



HI-FLEX ITALIA



**TUBI E RACCORDI
OLEODINAMICI**



// IL PRIMO TUBO *THE FIRST HOSE*

Scotzia, 1887. John Boyd Dunlop, un veterinario scozzese, osserva suo figlio che sta andando in bicicletta su una strada accidentata.

La bici con una gomma piena e dura non è né veloce né particolarmente comoda e la corsa è traballante.

Gli viene quindi l'idea di avvolgere un tubo di gomma riempito d'aria intorno al bordo della ruota.

Nel 1888 John Dunlop brevettò l'idea e il resto, come sappiamo, è storia.

Scotland, 1887. John Boyd Dunlop, a Scottish born inventive veterinarian observes his son as he's cycling down a bumpy road. The bike has hard solid rubber tyres and the ride is rough and shaky. The ride is neither fast nor particularly comfortable.

He then comes up with an idea of wrapping an air filled rubber hose around the rim.

In 1888 he patented the idea and the rest as we say, is history.

// UN PRODOTTO CHE CAMBIA IL MONDO *A PRODUCT THAT CHANGES THE WORLD*

Il brevetto di John Dunlop sui tubi flessibili in gomma fu l'inizio di una produzione industriale di tubi pneumatici riempiti ad aria e, successivamente, di uno sviluppo di tubi oleodinamici e industriali.

Da allora Dunlop Hiflex si è specializzata nella produzione di tubi per alta e bassa pressione e, attraverso la sua posizione di leader nel mercato, guida lo sviluppo della prossima generazione di tubi.

Oggi Dunlop Hiflex fa parte del gruppo Alfacomma, uno dei principali produttori di tubi nel mondo, ma porta con orgoglio il nome di uno scozzese in bicicletta.

John Dunlop's idea about air-filled rubber hoses was the beginning of an industrial manufacturing of air-filled tires and, later, a development of hydraulic and industrial hoses.

Dunlop Hiflex, is specialized at hoses for high and low pressure and through your unique position with manufacturing in your own factories they are leading the development of the next generation of hoses.

Today they are a part of the ALFAGOMMA GROUP, one of the leading manufactures of hoses in the world. But they still carry the name that originated from a Scot and bike with pride.

// GRUPPO ALFAGOMMA *ALFAGOMMA GROUP*

Il brand Dunlop Hiflex è entrato a far parte del gruppo Alfagomma nel 2005. Il Gruppo, fondato nel 1956, è un produttore globale specializzato in prodotti oleodinamici e industriali altamente ingegnerizzati e tecnicamente sofisticati con un impegno per l'eccellenza in termini di qualità e innovazione.

Dunlop Hiflex was acquired by ALFAGOMMA Group in 2005. The Group, established in 1956, is a global manufacturer specialized in highly engineered, technically demanding hydraulic and industrial products, created with a commitment to excellence in quality and innovation.

// RICERCA E SVILUPPO *RESEARCH AND DEVELOPMENT*

La caratteristica distintiva dell'azienda è la sua capacità di innovare, investendo in ricerca e sviluppo di prodotti e materiali e di progettare soluzioni che soddisfano le esigenze di clienti globali, in conformità con i regolamenti internazionali.

The company's distinguishing feature is its ability to innovate, by investing in research and development of products and materials, and designing solutions that meet customer's requirements, in compliance with international regulations.

ALFAGOMMA // **DUNLOPHIFLEX** // **HIFLEX** // **ARGUS**

22

**MANUFACTURING
PLANTS**

IN 10 COUNTRIES

ITALY – FINLAND
FRANCE – GERMANY
SWEDEN – UK
USA – BRAZIL
CHINA – MALAYSIA

86

**SUBSIDIARIES AND
ASSEMBLY PLANTS**

**IN 22 COUNTRIES
AND
5 CONTINENTS**

ISO

**QUALITY
CERTIFICATION**

**ISO 9001
SINCE 1993**
**ISO 14001
SINCE 1999**

3830

EMPLOYEES

**AROUND
THE WORLD**

// HI-FLEX ITALIA HI-FLEX ITALIA

Hi-flex Italia è il marchio che garantisce la massima affidabilità nel campo dell'oleodinamica ed è diventata, a oltre 25 anni dalla sua nascita, un punto di riferimento per tutti coloro che richiedono alte prestazioni in ogni settore industriale. Nata nel 1994 in provincia di Arezzo dalla mente imprenditoriale di Amedeo Asmodei, Hi-Flex Italia ha ampliato - anno dopo anno - l'offerta che propone ai propri clienti, facendo leva su alcuni dei più importanti marchi del settore, dallo storico Dunlop Hiflex all'americana SPX Power Team fino alla francese Techmaflex e l'italiana DNP.

La Value Proposition di Hi-flex Italia è lavorare a fianco di coloro che ricercano soluzioni di oleodinamica di avanguardia offrendo un servizio impeccabile in linea con il prestigio dei marchi che impreziosiscono la propria gamma di offerta. Una rete di tecnici commerciali su tutto il territorio nazionale, un customer service attento e tempestivo nel soddisfare i bisogni dei clienti, un magazzino quotidianamente rifornito, da cui parte una distribuzione in grado di raggiungere tutta Italia, sono i punti di forza storici dell'azienda. Una proposta che è stata ulteriormente integrata da un servizio di assemblaggio di tubi e raccordi per gli OEM conforme ai più rigorosi standard di qualità del settore.

Hi-flex Italia is the brand that guarantees maximum reliability in the hydraulic's world. It has become, over 25 years after its birth, a point of reference for all those who require high performances in every industrial sector. Hi-flex Italia was founded in 1994 by Amedeo Asmodei and it has expanded – year after year- the range of its products, thanks to the representing of some of the most important brands in this sector, from the historic Dunlop Hiflex to the American SPX Power Team up to the French Techmaflex and the Italian DNP.

The Value Proposition of Hi-flex Italia is working with those who are looking for cutting-edge hydraulic solutions, offering excellent service in line with the prestige of the brands that represent their range of offer.

The company has great strengths: qualified sales technicians operating throughout the national area, a careful and prompt customer service in meeting customer needs, a daily stocked warehouse whose products are distributed throughout Italy. Hi-Flex Italia also offers an hoses and fittings assembly service for OEM, consistent with the highest quality standards.



Nuova sede Hi-Flex Italia - New Hi-Flex Italia's Headquarter

// I NOSTRI VALORI OUR VALUES

Affidabilità, controllo e sicurezza sono le qualità che contraddistinguono il nostro prodotto. Progettiamo l'esperienza d'acquisto dei nostri clienti ispirandoci ai principi etici in base a cui lavoriamo: onestà, correttezza e trasparenza. Offriamo prodotti di alta gamma, supportati dalla competenza e dalla professionalità nell'interazione con i nostri collaboratori, clienti, fornitori e partners.

Esprimere le proprie capacità e metterle al servizio del cliente è ciò che chiediamo a tutti i collaboratori Hi-flex Italia, promuovendo momenti di formazione specifica. Partendo dalla centralità della persona siamo maturati come azienda e come gruppo di lavoro, senza perdere di vista gli obiettivi di una buona gestione d'impresa, in linea con la sostenibilità ambientale.

Our products stand out for reliability, control and safety. We design the purchasing experience of our customers taking good account of the ethical principles on which we work: honesty, fairness and transparency.

We offer high-end products, supported by the competence of our employees, customers, suppliers and partners.

Hi-flex Italia asks all its collaborators to express their skills and put them at the customer's service, promoting specific training sessions. Starting from the central role of the individual, matured as a company and as a working group, without losing sight of the objectives for a good business management, in line with environmental sustainability.



// TYPE APPROVAL TYPE APPROVAL

 AMERICAN BUREAU OF SHIPPING	 BUREAU VERITAS	 DET NORSKE VERITAS	 LLOYD'S REGISTER	 GERMANISCHER LLOYD	 MINE SAFETY AND HEALTH ADMINISTRATION
 NIPPON KAIJI KYOKAI	 OSRODEK BADAN ATESTACJI I CERTYFIKACJI SP. ZO.O.	 SPECIFICATION FOR CONTROL SYSTEMS FOR DRILLING WELL CONTROL EQUIPMENT AND CONTROL SYSTEMS FOR DIVERTER EQUIPMENT	 REGISTRO ITALIANO NAVALE		

// CENTRO ASSEMBLAGGIO AUTORIZZATO AUTHORIZED ASSEMBLY CENTER



// CERTIFICAZIONI DI QUALITÀ QUALITY CERTIFICATIONS

RINA

CERTIFICATO N. 7977/02/S
CERTIFICATE No.

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITÀ DI
IT IS HEREBY CERTIFIED THAT THE QUALITY MANAGEMENT SYSTEM OF
HI-FLEX ITALIA SRL
VIA ROMENA, 12 52014 POPPI (AR) ITALIA
NELLE SEGUENTI UNITÀ OPERATIVE: // IN THE FOLLOWING OPERATIONAL UNITS
VIA ROMENA, 12 52014 Poppi (AR) ITALIA

È CONFORME ALLA NORMA / IS IN COMPLIANCE WITH THE STANDARD
ISO 9001:2015

PER I SEGUENTI CAMPI DI ATTIVITÀ / FOR THE FOLLOWING FIELDS OF ACTIVITIES

COMMERCIALIZZAZIONE DI TUBI FLESSIBILI, RACCORDI, ADATTATORI, ACCESSORI, TUBI METALLICI SODDANTI, TUBI FLESSIBILI METALLICI PER IMPIANTI IDRAULICI, MACCHINARI PER L'ASSEMBLAGGIO E SISTEMI AD ALTA PRESSIONE, ASSEMBLAGGIO E COMMERCIALIZZAZIONE DI TUBI RACCORDANTI

TRADE OF FLEXIBLE HOSES, METALLIC FITTINGS, ADAPTERS, ACCESSORIES, MANIPULATED STEEL PIPES, FLEXIBLE METALLIC HOSES FOR HYDRAULIC SYSTEMS, HOSE ASSEMBLY MACHINES AND HIGH PRESSURE SYSTEMS, ASSEMBLY AND TRADE OF HOSE ASSEMBLIES

La validità del presente certificato è subordinata a sorveglianza periodica annuale / validity of the present certificate is subordinate to annual surveillance

First Issue: 17.12.2010
Data scadenza: 14.12.2020
Data decisione di rinnovo: 11.12.2017
Data revisione: 20.12.2019

Isabella Sofiaio
Primo Management System Certification Head

RINA Services S.p.A.
Via Corallo 12 - 16128 Genova Italy

ACCREDITED IAF

IQNet

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

CISQ / RINA has issued an IQNet recognized certificate that the organization:

HI-FLEX ITALIA SRL
VIA ROMENA, 12 52014 POPPI (AR) ITALIA

in the following operative units:

VIA ROMENA, 12 52014 Poppi (AR) ITALIA

has implemented and maintains a
Quality Management System
for the following scope:

TRADE OF FLEXIBLE HOSES, METALLIC FITTINGS, ADAPTERS, ACCESSORIES, MANIPULATED STEEL PIPES, FLEXIBLE METALLIC HOSES FOR HYDRAULIC SYSTEMS, HOSE ASSEMBLY MACHINES AND HIGH PRESSURE SYSTEMS, ASSEMBLY AND TRADE OF HOSE ASSEMBLIES

which fulfills the requirements of the following standard:
ISO 9001:2015
Issued on: 2019-12-20
First issued on: 2002-12-17
Expires on: 2020-12-14

This attestation is directly linked to the IQNet Partner's original certificate and shall not be used as a stand-alone document

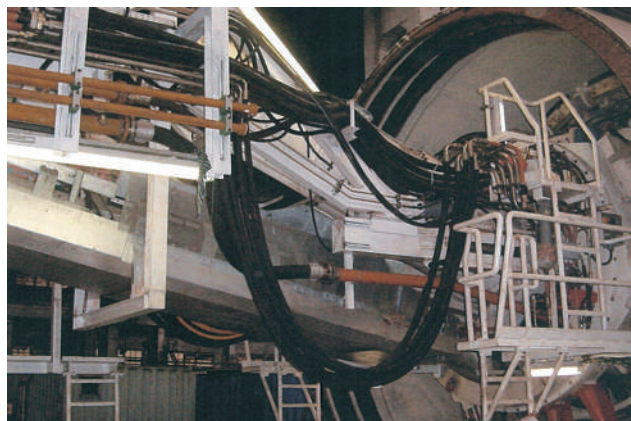
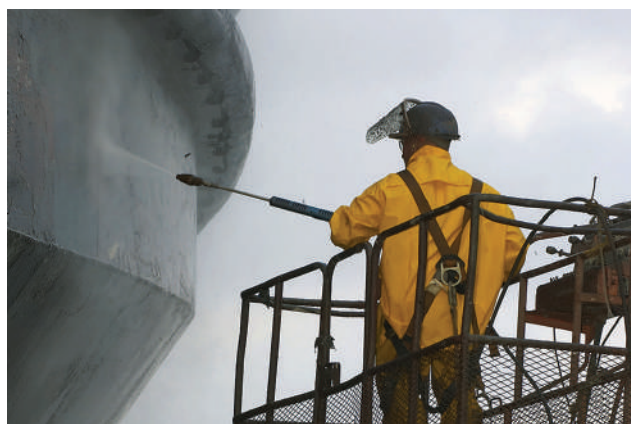
CISQ/RINA original certificate no.: **7977/02/S**
Registration Number: **IT-26851**

Alex Stachivits
President of IQNET

Ing. Claudio Prevetti
President of CISQ

* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com

// PANORAMICA APPLICAZIONI APPLICATIONS OVERVIEW

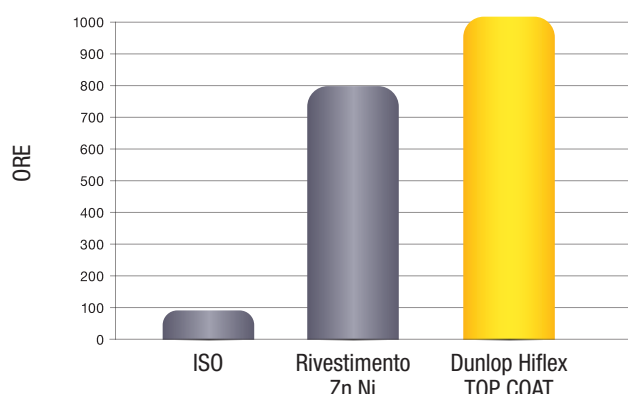


VANTAGGI

- SISTEMI COMPLETI ED INTEGRATI
- LOGICA DI PROGETTAZIONE COERENTE ED INTEGRATA
- MASSIMA QUALITÀ, SICUREZZA E AFFIDABILITÀ
- TRACCIABILITÀ COMPLETA DEI COMPONENTI
- SOLUZIONI CUSTOMIZZATE
- SELEZIONE DI COMPONENTI DI QUALITÀ PER UN RENDIMENTO OTTIMALE DELLE PRESTAZIONI



Resistenza alla ruggine rossa nella nebbia salina
(test in conformità con iso 9227)



CARATTERISTICHE

- TESTATO IN ACCORDO CON ASTM B117-03 E CON GLI STANDARD UNI ISO 9227
- RESISTENTE ALLA CORROSIONE DELLA RUGGINE BIANCA E DELLA NEBBIA SALINA PER OLTRE 500 ORE
- RESISTENTE ALLA CORROSIONE DELLA RUGGINE ROSSA PER OLTRE 1000 ORE



// RACCORDI SUPERTRAK SERIE 55 *SUPERTRAK FITTINGS 55 SERIES*

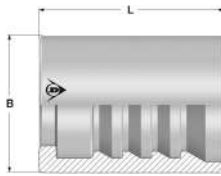
// GHIERE <i>FERRULES</i>	— 59	// INSERTI NPTF <i>NPTF INSERTS</i>	— 94
// DOPPIO INSERTO <i>HOSE MENDER</i>	— 61	// INSERTI NPSM <i>NPSM INSERTS</i>	— 96
// INSERTI BSP <i>BSP INSERTS</i>	— 62	// INSERTI ORFS <i>ORFS INSERTS</i>	— 97
// INSERTI METRICI DIN <i>DIN METRIC INSERTS</i>	— 69	// INSERTI FRANCESI <i>FRENCH INSERTS</i>	— 101
// INSERTI PER IDROPULITRICE <i>PRESSURE WASHER</i>	— 85	// INSERTI JIS <i>JIS INSERTS</i>	— 102
// INSERTI SAE <i>SAE INSERTS</i>	— 86	// INSERTI KOMATSU <i>KOMATSU INSERTS</i>	— 104
// INSERTI JIC 37° <i>JIC 37° INSERTS</i>	— 88	// INSERTI FLANGE SAE <i>SAE FLANGES</i>	— 105

// SUPERTRAK - GHIERE FERRULES

// SK1000 - GHIERA SUPERTRAK CON SPELLATURA
PER TUBI CON 1 TRECCIA D'ACCIAIO E COMPATTI
CON 2 TRECCE D'ACCIAIO

// SKIVE FERRULE FOR 1 WIRE BRAID AND 2 WIRE
BRAIDS COMPACT HOSES

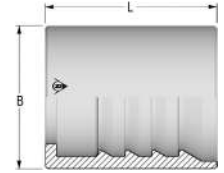
Code	ID			B	L
	Dash	mm	In		
SK1000-04	04	6,0	1/4"	19,0	25,5
SK1000-05	05	8,0	5/16"	21,0	25,5
SK1000-06	06	10,0	3/8"	23,0	27,5
SK1000-08	08	13,0	1/2"	27,0	33,5
SK1000-10	10	16,0	5/8"	30,0	36,5
SK1000-12	12	19,0	3/4"	33,0	40,0
SK1000-16	16	25,0	1"	41,0	46,5



// 340000 - GHIERA SUPERTRAK CON SPELLATURA
PER 1SN - 241 - CMD1

// SKIVE FERRULE FOR 1SN-CMD1-241

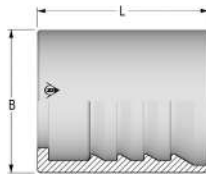
Code	ID			B	L
	Dash	mm	In		
340000-20	20	31,0	1 1/4"	50,0	43,8
340000-24	24	38,0	1 1/2"	57,0	49,2
340000-32	32	51,0	2"	71,0	63,7



// 440000 - GHIERA SUPERTRAK CON SPELLATURA
PER 2SN E POWERFLEX BIO

// SKIVE FERRULE FOR 2SN AND POWERFLEX BIO

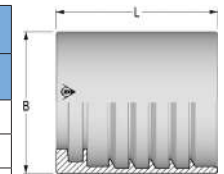
Code	ID			B	L
	Dash	mm	In		
440000-04	04	6,0	1/4"	22,0	26,3
440000-06	06	10,0	3/8"	25,0	28,5
440000-08	08	13,0	1/2"	29,0	34,7
440000-10	10	16,0	5/8"	33,0	37,5
440000-12	12	19,0	3/4"	37,0	41,5
440000-16	16	25,0	1"	45,0	47,7
440000-20	20	31,0	1 1/4"	55,0	54,5
440000-24	24	38,0	1 1/2"	67,0	61,1
440000-32	32	51,0	2"	82,0	75,1



// 430000 - GHIERA SUPERTRAK SENZA SPELLATURA PER
POWERFLEX BIO

// NO-SKIVE FERRULE FOR POWERFLEXBIO HOSES

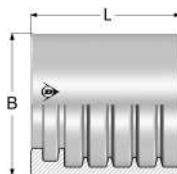
Code	ID			B	L
	Dash	mm	In		
430000-06	06	10,0	3/8"	30,0	28,0
430000-08	08	13,0	1/2"	34,0	33,9
430000-10	10	16,0	5/8"	38,0	36,6
430000-12	12	19,0	3/4"	42,0	39,5
430000-16	16	25,0	1"	50,0	47,5
430000-20	20	31,0	1 1/4"	61,0	50,2



// AD1 - GHIERA SUPERTRAK SENZA SPELLATURA PER TUBI CON
1 TRECCIA D'ACCIAIO E COMPATTI CON 2 TRECCE D'ACCIAIO

// NO-SKIVE FERRULE FOR 1 WIRE BRAID AND 2 WIRE BRAIDS
COMPACT HOSES

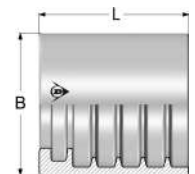
Code	ID			B	L
	Dash	mm	In		
AD1-03	03	5,0	3/16"	19,0	24,0
AD1-04	04	6,0	1/4"	22,0	24,7
AD1-05	05	8,0	5/16"	23,0	24,7
AD1-06	06	10,0	3/8"	26,0	29,7
AD1-08	08	13,0	1/2"	29,0	30,5
AD1-10	10	16,0	5/8"	32,0	30,5
AD1-12	12	19,0	3/4"	36,0	36,0
AD1-16	16	25,0	1"	44,0	36,7
AD1-20	20	31,0	1 1/4"	53,0	48,6
AD1-24	24	38,0	1 1/2"	61,0	48,6
AD1-32	32	51,0	2"	75,0	48,6



// AD2 - GHIERA SUPERTRAK SENZA SPELLATURA PER 2SN

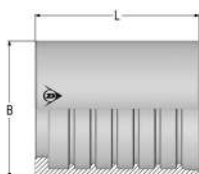
// NO-SKIVE FERRULE FOR 2SN

Code	ID			B	L
	Dash	mm	In		
AD2-03	03	5,0	3/16"	21,0	21,5
AD2-04	04	6,0	1/4"	23,0	24,7
AD2-05	05	8,0	5/16"	25,0	24,7
AD2-06	06	10,0	3/8"	27,0	29,7
AD2-08	08	13,0	1/2"	30,0	30,5
AD2-10	10	16,0	5/8"	33,0	30,5
AD2-12	12	19,0	3/4"	37,0	36,0
AD2-16	16	25,0	1"	45,0	36,7
AD2-20	20	31,0	1 1/4"	56,0	48,6
AD2-24	24	38,0	1 1/2"	64,0	48,5
AD2-32	32	51,0	2"	78,0	48,6



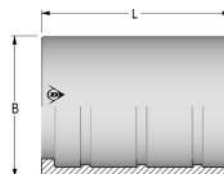
**// 5700TP - GHIERA SUPERTRAK SENZA SPELLATURA
PER TUBO TERMOPLASTICO E PILOT**
**// NO-SKIVE FERRULE FOR THERMOPLASTIC HOSE
AND PILOT**

Code	ID			B	L
	Dash	mm	In		
5700TP-03	03	5,0	3/16"	15,0	22,0
5700TP-04	04	6,0	1/4"	17,0	26,5
5700TP-05	05	8,0	5/16"	19,0	26,5
5700TP-06	06	10,0	3/8"	22,0	26,5
5700TP-08	08	13,0	1/2"	26,0	30,5



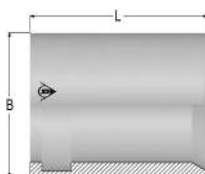
**// TX2 - GHIERA SUPERTRAK SENZA SPELLATURA
PER 3TE, R4 E 241- 40**
// NO-SKIVE FERRULE FOR 3TE, R4 AND 241- 40

Code	ID			B	L
	Dash	mm	In		
TX2-03	03	5,0	3/16"	21,0	21,5
TX2-04	04	6,0	1/4"	23,0	24,7
TX2-05	05	8,0	5/16"	25,0	24,7
TX2-06	06	10,0	3/8"	27,0	29,7
TX2-08	08	13,0	1/2"	30,0	30,5
TX2-10	10	16,0	5/8"	34,0	35,5
TX2-12	12	19,0	3/4"	38,0	36,0
TX2-16	16	25,0	1"	48,0	42,5
TX2-20	20	31,0	1 1/4"	53,0	56,5
TX2-24	24	38,0	1 1/2"	60,0	61,5
TX2-32	32	51,0	2"	76,0	73,5
TX2-40	40	63,0	2 1/2"	89,0	85,0



// 55000H - GHIERA SUPERTRAK SENZA SPELLATURA PER TUBO TEFLON LISCIO E CONVOLUTO
// NO-SKIVE FERRULE FOR SMOOTH AND CONVOLUTED TEFLON

Code	ID			B	L
	Dash	mm	In		
55000H-02	02	4,0	1/8"	10,9	17,3
55000H-03	03	5,0	3/16"	12,9	23,9
55000H-04	04	6,0	1/4"	15,9	28,0
55000H-05	05	8,0	5/16"	15,9	31,6
55000H-06	06	10,0	3/8"	18,9	31,8
55000H-08	08	13,0	1/2"	24,9	31,9
55000H-10	10	16,0	5/8"	29,9	35,7
55000H-12	12	19,0	3/4"	33,0	39,0
55000H-16	16	25,0	1"	41,9	47,0
55000H-20	20	31,0	1 1/4"	47,3	53,8
55000H-24	24	38,0	1 1/2"	54,9	64,8
55000H-32	32	51,0	2"	68,5	75,5



// LEGENDA DADI *NUT LEGEND*

SN

DADO A BATTUTA
SLIP ON NUT

CR

DADO CRIMPATO O PINZATO
CRIMPED NUT

TN

DADO SPINATO
THRUST WIRE NUT

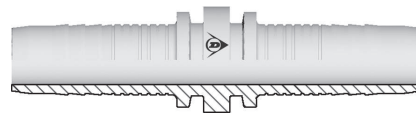
NA

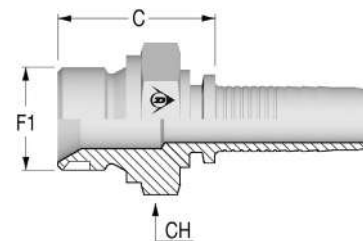
SENZA DADO
NO NUT// SUPERTRAK - DOPPIO INSERTO *HOSE MENDER*

// 550550 - DOPPIO INSERTO

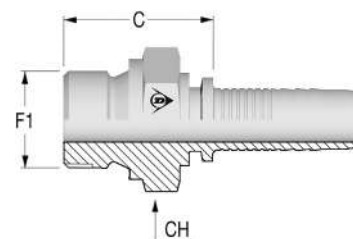
// *HOSE MENDER*

Code	ID		
	Dash	mm	In
550550-04-04	04	6,0	1/4"
550550-05-05	05	8,0	5/16"
550550-06-06	06	10,0	3/8"
550550-08-08	08	13,0	1/2"
550550-10-10	10	16,0	5/8"
550550-12-12	12	19,0	3/4"
550550-16-16	16	25,0	1"
550550-20-20	20	32,0	1 1/4"
550550-24-24	24	38,0	1 1/2"
550550-32-32	32	51,0	2"



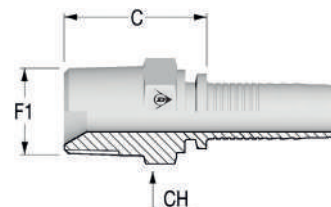
// **SUPERTRAK - INSERTI BSP** *BSP INSERTS*// **550120 - MASCHIO BSPP CILINDRICO SV. 60° - AGR**// **BSPP MALE 60° FLARE - AGR**

Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
550120-02-03	NA	03	5,0	3/16"	02	1/8-28	20,3	14,0
550120-02-04	NA	04	6,0	1/4"	02	1/8-28	20,8	14,0
550120-04-04	NA	04	6,0	1/4"	04	1/4-19	26,3	19,0
550120-06-04	NA	04	6,0	1/4"	06	3/8-19	27,8	22,0
550120-08-04	NA	04	6,0	1/4"	08	1/2-14	31,3	27,0
550120-04-05	NA	05	8,0	5/16"	04	1/4-19	26,3	19,0
550120-06-05	NA	05	8,0	5/16"	06	3/8-19	27,8	22,0
550120-08-05	NA	05	8,0	5/16"	08	1/2-14	31,3	27,0
550120-04-06	NA	06	10,0	3/8"	04	1/4-19	26,3	19,0
550120-06-06	NA	06	10,0	3/8"	06	3/8-19	27,8	22,0
550120-08-06	NA	06	10,0	3/8"	08	1/2-14	31,3	27,0
550120-06-08	NA	08	13,0	1/2"	06	3/8-19	28,6	22,0
550120-08-08	NA	08	13,0	1/2"	08	1/2-14	32,1	27,0
550120-10-08	NA	08	13,0	1/2"	10	5/8-14	34,1	30,0
550120-12-08	NA	08	13,0	1/2"	12	3/4-14	36,1	32,0
550120-08-10	NA	10	16,0	5/8"	08	1/2-14	32,1	27,0
550120-10-10	NA	10	16,0	5/8"	10	5/8-14	34,1	30,0
550120-12-10	NA	10	16,0	5/8"	12	3/4-14	36,1	32,0
550120-12-12	NA	12	19,0	3/4"	12	3/4-14	36,6	32,0
550120-16-12	NA	12	19,0	3/4"	16	1-11	41,6	41,0
550120-16-16	NA	16	25,0	1"	16	1-11	42,4	41,0
550120-20-16	NA	16	25,0	1"	20	1 1/4-11	46,4	50,0
550120-20-20	NA	20	32,0	1 1/4"	20	1 1/4-11	48,0	50,0
550120-24-24	NA	24	38,0	1 1/2"	24	1 1/2-11	51,0	55,0
550120-32-32	NA	32	51,0	2"	32	2-11	56,5	70,0

// **550130 - MASCHIO BSPP CILINDRICO SEDE PIANA - AGR FD**// **BSPP MALE FLAT SEAT - AGR FD**

Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
550130-04-04	NA	04	6,0	1/4"	04	1/4-19	26,3	19,0
550130-06-06	NA	06	10,0	3/8"	06	3/8-19	27,8	22,0
550130-08-06	NA	06	10,0	3/8"	08	1/2-14	31,3	27,0
550130-08-08	NA	08	13,0	1/2"	08	1/2-14	32,1	27,0
550130-10-10	NA	10	16,0	5/8"	10	5/8-14	36,1	30,0
550130-12-12	NA	12	19,0	3/4"	12	3/4-14	34,6	32,0
550130-16-12	NA	12	19,0	3/4"	16	1-11	39,6	41,0
550130-16-16	NA	16	25,0	1"	16	1-11	40,4	41,0

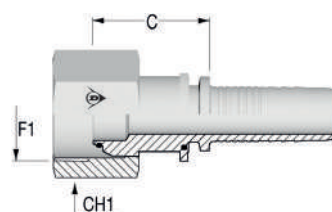
// 550150 - MASCHIO BSPT CONICO - AGR K
// BSPT MALE - AGR K



Code	Nut Type	ID			F1		C	CH
		Dash	mm	In	Dash size	F1		
550150-02-03	NA	03	5,0	3/16"	02	1/8-28	20,8	12,0
550150-02-04	NA	04	6,0	1/4"	02	1/8-28	21,3	12,0
550150-04-04	NA	04	6,0	1/4"	04	1/4-19	26,8	17,0
550150-06-04	NA	04	6,0	1/4"	06	3/8-19	27,8	19,0
550150-04-05	NA	05	8,0	5/16"	04	1/4-19	26,8	17,0
550150-06-05	NA	05	8,0	5/16"	06	3/8-19	27,8	19,0
550150-04-06	NA	06	10,0	3/8"	04	1/4-19	26,8	17,0
550150-06-06	NA	06	10,0	3/8"	06	3/8-19	27,8	19,0
550150-08-06	NA	06	10,0	3/8"	08	1/2-14	32,3	22,0
550150-06-08	NA	08	13,0	1/2"	06	3/8-19	28,6	19,0
550150-08-08	NA	08	13,0	1/2"	08	1/2-14	33,1	22,0
550150-12-10	NA	10	16,0	5/8"	12	3/4-14	34,1	27,0
550150-12-12	NA	12	19,0	3/4"	12	3/4-14	34,6	27,0
550150-16-12	NA	12	19,0	3/4"	16	1-11	43,6	36,0
550150-12-16	NA	16	25,0	1"	12	3/4-14	37,4	32,0
550150-16-16	NA	16	25,0	1"	16	1-11	44,4	36,0
550150-20-20	NA	20	32,0	1 1/4"	20	1 1/4-11	49,0	46,0
550150-24-24	NA	24	38,0	1 1/2"	24	1 1/2-11	50,5	50,0
550150-32-32	NA	32	51,0	2"	32	2-11	54,2	65,0

// A55001 - FEMMINA BSPP SV. 60° CON O'RING - DKOR

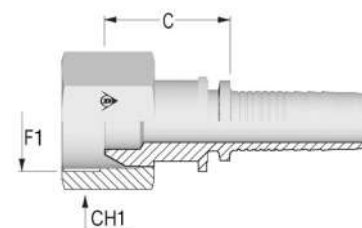
// BSPP FEMALE 60° CONE WITH O'RING - DKOR



Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In	Dash size		mm	mm
A55001-02-03	CR	03	5,0	3/16"	02	1/8-28	14,3	14,0
A55001-04-03	SN	03	5,0	3/16"	04	1/4-19	20,3	19,0
A55001-02-04	CR	04	6,0	1/4"	02	1/8-28	14,7	14,0
A55001-04-04	SN	04	6,0	1/4"	04	1/4-19	20,8	19,0
A55001-06-04	SN	04	6,0	1/4"	06	3/8-19	23,3	22,0
A55001-04-05	CR	05	8,0	5/16"	04	1/4-19	17,3	19,0
A55001-06-05	SN	05	8,0	5/16"	06	3/8-19	23,3	22,0
A55001-04-06	CR	06	10,0	3/8"	04	1/4-19	17,3	19,0
A55001-06-06	SN	06	10,0	3/8"	06	3/8-19	23,3	22,0
A55001-08-06	SN	06	10,0	3/8"	08	1/2-14	24,3	27,0
A55001-06-08	CR	08	13,0	1/2"	06	3/8-19	18,6	22,0
A55001-08-08	SN	08	13,0	1/2"	08	1/2-14	25,1	27,0
A55001-10-08	SN	08	13,0	1/2"	10	5/8-14	28,4	27,0
A55001-12-08	SN	08	13,0	1/2"	12	3/4-14	29,0	32,0
A55001-10-10	CR	10	16,0	5/8"	10	5/8-14	17,1	27,0
A55001-12-10	SN	10	16,0	5/8"	12	3/4-14	29,0	32,0
A55001-12-12	CR	12	19,0	3/4"	12	3/4-14	23,9	32,0
A55001-16-12	SN	12	19,0	3/4"	16	1-11	34,0	38,0
A55001-16-16	CR	16	25,0	1"	16	1-11	23,9	38,0
A55001-20-16	SN	16	25,0	1"	20	1 1/4-11	39,4	50,0
A55001-20-20	TN	20	32,0	1 1/4"	20	1 1/4-11	32,0	50,0
A55001-24-20	SN	20	32,0	1 1/4"	24	1 1/2-11	41,9	55,0
A55001-24-24	TN	24	38,0	1 1/2"	24	1 1/2-11	33,8	55,0
A55001-32-24	SN	24	38,0	1 1/2"	32	2-11	47,0	70,0
A55001-32-32	TN	32	51,0	2"	32	2-11	34,0	70,0

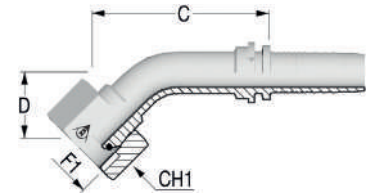
// A55002 - FEMMINA BSPP SV. 60° SENZA O'RING - DKR

// BSPP FEMALE 60° CONE WITHOUT O'RING - DKR



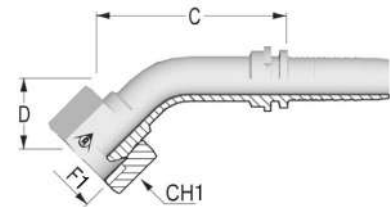
Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In	Dash size		mm	mm
A55002-04-04	SN	04	6,0	1/4"	04	1/4-19	20,8	19,0
A55002-06-06	SN	06	10,0	3/8"	06	3/8-19	23,3	22,0
A55002-08-08	SN	08	13,0	1/2"	08	1/2-14	25,1	27,0
A55002-10-10	CR	10	16,0	5/8"	10	5/8-14	17,1	27,0
A55002-12-12	CR	12	19,0	3/4"	12	3/4-14	23,9	32,0
A55002-16-16	CR	16	25,0	1"	16	1-11	23,9	38,0

// A55061 - FEMMINA 45° BSPP SV. 60° CON O'RING - DKOR 45
// 45° BSPP FEMALE 60° CONE WITH O'RING - DKOR 45



Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash size	F1			
A55061-04-04	SN	04	6,0	1/4"	04	1/4-19	45,5	15,0	19,0
A55061-06-04	SN	04	6,0	1/4"	06	3/8-19	41,5	17,5	22,0
A55061-04-05	CR	05	8,0	5/16"	04	1/4-19	19,0	17,5	19,0
A55061-06-05	SN	05	8,0	5/16"	06	3/8-19	45,1	18,5	22,0
A55061-06-06	SN	06	10,0	3/8"	06	3/8-19	49,9	20,5	22,0
A55061-08-06	SN	06	10,0	3/8"	08	1/2-14	45,7	21,0	27,0
A55061-08-08	SN	08	13,0	1/2"	08	1/2-14	55,0	21,0	27,0
A55061-10-08	SN	08	13,0	1/2"	10	5/8-14	57,2	23,0	27,0
A55061-12-08	SN	08	13,0	1/2"	12	3/4-14	56,7	23,0	32,0
A55061-10-10	CR	10	16,0	5/8"	10	5/8-14	64,0	21,5	27,0
A55061-12-10	SN	10	16,0	5/8"	12	3/4-14	66,5	22,5	32,0
A55061-12-12	CR	12	19,0	3/4"	12	3/4-14	70,0	28,0	32,0
A55061-16-12	SN	12	19,0	3/4"	16	1-11	74,6	31,5	38,0
A55061-16-16	CR	16	25,0	1"	16	1-11	84,0	34,0	38,0
A55061-20-16	SN	16	25,0	1"	20	1 1/4-11	97,0	47,5	50,0
A55061-20-20	TN	20	32,0	1 1/4"	20	1 1/4-11	100,8	40,0	50,0
A55061-24-24	TN	24	38,0	1 1/2"	24	1 1/2-11	115,7	46,0	55,0
A55061-32-32	TN	32	51,0	2"	32	2-11	151,5	60,0	70,0

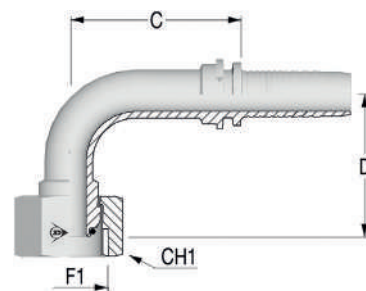
// A55062 - FEMMINA 45° BSPP SV. 60° SENZA O'RING - DKR
// 45° BSPP FEMALE 60° CONE WITHOUT O'RING - DKR



Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash size	F1			
A55062-04-04	SN	04	6,0	1/4"	04	1/4-19	45,5	15,0	19,0
A55062-06-06	SN	06	10,0	3/8"	06	3/8-19	49,9	20,5	22,0
A55062-08-08	SN	08	13,0	1/2"	08	1/2-14	55,0	21,0	27,0
A55062-10-10	CR	10	16,0	5/8"	10	5/8-14	64,0	21,5	27,0
A55062-12-12	CR	12	19,0	3/4"	12	3/4-14	70,0	28,0	32,0
A55062-16-16	CR	16	25,0	1"	16	1-11	84,0	34,0	38,0

// A55051 - FEMMINA 90° BSPP SV. 60° CON O'RING - DKOR 90

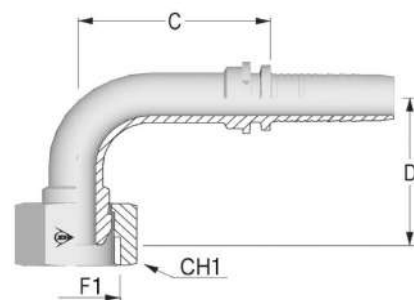
// 90° BSPP FEMALE 60° CONE WITH O'RING - DKOR 90



Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A55051-02-03	CR	03	5,0	3/16"	02	1/8-28	24,0	30,0	14,0
A55051-02-04	CR	04	6,0	1/4"	02	1/8-28	30,5	32,0	14,0
A55051-04-04	SN	04	6,0	1/4"	04	1/4-19	29,3	29,0	19,0
A55051-06-04	SN	04	6,0	1/4"	06	3/8-19	29,8	31,0	22,0
A55051-06-05	SN	05	8,0	5/16"	06	3/8-19	33,2	36,0	22,0
A55051-06-06	SN	06	10,0	3/8"	06	3/8-19	34,8	42,0	22,0
A55051-08-06	SN	06	10,0	3/8"	08	1/2-14	34,3	35,5	27,0
A55051-06-08	CR	08	13,0	1/2"	06	3/8-19	35,3	43,0	22,0
A55051-08-08	SN	08	13,0	1/2"	08	1/2-14	35,8	41,0	27,0
A55051-10-08	SN	08	13,0	1/2"	10	5/8-14	41,6	43,5	27,0
A55051-12-08	SN	08	13,0	1/2"	12	3/4-14	41,8	43,0	32,0
A55051-10-10	CR	10	16,0	5/8"	10	5/8-14	47,9	47,0	27,0
A55051-12-10	SN	10	16,0	5/8"	12	3/4-14	51,9	49,0	32,0
A55051-12-12	CR	12	19,0	3/4"	12	3/4-14	49,1	53,0	32,0
A55051-16-12	SN	12	19,0	3/4"	16	1-11	54,1	60,5	38,0
A55051-16-16	CR	16	25,0	1"	16	1-11	75,1	69,0	38,0
A55051-20-16	SN	16	25,0	1"	20	1 1/4-11	75,1	88,5	50,0
A55051-20-20	TN	20	32,0	1 1/4"	20	1 1/4-11	82,3	83,0	50,0
A55051-24-20	SN	20	32,0	1 1/4"	24	1 1/2-11	101,0	83,0	55,0
A55051-24-24	TN	24	38,0	1 1/2"	24	1 1/2-11	95,7	96,0	55,0
A55051-32-24	SN	24	38,0	1 1/2"	32	2-11	107,8	104,0	70,0
A55051-32-32	TN	32	51,0	2"	32	2-11	128,5	136,0	70,0

// A55052 - FEMMINA 90° BSPP SV. 60° SENZA O'RING- DKR

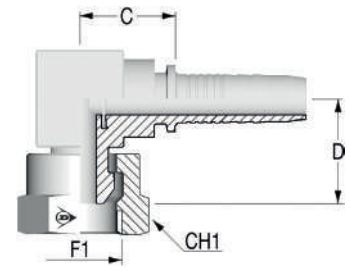
// 90° BSPP FEMALE 60° CONE WITHOUT O'RING - DKR



Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A55052-04-04	SN	04	6,0	1/4"	04	1/4-19	29,3	29,0	19,0
A55052-06-06	SN	06	10,0	3/8"	06	3/8-19	34,8	42,0	22,0
A55052-08-08	SN	08	13,0	1/2"	08	1/2-14	35,8	41,0	27,0
A55052-10-10	CR	10	16,0	5/8"	10	5/8-14	47,9	47,0	27,0
A55052-12-12	CR	12	19,0	3/4"	12	3/4-14	49,1	53,0	32,0
A55052-16-16	CR	16	25,0	1"	16	1-11	75,1	69,0	38,0

// A55180 - FEMMINA 90° COMPATTA BSPP SV. 60° - DKR 90

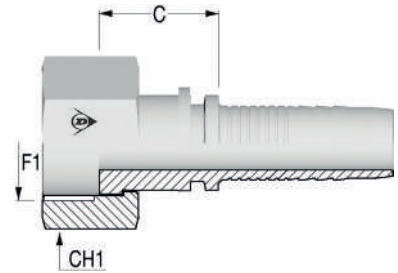
// 90° COMPACT BSPP FEMALE 60° CONE - DKR 90



Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash size	F1			
A55180-04-04	CR	04	6,0	1/4"	04	1/4-19	16,8	19,5	19,0
A55180-06-06	CR	06	10,0	3/8"	06	3/8-19	18,8	22,0	22,0
A55180-08-06	CR	06	10,0	3/8"	08	1/2-14	21,5	22,5	27,0
A55180-08-08	CR	08	13,0	1/2"	08	1/2-14	22,6	24,5	27,0
A55180-12-12	CR	12	19,0	3/4"	12	3/4-14	26,7	31,0	32,0
A55180-16-16	CR	16	25,0	1"	16	1-11	34,5	27,5	38,0

// A55003 - FEMMINA SEDE PIANA BSPP - DKR FD

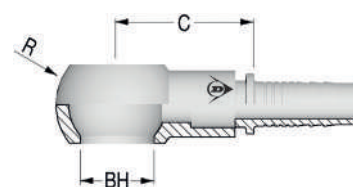
// BSPP FEMALE FLAT SEAT - DKR FD



Code	Nut Type	ID			F1		C	CH1
		Dash	mm	In	Dash size	F1		
A55003-04-04	SN	04	6,0	1/4"	04	1/4-19	20,3	19,0
A55003-06-06	SN	06	10,0	3/8"	06	3/8-19	20,3	22,0
A55003-08-06	SN	06	10,0	3/8"	08	1/2-14	20,8	27,0
A55003-08-08	SN	08	13,0	1/2"	08	1/2-14	21,6	27,0
A55003-12-08	SN	08	13,0	1/2"	12	3/4-14	24,6	32,0
A55003-12-10	CR	10	16,0	5/8"	12	3/4-14	17,6	32,0
A55003-12-12	CR	12	19,0	3/4"	12	3/4-14	18,1	32,0
A55003-16-12	CR	12	19,0	3/4"	16	1-11	20,6	38,0
A55003-16-16	CR	16	25,0	1"	16	1-11	19,9	38,0

// 552910 - OCCHIO BSPP- RNR

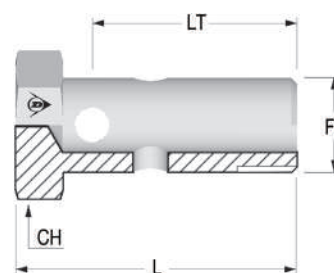
// BSPP BANJO - RNR



Code	Nut Type	ID			F1	F1	C	BH	R
		Dash	mm	In					
552910-02-04	NA	04	6,0	1/4"	02	1/8-28	20,0	10,10	17
552910-04-04	NA	04	6,0	1/4"	04	1/4-19	26,5	13,30	22
552910-06-04	NA	04	6,0	1/4"	06	3/8-19	30,5	16,70	28
552910-06-05	NA	05	8,0	5/16"	06	3/8-19	30,5	16,70	28
552910-06-06	NA	06	10,0	3/8"	06	3/8-19	30,5	16,70	28
552910-08-06	NA	06	10,0	3/8"	08	1/2-14	34,5	21,00	38
552910-06-08	NA	08	13,0	1/2"	06	3/8-19	30,5	16,70	28
552910-08-08	NA	08	13,0	1/2"	08	1/2-14	35,0	21,00	38
552910-10-10	NA	10	16,0	5/8"	10	5/8-14	38,0	23,00	40
552910-12-12	NA	12	19,0	3/4"	12	3/4-14	41,5	26,50	46
552910-16-16	NA	16	25,0	1"	16	1-11	50,5	33,30	58

// 002920 - VITE FORATA BSPP

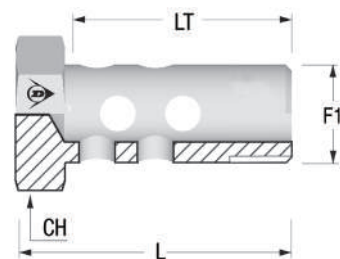
// BSPP BOLT



Code	F1	F1	CH	LT	L
	Dash		mm	mm	mm
002920-04	04	1/4-19	19,0	25,0	30,0
002920-06	06	3/8-19	22,0	31,0	38,0
002920-08	08	1/2-14	27,0	38,0	46,0
002920-10	10	5/8-14	28,0	42,0	51,0
002920-12	12	3/4-14	32,0	47,0	56,0
002920-16	16	1-11	38,0	58,0	69,0

// DD2920 - VITE FORATA BSPP DOPPIA

// BSPP DUAL BOLT

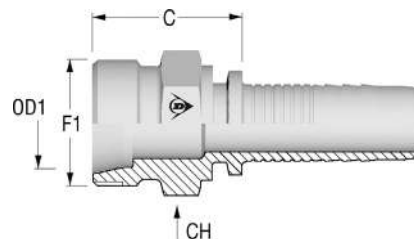


Code	F1	F1	CH	LT	L
	Dash		mm	mm	mm
DD2920-02	02	1/8	14,0	33,0	38,0
DD2920-04	04	1/4	19,0	43,0	49,0
DD2920-06	06	3/8	22,0	51,0	58,0
DD2920-08	08	1/2	27,0	63,0	71,0
DD2920-12	12	3/4	32,0	80,0	90,0
DD2920-16	16	1	41,0	110,0	122,0

// SUPERTRAK - INSERTI METRICI DIN DIN METRIC INSERTS

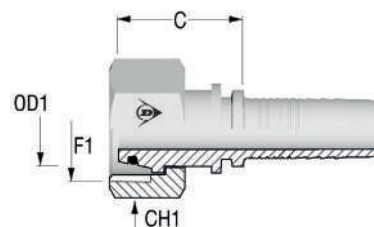
// 551690 - MASCHIO METRICO SV. 24° DIN 3853 SERIE LEGGERA - CEL

// METRIC MALE 24° SEAT - LIGHT - DIN 3853 - CEL



Code	Nut Type	ID			F1	OD1	C	CH
		Dash	mm	In		mm	mm	mm
551690-03-03	NA	03	5,0	3/16"	M12X1.5	6	20,8	14,0
551690-03-04	NA	04	6,0	1/4"	M12X1.5	6	21,3	14,0
551690-04-04	NA	04	6,0	1/4"	M14X1.5	8	21,3	14,0
551690-05-04	NA	04	6,0	1/4"	M16X1.5	10	23,3	17,0
551690-05-05	NA	05	8,0	5/16"	M16X1.5	10	23,3	17,0
551690-06-05	NA	05	8,0	5/16"	M18X1.5	12	24,3	19,0
551690-05-06	NA	06	10,0	3/8"	M16X1.5	10	23,3	17,0
551690-06-06	NA	06	10,0	3/8"	M18X1.5	12	24,3	19,0
551690-08-06	NA	06	10,0	3/8"	M22X1.5	15	25,3	22,0
551690-06-08	NA	08	13,0	1/2"	M18X1.5	12	25,1	19,0
551690-08-08	NA	08	13,0	1/2"	M22X1.5	15	26,1	22,0
551690-10-08	NA	08	13,0	1/2"	M26X1.5	18	27,1	27,0
551690-10-10	NA	10	16,0	5/8"	M26X1.5	18	27,1	27,0
551690-12-12	NA	12	19,0	3/4"	M30X2	22	31,6	32,0
551690-16-16	NA	16	25,0	1"	M36X2	28	34,4	36,0
551690-20-20	NA	20	32,0	1 1/4"	M45X2	35	40,0	46,0
551690-24-24	NA	24	38,0	1 1/2"	M52X2	42	42,0	55,0

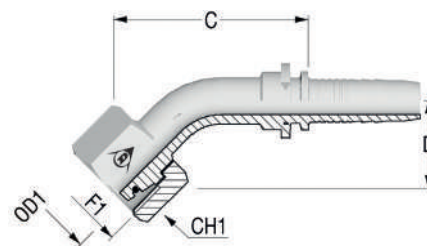
// A55146 - FEMMINA METRICA SV. 24° CON O'RING DIN 3865 SERIE LEGGERA - DKOL
 // METRIC FEMALE 24° CONE WITH O'RING - LIGHT - DIN 3865 - DKOL



Code	Nut Type	ID			F1	OD1	C	CH1
		Dash	mm	In		mm	mm	mm
A55146-03-03	SN	03	5,0	3/16"	M12X1.5	6	23,9	14,0
A55146-03-04	CR	04	6,0	1/4"	M12X1.5	6	20,3	14,0
A55146-04-04	TN	04	6,0	1/4"	M14X1.5	8	22,9	17,0
A55146-05-04	SN	04	6,0	1/4"	M16X1.5	10	25,4	19,0
A55146-06-04	SN	04	6,0	1/4"	M18X1.5	12	25,4	22,0
A55146-04-05	TN	05	8,0	5/16"	M14X1.5	8	47,7	17,0
A55146-05-05	TN	05	8,0	5/16"	M16X1.5	10	23,2	19,0
A55146-06-05	SN	05	8,0	5/16"	M18X1.5	12	25,4	22,0
A55146-05-06	TN	06	10,0	3/8"	M16X1.5	10	25,4	19,0
A55146-06-06	SN	06	10,0	3/8"	M18X1.5	12	25,4	22,0
A55146-08-06	SN	06	10,0	3/8"	M22X1.5	15	27,4	27,0
A55146-06-08	TN	08	13,0	1/2"	M18X1.5	12	24,0	22,0
A55146-08-08	TN	08	13,0	1/2"	M22X1.5	15	25,3	27,0
A55146-10-08	SN	08	13,0	1/2"	M26X1.5	18	29,2	32,0
A55146-08-10	TN	10	16,0	5/8"	M22X1.5	15	25,3	27,0
A55146-10-10	TN	10	16,0	5/8"	M26X1.5	18	25,0	32,0
A55146-10-12	TN	12	19,0	3/4"	M26X1.5	18	25,5	32,0
A55146-12-12	SN	12	19,0	3/4"	M30X2	22	31,7	36,0
A55146-16-12	SN	12	19,0	3/4"	M36X2	28	32,8	41,0
A55146-12-16	TN	16	25,0	1"	M30X2	22	44,6	36,0
A55146-16-16	SN	16	25,0	1"	M36X2	28	33,6	41,0
A55146-20-16	SN	16	25,0	1"	M45X2	35	38,5	50,0
A55146-20-20	SN	20	32,0	1 1/4"	M45X2	35	40,1	50,0
A55146-24-24	SN	24	38,0	1 1/2"	M52X2	42	40,5	60,0

**// A55A51 - FEMMINA 45° METRICA SV. 24° CON O'RING DIN 3865 SERIE
LEGGERA - DKOL 45**

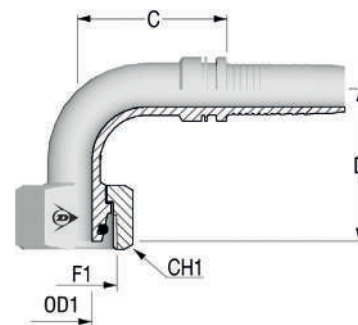
// 45° METRIC FEMALE 24° CONE WITH O'RING - LIGHT - DIN 3865 - DKOL 45



Code	Nut Type	ID			F1	OD1	C	D Drop	CH1
		Dash	mm	In		mm	mm	mm	mm
A55A51-03-03	SN	03	5,0	3/16"	M12X1.5	6	44,9	19,0	14,0
A55A51-03-04	CR	04	6,0	1/4"	M12X1.5	6	45,2	15,5	14,0
A55A51-04-04	SN	04	6,0	1/4"	M14X1.5	8	43,0	17,5	17,0
A55A51-05-04	SN	04	6,0	1/4"	M16X1.5	10	42,0	20,0	19,0
A55A51-04-05	SN	05	8,0	5/16"	M14X1.5	8	47,5	20,0	17,0
A55A51-05-05	SN	05	8,0	5/16"	M16X1.5	10	47,5	20,0	19,0
A55A51-06-05	SN	05	8,0	5/16"	M18X1.5	12	47,0	22,0	22,0
A55A51-05-06	TN	06	10,0	3/8"	M16X1.5	10	43,0	19,0	19,0
A55A51-06-06	SN	06	10,0	3/8"	M18X1.5	12	46,8	19,5	22,0
A55A51-06-08	TN	08	13,0	1/2"	M18X1.5	12	52,0	23,0	22,0
A55A51-08-08	SN	08	13,0	1/2"	M22X1.5	15	55,0	21,0	27,0
A55A51-10-10	SN	10	16,0	5/8"	M26X1.5	18	65,3	24,0	32,0
A55A51-10-12	TN	12	19,0	3/4"	M26X1.5	18	77,0	34,0	32,0
A55A51-12-12	SN	12	19,0	3/4"	M30X2	22	69,4	32,0	36,0
A55A51-12-16	TN	16	25,0	1"	M30X2	22	71,1	29,0	36,0
A55A51-16-16	SN	16	25,0	1"	M36X2	28	91,4	32,0	41,0
A55A51-20-20	SN	20	32,0	1 1/4"	M45X2	35	100,0	45,0	50,0
A55A51-24-24	SN	24	38,0	1 1/2"	M52X2	42	114,1	47,0	60,0

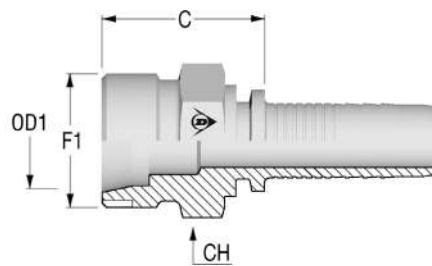
**// A55A50 - FEMMINA 90° METRICA SV. 24° CON O'RING DIN 3865 SERIE
LEGGERA - DKOL 90**

// 90° METRIC FEMALE 24° CONE WITH O'RING - LIGHT - DIN 3865 - DKOL 90



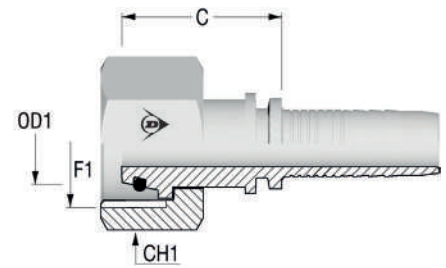
Code	Nut Type	ID			F1	OD1	C	D Drop	CH1
		Dash	mm	In		mm	mm	mm	mm
A55A50-03-04	TN	04	6,0	1/4"	M12X1.5	6	29,0	34,0	14,0
A55A50-04-04	SN	04	6,0	1/4"	M14X1.5	8	28,3	32,5	17,0
A55A50-05-04	SN	04	6,0	1/4"	M16X1.5	10	28,3	32,5	19,0
A55A50-06-04	SN	04	6,0	1/4"	M18X1.5	12	28,8	35,0	22,0
A55A50-05-05	SN	05	8,0	5/16"	M16X1.5	10	33,7	38,0	19,0
A55A50-06-05	SN	05	8,0	5/16"	M18X1.5	12	32,2	40,0	22,0
A55A50-05-06	TN	06	10,0	3/8"	M16X1.5	10	35,0	36,0	19,0
A55A50-06-06	SN	06	10,0	3/8"	M18X1.5	12	32,8	39,0	22,0
A55A50-08-06	SN	06	10,0	3/8"	M22X1.5	15	35,8	38,5	27,0
A55A50-06-08	TN	08	13,0	1/2"	M18X1.5	12	42,0	44,0	22,0
A55A50-08-08	SN	08	13,0	1/2"	M22X1.5	15	39,8	40,5	27,0
A55A50-10-08	SN	08	13,0	1/2"	M26X1.5	18	39,8	41,0	32,0
A55A50-08-10	SN	10	16,0	5/8"	M22X1.5	15	51,4	47,0	27,0
A55A50-10-10	SN	10	16,0	5/8"	M26X1.5	18	51,4	48,0	32,0
A55A50-12-10	SN	10	16,0	5/8"	M30X2	22	52,4	49,0	36,0
A55A50-10-12	TN	12	19,0	3/4"	M26X1.5	18	60,0	64,0	32,0
A55A50-12-12	SN	12	19,0	3/4"	M30X2	22	52,1	59,0	36,0
A55A50-16-12	SN	12	19,0	3/4"	M36X2	28	60,0	63,0	41,0
A55A50-12-16	TN	16	25,0	1"	M30X2	22	66,0	64,0	36,0
A55A50-16-16	SN	16	25,0	1"	M36X2	28	75,0	68,0	41,0
A55A50-16-20	TN	20	32,0	1 1/4"	M36X2	28	92,2	86,0	41,0
A55A50-20-20	SN	20	32,0	1 1/4"	M45X2	35	90,5	89,0	50,0
A55A50-24-24	SN	24	38,0	1 1/2"	M52X2	42	106,5	100,0	60,0

// 551700 - MASCHIO METRICO SV. 24° DIN 3853 SERIE PESANTE - CES
// METRIC MALE 24° SEAT - HEAVY - DIN 3853 - CES



Code	Nut Type	ID			F1	OD1	C	CH
		Dash	mm	In		mm	mm	mm
551700-02-04	NA	04	6,0	1/4"	M14X1.5	6	24,3	17,0
551700-03-04	NA	04	6,0	1/4"	M16X1.5	8	24,3	17,0
551700-04-04	NA	04	6,0	1/4"	M18X1.5	10	25,3	19,0
551700-05-05	NA	05	8,0	5/16"	M20X1.5	12	25,3	22,0
551700-04-06	NA	06	10,0	3/8"	M18X1.5	10	25,3	19,0
551700-05-06	NA	06	10,0	3/8"	M20X1.5	12	25,3	22,0
551700-06-06	NA	06	10,0	3/8"	M22X1.5	14	27,3	22,0
551700-06-08	NA	08	13,0	1/2"	M22X1.5	14	28,1	22,0
551700-08-08	NA	08	13,0	1/2"	M24X1.5	16	29,1	24,0
551700-10-08	NA	08	13,0	1/2"	M30X2	20	33,1	32,0
551700-10-10	NA	10	16,0	5/8"	M30X2	20	33,1	32,0
551700-10-12	NA	12	19,0	3/4"	M30X2	20	33,6	32,0
551700-12-12	NA	12	19,0	3/4"	M36X2	25	37,6	36,0
551700-12-16	NA	16	25,0	1"	M36X2	25	38,4	36,0
551700-16-16	NA	16	25,0	1"	M42X2	30	42,4	46,0
551700-20-20	NA	20	32,0	1 1/4"	M52X2	38	48,0	55,0

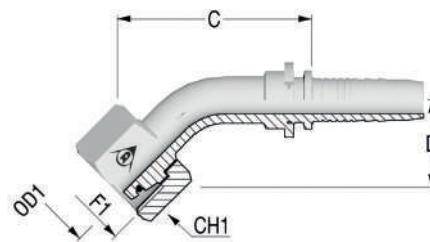
// A55179 - FEMMINA METRICA SV. 24° CON O'RING DIN 3865 SERIE PESANTE - DKOS
// METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS



Code	Nut Type	ID			F1	OD1	C	CH1
		Dash	mm	In		mm	mm	mm
A55179-03-03	SN	03	5,0	3/16"	M16X1.5	8	27,2	19,0
A55179-03-04	SN	04	6,0	1/4"	M16X1.5	8	27,7	19,0
A55179-04-04	SN	04	6,0	1/4"	M18X1.5	10	27,6	22,0
A55179-05-04	SN	04	6,0	1/4"	M20X1.5	12	27,6	24,0
A55179-04-05	SN	05	8,0	5/16"	M18X1.5	10	27,6	22,0
A55179-05-05	SN	05	8,0	5/16"	M20X1.5	12	27,6	24,0
A55179-04-06	TN	06	10,0	3/8"	M18X1.5	10	22,3	22,0
A55179-05-06	SN	06	10,0	3/8"	M20X1.5	12	27,6	24,0
A55179-06-06	SN	06	10,0	3/8"	M22X1.5	14	31,1	27,0
A55179-08-06	SN	06	10,0	3/8"	M24X1.5	16	30,9	30,0
A55179-05-08	TN	08	13,0	1/2"	M20X1.5	12	23,2	24,0
A55179-06-08	SN	08	13,0	1/2"	M22X1.5	14	31,9	27,0
A55179-08-08	SN	08	13,0	1/2"	M24X1.5	16	31,7	30,0
A55179-10-08	SN	08	13,0	1/2"	M30X2	20	36,5	36,0
A55179-10-10	SN	10	16,0	5/8"	M30X2	20	36,5	36,0
A55179-10-12	SN	12	19,0	3/4"	M30X2	20	37,0	36,0
A55179-12-12	SN	12	19,0	3/4"	M36X2	25	40,2	46,0
A55179-10-16	TN	16	25,0	1"	M30X2	20	29,8	36,0
A55179-12-16	SN	16	25,0	1"	M36X2	25	41,0	46,0
A55179-16-16	SN	16	25,0	1"	M42X2	30	43,1	50,0
A55179-16-20	SN	20	32,0	1 1/4"	M42X2	30	44,7	50,0
A55179-20-20	SN	20	32,0	1 1/4"	M52X2	38	48,1	60,0
A55179-20-24	SN	24	38,0	1 1/2"	M52X2	38	48,1	60,0

// A55A56 - FEMMINA 45° METRICA SV. 24° CON O'RING DIN 3865 SERIE PESANTE - DKOS 45

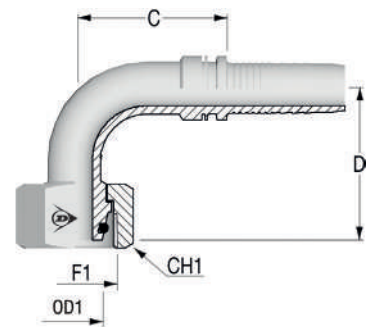
// 45° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 45



Code	Nut Type	ID			F1	OD1	C	D Drop	CH1
		Dash	mm	In		mm	mm	mm	mm
A55A56-03-04	SN	04	6,0	1/4"	M16X1.5	8	48,6	16,0	19,0
A55A56-04-04	SN	04	6,0	1/4"	M18X1.5	10	43,5	19,0	22,0
A55A56-05-05	SN	05	8,0	5/16"	M20X1.5	12	48,1	21,0	24,0
A55A56-05-06	SN	06	10,0	3/8"	M20X1.5	12	50,6	20,0	24,0
A55A56-06-06	SN	06	10,0	3/8"	M22X1.5	14	52,9	21,0	27,0
A55A56-05-08	TN	08	13,0	1/2"	M20X1.5	12	54,0	24,0	24,0
A55A56-08-08	SN	08	13,0	1/2"	M24X1.5	16	55,8	21,5	30,0
A55A56-10-10	SN	10	16,0	5/8"	M30X2	20	66,3	30,0	36,0
A55A56-10-12	SN	12	19,0	3/4"	M30X2	20	66,1	29,0	36,0
A55A56-12-12	SN	12	19,0	3/4"	M36X2	25	69,5	33,0	46,0
A55A56-12-16	SN	16	25,0	1"	M36X2	25	89,7	36,0	46,0
A55A56-16-16	SN	16	25,0	1"	M42X2	30	110,3	40,5	50,0
A55A56-20-20	SN	20	32,0	1 1/4"	M52X2	38	109,0	45,0	60,0

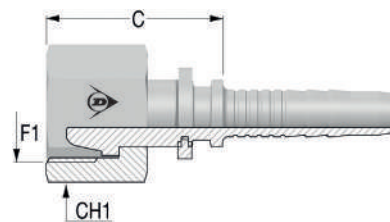
// A55A57 - FEMMINA 90° METRICA SV. 24° CON O'RING DIN 3865 SERIE PESANTE - DKOS 90

// 90° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 90



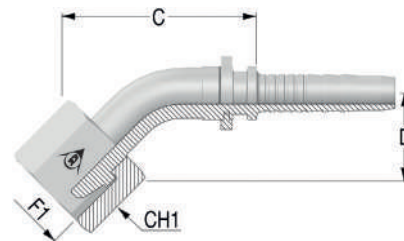
Code	Nut Type	ID			F1	OD1	C	D Drop	CH1
		Dash	mm	In		mm	mm	mm	mm
A55A57-03-04	SN	04	6,0	1/4"	M16X1.5	8	27,3	33,0	19,0
A55A57-04-04	SN	04	6,0	1/4"	M18X1.5	10	26,8	34,0	22,0
A55A57-04-05	SN	05	8,0	5/16"	M18X1.5	10	33,2	39,0	22,0
A55A57-05-05	SN	05	8,0	5/16"	M20X1.5	12	33,2	39,0	24,0
A55A57-04-06	TN	06	10,0	3/8"	M18X1.5	10	35,0	38,0	22,0
A55A57-05-06	SN	06	10,0	3/8"	M20X1.5	12	34,3	38,5	24,0
A55A57-06-06	SN	06	10,0	3/8"	M22X1.5	14	34,3	40,5	27,0
A55A57-05-08	TN	08	13,0	1/2"	M20X1.5	12	40,0	45,0	24,0
A55A57-08-08	SN	08	13,0	1/2"	M24X1.5	16	39,8	41,5	30,0
A55A57-10-08	SN	08	13,0	1/2"	M30X2	20	45,8	50,0	36,0
A55A57-08-10	TN	10	16,0	5/8"	M24X1.5	16	52,0	56,0	30,0
A55A57-10-10	SN	10	16,0	5/8"	M30X2	20	47,9	55,0	36,0
A55A57-10-12	SN	12	19,0	3/4"	M30X2	20	50,6	58,0	36,0
A55A57-12-12	SN	12	19,0	3/4"	M36X2	25	50,6	59,5	46,0
A55A57-12-16	SN	16	25,0	1"	M36X2	25	77,6	73,5	46,0
A55A57-16-16	SN	16	25,0	1"	M42X2	30	75,6	79,0	50,0
A55A57-16-20	TN	20	32,0	1 1/4"	M42X2	30	94,0	92,0	50,0
A55A57-20-20	SN	20	32,0	1 1/4"	M52X2	38	94,0	92,0	60,0

// A55145 - FEMMINA UNIVERSALE METRICA - DKL
// UNIVERSAL METRIC FEMALE - DKL



Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In	Dash Size		mm	mm
A55145-04-04	SN	04	6,0	1/4"	14	M14X1.5	22,3	17,0
A55145-05-04	SN	04	6,0	1/4"	16	M16X1.5	21,8	19,0
A55145-06-04	SN	04	6,0	1/4"	18	M18X1.5	22,3	22,0
A55145-05-05	SN	05	8,0	5/16"	16	M16X1.5	22,3	19,0
A55145-06-05	SN	05	8,0	5/16"	18	M18X1.5	22,3	22,0
A55145-06-06	SN	06	10,0	3/8"	18	M18X1.5	22,3	22,0
A55145-08-08	SN	08	13,0	1/2"	22	M22X1.5	24,7	27,0
A55145-10-10	SN	10	16,0	5/8"	26	M26X1.5	25,1	32,0

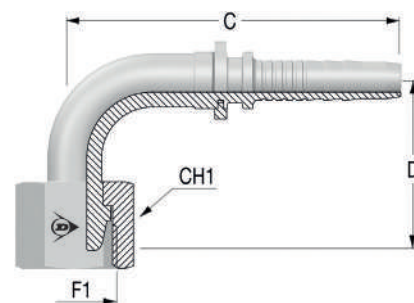
// A55985 - FEMMINA 45° UNIVERSALE - DKL
// 45° UNIVERSAL METRIC FEMALE - DKL



Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A55985-04-04	SN	04	6,0	1/4"	14	M14X1.5	36,5	16,0	17,0
A55985-05-05	SN	05	8,0	5/16"	16	M16X1.5	42,1	19,0	19,0
A55985-06-06	SN	06	10,0	3/8"	18	M18X1.5	42,8	20,0	22,0
A55985-08-08	SN	08	13,0	1/2"	22	M22X1.5	54,9	20,0	27,0
A55985-10-10	SN	10	16,0	5/8"	26	M26X1.5	54,0	22,0	32,0

// A55975 - FEMMINA 90° UNIVERSALE - DKL

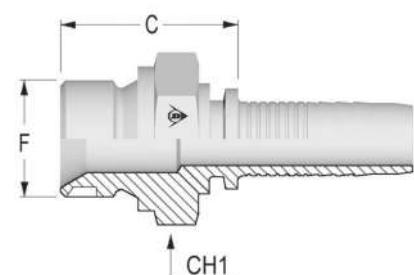
// 90° UNIVERSAL METRIC FEMALE - DKL



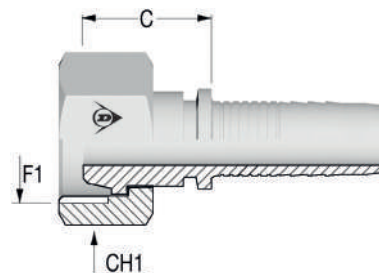
Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash Size	F1			
A55975-04-04	SN	04	6,0	1/4"	14	M14X1.5	29,9	28,5	17,0
A55975-05-04	SN	04	6,0	1/4"	16	M16X1.5	28,3	33,0	19,0
A55975-05-05	SN	05	8,0	5/16"	16	M16X1.5	34,2	36,0	19,0
A55975-06-05	SN	05	8,0	5/16"	18	M18X1.5	34,0	32,0	22,0
A55975-06-06	SN	06	10,0	3/8"	18	M18X1.5	32,8	37,0	22,0
A55975-08-06	SN	06	10,0	3/8"	22	M22X1.5	32,3	36,0	27,0
A55975-08-08	SN	08	13,0	1/2"	22	M22X1.5	39,8	40,0	27,0
A55975-10-10	SN	10	16,0	5/8"	26	M26X1.5	51,0	46,0	32,0

// 551800 - MASCHIO METRICO SV. 60° - CEM

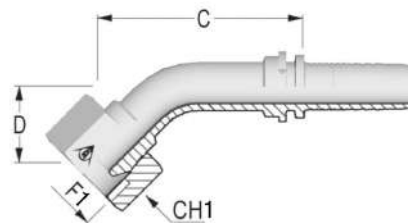
// METRIC MALE 60° CONE - CEM



Code	ID			F1	
	Dash	mm	In	Dash size	F1
551800-03-03	03	5,0	3/16"	12	M12X1,5
551800-03-04	04	6,0	1/4"	12	M12X1,5
551800-04-04	04	6,0	1/4"	14	M14X1,5
551800-05-04	04	6,0	1/4"	16	M16X1,5
551800-05-05	05	8,0	5/16"	16	M16X1,5
551800-06-05	05	8,0	5/16"	18	M18X1,5
551800-04-06	06	10,0	3/8"	14	M14X1,5
551800-05-06	06	10,0	3/8"	16	M16X1,5
551800-06-06	06	10,0	3/8"	18	M18X1,5
551800-08-08	08	13,0	1/2"	22	M22X1,5
551800-10-10	10	16,0	1"	26	M26X1,5

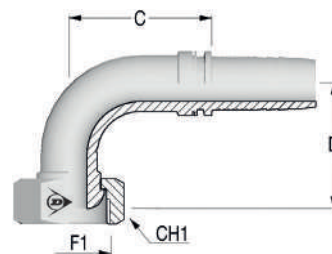
// A55140 - FEMMINA METRICA SV. 60° DIN 3863 - DKM
// METRIC FEMALE 60° CONE - DIN 3863 - DKM


Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In				
A55140-02-03	SN	03	5,0	3/16"	10	M10X1	19,0	15
A55140-03-03	SN	03	5,0	3/16"	12	M12X1.5	19,0	17
A55140-03-04	SN	04	6,0	1/4"	12	M12X1.5	19,0	17
A55140-04-04	SN	04	6,0	1/4"	14	M14X1.5	18,0	17
A55140-05-04	SN	04	6,0	1/4"	16	M16X1.5	20,0	22
A55140-05-05	SN	05	8,0	5/16"	16	M16X1.5	20,0	22
A55140-06-05	SN	05	8,0	5/16"	18	M18X1.5	20,0	22
A55140-05-06	SN	06	10,0	3/8"	16	M16X1.5	20,0	22
A55140-06-06	SN	06	10,0	3/8"	18	M18X1.5	20,0	22
A55140-07-06	SN	06	10,0	3/8"	20	M20X1.5	22,0	27
A55140-08-06	SN	06	10,0	3/8"	22	M22X1.5	22,0	27
A55140-07-08	SN	08	13,0	1/2"	20	M20X1.5	23,0	27
A55140-08-08	SN	08	13,0	1/2"	22	M22X1.5	23,0	27
A55140-10-08	SN	08	13,0	1/2"	26	M26X1.5	25,0	32
A55140-10-10	SN	10	16,0	5/8"	26	M26X1.5	25,0	32
A55140-10-12	SN	12	19,0	3/4"	26	M26X1.5	26,0	32
A55140-12-12	SN	12	19,0	3/4"	30	M30X1.5	26,0	36
A55140-16-16	SN	16	25,0	1"	38	M38X1.5	30,0	46

// A55A41 - FEMMINA 45° METRICA SV. 60° DIN 3863 - DKM
// METRIC FEMALE 45° CONE - DIN 3863 - DKM


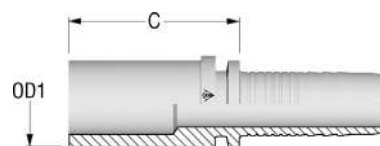
Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In				
A55A41-04-04	SN	04	6,0	1/4"	14x1,5	36,0	14,0	17,0
A55A41-05-04	SN	04	6,0	1/4"	16x1,5	37,5	16,0	22,0
A55A41-06-04	SN	04	6,0	1/4"	18x1,5	37,5	16,0	22,0
A55A41-05-05	SN	05	8,0	5/16"	16x1,5	44,0	17,0	22,0
A55A41-06-05	SN	05	8,0	5/16"	18x1,5	44,0	17,0	22,0
A55A41-05-06	SN	06	10,0	3/8"	16x1,5	48,0	18,0	22,0
A55A41-06-06	SN	06	10,0	3/8"	18x1,5	48,0	20,0	22,0
A55A41-07-06	SN	06	10,0	3/8"	20x1,5	49,5	20,0	27,0
A55A41-08-06	SN	06	10,0	3/8"	22x1,5	49,5	20,0	27,0
A55A41-07-08	SN	08	13,0	1/2"	20x1,5	58,5	22,0	27,0
A55A41-08-08	SN	08	13,0	1/2"	22x1,5	58,5	22,0	27,0
A55A41-10-10	SN	10	16,0	5/8"	26x1,5	68,0	25,0	32,0
A55A41-10-12	SN	12	19,0	3/4"	26x1,5	68,0	28,0	32,0
A55A41-16-16	SN	16	25,0	1"	38x1,5	85,0	33,0	46,0
A55A41-20-20	SN	20	32,0	1 1/4"	45x1,5	85,0	40,0	50,0

// A55A40 - FEMMINA 90° METRICA SV. 60° DIN 3863 - DKM
// 90° METRIC FEMALE 60° CONE - DIN 3863 - DKM



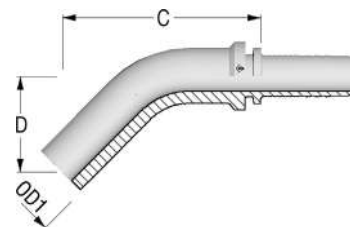
Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A55A40-04-04	SN	04	6,0	1/4"	14	M14X1.5	23,0	26,0	17,0
A55A40-05-04	SN	04	6,0	1/4"	16	M16X1.5	23,0	28,0	22,0
A55A40-05-05	SN	05	8,0	5/16"	16	M16X1.5	29,0	32,5	22,0
A55A40-06-05	SN	05	8,0	5/16"	18	M18X1.5	29,0	32,5	22,0
A55A40-05-06	SN	06	10,0	3/8"	16	M16X1.5	33,0	35,5	22,0
A55A40-06-06	SN	06	10,0	3/8"	18	M18X1.5	33,0	35,5	22,0
A55A40-07-06	SN	06	10,0	3/8"	20	M20X1.5	33,0	37,5	27,0
A55A40-08-06	SN	06	10,0	3/8"	22	M22X1.5	33,0	37,5	27,0
A55A40-07-08	SN	08	13,0	1/2"	20	M20X1.5	39,5	43,0	27,0
A55A40-08-08	SN	08	13,0	1/2"	22	M22X1.5	39,5	43,0	27,0
A55A40-10-10	SN	10	16,0	5/8"	26	M26X1.5	47,5	51,0	32,0
A55A40-10-12	SN	12	19,0	3/4"	26	M26X1.5	55,5	57,0	32,0
A55A40-12-12	SN	12	19,0	3/4"	30	M30X1.5	60,0	60,0	32,0
A55A40-16-16	SN	16	25,0	1"	38	M38X1.5	68,0	69,0	46,0
A55A40-20-20	SN	20	32,0	1" 1/4	45	M45X1.5	68,0	85,0	50,0

// 550930 - 550940 - ESTREMITÀ TUBOLARE METRICA DIN 2353 - RSL/RSS
// METRIC STRAIGHT STANDPIPE - DIN 2353 - RSL/RSS



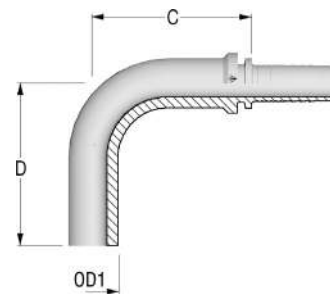
Code	ID			OD1	C
	Dash	mm	In	mm	mm
550940-02-03	03	5,0	3/16"	06S	27,8
550940-03-03	03	5,0	3/16"	08S	29,8
550930-03-04	04	6,0	1/4"	06L	28,3
550930-04-04	04	6,0	1/4"	08L	30,2
550940-04-04	04	6,0	1/4"	10S	32,2
550930-06-04	04	6,0	1/4"	12L	31,2
550930-04-05	05	8,0	5/16"	08L	30,3
550930-05-05	05	8,0	5/16"	10L	30,2
550940-05-05	05	8,0	5/16"	12S	32,7
550930-05-06	06	10,0	3/8"	10L	30,3
550930-06-06	06	10,0	3/8"	12L	29,3
550940-06-06	06	10,0	3/8"	14S	35,8
550930-08-06	06	10,0	3/8"	15L	34,8
550930-05-08	08	13,0	1/2"	10L	32,5
550930-06-08	08	13,0	1/2"	12L	32,1
550940-06-08	08	13,0	1/2"	14S	36,1
550930-08-08	08	13,0	1/2"	15L	32,1
550940-08-08	08	13,0	1/2"	16S	37,1
550930-10-08	08	13,0	1/2"	18L	36,0
550930-10-10	10	16,0	5/8"	18L	34,2
550940-10-10	10	16,0	5/8"	20S	44,2
550930-12-10	10	16,0	5/8"	22L	37,2
550940-10-12	12	19,0	3/4"	20S	45,5
550930-12-12	12	19,0	3/4"	22L	36,5
550940-12-12	12	19,0	3/4"	25S	48,5
550940-12-16	16	25,0	1"	25S	51,4
550930-16-16	16	25,0	1"	28L	40,4
550940-16-16	16	25,0	1"	30S	54,4
550940-20-16	16	25,0	1"	38S	60,4
550940-16-20	20	32,0	1 1/4"	30S	56,0
550930-20-20	20	32,0	1 1/4"	35L	48,0
550940-20-20	20	32,0	1 1/4"	38S	62,0
550940-20-24	24	38,0	1 1/2"	38S	62,0
550930-24-24	24	38,0	1 1/2"	42L	52,0

// 559490 - 559500- ESTREMITÀ TUBOLARE METRICA 45° DIN 2353 - RSL 45/RSS 45
// 45° METRIC STANDPIPE - DIN 2353 - RSL 45/RSS 45



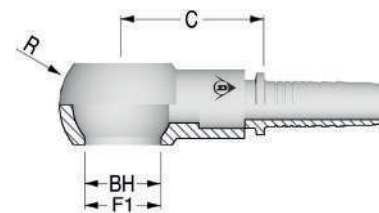
Code	ID			OD1	C	D Drop
	Dash	mm	In	mm	mm	mm
559490-03-04	04	6,0	1/4"	06L	50,1	28,0
559490-04-04	04	6,0	1/4"	08L	43,2	23,0
559500-04-04	04	6,0	1/4"	10S	48,0	24,0
559490-05-05	05	8,0	5/16"	10L	48,4	24,0
559500-05-05	05	8,0	5/16"	12S	49,0	24,0
559490-06-05	05	8,0	5/16"	12L	55,4	28,0
559490-05-06	06	10,0	3/8"	10L	48,5	24,0
559490-06-06	06	10,0	3/8"	12L	55,5	28,0
559500-06-06	06	10,0	3/8"	14S	53,1	28,0
559490-08-08	08	13,0	1/2"	15L	62,6	28,5
559500-08-08	08	13,0	1/2"	16S	63,3	32,0
559490-10-08	08	13,0	1/2"	18L	65,0	30,5
559490-10-10	10	16,0	5/8"	18L	65,0	30,5
559500-10-10	10	16,0	5/8"	18S	73,0	38,0
559500-12-10	10	16,0	5/8"	20S	89,2	35,0
559490-12-12	12	19,0	3/4"	22L	74,3	37,0
559500-12-12	12	19,0	3/4"	25S	83,0	44,0
559490-16-16	16	25,0	1"	28L	83,0	44,0
559500-16-16	16	25,0	1"	30S	137,0	46,1

// 559390- 559400 ESTREMITÀ TUBOLARE METRICA 90° DIN 2353 - RLS 90/RSS
 // 90° METRIC STANDPIPE - DIN 2353 - RLS 90/RSS



Code	ID			OD1	C	D Drop
	Dash	mm	In	mm	mm	mm
559400-02-03	03	5,0	3/16"	06S	24,5	36,0
559390-03-04	04	6,0	1/4"	06L	25,4	36,0
559390-04-04	04	6,0	1/4"	08L	25,9	44,0
559400-04-04	04	6,0	1/4"	10S	37,0	42,0
559390-06-04	04	6,0	1/4"	12L	38,0	50,0
559390-05-05	05	8,0	5/16"	10L	28,6	48,5
559400-05-05	05	8,0	5/16"	12S	39,4	55,0
559390-05-06	06	10,0	3/8"	10L	30,7	42,0
559390-06-06	06	10,0	3/8"	12L	35,0	50,0
559400-06-06	06	10,0	3/8"	14S	37,0	50,0
559390-06-08	08	13,0	1/2"	12L	41,1	52,0
559390-08-08	08	13,0	1/2"	15L	44,7	57,0
559400-08-08	08	13,0	1/2"	16S	43,7	64,0
559390-10-08	08	13,0	1/2"	18L	58,1	59,0
559390-10-10	10	16,0	5/8"	18L	52,2	58,0
559400-10-10	10	16,0	5/8"	20S	62,6	70,0
559390-12-10	10	16,0	5/8"	22L	49,4	64,0
559400-10-12	12	19,0	3/4"	20S	63,4	70,0
559390-12-12	12	19,0	3/4"	22L	53,1	67,5
559400-12-12	12	19,0	3/4"	25S	63,2	85,0
559400-12-16	16	25,0	1"	25S	73,1	98,5
559390-16-16	16	25,0	1"	28L	73,1	89,5
559400-16-16	16	25,0	1"	30S	73,1	102,5
559390-20-20	20	32,0	1 1/4"	35L	89,0	106,5

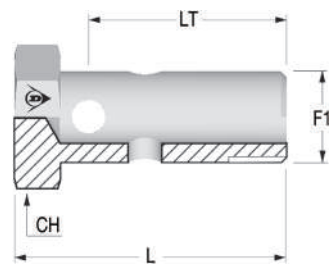
// 55A170 - OCCHIO METRICO - RNM
 // METRIC BANJO - RNM



Code	ID			F1	C	BH	R
	Dash	mm	In		mm	mm	mm
55A170-03-03	03	5,0	3/16"	M10X1.0	24,0	10,00	17
55A170-03-04	04	6,0	1/4"	M10X1.0	25,0	10,00	17
55A170-04-04	04	6,0	1/4"	M12X1.5	28,5	12,00	20
55A170-05-04	04	6,0	1/4"	M14X1.5	27,5	14,00	24
55A170-04-05	05	8,0	5/16"	M12X1.5	28,5	12,00	24
55A170-05-05	05	8,0	5/16"	M14X1.5	27,5	14,00	24
55A170-06-05	05	8,0	5/16"	M16X1.5	30,5	16,00	28
55A170-08-05	05	8,0	5/16"	M18X1.5	28,5	18,00	32
55A170-05-06	06	10,0	3/8"	M14X1.5	27,5	14,00	24
55A170-06-06	06	10,0	3/8"	M16X1.5	30,5	16,00	28
55A170-08-06	06	10,0	3/8"	M18X1.5	31,5	18,00	32
55A170-08-08	08	13,0	1/2"	M18X1.5	32,0	18,00	32
55A170-12-08	08	13,0	1/2"	M22X1.5	35,0	22,00	39
55A170-12-10	10	16,0	5/8"	M22X1.5	35,0	22,00	39
55A170-20-12	12	19,0	3/4"	M26X1.5	38,5	26,00	46
55A170-24-16	16	25,0	1"	M30X1.5	42,5	30,00	54

// 003020 - VITE FORATA METRICA

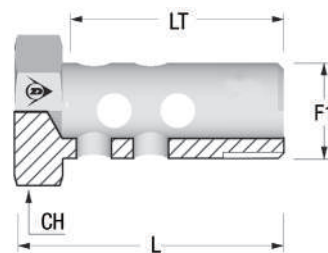
// METRIC BOLT



Code	ID	F1	CH	LT	L
	Dash		mm	mm	mm
003020-03	10	M10X1.0	14,0	19,00	24,0
003020-04	12	M12X1.5	17,0	24,00	29,0
003020-05	14	M14X1.5	19,0	28,00	34,0
003020-06	16	M16X1.5	22,0	34,00	41,0
003020-08	18	M18X1.5	24,0	37,00	44,0
003020-10	20	M20X1.5	32,0	42,00	52,0
003020-12	22	M22X1.5	27,0	41,00	48,0
003020-20	26	M26X1.5	32,0	42,00	52,0
003020-24	30	M30X1.5	38,0	51,00	62,0

// DD3020 - VITE FORATA METRICA DOPPIA

// DUAL METRIC BOLT

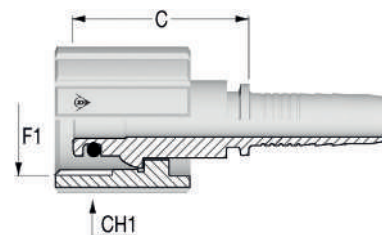


Code	ID	F1	CH	LT	L
	Dash		mm	mm	mm
DD3020-03	10	10X1.0	14,0	33,00	38,0
DD3020-04	12	12X1.5	17,0	37,00	43,0
DD3020-05	14	14X1.5	19,0	43,00	49,0
DD3020-06	16	16X1.5	22,0	51,00	58,0
DD3020-08	18	18X1.5	24,0	57,00	65,0
DD3020-10	22	22X1.5	27,0	63,00	71,0

// SUPERTRAK - INSERTI PER IDROPULITRICE PRESSURE WASHER

// A55100 - FEMMINA UNIVERSALE PER IDROPULITRICE

// UNIVERSAL FEMALE FOR PRESSURE WASHER

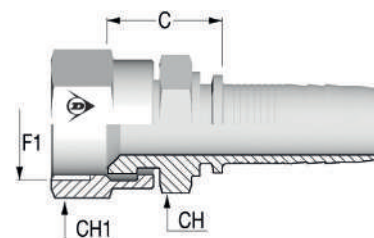


Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In	Dash Size		mm	mm
A55100-05-04	TN	04	6,0	1/4"	22	M22X1.5	36,8	35,0
A55100-05-05	TN	05	8,0	5/16"	22	M22X1.5	36,8	35,0
A55100-05-06	TN	06	10,0	3/8"	22	M22X1.5	36,8	35,0

// SUPERTRAK - INSERTI SAE SAE INSERTS

// A55004 - FEMMINA SAE SV. 45°

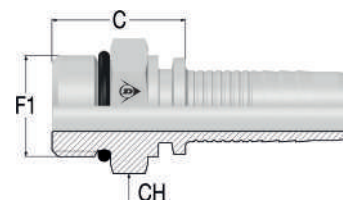
// SAE FEMALE SWIVEL 45° SEAT



Code	Nut Type	ID			F1	F1	C	CH	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A55004-06-06	CR	06	10,0	3/8"	06	5/8-18	23,3	19,0	22,0
A55004-10-08	CR	08	13,0	1/2"	10	7/8-14	26,6	22,0	27,0
A55004-12-12	CR	12	19,0	3/4"	12	1 1/16-14	28,6	27,0	32,0

// 550180 - MASCHIO SAE CON O'RING

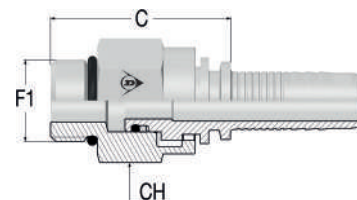
// SAE MALE SOLID - O'RING BOSS



Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
550180-04-04	NA	04	6,0	1/4"	04	7/16-20	20,3	14,0
550180-05-04	NA	04	6,0	1/4"	05	1/2-20	21,3	16,0
550180-06-04	NA	04	6,0	1/4"	06	9/16-18	22,3	17,0
550180-06-06	NA	06	10,0	3/8"	06	9/16-18	23,3	19,0
550180-08-06	NA	06	10,0	3/8"	08	3/4-16	24,3	22,0
550180-10-06	NA	06	10,0	3/8"	10	7/8-14	26,8	27,0
550180-08-08	NA	08	13,0	1/2"	08	3/4-16	25,1	22,0
550180-10-08	NA	08	13,0	1/2"	10	7/8-14	27,6	27,0
550180-12-08	NA	08	13,0	1/2"	12	1 1/16-12	32,1	32,0
550180-10-10	NA	10	16,0	5/8"	10	7/8-14	27,6	24,0
550180-10-12	NA	12	19,0	3/4"	10	7/8-14	28,1	27,0
550180-12-12	NA	12	19,0	3/4"	12	1 1/16-12	32,6	32,0
550180-16-16	NA	16	25,0	1"	16	1 5/16-12	35,4	38,0
550180-20-20	NA	20	32,0	1 1/4"	20	1 5/8-12	39,0	46,0

// 550480 - MASCHIO SAE GIREVOLE CON O'RING

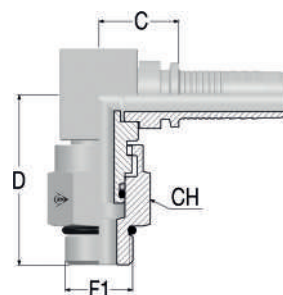
// SAE MALE SWIVEL - O'RING BOSS



Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
550480-06-06	CR	06	10,0	3/8"	06	9/16-18	40,5	22,0
550480-08-06	CR	06	10,0	3/8"	08	3/4-16	22,0	22,0
550480-08-08	CR	08	13,0	1/2"	08	3/4-16	23,0	25,0
550480-10-08	CR	08	13,0	1/2"	10	7/8-14	23,0	25,0
550480-12-12	CR	12	19,0	3/4"	12	1 1/16-12	49,6	32,0

// 550485 - MASCHIO 90° SAE GIREVOLE COMPATTO CON O'RING

// 90° COMPACT SAE MALE SWIVEL - O'RING BOSS

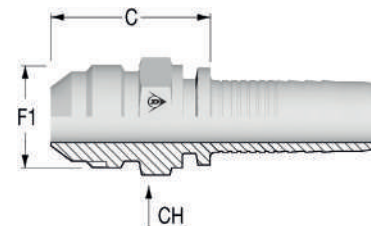


Code	Nut Type	ID			F1	F1	C	D Drop	CH
		Dash	mm	In	Dash Size		mm	mm	mm
550485-05-04	CR	04	6,0	1/4"	05	1/2-20	17,0	34,0	17,0
550485-08-06	CR	06	10,0	3/8"	08	3/4-16	22,0	44,0	25,0
550485-08-08	CR	08	13,0	1/2"	08	3/4-16	23,0	47,0	25,0
550485-10-08	CR	08	13,0	1/2"	10	7/8-14	23,0	49,0	25,0
550485-12-12	CR	12	19,0	3/4"	12	1 1/16-12	27,0	61,0	32,0
550485-16-16	CR	16	25,0	1"	16	1 5/16-12	34,4	67,5	41,0

// SUPERTRAK - INSERTI JIC 37 JIC 37° INSERTS

// 550200 - MASCHIO JIC SV. 37° - AGJ

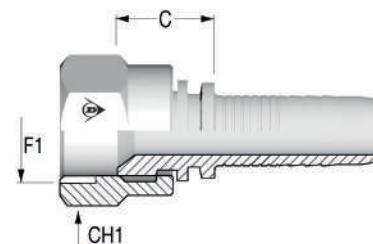
// JIC MALE 37° CONE - AGJ



Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
550200-04-03	NA	03	5,0	3/16"	04	7/16-20	23,8	12,0
550200-04-04	NA	04	6,0	1/4"	04	7/16-20	25,3	12,0
550200-05-04	NA	04	6,0	1/4"	05	1/2-20	25,3	14,0
550200-06-04	NA	04	6,0	1/4"	06	9/16-18	26,3	17,0
550200-05-05	NA	05	8,0	5/16"	05	1/2-20	25,3	14,0
550200-06-05	NA	05	8,0	5/16"	06	9/16-18	26,3	17,0
550200-08-05	NA	05	8,0	5/16"	08	3/4-16	29,8	19,0
550200-06-06	NA	06	10,0	3/8"	06	9/16-18	26,3	17,0
550200-08-06	NA	06	10,0	3/8"	08	3/4-16	29,8	19,0
550200-10-06	NA	06	10,0	3/8"	10	7/8-14	33,8	24,0
550200-08-08	NA	08	13,0	1/2"	08	3/4-16	30,6	19,0
550200-10-08	NA	08	13,0	1/2"	10	7/8-14	34,6	24,0
550200-12-08	NA	08	13,0	1/2"	12	1 1/16-12	37,1	27,0
550200-10-10	NA	10	16,0	5/8"	10	7/8-14	34,6	24,0
550200-12-10	NA	10	16,0	5/8"	12	1 1/16-12	37,1	27,0
550200-12-12	NA	12	19,0	3/4"	12	1 1/16-12	37,6	27,0
550200-14-12	NA	12	19,0	3/4"	14	1 3/16-12	40,1	32,0
550200-16-12	NA	12	19,0	3/4"	16	1 5/16-12	42,6	36,0
550200-12-16	NA	16	25,0	1"	12	1 1/16-12	40,4	32,0
550200-16-16	NA	16	25,0	1"	16	1 5/16-12	43,4	36,0
550200-20-16	NA	16	25,0	1"	20	1 5/8-12	46,9	46,0
550200-20-20	NA	20	32,0	1 1/4"	20	1 5/8-12	48,5	46,0
550200-24-20	NA	20	32,0	1 1/4"	24	1 7/8-12	52,5	50,0
550200-24-24	NA	24	38,0	1 1/2"	24	1 7/8-12	52,5	50,0
550200-32-32	NA	32	51,0	2"	32	2 1/2-12	62,0	65,0

// A55005 - FEMMINA JIC SV. 37° - DKJ

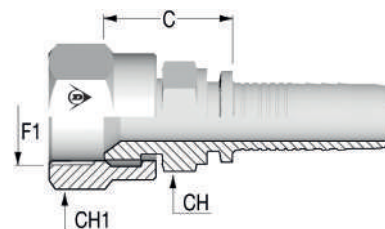
// JIC FEMALE 37° SEAT - DKJ



Code	Nut Type	ID			F1		C	CH1
		Dash	mm	In	Dash Size	F1		
A55005-04-03	CR	03	5,0	3/16"	04	7/16-20	14,3	16,0
A55005-04-04	CR	04	6,0	1/4"	04	7/16-20	14,6	16,0
A55005-05-04	CR	04	6,0	1/4"	05	1/2-20	15,3	17,0
A55005-06-04	CR	04	6,0	1/4"	06	9/16-18	15,3	19,0
A55005-05-05	CR	05	8,0	5/16"	05	1/2-20	15,3	17,0
A55005-06-05	CR	05	8,0	5/16"	06	9/16-18	15,3	19,0
A55005-06-06	CR	06	10,0	3/8"	06	9/16-18	15,3	19,0
A55005-08-06	CR	06	10,0	3/8"	08	3/4-16	17,8	25,0
A55005-10-06	CR	06	10,0	3/8"	10	7/8-14	20,3	27,0
A55005-08-08	CR	08	13,0	1/2"	08	3/4-16	18,6	25,0
A55005-10-08	CR	08	13,0	1/2"	10	7/8-14	19,6	27,0
A55005-12-08	CR	08	13,0	1/2"	12	1 1/16-12	22,1	32,0
A55005-10-10	CR	10	16,0	5/8"	10	7/8-14	19,6	27,0
A55005-12-10	CR	10	16,0	5/8"	12	1 1/16-12	20,1	32,0
A55005-10-12	CR	12	19,0	3/4"	10	7/8-14	20,1	27,0
A55005-12-12	CR	12	19,0	3/4"	12	1 1/16-12	20,6	32,0
A55005-14-12	CR	12	19,0	3/4"	14	1 3/16-12	19,9	36,0
A55005-16-12	CR	12	19,0	3/4"	16	1 5/16-12	22,1	38,0
A55005-12-16	CR	16	25,0	1"	12	1 1/16-12	22,4	32,0
A55005-16-16	CR	16	25,0	1"	16	1 5/16-12	23,9	38,0
A55005-20-16	TN	16	25,0	1"	20	1 5/8-12	26,5	50,0
A55005-16-20	CR	20	32,0	1 1/4"	16	1 5/16-12	26,5	38,0
A55005-20-20	TN	20	32,0	1 1/4"	20	1 5/8-12	28,1	50,0
A55005-24-20	TN	20	32,0	1 1/4"	24	1 7/8-12	30,4	55,0
A55005-24-24	TN	24	38,0	1 1/2"	24	1 7/8-12	29,4	55,0
A55005-32-32	TN	32	51,0	2"	32	2 1/2-12	32,0	70,0

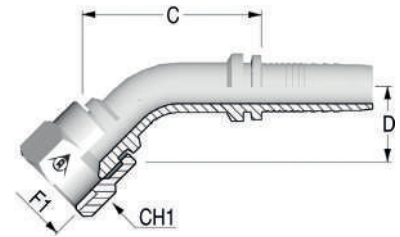
// A55H05 - FEMMINA JIC SV. 37° CON CONTRO-ESAGONO - DKJ

// JIC FEMALE 37° SEAT WITH STEM HEXAGON - DKJ



Code	Nut Type	ID			F1	F1	C	CH	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A55H05-04-03	CR	03	5,0	3/16"	04	7/16-20	18,1	12,0	16,0
A55H05-03-04	CR	04	6,0	1/4"	03	3/8-24	19,8	12,0	14,0
A55H05-04-04	CR	04	6,0	1/4"	04	7/16-20	19,6	14,0	16,0
A55H05-05-04	CR	04	6,0	1/4"	05	1/2-20	20,3	14,0	17,0
A55H05-06-04	CR	04	6,0	1/4"	06	9/16-18	20,3	14,0	19,0
A55H05-05-05	CR	05	8,0	5/16"	05	1/2-20	20,3	14,0	17,0
A55H05-06-05	CR	05	8,0	5/16"	06	9/16-18	20,3	14,0	19,0
A55H05-04-06	CR	06	10,0	3/8"	04	7/16-20	20,6	17,0	16,0
A55H05-05-06	CR	06	10,0	3/8"	05	1/2-20	21,3	16,0	17,0
A55H05-06-06	CR	06	10,0	3/8"	06	9/16-18	21,3	17,0	19,0
A55H05-08-06	CR	06	10,0	3/8"	08	3/4-16	24,8	19,0	25,0
A55H05-10-06	CR	06	10,0	3/8"	10	7/8-14	25,8	22,0	27,0
A55H05-06-08	CR	08	13,0	1/2"	06	9/16-18	23,1	19,0	19,0
A55H05-08-08	CR	08	13,0	1/2"	08	3/4-16	25,6	19,0	25,0
A55H05-10-08	CR	08	13,0	1/2"	10	7/8-14	26,6	22,0	27,0
A55H05-12-08	CR	08	13,0	1/2"	12	1 1/16-12	28,1	25,0	32,0
A55H05-08-10	CR	10	16,0	5/8"	08	3/4-16	26,6	24,0	25,0
A55H05-10-10	CR	10	16,0	5/8"	10	7/8-14	27,6	24,0	27,0
A55H05-12-10	CR	10	16,0	5/8"	12	1 1/16-12	28,1	25,0	32,0
A55H05-10-12	CR	12	19,0	3/4"	10	7/8-14	28,1	27,0	27,0
A55H05-12-12	CR	12	19,0	3/4"	12	1 1/16-12	28,6	27,0	32,0
A55H05-14-12	CR	12	19,0	3/4"	14	1 3/16-12	29,9	32,0	36,0
A55H05-16-12	CR	12	19,0	3/4"	16	1 5/16-12	32,1	32,0	38,0
A55H05-16-14	CR	14	22,0	7/8"	16	1 5/16-12	32,1	32,0	38,0
A55H05-12-16	CR	16	25,0	1"	12	1 1/16-12	31,4	32,0	32,0
A55H05-16-16	CR	16	25,0	1"	16	1 5/16-12	32,9	32,0	38,0
A55H05-20-16	TN	16	25,0	1"	20	1 5/8-12	37,5	41,0	50,0
A55H05-20-18	TN	-	29,0	1 1/8"	20	1 5/8-12	37,5	41,0	50,0
A55H05-16-20	CR	20	32,0	1 1/4"	16	1 5/16-12	37,5	41,0	38,0
A55H05-20-20	TN	20	32,0	1 1/4"	20	1 5/8-12	39,1	41,0	50,0
A55H05-24-20	TN	20	32,0	1 1/4"	24	1 7/8-12	43,4	50,0	55,0
A55H05-24-22	TN	-	35,0	1 3/8"	24	1 7/8-12	43,4	50,0	55,0
A55H05-24-24	TN	24	38,0	1 1/2"	24	1 7/8-12	43,4	50,0	55,0
A55H05-32-32	TN	32	51,0	2"	32	2 1/2-12	49,0	65,0	70,0

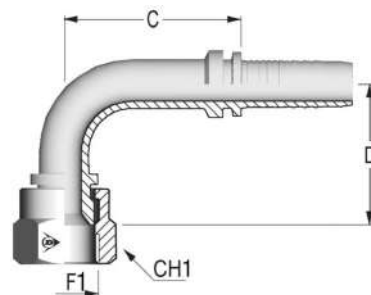
// A55064 - FEMMINA 45° JIC SV. 37° - DKJ 45M
// 45° JIC FEMALE 37° SEAT - MEDIUM DROP - DKJ 45M



Code	Nut Type	ID			F1 Dash Size	F1	C mm	D Drop mm	CH1 mm
		Dash	mm	In					
A55064-04-03	CR	03	5,0	3/16"	04	7/16-20	37,1	10,0	16,0
A55064-04-04	CR	04	6,0	1/4"	04	7/16-20	36,6	10,0	16,0
A55064-05-04	CR	04	6,0	1/4"	05	1/2-20	37,2	12,0	17,0
A55064-06-04	CR	04	6,0	1/4"	06	9/16-18	39,4	11,0	19,0
A55064-05-05	CR	05	8,0	5/16"	05	1/2-20	39,8	12,0	17,0
A55064-06-05	CR	05	8,0	5/16"	06	9/16-18	42,8	12,0	19,0
A55064-06-06	CR	06	10,0	3/8"	06	9/16-18	46,3	11,0	19,0
A55064-08-06	CR	06	10,0	3/8"	08	3/4-16	47,2	15,0	25,0
A55064-08-08	CR	08	13,0	1/2"	08	3/4-16	51,6	15,0	25,0
A55064-10-08	CR	08	13,0	1/2"	10	7/8-14	50,7	16,0	27,0
A55064-12-08	CR	08	13,0	1/2"	12	1 1/16-12	57,0	21,0	32,0
A55064-10-10	CR	10	16,0	5/8"	10	7/8-14	62,2	19,0	27,0
A55064-12-10	CR	10	16,0	5/8"	12	1 1/16-12	68,6	21,0	32,0
A55064-12-12	CR	12	19,0	3/4"	12	1 1/16-12	67,5	21,0	32,0
A55064-14-12	CR	12	19,0	3/4"	14	1 3/16-12	67,6	23,0	36,0
A55064-16-12	CR	12	19,0	3/4"	16	1 5/16-12	71,4	26,0	38,0
A55064-16-16	CR	16	25,0	1"	16	1 5/16-12	79,4	24,0	38,0
A55064-20-16	TN	16	25,0	1"	20	1 5/8-12	83,8	37,0	50,0
A55064-20-20	TN	20	32,0	1 1/4"	20	1 5/8-12	97,1	37,0	50,0
A55064-24-24	TN	24	38,0	1 1/2"	24	1 7/8-12	112,7	43,0	55,0
A55064-32-32	TN	32	51,0	2"	32	2 1/2-12	159,9	67,0	70,0

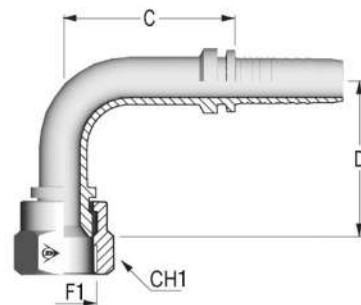
// A55053 - FEMMINA 90° JIC SV. 37° SHORT DROP - DKJ 90S

// 90° JIC FEMALE 37° SEAT - SHORT DROP - DKJ 90S



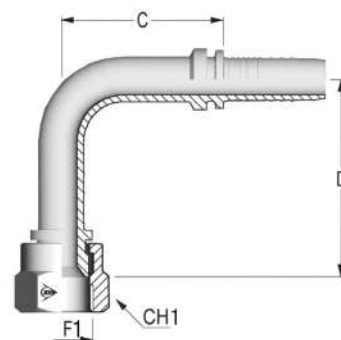
Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A55053-04-03	CR	03	5,0	3/16"	04	7/16-20	26,7	21,0	16,0
A55053-04-04	CR	04	6,0	1/4"	04	7/16-20	27,0	21,0	16,0
A55053-05-04	CR	04	6,0	1/4"	05	1/2-20	26,5	23,5	17,0
A55053-06-04	CR	04	6,0	1/4"	06	9/16-18	31,0	23,0	19,0
A55053-06-05	CR	05	8,0	5/16"	06	9/16-18	42,7	23,0	19,0
A55053-05-06	CR	06	10,0	3/8"	05	1/2-20	33,3	25,0	17,0
A55053-06-06	CR	06	10,0	3/8"	06	9/16-18	42,3	25,0	19,0
A55053-08-06	CR	06	10,0	3/8"	08	3/4-16	48,8	29,0	25,0
A55053-08-08	CR	08	13,0	1/2"	08	3/4-16	46,4	29,0	25,0
A55053-10-08	CR	08	13,0	1/2"	10	7/8-14	45,8	32,0	27,0
A55053-12-08	CR	08	13,0	1/2"	12	1 1/16-12	37,3	46,0	32,0
A55053-10-10	CR	10	16,0	5/8"	10	7/8-14	36,5	32,0	27,0
A55053-12-10	CR	10	16,0	5/8"	12	1 1/16-12	47,9	48,0	32,0
A55053-12-12	CR	12	19,0	3/4"	12	1 1/16-12	58,2	46,0	32,0
A55053-14-12	CR	12	19,0	3/4"	14	1 3/16-12	49,6	52,5	36,0
A55053-16-12	CR	12	19,0	3/4"	16	1 5/16-12	53,6	53,0	38,0
A55053-16-16	CR	16	25,0	1"	16	1 5/16-12	74,0	56,0	38,0

// A55054 - FEMMINA 90° JIC SV. 37° MEDIUM DROP - DKJ 90M
// 90° JIC FEMALE 37° SEAT - MEDIUM DROP - DKJ 90M



Code	Nut Type	ID			F1 Dash Size	F1	C mm	D Drop mm	CH1 mm
		Dash	mm	In					
A55054-04-03	CR	03	5,0	3/16"	04	7/16-20	33,5	32,0	16,0
A55054-04-04	CR	04	6,0	1/4"	04	7/16-20	34,2	32,0	16,0
A55054-05-04	CR	04	6,0	1/4"	05	1/2-20	25,7	30,0	17,0
A55054-06-04	CR	04	6,0	1/4"	06	9/16-18	28,5	38,0	19,0
A55054-05-05	CR	05	8,0	5/16"	05	1/2-20	34,2	32,0	17,0
A55054-06-05	CR	05	8,0	5/16"	06	9/16-18	33,2	35,0	19,0
A55054-06-06	CR	06	10,0	3/8"	06	9/16-18	31,3	35,0	19,0
A55054-08-06	CR	06	10,0	3/8"	08	3/4-16	39,5	41,0	25,0
A55054-10-06	CR	06	10,0	3/8"	10	7/8-14	44,6	47,0	27,0
A55054-08-08	CR	08	13,0	1/2"	08	3/4-16	37,2	40,0	25,0
A55054-10-08	CR	08	13,0	1/2"	10	7/8-14	43,3	47,0	27,0
A55054-10-10	CR	10	16,0	5/8"	10	7/8-14	49,4	48,0	27,0
A55054-12-10	CR	10	16,0	5/8"	12	1 1/16-12	47,9	58,0	32,0
A55054-12-12	CR	12	19,0	3/4"	12	1 1/16-12	52,4	54,0	32,0
A55054-16-12	CR	12	19,0	3/4"	16	1 5/16-12	52,6	72,0	38,0
A55054-16-16	CR	16	25,0	1"	16	1 5/16-12	72,6	71,5	38,0
A55054-20-16	TN	16	25,0	1"	20	1 5/8-12	72,6	78,0	50,0
A55054-20-20	TN	20	32,0	1 1/4"	20	1 5/8-12	82,4	78,0	50,0
A55054-24-20	TN	20	32,0	1 1/4"	24	1 7/8-12	87,3	82,0	55,0
A55054-24-24	TN	24	38,0	1 1/2"	24	1 7/8-12	95,3	92,0	55,0
A55054-32-32	TN	32	51,0	2"	32	2 1/2-12	129,5	140,0	70,0

// A55055 - FEMMINA 90° JIC SV. 37° LONG DROP - DKJ 90L
// 90° JIC FEMALE 37° SEAT - LONG DROP - DKJ 90L

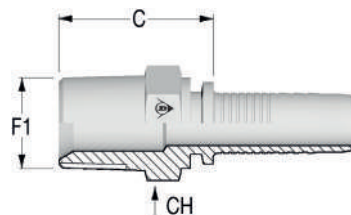


Code	Nut Type	ID			F1 Dash Size	F1	C mm	D Drop mm	CH1 mm
		Dash	mm	In					
A55055-04-04	CR	04	6,0	1/4"	04	7/16-20	30,8	46,0	16,0
A55055-05-04	CR	04	6,0	1/4"	05	1/2-20	31,3	45,0	17,0
A55055-06-06	CR	06	10,0	3/8"	06	9/16-18	43,3	54,0	19,0
A55055-08-06	CR	06	10,0	3/8"	08	3/4-16	46,8	64,0	25,0
A55055-08-08	CR	08	13,0	1/2"	08	3/4-16	49,9	64,0	25,0
A55055-10-08	CR	08	13,0	1/2"	10	7/8-14	37,3	65,0	27,0
A55055-10-10	CR	10	16,0	5/8"	10	7/8-14	49,9	65,0	27,0
A55055-12-12	CR	12	19,0	3/4"	12	1 1/16-12	54,1	95,0	32,0
A55055-16-16	CR	16	25,0	1"	16	1 5/16-12	78,6	114,0	38,0

// SUPERTRAK - INSERTI NPTF NPTF INSERTS

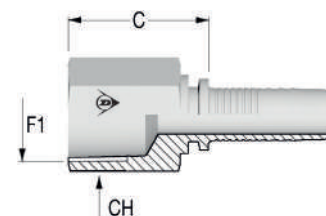
// 550170 - MASCHIO NPTF SV. 60° - AGN

// NPTF MALE 60° SEAT - AGN



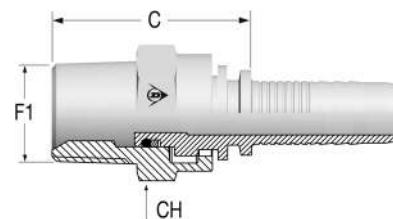
Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
550170-02-03	NA	03	5,0	3/16"	02	1/8-27	20,8	12,0
550170-02-04	NA	04	6,0	1/4"	02	1/8-27	21,3	14,0
550170-04-04	NA	04	6,0	1/4"	04	1/4-18	26,8	14,3
550170-06-04	NA	04	6,0	1/4"	06	3/8-18	27,8	19,0
550170-08-04	NA	04	6,0	1/4"	08	1/2-14	31,3	22,0
550170-04-05	NA	05	8,0	5/16"	04	1/4-18	26,8	17,0
550170-06-05	NA	05	8,0	5/16"	06	3/8-18	27,8	19,0
550170-04-06	NA	06	10,0	3/8"	04	1/4-18	26,8	17,0
550170-06-06	NA	06	10,0	3/8"	06	3/8-18	27,8	19,0
550170-08-06	NA	06	10,0	3/8"	08	1/2-14	31,3	22,0
550170-06-08	NA	08	13,0	1/2"	06	3/8-18	28,6	19,0
550170-08-08	NA	08	13,0	1/2"	08	1/2-14	32,1	22,0
550170-12-08	NA	08	13,0	1/2"	12	3/4-14	34,1	27,0
550170-08-10	NA	10	16,0	5/8"	08	1/2-14	33,1	24,0
550170-12-10	NA	10	16,0	5/8"	12	3/4-14	34,1	27,0
550170-08-12	NA	12	19,0	3/4"	08	1/2-14	33,6	27,0
550170-12-12	NA	12	19,0	3/4"	12	3/4-14	34,6	27,0
550170-16-12	NA	12	19,0	3/4"	16	1-11 1/2	43,6	36,0
550170-16-14	NA	14	22,0	7/8"	16	1-11 1/2	43,6	36,0
550170-12-16	NA	16	25,0	1"	12	3/4-14	39,4	36,0
550170-16-16	NA	16	25,0	1"	16	1-11 1/2	44,4	36,0
550170-20-16	NA	16	25,0	1"	20	1 1/4-11 1/2	47,4	46,0
550170-20-20	NA	20	32,0	1 1/4"	20	1 1/4-11 1/2	49,0	46,0
550170-24-22	NA	22	35,0	1 3/8"	24	1 1/2-11 1/2	50,5	50,0
550170-24-24	NA	24	38,0	1 1/2"	24	1 1/2-11 1/2	50,5	50,0
550170-32-29	NA	29	46,0	1 13/16"	32	2-11 1/2	54,2	65,0
550170-32-32	NA	32	51,0	2"	32	2-11 1/2	54,2	65,0

// 550470 - FEMMINA FISSA NPTF
// NPTF FEMALE SEAT



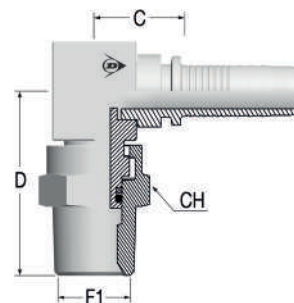
Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
550470-02-04	NA	04	6,0	1/4"	02	1/8-27	22,3	14,0
550470-04-04	NA	04	6,0	1/4"	04	1/4-18	27,8	19,0
550470-06-06	NA	06	10,0	3/8"	06	3/8-18	28,8	22,0
550470-08-08	NA	08	13,0	1/2"	08	1/2-14	35,6	25,0
550470-12-12	NA	12	19,0	3/4"	12	3/4-14	38,1	32,0
550470-16-16	NA	16	25,0	1"	16	1-11 1/2	44,9	38,0

// 550990 - MASCHIO NPTF SV. 60° GIREVOLE
// NPTF MALE SWIVEL 60° SEAT

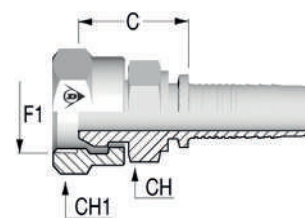


Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
550990-04-04	CR	04	6,0	1/4"	04	1/4-18	37,6	17,0
550990-06-04	CR	04	6,0	1/4"	06	3/8-18	39,5	22,0
550990-04-06	CR	06	10,0	3/8"	04	1/4-18	39,6	17,0
550990-06-06	CR	06	10,0	3/8"	06	3/8-18	37,5	22,0
550990-08-06	CR	06	10,0	3/8"	08	1/2-14	43,5	25,0
550990-06-08	CR	08	13,0	1/2"	06	3/8-18	38,3	22,0
550990-08-08	CR	08	13,0	1/2"	08	1/2-14	42,3	25,0
550990-12-12	CR	12	19,0	3/4"	12	3/4-14	50,1	32,0
550990-16-16	CR	16	25,0	1"	16	1-11 1/2	57,9	41,0

// 550270 - MASCHIO 90° NPTF SV. 60° GIREVOLE COMPATTO
// 90° COMPACT NPTF MALE SWIVEL 60° SEAT



Code	Nut Type	ID			F1	F1	C	D Drop	CH
		Dash	mm	In	Dash Size		mm	mm	mm
550270-04-04	CR	04	6,0	1/4"	04	1/4-18	17,0	39,0	17,0
550270-06-06	CR	06	10,0	3/8"	06	3/8-18	20,0	41,0	22,0
550270-08-08	CR	08	13,0	1/2"	08	1/2-14	23,0	48,0	25,0
550270-12-12	CR	12	19,0	3/4"	12	3/4-14	27,0	61,0	32,0

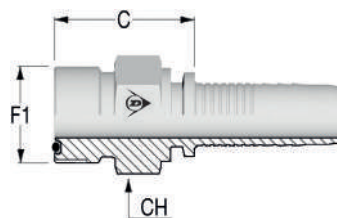
// **SUPERTRAK - INSERTI NPSM** *NPSM INSERTS*// **550490 - FEMMINA NPSM**// **NPSM FEMALE**

Code	Nut Type	ID			F1	F1	C	CH	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
550490-04-04	CR	04	6,0	1/4"	04	1/4-18	24,3	17,0	19,0
550490-06-06	CR	06	10,0	3/8"	06	3/8-18	24,8	19,0	22,0
550490-08-08	CR	08	13,0	1/2"	08	1/2-14	26,6	22,0	27,0
550490-12-12	CR	12	19,0	3/4"	12	3/4-14	28,6	30,0	32,0
550490-16-16	CR	16	25,0	1"	16	1-11 1/2	35,4	36,0	38,0

// SUPERTRAK - INSERTI ORFS *ORFS INSERTS*

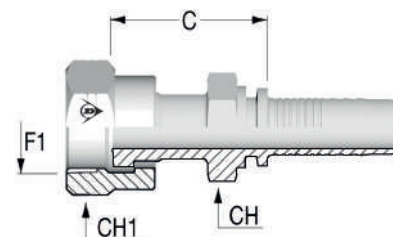
// 55A290 - MASCHIO ORFS

// ORFS MALE

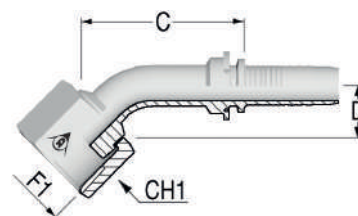


Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
55A290-04-04	NA	04	6,0	1/4"	04	9/16-18	22,3	17,0
55A290-06-04	NA	04	6,0	1/4"	06	11/16-16	24,3	19,0
55A290-06-05	NA	05	8,0	5/16"	06	11/16-16	24,3	19,0
55A290-06-06	NA	06	10,0	3/8"	06	11/16-16	24,3	19,0
55A290-08-06	NA	06	10,0	3/8"	08	13/16-16	26,3	22,0
55A290-10-06	NA	06	10,0	3/8"	10	1-14	29,8	27,0
55A290-08-08	NA	08	13,0	1/2"	08	13/16-16	27,1	22,0
55A290-10-08	NA	08	13,0	1/2"	10	1-14	30,6	27,0
55A290-12-08	NA	08	13,0	1/2"	12	1 3/16-12	34,1	32,0
55A290-10-10	NA	10	16,0	5/8"	10	1-14	30,6	27,0
55A290-12-10	NA	10	16,0	5/8"	12	1 3/16-12	34,1	32,0
55A290-10-12	NA	12	19,0	3/4"	10	1-14	31,1	27,0
55A290-12-12	NA	12	19,0	3/4"	12	1 3/16-12	34,6	32,0
55A290-16-12	NA	12	19,0	3/4"	16	1 7/16-12	38,1	41,0
55A290-16-16	NA	16	25,0	1"	16	1 7/16-12	37,9	38,0
55A290-20-16	NA	16	25,0	1"	20	1 11/16-12	39,9	46,0
55A290-20-20	NA	20	32,0	1 1/4"	20	1 11/16-12	41,5	46,0

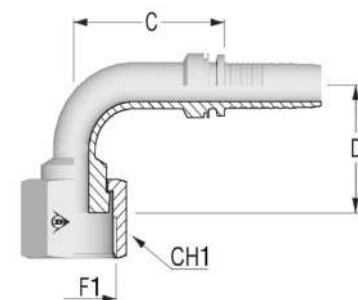
// A55H26 - FEMMINA ORFS CON CONTRO-ESAGONO
// ORFS FEMALE WITH STEM HEXAGON



Code	Nut Type	ID			F1	F1	C	CH	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A55H26-04-03	SN	03	5,0	3/16"	04	9/16-18	26,8	14,0	17,0
A55H26-04-04	SN	04	6,0	1/4"	04	9/16-18	27,3	14,0	17,0
A55H26-06-04	SN	04	6,0	1/4"	06	11/16-16	30,3	17,0	22,0
A55H26-08-04	SN	04	6,0	1/4"	08	13/16-16	35,3	22,0	24,0
A55H26-06-05	SN	05	8,0	5/16"	06	11/16-16	30,3	17,0	22,0
A55H26-04-06	SN	06	10,0	3/8"	04	9/16-18	28,3	17,0	17,0
A55H26-06-06	SN	06	10,0	3/8"	06	11/16-16	30,3	17,0	22,0
A55H26-08-06	SN	06	10,0	3/8"	08	13/16-16	35,3	22,0	24,0
A55H26-06-08	SN	08	13,0	1/2"	06	11/16-16	32,1	19,0	22,0
A55H26-08-08	SN	08	13,0	1/2"	08	13/16-16	36,1	22,0	24,0
A55H26-10-08	SN	08	13,0	1/2"	10	1-14	39,6	24,0	30,0
A55H26-12-08	SN	08	13,0	1/2"	12	1 3/16-12	42,1	30,0	36,0
A55H26-08-10	SN	10	16,0	5/8"	08	13/16-16	37,1	24,0	24,0
A55H26-10-10	SN	10	16,0	5/8"	10	1-14	39,6	24,0	30,0
A55H26-12-10	SN	10	16,0	5/8"	12	1 3/16-12	42,1	30,0	36,0
A55H26-10-12	SN	12	19,0	3/4"	10	1-14	40,1	27,0	30,0
A55H26-12-12	SN	12	19,0	3/4"	12	1 3/16-12	42,6	30,0	36,0
A55H26-16-12	SN	12	19,0	3/4"	16	1 7/16-12	48,6	36,0	41,0
A55H26-12-16	SN	16	25,0	1"	12	1 3/16-12	45,4	32,0	36,0
A55H26-16-16	SN	16	25,0	1"	16	1 7/16-12	49,4	36,0	41,0
A55H26-20-16	SN	16	25,0	1"	20	1 11/16-12	50,4	41,0	50,0
A55H26-20-20	SN	20	32,0	1 1/4"	20	1 11/16-12	52,0	41,0	50,0
A55H26-24-20	SN	20	32,0	1 1/4"	24	2-12	56,5	50,0	60,0
A55H26-24-24	SN	24	38,0	1 1/2"	24	2-12	56,5	50,0	60,0

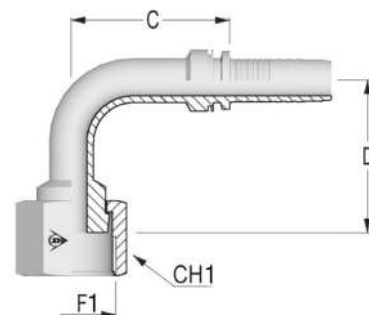
// A55A27 - FEMMINA 45° ORFS MEDIUM DROP - DK ORFS 45M
// 45° ORFS FEMALE MEDIUM DROP - DK ORFS 45M


Code	Nut Type	ID			F1 Dash Size	F1	C mm	D Drop mm	CH1 mm
		Dash	mm	In					
A55A27-04-04	SN	04	6,0	1/4"	04	9/16-18	41,1	11,0	17,0
A55A27-06-04	SN	04	6,0	1/4"	06	11/16-16	46,1	11,0	22,0
A55A27-06-05	SN	05	8,0	5/16"	06	11/16-16	46,3	12,0	22,0
A55A27-06-06	SN	06	10,0	3/8"	06	11/16-16	47,4	12,0	22,0
A55A27-08-06	SN	06	10,0	3/8"	08	13/16-16	51,2	15,0	24,0
A55A27-08-08	CR	08	13,0	1/2"	08	13/16-16	47,1	16,0	24,0
A55A27-10-08	SN	08	13,0	1/2"	10	1-14	50,4	16,5	30,0
A55A27-10-10	SN	10	16,0	5/8"	10	1-14	57,7	17,0	30,0
A55A27-12-10	SN	10	16,0	5/8"	12	1 3/16-12	63,1	21,0	36,0
A55A27-10-12	CR	12	19,0	3/4"	10	1-14	51,4	24,0	30,0
A55A27-12-12	SN	12	19,0	3/4"	12	1 3/16-12	63,5	21,0	36,0
A55A27-16-12	SN	12	19,0	3/4"	16	1 7/16-12	70,7	24,0	41,0
A55A27-16-16	SN	16	25,0	1"	16	1 7/16-12	82,4	26,0	41,0
A55A27-20-16	SN	16	25,0	1"	20	1 11/16-12	85,4	26,0	50,0
A55A27-20-20	SN	20	32,0	1 1/4"	20	1 11/16-12	97,4	26,0	50,0
A55A27-24-24	SN	24	38,0	1 1/2"	24	2-12	104,4	28,0	60,0

// A55A29 - FEMMINA 90° ORFS SHORT DROP - DK ORFS 90S
// 90° ORFS FEMALE SHORT DROP - DK ORFS 90S


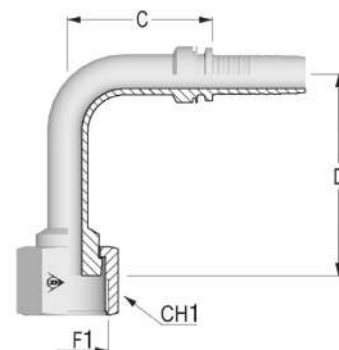
Code	Nut Type	ID			F1 Dash Size	F1	C mm	D Drop mm	CH1 mm
		Dash	mm	In					
A55A29-04-04	SN	04	6,0	1/4"	04	9/16-18	28,5	21,0	17,0
A55A29-06-04	SN	04	6,0	1/4"	06	11/16-16	32,0	23,0	22,0
A55A29-06-05	SN	05	8,0	5/16"	06	11/16-16	49,3	23,0	22,0
A55A29-06-06	SN	06	10,0	3/8"	06	11/16-16	41,8	25,0	22,0
A55A29-08-06	SN	06	10,0	3/8"	08	13/16-16	41,8	29,0	24,0
A55A29-06-08	CR	08	13,0	1/2"	06	11/16-16	44,1	25,0	22,0
A55A29-08-08	CR	08	13,0	1/2"	08	13/16-16	39,8	29,0	24,0
A55A29-10-08	SN	08	13,0	1/2"	10	1-14	46,3	32,5	30,0
A55A29-12-08	SN	08	13,0	1/2"	12	1 3/16-12	56,3	51,0	36,0
A55A29-10-10	SN	10	16,0	5/8"	10	1-14	52,3	32,5	30,0
A55A29-12-10	SN	10	16,0	5/8"	12	1 3/16-12	55,4	49,0	36,0
A55A29-12-12	SN	12	19,0	3/4"	12	1 3/16-12	60,6	51,0	36,0
A55A29-16-12	SN	12	19,0	3/4"	16	1 7/16-12	61,6	56,0	41,0
A55A29-12-16	CR	16	25,0	1"	12	1 3/16-12	54,6	51,0	36,0
A55A29-16-16	SN	16	25,0	1"	16	1 7/16-12	80,0	58,0	41,0
A55A29-20-16	SN	16	25,0	1"	20	1 11/16-12	82,6	64,0	50,0
A55A29-20-20	SN	20	32,0	1 1/4"	20	1 11/16-12	95,0	68,0	50,0
A55A29-24-24	SN	24	38,0	1 1/2"	24	2-12	103,7	78,0	60,0

// A55A28 - FEMMINA 90° ORFS MEDIUM DROP - DK ORFS 90M
// 90° ORFS FEMALE MEDIUM DROP - DK ORFS 90M

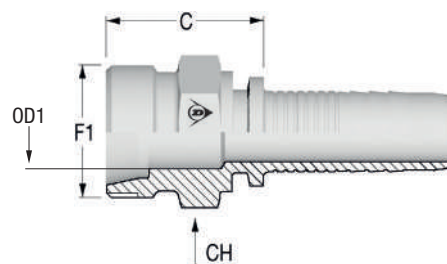


Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A55A28-04-04	SN	04	6,0	1/4"	04	9/16-18	29,8	32,0	17,0
A55A28-06-04	SN	04	6,0	1/4"	06	11/16-16	37,3	38,0	22,0
A55A28-06-05	SN	05	8,0	5/16"	06	11/16-16	40,7	34,0	22,0
A55A28-06-06	SN	06	10,0	3/8"	06	11/16-16	41,8	38,0	22,0
A55A28-08-06	SN	06	10,0	3/8"	08	13/16-16	43,8	41,0	24,0
A55A28-08-08	CR	08	13,0	1/2"	08	13/16-16	34,8	42,0	24,0
A55A28-10-08	SN	08	13,0	1/2"	10	1-14	48,3	47,0	30,0
A55A28-10-10	SN	10	16,0	5/8"	10	1-14	55,4	44,0	30,0
A55A28-12-10	SN	10	16,0	5/8"	12	1 3/16-12	55,4	58,0	36,0
A55A28-12-12	SN	12	19,0	3/4"	12	1 3/16-12	61,6	58,0	36,0
A55A28-16-12	SN	12	19,0	3/4"	16	1 7/16-12	65,6	71,0	41,0
A55A28-12-16	CR	16	25,0	1"	12	1 3/16-12	62,6	58,0	36,0
A55A28-16-16	SN	16	25,0	1"	16	1 7/16-12	82,6	66,0	41,0
A55A28-20-16	SN	16	25,0	1"	20	1 11/16-12	82,6	78,0	50,0
A55A28-20-20	SN	20	32,0	1 1/4"	20	1 11/16-12	97,0	78,0	50,0
A55A28-24-24	SN	24	38,0	1 1/2"	24	2-12	107,8	87,0	60,0

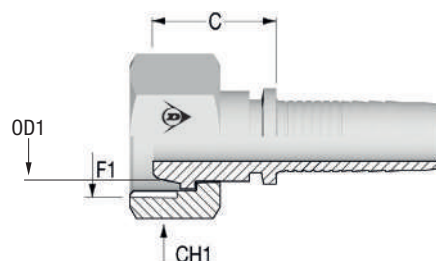
// A55A30 - FEMMINA 90° ORFS LONG DROP - DK ORFS 90L
// 90° ORFS FEMALE LONG DROP - DK ORFS 90L



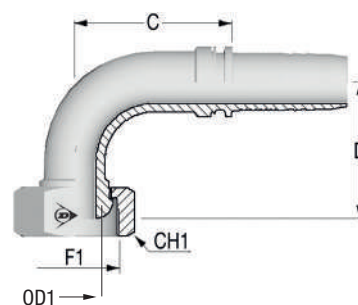
Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A55A30-04-04	SN	04	6,0	1/4"	04	9/16-18	32,8	46,0	17,0
A55A30-06-04	SN	04	6,0	1/4"	06	11/16-16	34,8	54,0	22,0
A55A30-06-06	SN	06	10,0	3/8"	06	11/16-16	41,8	54,0	22,0
A55A30-08-06	SN	06	10,0	3/8"	08	13/16-16	46,8	64,0	24,0
A55A30-08-08	CR	08	13,0	1/2"	08	13/16-16	38,3	64,0	24,0
A55A30-10-08	SN	08	13,0	1/2"	10	1-14	46,3	70,0	30,0
A55A30-10-10	SN	10	16,0	5/8"	10	1-14	55,4	70,0	30,0
A55A30-12-10	SN	10	16,0	5/8"	12	1 3/16-12	55,4	96,0	36,0
A55A30-12-12	SN	12	19,0	3/4"	12	1 3/16-12	61,6	96,0	36,0
A55A30-16-12	SN	12	19,0	3/4"	16	1 7/16-12	61,6	118,0	41,0
A55A30-16-16	SN	16	25,0	1"	16	1 7/16-12	82,6	114,0	41,0
A55A30-20-20	SN	20	32,0	1 1/4"	20	1 11/16-12	97,0	129,0	50,0
A55A30-24-24	SN	24	38,0	1 1/2"	24	2-12	110,8	141,0	60,0

// **SUPERTRAK - INSERTI FRANCESI** FRENCH INSERTS// **561680 - MASCHIO METRICO FRANCESE**// **METRIC MALE FRENCH TYPE**

Code	Nut Type	ID			F1	OD1	C	CH
		Dash	mm	In		mm	mm	mm
561680-05-05	NA	05	8,0	5/16"	M20X1.5	13,25	17,0	22,0
561680-06-06	NA	06	10,0	3/8"	M20X1.5	13,25	25,3	22,0
561680-08-08	NA	08	13,0	1/2"	M24X1.5	16,75	27,1	24,0
561680-10-10	NA	10	16,0	5/8"	M30X1.5	21,25	31,1	30,0
561680-12-12	NA	12	19,0	3/4"	M36X1.5	26,75	33,6	36,0

// **A55155 - FEMMINA METRICA FRANCESE**// **METRIC FEMALE FRENCH TYPE**

Code	Nut Type	ID			F1	OD1	C	CH
		Dash	mm	In		mm	mm	mm
A55155-05-05	SN	05	8,0	5/16"	M20X1.5	14	23,8	24,0
A55155-06-06	SN	06	10,0	3/8"	M20X1.5	14	23,8	24,0
A55155-08-08	SN	08	13,0	1/2"	M24X1.5	16	26,8	30,0
A55155-10-10	SN	10	16,0	5/8"	M30X1.5	22	26,6	36,0
A55155-12-12	SN	12	19,0	3/4"	M36X1.5	28	27,0	42,0

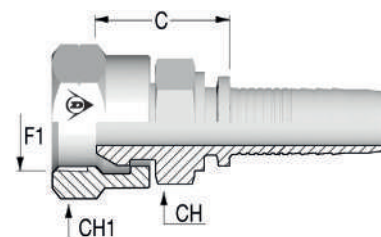
// **A55157 - FEMMINA 90° METRICA FRANCESE**// **90° METRIC FEMALE FRENCH TYPE**

Code	Nut Type	ID			F1	OD1	C	D Drop	CH1
		Dash	mm	In		mm	mm	mm	mm
A55157-05-05	SN	05	8,0	5/16"	M20X1.5	14	32,5	36,5	24,0
A55157-06-06	SN	06	10,0	3/8"	M20X1.5	14	36,7	44,0	24,0
A55157-08-08	SN	08	13,0	1/2"	M24X1.5	16	39,5	46,0	30,0
A55157-10-10	SN	10	16,0	5/8"	M30X1.5	22	43,0	49,0	36,0
A55157-12-12	SN	12	19,0	3/4"	M36X1.5	28	46,6	48,5	42,0

// SUPERTRAK - INSERTI JIS JIS INSERTS

// A55C04 - FEMMINA JIS CILINDRICA SV. 60° (TIPO C)

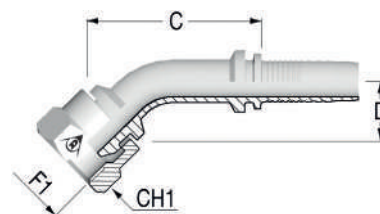
// JIS FEMALE 60° CONE - B 8363 (TYPE C)



Code	Nut Type	ID			F1		C	CH	CH1
		Dash	mm	In	Dash Size	F1			
A55C04-04-04	CR	04	6,0	1/4"	04	1/4-19	24,3	17,0	19,0
A55C04-06-06	CR	06	10,0	3/8"	06	3/8-19	25,5	19,0	22,0
A55C04-08-08	CR	08	13,0	1/2"	08	1/2-14	26,1	22,0	27,0
A55C04-10-08	CR	10	16,0	5/8"	08	1/2-14	27,1	24,0	27,0
A55C04-10-12	CR	10	16,0	5/8"	12	3/4-14	29,6	30,0	36,0
A55C04-12-12	CR	12	19,0	3/4"	12	3/4-14	30,1	30,0	36,0
A55C04-16-16	CR	16	25,0	1"	16	1-11	34,9	36,0	41,0

// A55C07 - FEMMINA 45° JIS CILINDRICA SV. 60° (TIPO C)

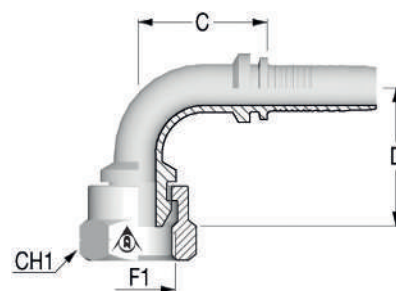
// 45° JIS FEMALE 60° CONE - B 8363 (TYPE C)



Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash Size	F1			
A55C07-04-04	CR	04	6,0	1/4"	04	1/4-19	24,3	19,0	19,0
A55C07-06-06	CR	06	10,0	3/8"	06	3/8-19	26,5	21,0	22,0
A55C07-08-08	CR	08	13,0	1/2"	08	1/2-14	27,0	22,0	27,0
A55C07-12-12	CR	12	19,0	3/4"	12	3/4-14	19,9	25,0	36,0

// A55C08 - FEMMINA 90° JIS CILINDRICA SV. 60° (TIPO C)

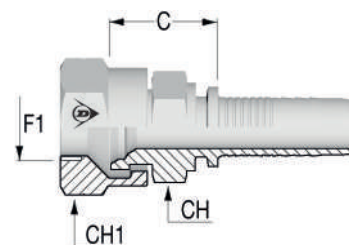
// 90° JIS FEMALE 60° CONE - B 8363 (TYPE C)



Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash Size	F1			
A55C08-04-04	CR	04	6,0	1/4"	04	1/4-19	25,3	33,0	19,0
A55C08-06-06	CR	06	10,0	3/8"	06	3/8-19	32,3	36,5	22,0
A55C08-08-08	CR	08	13,0	1/2"	08	1/2-14	37,3	38,5	27,0

// A55C02 - FEMMINA JIS SV. 60° B 8363 (TIPO F)

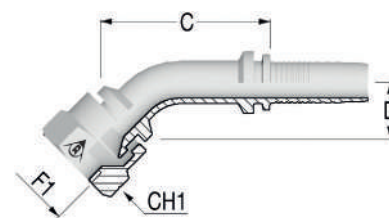
// JIS FEMALE 60° SEAT FLARE - B 8363 (TYPE F)



Code	Nut Type	ID			F1		C	CH	CH1
		Dash	mm	In	Dash Size	F1			
A55C02-04-04	CR	04	6,0	1/4"	04	1/4-19	20,8	17,0	19,0
A55C02-06-06	CR	06	10,0	3/8"	06	3/8-19	21,8	19,0	22,0
A55C02-08-08	CR	08	13,0	1/2"	08	1/2-14	23,6	22,0	27,0
A55C02-12-12	CR	12	19,0	3/4"	12	3/4-14	27,1	30,0	36,0
A55C02-16-16	CR	16	25,0	1"	16	1-11	32,9	36,0	41,0
A55C02-20-20	TN	20	32,0	1 1/4"	20	1 1/4-11	39,5	46,0	50,0
A55C02-24-24	TN	24	38,0	1 1/2"	24	1 1/2-11	41,5	50,0	55,0

// A55C05 - FEMMINA 45° JIS SV. 60° B 8363 (TIPO F)

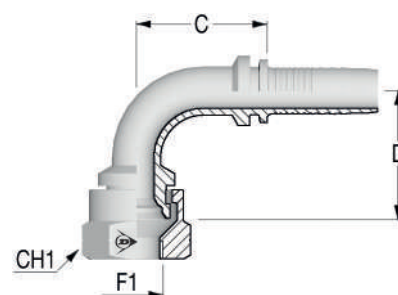
// 45° JIS FEMALE 60° SEAT FLARE - B 8363 (TYPE F)



Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash Size	F1			
A55C05-04-04	CR	04	6,0	1/4"	04	1/4-19	42,5	15,0	19,0
A55C05-06-06	CR	06	10,0	3/8"	06	3/8-19	50,8	16,5	22,0
A55C05-08-08	CR	08	13,0	1/2"	08	1/2-14	54,5	18,0	27,0
A55C05-12-12	CR	12	19,0	3/4"	12	3/4-14	70,7	21,7	36,0
A55C05-16-16	CR	16	25,0	1"	16	1-11	81,6	28,7	41,0

// A55C06 - FEMMINA 90° JIS SV. 60° B 8363 (TIPO F)

// 90° JIS FEMALE 60° SEAT FLARE - B 8363 (TYPE F)

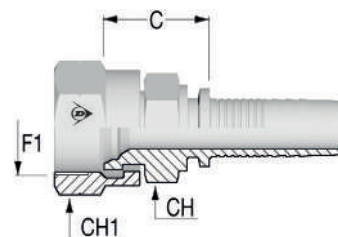


Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash Size	F1			
A55C06-04-04	CR	04	6,0	1/4"	04	1/4-19	27,3	29,5	19,0
A55C06-06-06	CR	06	10,0	3/8"	06	3/8-19	31,3	33,0	22,0
A55C06-08-08	CR	08	13,0	1/2"	08	1/2-14	37,3	36,5	27,0
A55C06-12-12	CR	12	19,0	3/4"	12	3/4-14	46,1	52,0	36,0
A55C06-16-16	CR	16	25,0	1"	16	1-11	77,1	64,5	41,0

// SUPERTRAK- INSERTI KOMATSU KOMATSU INSERTS

// A55C03 - FEMMINA KOMATSU

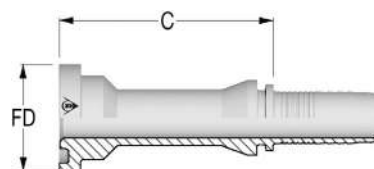
// KOMATSU FEMALE



Code	Nut Type	ID			F1	F1	C	CH	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A55C03-04-04	CR	04	6,0	1/4"	14	M14X1.5	20,8	17,0	19,0
A55C03-04-06	CR	06	10,0	3/8"	14	M14X1.5	20,8	17,0	19,0
A55C03-06-06	CR	06	10,0	3/8"	18	M18X1.5	21,8	19,0	22,0
A55C03-08-08	CR	08	13,0	1/2"	22	M22X1.5	23,6	22,0	27,0
A55C03-10-10	CR	10	16,0	5/8"	24	M24X1.5	27,1	30,0	32,0
A55C03-12-12	CR	12	19,0	3/4"	30	M30X1.5	27,6	30,0	36,0
A55C03-16-16	CR	16	25,0	1"	33	M33X1.5	35,7	36,0	41,0
A55C03-20-20	CR	20	32,0	1 1/4"	36	M36X1.5	43,5	46,0	46,0
A55C03-24-24	CR	24	38,0	1 1/2"	42	M42X1.5	44,0	55,0	55,0

// 664143 - FLANGIA KOMATSU

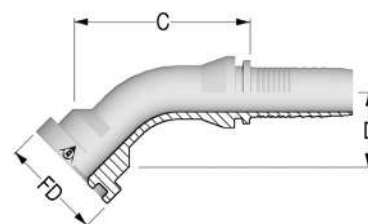
// KOMATSU FLANGE



Code	ID			Flange	Flange Size	C	FD
	Dash	mm	In	Dash Size		mm	mm
664143-10-10	10	16,0	5/8"	10	5/8"	46,7	34,0

// 664144 - FLANGIA KOMATSU 45°

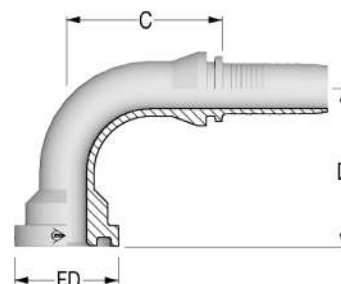
// 45° KOMATSU FLANGE



Code	ID			Flange	Flange Size	C	FD
	Dash	mm	In	Dash Size		mm	mm
664144-10-10	10	16,0	5/8"	10	5/8"	49,1	25,0

// 664145 - FLANGIA KOMATSU 90°

// 90° KOMATSU FLANGE

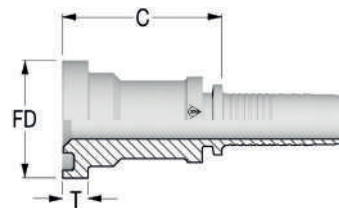


Code	ID			Flange	Flange Size	C	FD
	Dash	mm	In	Dash Size		mm	mm
664145-10-10	10	16,0	5/8"	10	5/8"	34,0	51,0

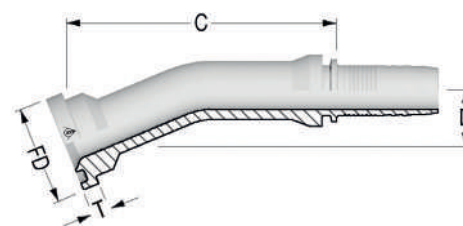
// SUPERTRAK - INSERTI FLANGE SAE SAE FLANGES

// 550250 - FLANGIA SAE 3000 PSI J518 CODE 61 - SFL

// FLANGE SAE 3000 PSI J518 CODE 61 - SFL



Code	ID			Flange	Flange Size	FD	T	C	WP
	Dash	mm	In	Dash Size		mm	mm	mm	psi
550250-08-08	08	13,0	1/2"	08	1/2	30,2	6,5	41,0	5000
550250-12-08	08	13,0	1/2"	12	3/4	38,1	6,5	42,0	5000
550250-12-10	10	16,0	5/8"	12	3/4	38,1	6,5	42,2	5000
550250-12-12	12	19,0	3/4"	12	3/4	38,1	6,5	42,5	5000
550250-16-12	12	19,0	3/4"	16	1	44,5	8,0	50,5	5000
550250-16-16	16	25,0	1"	16	1	44,5	8,0	51,4	5000
550250-20-16	16	25,0	1"	20	1 1/4	50,8	8,0	53,9	4000
550250-16-20	20	32,0	1 1/4"	16	1	44,5	8,0	53,0	5000
550250-20-20	20	32,0	1 1/4"	20	1 1/4	50,8	8,0	55,5	4000
550250-24-20	20	32,0	1 1/4"	24	1 1/2	60,3	8,0	58,5	3000
550250-24-24	24	38,0	1 1/2"	24	1 1/2	60,3	8,0	58,5	3000
550250-32-24	24	38,0	1 1/2"	32	2	71,4	9,5	70,0	3000
550250-24-32	32	51,0	2"	24	1 1/2	60,3	8,0	66,0	3000
550250-32-32	32	51,0	2"	32	2	71,4	9,5	70,0	3000
550250-40-32	32	51,0	2"	40	2 1/2	84,1	9,5	83,0	2500
550250-32-40	40	63,0	2 1/2"	32	2	71,4	9,5	86,5	3000
550250-40-40	40	63,0	2 1/2"	40	2 1/2	84,1	9,5	86,5	2500



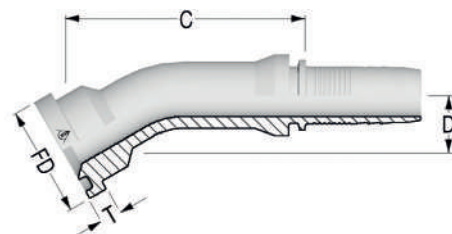
// 550740 - FLANGIA 22° SAE 3000 PSI J518 CODE 61 - SFL 22

// 22° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 22

Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
550740-16-16	16	25,0	1"	16	1	44,5	8,0	92,7	12,0	5000
550740-20-20	20	32,0	1 1/4"	20	1 1/4	50,8	8,0	113,6	16,0	4000
550740-24-20	20	32,0	1 1/4"	24	1 1/2	60,3	8,0	114,7	20,5	3000
550740-24-24	24	38,0	1 1/2"	24	1 1/2	60,3	8,0	131,0	22,0	3000
550740-32-32	32	51,0	2"	32	2	71,4	9,5	153,0	30,0	3000

// 550770 - FLANGIA 30° SAE 3000 PSI J518 CODE 61 - SFL 30

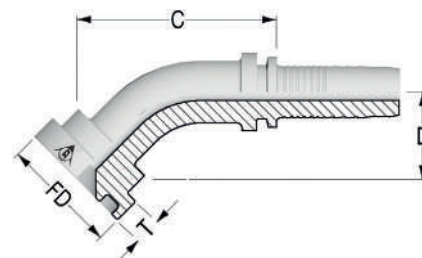
// 30° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 30



Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
550770-12-12	12	19,0	3/4"	12	3/4	38,1	6,5	80,8	12,0	5000
550770-16-12	12	19,0	3/4"	16	1	44,5	8,0	83,8	12,0	5000
550770-16-16	16	25,0	1"	16	1	44,5	8,0	89,8	12,0	5000
550770-20-16	16	25,0	1"	20	1 1/4	50,8	8,0	90,0	12,0	4000
550770-20-20	20	32,0	1 1/4"	20	1 1/4	50,8	8,0	102,4	12,0	4000
550770-24-20	20	32,0	1 1/4"	24	1 1/2	60,3	8,0	111,9	13,0	3000
550770-24-24	24	38,0	1 1/2"	24	1 1/2	60,3	8,0	128,6	23,0	3000
550770-32-24	24	38,0	1 1/2"	32	2	71,4	9,5	147,0	29,5	3000

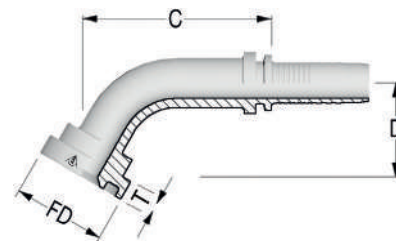
// 550680 - FLANGIA 45° SAE 3000 PSI J518 CODE 61 - SFL 45

// 45° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 45



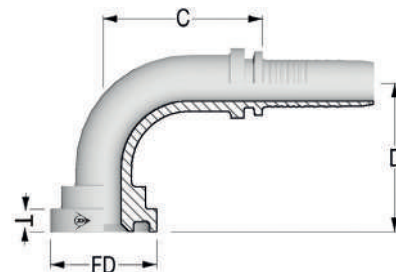
Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
550680-08-08	08	13,0	1/2"	08	1/2	30,2	6,5	52,9	22,0	5000
550680-12-08	08	13,0	1/2"	12	3/4	38,1	6,5	60,3	26,0	5000
550680-12-12	12	19,0	3/4"	12	3/4	38,1	6,5	73,7	32,0	5000
550680-16-12	12	19,0	3/4"	16	1	44,5	8,0	77,9	29,0	5000
550680-20-12	12	19,0	3/4"	20	1 1/4	50,8	8,0	81,5	30,0	5000
550680-16-16	16	25,0	1"	16	1	44,5	8,0	82,7	33,5	5000
550680-20-16	16	25,0	1"	20	1 1/4	50,8	8,0	82,2	36,0	4000
550680-16-20	20	32,0	1 1/4"	16	1	44,5	8,0	114,6	35,1	5000
550680-20-20	20	32,0	1 1/4"	20	1 1/4	50,8	8,0	95,1	37,5	4000
550680-24-20	20	32,0	1 1/4"	24	1 1/2	60,3	8,0	104,1	40,0	3000
550680-20-24	24	38,0	1 1/2"	20	1 1/4	50,8	8,0	144,9	49,5	4000
550680-24-24	24	38,0	1 1/2"	24	1 1/2	60,3	8,0	116,7	48,0	3000
550680-32-24	24	38,0	1 1/2"	32	2	71,4	9,5	135,6	55,5	3000
550680-32-32	32	51,0	2"	32	2	71,4	9,5	140,8	47,5	3000
550680-40-40	40	63,0	2 1/2"	40	2 1/2	84,1	9,5	139,0	53,0	2500

// 55A120 - FLANGIA 60° SAE 3000 PSI J518 CODE 61 - SFL 60
// 60° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 60



Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
55A120-12-12	12	19,0	3/4"	12	3/4	38,1	6,5	85,7	37,0	5000
55A120-16-16	16	25,0	1"	16	1	44,5	8,0	101,0	47,0	5000
55A120-20-16	16	25,0	1"	20	1 1/4	50,8	8,0	106,6	43,5	4000
55A120-20-20	20	32,0	1 1/4"	20	1 1/4	50,8	8,0	129,5	56,5	4000
55A120-24-24	24	38,0	1 1/2"	24	1 1/2	60,3	8,0	151,5	57,0	3000
55A120-32-32	32	51,0	2"	32	2	71,4	9,5	173,0	92,0	3000

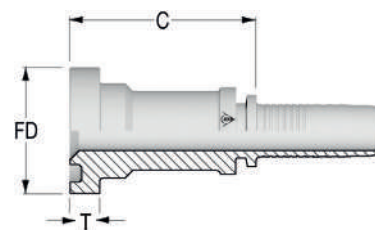
// 550580 - FLANGIA 90° SAE 3000 PSI J518 CODE 61 - SFL 90
// 90° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 90



Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
550580-08-08	08	13,0	1/2"	08	1/2	30,2	6,5	45,8	42,0	5000
550580-12-08	08	13,0	1/2"	12	3/4	38,1	6,5	45,3	51,0	5000
550580-12-10	10	16,0	5/8"	12	3/4	38,1	6,5	49,4	51,0	5000
550580-12-12	12	19,0	3/4"	12	3/4	38,1	8,0	59,7	58,0	5000
550580-16-12	12	19,0	3/4"	16	1	44,5	8,0	66,2	64,5	5000
550580-20-12	12	19,0	3/4"	20	1 1/4	50,8	8,0	69,7	60,0	4000
550580-16-16	16	25,0	1"	16	1	44,5	8,0	70,6	67,0	5000
550580-20-16	16	25,0	1"	20	1 1/4	50,8	8,0	73,6	71,0	4000
550580-24-16	16	25,0	1"	24	1 1/2	60,3	8,0	93,1	75,0	3000
550580-16-20	20	32,0	1 1/4"	16	1	44,5	8,0	94,4	65,0	5000
550580-20-20	20	32,0	1 1/4"	20	1 1/4	50,8	8,0	88,0	84,0	4000
550580-24-20	20	32,0	1 1/4"	24	1 1/2	60,3	8,0	91,5	87,5	3000
550580-20-24	24	38,0	1 1/2"	20	1 1/4	50,8	8,0	93,6	93,0	4000
550580-24-24	24	38,0	1 1/2"	24	1 1/2	60,3	8,0	104,8	91,0	3000
550580-32-24	24	38,0	1 1/2"	32	2	71,4	9,5	104,8	115,0	3000
550580-24-32	32	51,0	2"	24	1 1/2	60,3	8,0	132,8	133,0	3000
550580-32-32	32	51,0	2"	32	2	71,4	9,5	129,3	130,0	3000
550580-40-32	32	51,0	2"	40	2 1/2	84,1	9,5	103,0	100,0	2500
550580-40-40	40	63,0	2 1/2"	40	2 1/2	84,1	9,5	137,2	125,0	2500

// 551590 - FLANGIA SAE 6000 PSI J518 CODE 62

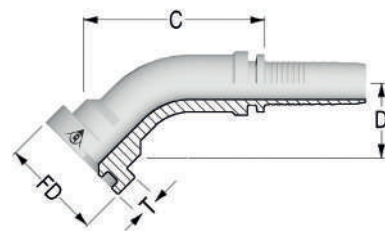
// FLANGE SAE 6000 PSI J518 CODE 62



Code	ID			Flange	Flange Size	FD	T	C	WP
	Dash	mm	In	Dash Size		mm	mm	mm	psi
551590-08-08	08	13,0	1/2"	08	1/2	31,8	8,0	47,0	6000
551590-12-08	08	13,0	1/2"	12	3/4	41,3	9,0	52,0	6000
551590-12-10	10	16,0	5/8"	12	3/4	41,3	9,0	52,2	6000
551590-12-12	12	19,0	3/4"	12	3/4	41,3	9,0	52,5	6000
551590-16-12	12	19,0	3/4"	16	1	47,6	9,5	55,5	6000
551590-12-16	16	25,0	1"	12	3/4	41,3	9,0	56,4	6000
551590-16-16	16	25,0	1"	16	1	47,6	9,5	56,4	6000
551590-20-16	16	25,0	1"	20	1 1/4	54,0	10,5	63,4	6000
551590-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	10,5	83,0	6000
551590-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	12,5	71,0	6000
551590-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	12,5	101,0	6000
551590-32-24	24	38,0	1 1/2"	32	2	79,4	12,5	76,0	6000
551590-32-32	32	51,0	2"	32	2	79,4	12,5	76,0	6000

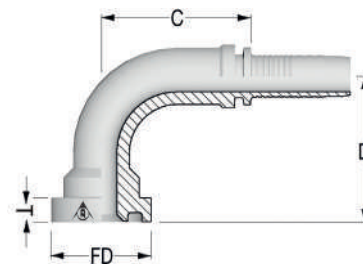
// 551610 - FLANGIA 45° SAE 6000 PSI J518 CODE 62 - SFS 45

// 45° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 45



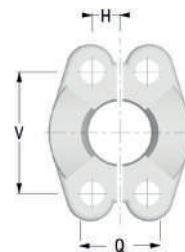
Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
551610-08-08	08	13,0	1/2"	08	1/2	31,8	8,0	56,5	23,0	6000
551610-12-08	08	13,0	1/2"	12	3/4	41,3	9,0	79,9	30,5	6000
551610-12-10	10	16,0	5/8"	12	3/4	41,3	9,0	69,0	31,0	6000
551610-12-12	12	19,0	3/4"	12	3/4	41,3	9,0	84,1	31,0	6000
551610-16-12	12	19,0	3/4"	16	1	47,6	9,5	80,0	33,5	6000
551610-16-16	16	25,0	1"	16	1	47,6	9,5	96,7	36,0	6000
551610-20-16	16	25,0	1"	20	1 1/4	54,0	10,5	96,1	39,0	6000
551610-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	10,5	108,6	40,0	6000
551610-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	12,5	114,8	45,5	6000
551610-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	12,5	122,9	45,0	6000
551610-32-32	32	51,0	2"	32	2	79,4	12,5	156,6	60,0	6000

// 551600 - FLANGIA 90° SAE 6000 PSI J518 CODE 62 - SFS 90
// 90° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 90



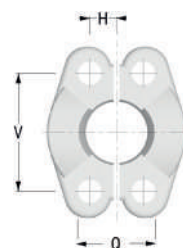
Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In							
551600-08-08	08	13,0	1/2"	08	1/2	31,8	8,0	47,8	46,0	6000
551600-12-08	08	13,0	1/2"	12	3/4	41,3	9,0	47,8	54,0	6000
551600-08-10	10	16,0	5/8"	08	1/2	31,8	8,0	50,0	52,0	6000
551600-12-10	10	16,0	5/8"	12	3/4	41,3	9,0	49,9	55,0	6000
551600-12-12	12	19,0	3/4"	12	3/4	41,3	9,0	63,2	61,0	6000
551600-16-12	12	19,0	3/4"	16	1	47,6	9,5	63,2	66,0	6000
551600-12-16	16	25,0	1"	12	3/4	41,3	9,0	72,6	61,0	6000
551600-16-16	16	25,0	1"	16	1	47,6	9,5	73,6	75,0	6000
551600-20-16	16	25,0	1"	20	1 1/4	54,0	10,5	77,6	78,0	6000
551600-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	10,5	94,5	89,0	6000
551600-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	12,5	98,0	94,0	6000
551600-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	12,5	99,6	105,0	6000
551600-32-24	24	38,0	1 1/2"	32	2	79,4	12,5	116,9	123,0	6000
551600-32-32	32	51,0	2"	32	2	79,4	12,5	143,3	132,0	6000

// OV2860 - SEMIFLANGIA SAE 3000 PSI J518 CODE 61 - FHL
// SPLIT FLANGE CLAMP 3000 PSI J518 CODE 61 - FHL



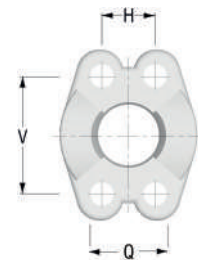
Code	ID	FD	V	H	Q
	Dash	In	mm	mm	mm
OV2860-08	08	1/2"	38,1	8,7	30,2
OV2860-12	12	3/4"	47,6	11,1	38,0
OV2860-16	16	1"	52,4	13,1	44,5
OV2860-20	20	1 1/4"	58,7	15,1	50,8
OV2860-24	24	1 1/2"	69,9	17,9	60,3
OV2860-32	32	2"	77,8	21,4	71,5
OV2860-40	40	2 1/2"	89,0	25,5	84,1
OV2860-48	48	3"	106,0	31,0	101,6
OV2860-56	56	3 1/2"	120,0	35,0	115,0
OV2860-64	64	4"	130,0	39,0	127,0

// OV5910 - SEMIFLANGIA SAE 6000 PSI J518 CODE 62
// SPLIT FLANGE CLAMP 6000 PSI J518 CODE 62



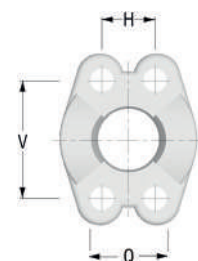
Code	ID	FD	V	H	Q
	Dash	In	mm	mm	mm
OV5910-08	08	1/2"	40,5	9,1	31,8
OV5910-12	12	3/4"	50,8	11,9	41,3
OV5910-16	16	1"	57,2	13,9	47,6
OV5910-20	20	1 1/4"	66,7	15,9	54,0
OV5910-24	24	1 1/2"	79,4	18,3	63,5
OV5910-32	32	2"	96,8	22,2	79,5

// OV3860 - SEMIFLANGIA INTERA SAE 3000 PSI 4 FORI J518 CODE 61 - VHL
// 4 HOLE FLANGE CLAMP 3000 PSI J518 CODE 61 - VHL



Code	ID	FD	V	H	Q
	Dash	In	mm	mm	mm
OV3860-12	12	3/4"	47,6	22,2	38,0
OV3860-16	16	1"	52,4	26,2	44,5
OV3860-20	20	1 1/4"	58,7	30,2	50,8
OV3860-24	24	1 1/2"	69,9	35,8	60,3
OV3860-32	32	2"	77,8	42,8	84,1

// OV6910 - SEMIFLANGIA INTERA SAE 6000 PSI 4 FORI J518 CODE 62 - VHS
// 4 HOLE FLANGE CLAMP 6000 PSI J518 CODE 62 - VHS



Code	ID	FD	V	H	Q
	Dash	In	mm	mm	mm
OV6910-08	08	1/2"	40,5	18,2	31,8
OV6910-12	12	3/4"	50,8	23,8	41,3
OV6910-16	16	1"	57,2	27,8	47,6
OV6910-20	20	1 1/4"	66,7	31,8	54,0
OV6910-24	24	1 1/2"	79,4	36,6	63,5
OV6910-32	32	2"	96,8	44,4	79,5



// RACCORDI NEW POWERTRAK SERIE 29 *NEW POWERTRAK FITTINGS* 29 SERIES

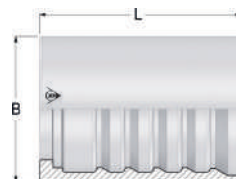
// GHIERE FERRULES	— 113	// INSERTI NPTF NPTF INSERTS	— 120
// INSERTI BSP BSP INSERTS	— 114	// INSERTI ORFS ORFS INSERTS	— 121
// INSERTI METRICI DIN DIN METRIC INSERTS	— 116	// INSERTI FLANGE SAE SAE FLANGES	— 123
// INSERTI JIC 37° JIC 37° INSERTS	— 118	// INSERTI FLANGE SUPERCAT SUPERCAT FLANGES	— 126

// NEW POWERTRAK - GHIERE FERRULES

// 290000 - GHIERA NEW POWERTRAK SENZA SPELLATURA PER TUBI 4 SPIRALI

// NO-SKIVE MULTISPIRAL FERRULE FOR 4 SPIRAL HOSES

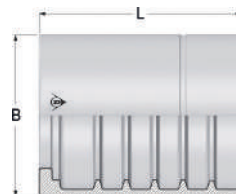
Code	ID			B	L
	Dash	mm	In	mm	mm
290000-12	12	19,0	3/4"	44,0	55,0
290000-16	16	25,0	1"	51,0	64,0
290000-20	20	31,0	1 1/4"	61,0	99,0
290000-24	24	38,0	1 1/2"	70,0	89,5
290000-24	32	51,0	2"	87,0	125,0



// 280000 - GHIERA NEW POWERTRAK SENZA SPELLATURA PER TUBI 6 SPIRALI

// NO-SKIVE MULTISPIRAL FERRULE FOR 6 SPIRAL HOSES

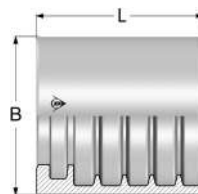
Code	ID			B	L
	Dash	mm	In	mm	mm
280000-20	20	31,0	1 1/4"	65,0	99,0
280000-24	24	38,0	1 1/2"	73,0	89,5
280000-32	32	51,0	2"	88,9	125,0



// SK4000 - GHIERA NEW POWERTRAK CON SPELLATURA PER TUBI 4 SPIRALI

// SKIVE MULTISPIRAL FERRULE FOR 4 SPIRAL HOSES

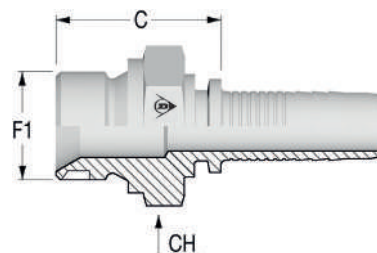
Code	ID			B	L
	Dash	mm	In	mm	mm
SK4000-12	12	19,0	3/4"	38,0	59,0
SK4000-16	16	25,0	1"	46,0	64,0
SK4000-20	20	31,0	1 1/4"	56,0	91,0
SK4000-24	24	38,0	1 1/2"	62,0	91,0
SK4000-32	32	51,0	2"	78,0	115,0



// NEW POWERTRAK - INSERTI BSP *BSP INSERTS*

// 290120 - MASCHIO BSPP CILINDRICO SV. 60° - AGR

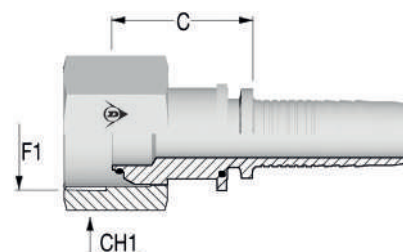
// BSPP MALE 60° FLARE - AGR



Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
290120-12-12	NA	12	19,0	3/4"	12	3/4-14	37,5	32,0
290120-16-16	NA	16	25,0	1"	16	1-11	44,5	41,0
290120-20-20	NA	20	32,0	1 1/4"	20	1 1/4-11	95,5	50,0
290120-24-24	NA	24	38,0	1 1/2"	24	1 1/2-11	56,0	55,0
290120-32-32	NA	32	51,0	2"	32	2-11	71,5	70,0

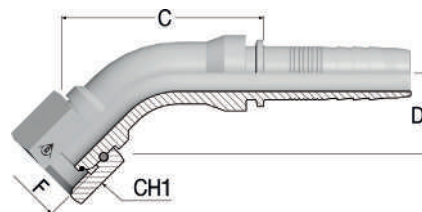
// A29001 - FEMMINA BSPP CILINDRICA SV. 60° CON O'RING - DKOR

// BSPP FEMALE 60° CONE WITH O'RING - DKOR



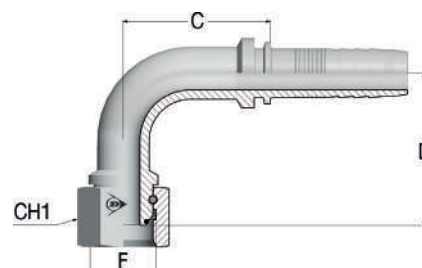
Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In	Dash Size		mm	mm
A29001-12-12	TN	12	19,0	3/4"	12	3/4-14	25,2	32,0
A29001-16-12	TN	12	19,0	3/4"	16	1-11	27,7	38,0
A29001-16-16	TN	16	25,0	1"	16	1-11	31,0	38,0
A29001-20-16	TN	16	25,0	1"	20	1 1/4-11	32,0	50,0
A29001-20-20	TN	20	32,0	1 1/4"	20	1 1/4-11	35,0	50,0
A29001-24-24	TN	24	38,0	1 1/2"	24	1 1/2-11	38,8	55,0
A29001-32-32	TN	32	51,0	2"	32	2-11	49,0	70,0

// A29061 - FEMMINA 45° BSPP CILINDRICA SV. 60° CON O'RING - DKOR 45
// 45° BSPP FEMALE 60° CONE WITH O'RING - DKOR 45



Code	Nut Type	ID			F1		C	D Drop	CH
		Dash	mm	In	Dash Size	F1			
A29061-12-12	TN	12	19,0	3/4"	12	3/4-14	75,2	30,0	32,0
A29061-16-16	TN	16	25,0	1"	16	1-11	92,1	40,0	38,0
A29061-20-20	TN	20	32,0	1 1/4"	20	1 1/4-11	90,4	40,0	50,0
A29061-24-24	TN	24	38,0	1 1/2"	24	1 1/2-11	113,0	46,0	55,0
A29061-32-32	TN	32	51,0	2"	32	2-11	153,5	60,0	70,0

// A29051 - FEMMINA 90° BSPP CILINDRICA SV. 60° CON O'RING - DKOR 90
// 90° BSPP FEMALE 60° CONE WITH O'RING - DKOR 90

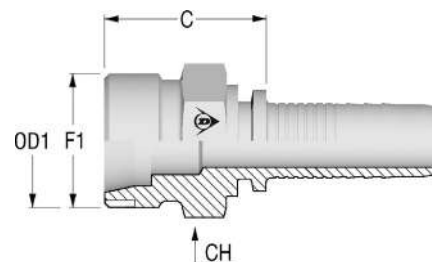


Code	Nut Type	ID			F1		C	D Drop	CH
		Dash	mm	In	Dash Size	F1			
A29051-12-12	TN	12	19,0	3/4"	12	3/4-14	59,1	61,0	32,0
A29051-16-16	TN	16	25,0	1"	16	1-11	73,7	71,0	38,0
A29051-20-20	TN	20	32,0	1 1/4"	20	1 1/4-11	84,3	83,0	50,0
A29051-24-24	TN	24	38,0	1 1/2"	24	1 1/2-11	98,7	96,0	55,0
A29051-32-32	TN	32	51,0	2"	32	2-11	140,5	130,0	70,0

// NEW POWERTRAK - INSERTI METRICI DIN DIN METRIC INSERTS

// 291700 - MASCHIO METRICO SV. 24° DIN 3853 - SERIE PESANTE - CES

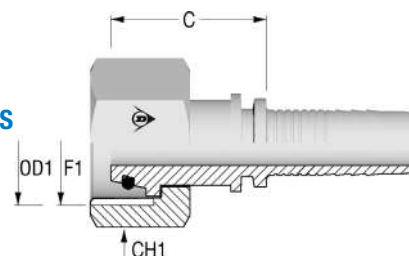
// METRIC MALE 24° SEAT - HEAVY - DIN 3853 - CES



Code	Nut Type	ID			F1	OD1	C	CH
		Dash	mm	In		mm	mm	mm
291700-12-12	NA	12	19,0	3/4"	M36X2	25	36,5	36,0
291700-16-16	NA	16	25,0	1"	M42X2	30	36,2	46,0
291700-20-20	NA	20	32,0	1 1/4"	M52X2	38	51,0	55,0

// A29179 - FEMMINA METRICA SV. 24° CON O'RING DIN 3865 - SERIE PESANTE - DKOS

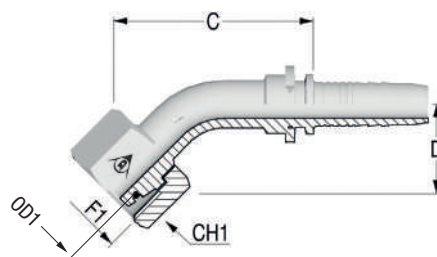
// METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS



Code	Nut Type	ID			F1	OD1	C	CH1
		Dash	mm	In		mm	mm	mm
A29179-10-12	TN	12	19,0	3/4"	M30X2	20	36,8	36,0
A29179-12-12	SN	12	19,0	3/4"	M36X2	25	41,1	46,0
A29179-12-16	TN	16	25,0	1"	M36X2	25	46,0	46,0
A29179-16-16	SN	16	25,0	1"	M42X2	30	45,2	50,0
A29179-16-20	TN	20	32,0	1 1/4"	M42X2	30	51,0	50,0
A29179-20-20	SN	20	32,0	1 1/4"	M52X2	38	51,1	60,0
A29179-20-24	TN	24	38,0	1 1/2"	M52X2	38	58,0	60,0

// A29987 - FEMMINA 45° METRICA SV. 24° CON O'RING DIN 3865 - SERIE PESANTE - DKOS 45

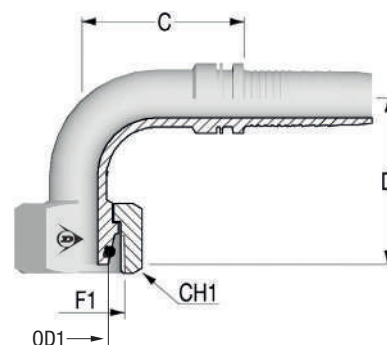
// 45° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 45



Code	Nut Type	ID			F1	OD1	C	D Drop	CH1
		Dash	mm	In		mm	mm	mm	mm
A29987-12-12	SN	12	19,0	3/4"	M36X2	25	70,4	33,0	46,0
A29987-12-16	TN	16	25,0	1"	M36X2	25	93,0	37,5	46,0
A29987-16-16	SN	16	25,0	1"	M42X2	30	109,5	35,5	50,0
A29987-20-20	SN	20	32,0	1 1/4"	M52X2	38	112,0	45,0	60,0
A29987-20-24	TN	24	38,0	1 1/2"	M52X2	38	127,0	45,0	60,0

// A29977 - FEMMINA 90° METRICA SV. 24° CON O'RING DIN 3865 - SERIE PESANTE - DKOS 90

// 90° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 90

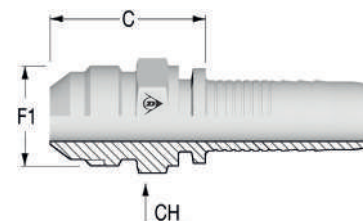


Code	Nut Type	ID			F1	OD1	C	D Drop	CH1
		Dash	mm	In		mm	mm	mm	mm
A29977-10-12	TN	12	19,0	3/4"	M30X2	20	65,5	67,5	36,0
A29977-12-12	SN	12	19,0	3/4"	M36X2	25	51,0	59,5	46,0
A29977-12-16	TN	16	25,0	1"	M36X2	25	75,6	82,0	46,0
A29977-16-16	SN	16	25,0	1"	M42X2	30	85,0	70,0	50,0
A29977-20-20	SN	20	32,0	1 1/4"	M52X2	38	97,0	92,0	60,0
A29977-20-24	TN	24	38,0	1 1/2"	M52X2	38	106,0	95,0	60,0

// NEW POWERTRAK - INSERTI JIC 37° JIC 37° INSERTS

// 290200 - MASCHIO JIC SV. 37° - AGJ

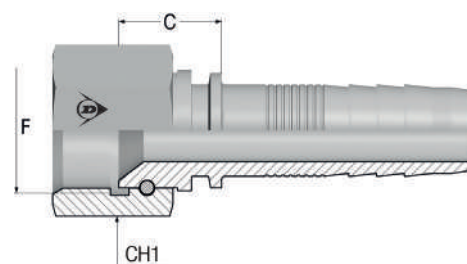
// JIC MALE 37° CONE - AGJ



Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
290200-12-12	NA	12	19,0	3/4"	12	1 1/16-12	38,5	27,0
290200-16-16	NA	16	25,0	1"	16	1 5/16-12	45,5	36,0
290200-20-20	NA	20	32,0	1 1/4"	20	1 5/8-12	51,5	46,0
290200-24-24	NA	24	38,0	1 1/2"	24	1 7/8-12	57,5	50,0
290200-32-32	NA	32	51,0	2"	32	2 1/2-12	77,0	65,0

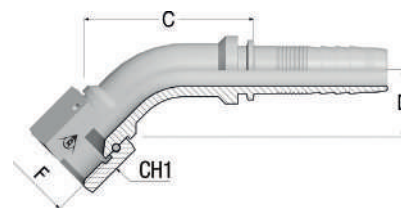
// A29005 - FEMMINA JIC SV. 37° - DKJ

// JIC FEMALE 37° SEAT - DKJ



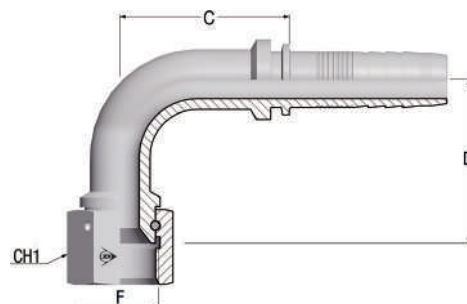
Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In	Dash Size		mm	mm
A29005-12-12	TN	12	19,0	3/4"	12	1 1/16-12	22,2	32,0
A29005-16-12	TN	12	19,0	3/4"	16	1 5/16-12	25,0	38,0
A29005-16-16	TN	16	25,0	1"	16	1 5/16-12	27,0	38,0
A29005-20-16	TN	16	25,0	1"	20	1 5/8-12	29,0	50,0
A29005-20-20	TN	20	32,0	1 1/4"	20	1 5/8-12	31,5	50,0
A29005-24-20	TN	20	32,0	1 1/4"	24	1 7/8-12	34,0	55,0
A29005-24-24	TN	24	38,0	1 1/2"	24	1 7/8-12	36,5	55,0
A29005-32-32	TN	32	51,0	2"	32	2 1/2-12	47,0	70,0

// A29064 - FEMMINA 45° JIC SV. 37° - DKJ 45M
// 45° JIC FEMALE 37° SEAT - MEDIUM DROP - DKJ 45M



Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash Size	F1			
A29064-12-12	TN	12	19,0	3/4"	12	1 1/16-12	69,5	27,5	32,0
A29064-16-12	TN	12	19,0	3/4"	16	1 5/16-12	69,0	33,5	38,0
A29064-16-16	TN	16	25,0	1"	16	1 5/16-12	84,8	31,0	38,0
A29064-20-20	TN	20	32,0	1 1/4"	20	1 5/8-12	99,0	37,0	50,0
A29064-24-24	TN	24	38,0	1 1/2"	24	1 7/8-12	118,3	43,5	55,0
A29064-32-32	TN	32	51,0	2"	32	2 1/2-12	162,3	51,5	70,0

// A29054 - FEMMINA 90° JIC SV. 37° - DKJ 90M
// 90° JIC FEMALE 37° SEAT - MEDIUM DROP - DKJ 90M

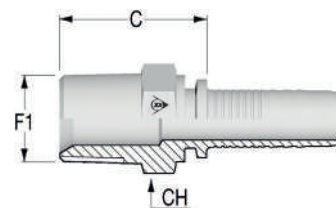


Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash Size	F1			
A29054-12-12	TN	12	19,0	3/4"	12	1 1/16-12	59,1	57,0	32,0
A29054-16-12	TN	12	19,0	3/4"	16	1 5/16-12	58,1	63,5	38,0
A29054-16-16	TN	16	25,0	1"	16	1 5/16-12	75,7	67,0	38,0
A29054-20-20	TN	20	32,0	1 1/4"	20	1 5/8-12	84,0	78,0	50,0
A29054-24-24	TN	24	38,0	1 1/2"	24	1 7/8-12	105,3	92,0	55,0
A29054-32-32	TN	32	51,0	2"	32	2 1/2-12	147,5	135,0	70,0

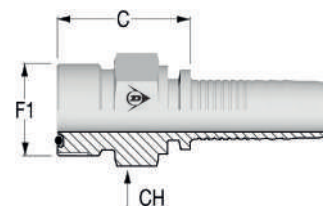
// NEW POWERTRAK - INSERTI NPTF NPTF INSERTS

// 290170 - MASCHIO NPTF SV. 60° - AGN

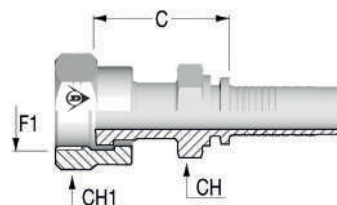
// NPTF MALE 60° SEAT - AGN



Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
290170-12-12	NA	12	19,0	3/4"	12	3/4-14	35,5	27,0
290170-16-16	NA	16	25,0	1"	16	1-11 1/2	46,5	36,0
290170-20-20	NA	20	32,0	1 1/4"	20	1 1/4-11 1/2	41,0	46,0
290170-24-24	NA	24	38,0	1 1/2"	24	1 1/2-11	55,5	69,2
290170-32-32	NA	32	51,0	2"	32	2-11 1/2	69,2	65,0

// **NEW POWERTRAK - INSERTI ORFS** *ORFS INSERTS*// **29A290 - MASCHIO ORFS**// **ORFS MALE**

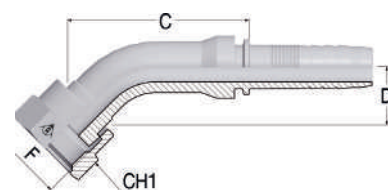
Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
29A290-12-12	NA	12	19,0	3/4"	12	1 3/16-12	32,7	32,0
29A290-16-16	NA	16	25,0	1"	16	1 7/16-12	35,7	38,0
29A290-20-20	NA	20	32,0	1 1/4"	20	1 11/16-12	38,7	46,0
29A290-24-24	NA	24	38,0	1 1/2"	24	2-12	41,8	55,0

// **A29A26 - FEMMINA ORFS CON CONTRO-ESAGONO**// **ORFS FEMALE WITH STEM HEXAGON**

Code	Nut Type	ID			F1	F1	C	CH	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A29A26-12-12	CR	12	19,0	3/4"	12	1 3/16-12	44,5	30,0	36,0
A29A26-16-12	CR	12	19,0	3/4"	16	1 7/16-12	50,5	36,0	41,0
A29A26-12-16	CR	16	25,0	1"	12	1 3/16-12	42,0	32,0	36,0
A29A26-16-16	CR	16	25,0	1"	16	1 7/16-12	52,5	36,0	41,0
A29A26-20-16	CR	16	25,0	1"	20	1 11/16-12	53,5	41,0	50,0
A29A26-20-20	CR	20	32,0	1 1/4"	20	1 11/16-12	56,0	41,0	50,0
A29A26-24-24	CR	24	38,0	1 1/2"	24	2-12	62,5	50,0	60,0

// A29A27 - FEMMINA 45° ORFS MEDIUM DROP - DK ORFS 45M

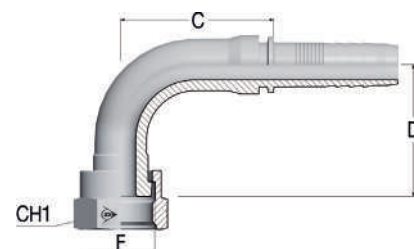
// 45° ORFS FEMALE MEDIUM DROP - DK ORFS 45M



Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A29A27-12-12	CR	12	19,0	3/4"	12	1 3/16-12	32,5	26,0	36,0
A29A27-16-12	CR	12	19,0	3/4"	16	1 7/16-12	31,2	28,0	41,0
A29A27-16-16	CR	16	25,0	1"	16	1 7/16-12	94,0	28,0	41,0
A29A27-20-16	CR	16	25,0	1"	20	1 11/16-12	88,0	28,0	50,0
A29A27-20-20	CR	20	32,0	1 1/4"	20	1 11/16-12	110,0	36,5	50,0

// A29A28 - FEMMINA 90° ORFS MEDIUM DROP - DK ORFS 90M

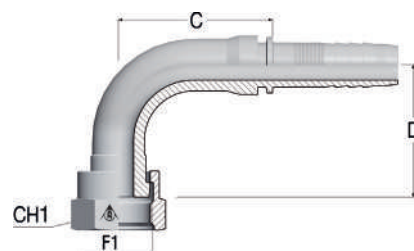
// 90° ORFS FEMALE MEDIUM DROP - DK ORFS 90M



Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A29A28-12-12	CR	12	19,0	3/4"	12	1 3/16-12	67,6	58,0	36,0
A29A28-16-12	CR	12	19,0	3/4"	16	1 7/16-12	69,6	58,0	36,0
A29A28-16-16	CR	16	25,0	1"	16	1 7/16-12	79,6	66,0	41,0
A29A28-20-16	CR	16	25,0	1"	20	1 11/16-12	73,0	66,0	50,0
A29A28-20-20	CR	20	32,0	1 1/4"	20	1 11/16-12	102,4	81,0	50,0
A29A28-24-24	CR	24	38,0	1 1/2"	24	2-12	IN PREPARAZ.	IN PREPARAZ.	60,0

// A29A42 - FEMMINA 90° ORFS LONG DROP - DK ORFS 90L

// 90° ORFS FEMALE LONG DROP - DK ORFS 90L

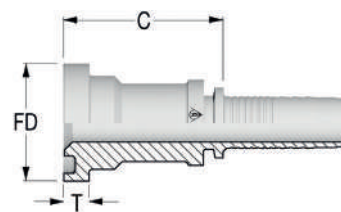


Code	ID			F1	F1	C	D Drop	CH1
	Dash	mm	In	Dash Size		mm	mm	mm
A29A42-12-12	12	19,0	3/4"	12	1 3/16-12	IN PREPARAZ.	96,0	36,0
A29A42-16-16	16	25,0	1"	16	1 7/16-12	IN PREPARAZ.	114,0	41,0

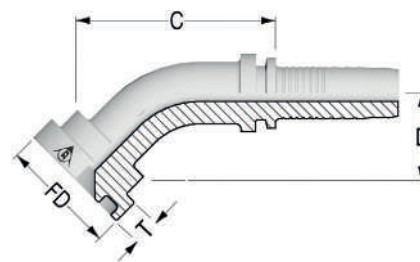
// NEW POWERTRAK - INSERTI FLANGE SAE SAE FLANGES

// 290250 - FLANGIA SAE 3000 PSI J518 CODE 61 - SFL

// FLANGE SAE 3000 PSI J518 CODE 61 - SFL



Code	ID			Flange	Flange Size	FD	T	C	WP
	Dash	mm	In	Dash Size		mm	mm	mm	psi
290250-12-12	12	19,0	3/4"	12	3/4	38,1	6,5	43,5	5000
290250-16-12	12	19,0	3/4"	16	1	44,5	8,0	53,5	5000
290250-16-16	16	25,0	1"	16	1	44,5	8,0	53,5	5000
290250-20-16	16	25,0	1"	20	1 1/4	50,8	8,0	56,0	5000
290250-16-20	20	32,0	1 1/4"	16	1	44,4	8,0	58,5	5000
290250-20-20	20	32,0	1 1/4"	20	1 1/4	50,8	8,0	58,5	5000
290250-24-20	20	32,0	1 1/4"	24	1 1/2	60,3	8,0	61,5	5000
290250-20-24	24	38,0	1 1/2"	20	1 1/4	50,8	8,0	55,5	5000
290250-24-24	24	38,0	1 1/2"	24	1 1/2	60,3	8,0	63,5	5000
290250-32-24	24	38,0	1 1/2"	32	2	71,4	9,5	75,0	5000
290250-32-32	32	50,0	2"	32	2	71,4	9,5	85,0	5000



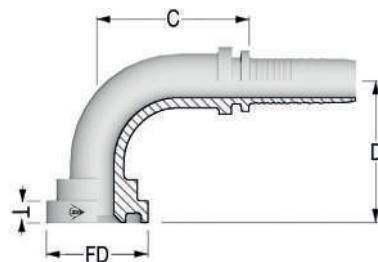
// 29B370 - FLANGIA 45° SAE 3000 PSI J518 CODE 61 - SFL 45

// 45° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 45

Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
29B370-20-16	16	25,0	1"	20	1 1/4	50,8	8,0	88,9	32,5	5000
29B370-20-20	20	32,0	1 1/4"	20	1 1/4	50,8	8,0	94,3	38,5	5000
29B370-24-24	24	38,0	1 1/2"	24	1 1/2	60,3	8,0	99,8	43,0	5000
29B370-32-32	32	50,0	2"	32	2	71,4	9,5	154,0	54,0	5000

// 29B380 - FLANGIA 90° SAE 3000 PSI J518 CODE 61 - SFL 90

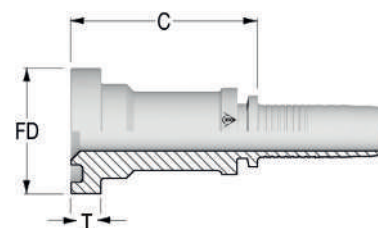
// 90° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 90



Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
29B380-16-16	16	25,0	1"	16	1	44,5	9,5	78,1	64,0	5000
29B380-20-16	16	25,0	1"	20	1 1/4	50,8	10,5	74,7	69,0	5000
29B380-20-20	20	32,0	1 1/4"	20	1 1/4	50,8	10,5	92,0	81,0	5000
29B380-24-20	20	32,0	1 1/4"	24	1 1/2	60,3	12,5	87,0	85,0	5000
29B380-24-24	24	38,0	1 1/2"	24	1 1/2	60,3	12,5	103,0	93,0	5000
29B380-32-24	24	38,0	1 1/2"	32	2	71,4	12,5	137,8	97,0	5000
29B380-32-32	32	50,0	2"	32	2	71,4	12,5	139,0	130,0	5000

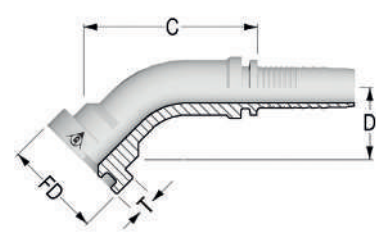
// 29B810 - FLANGIA SAE 6000 PSI J518 CODE 62 - SFS

// FLANGE SAE 6000 PSI J518 CODE 62 - SFS



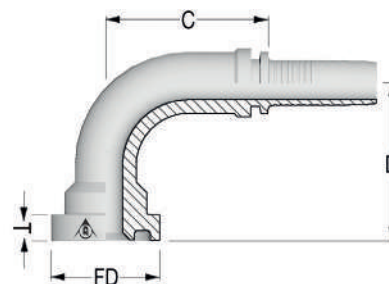
Code	ID			Flange	Flange Size	FD	T	C	WP
	Dash	mm	In	Dash Size		mm	mm	mm	psi
29B810-12-12	12	19,0	3/4"	12	3/4	41,3	9,0	53,5	6000
29B810-16-12	12	19,0	3/4"	16	1	47,6	9,5	56,5	6000
29B810-12-16	16	25,0	1"	12	3/4	41,3	9,0	58,5	6000
29B810-16-16	16	25,0	1"	16	1	47,6	9,5	58,5	6000
29B810-20-16	16	25,0	1"	20	1 1/4	54,0	10,5	65,5	6000
29B810-16-20	20	32,0	1 1/4"	16	1	47,6	9,5	61,0	6000
29B810-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	10,5	64,0	6000
29B810-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	12,5	74,0	6000
29B810-20-24	24	38,0	1 1/2"	20	1 1/4	54,0	10,5	71,0	6000
29B810-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	12,5	76,0	6000
29B810-32-24	24	38,0	1 1/2"	32	2	79,4	12,5	88,0	6000
29B810-24-32	32	51,0	2"	24	1 1/2	63,5	12,5	86,0	6000
29B810-32-32	32	50,0	2"	32	2	79,4	12,5	103,0	6000

// 29B470 - FLANGIA 45° SAE 6000 PSI J518 CODE 62 - SFS 45
// 45° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 45



Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
29B470-12-12	12	19,0	3/4"	12	3/4	41,3	9,0	62,8	30,0	6000
29B470-16-12	12	19,0	3/4"	16	1	47,6	9,5	65,4	33,0	6000
29B470-12-16	16	25,0	1"	12	3/4	41,3	9,0	77,0	29,5	6000
29B470-16-16	16	25,0	1"	16	1	47,6	9,5	82,9	38,5	6000
29B470-20-16	16	25,0	1"	20	1 1/4	54,0	10,5	78,0	44,0	6000
29B470-16-20	20	32,0	1 1/4"	16	1	47,6	9,5	104,7	34,5	6000
29B470-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	10,5	103,0	41,0	6000
29B470-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	12,5	117,0	48,0	6000
29B470-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	12,5	122,5	48,0	6000
29B470-32-24	24	38,0	2"	32	2	79,4	12,5	109,6	55,0	6000
29B470-32-32	32	50,0	2"	32	2	79,4	12,5	177,0	61,0	6000

// 29B480 - FLANGIA 90° SAE 6000 PSI J518 CODE 62 - SFS 90
// 90° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 90

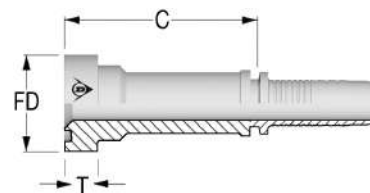


Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
29B480-12-12	12	19,0	3/4"	12	3/4	41,3	9,0	64,7	64,0	6000
29B480-16-12	12	19,0	3/4"	16	1	47,6	9,5	64,7	66,0	6000
29B480-12-16	16	25,0	1"	12	3/4	41,3	9,0	74,7	61,0	6000
29B480-16-16	16	25,0	1"	16	1	47,6	9,5	74,8	74,0	6000
29B480-20-16	16	25,0	1"	20	1 1/4	54,0	10,5	78,8	85,0	6000
29B480-16-20	20	32,0	1 1/4"	16	1	47,6	9,5	87,0	72,0	6000
29B480-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	10,5	96,0	91,0	6000
29B480-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	12,5	99,0	103,5	6000
29B480-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	12,5	113,8	109,0	6000
29B480-32-24	24	38,0	2"	32	2	79,4	12,5	118,4	121,5	6000
29B480-32-32	32	50,0	2"	32	2	79,4	12,5	172,0	131,0	6000

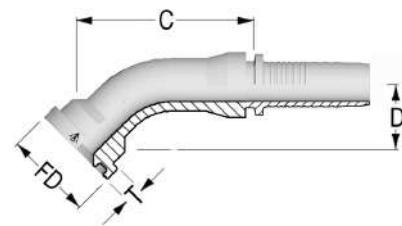
// NEW POWERTRAK - INSERTI FLANGE SUPERCAT SUPERCAT FLANGES

// 29B830 - FLANGIA SUPERCAT

// 29B830 - FLANGE SUPERCAT



Code	ID			Flange	Flange Size	FD	T	C
	Dash	mm	In	Dash Size		mm	mm	mm
29B830-12-12	12	19,0	3/4"	12	3/4	41,3	14,30	85,5
29B830-16-12	12	19,0	3/4"	16	1	47,6	14,30	85,5
29B830-16-16	16	25,0	1"	16	1	47,6	14,30	94,5
29B830-20-16	16	25,0	1"	20	1 1/4	54,0	14,30	94,5
29B830-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	14,30	92,0
29B830-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	14,30	87,0
29B830-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	14,30	IN PREPARAZ.
29B830-32-32	32	50,0	2"	32	2	79,5	14,30	IN PREPARAZ.



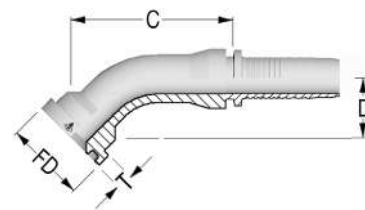
// 29B550 - FLANGIA 30° SUPERCAT

// 29B550 - 30° FLANGE SUPERCAT

Code	ID			F1	F1	FD	T	C	D Drop
	Dash	mm	In	Dash Size		mm	mm	mm	mm
29B550-12-12	12	19,0	3/4"	12	3/4	41,3	14,30	IN PREPARAZ.	IN PREPARAZ.
29B550-16-16	16	25,0	1"	16	1	47,6	14,30	IN PREPARAZ.	IN PREPARAZ.
29B550-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	14,30	IN PREPARAZ.	IN PREPARAZ.
29B550-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	14,30	IN PREPARAZ.	IN PREPARAZ.
29B550-32-32	32	50,0	2"	32	2	79,5	14,30	IN PREPARAZ.	IN PREPARAZ.

// 29B510 - FLANGIA 45° SUPERCAT

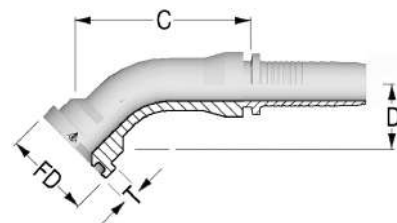
// 29B510 - 45° FLANGE SUPERCAT



Code	ID			Flange	Flange Size	FD	T	C	D Drop
	Dash	mm	In	Dash Size		mm	mm	mm	mm
29B510-12-12	12	19,0	3/4"	12	3/4	41,3	14,30	107,0	34,0
29B510-16-12	12	19,0	3/4"	16	1	47,6	14,30	112,0	34,0
29B510-16-16	16	25,0	1"	16	1	47,6	14,30	129,0	42,5
29B510-20-16	16	25,0	1"	20	1 1/4	54,0	14,30	128,0	40,0
29B510-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	14,30	150,0	45,1
29B510-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	14,30	152,0	60,0
29B510-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	14,30	IN PREPARAZ.	IN PREPARAZ.
29B510-32-32	32	50,0	2"	32	2	79,5	14,30	IN PREPARAZ.	IN PREPARAZ.

// 29B560 - FLANGIA 60° SUPERCAT

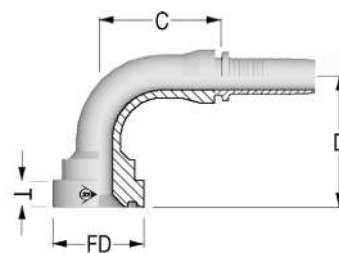
// 29B560 - 60° FLANGE SUPERCAT



Code	ID			Flange	Flange Size	FD	T	C	D Drop
	Dash	mm	In	Dash Size		mm	mm	mm	mm
29B560-12-12	12	19,0	3/4"	12	3/4	41,3	14,30	IN PREPARAZ.	IN PREPARAZ.
29B560-16-16	16	25,0	1"	16	1	47,6	14,30	IN PREPARAZ.	IN PREPARAZ.
29B560-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	14,30	IN PREPARAZ.	IN PREPARAZ.
29B560-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	14,30	IN PREPARAZ.	IN PREPARAZ.
29B560-32-32	32	50,0	2"	32	2	79,5	14,30	IN PREPARAZ.	IN PREPARAZ.

// 29B520 - FLANGIA 90° SUPERCAT

// 29B520 - 90° FLANGE SUPERCAT



Code	ID			Flange	Flange Size	FD	T	C	D Drop
	Dash	mm	In	Dash Size		mm	mm	mm	mm
29B520-12-12	12	19,0	3/4"	12	3/4	41,3	14,30	67,2	67,0
29B520-16-12	12	19,0	3/4"	16	1	47,6	14,30	68,7	70,0
29B520-16-16	16	25,0	1"	16	1	47,6	14,30	84,8	79,0
29B520-20-16	16	25,0	1"	20	1 1/4	54,0	14,30	79,8	82,5
29B520-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	14,30	97,0	93,0
29B520-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	14,30	97,0	101,0
29B520-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	14,30	IN PREPARAZ.	IN PREPARAZ.
29B520-32-32	32	50,0	2"	32	2	79,5	14,30	IN PREPARAZ.	IN PREPARAZ.



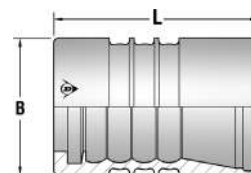
// RACCORDI WATERBLAST SERIE 99 WATERBLAST FITTINGS 99 SERIES

// GHIERE FERRULES _____ 130

// INSERTI INSERTS _____ 131

// **WATERBLAST - GHIERE FERRULES**// **990000 - GHIERA WATERBLAST CON DOPPIA SPELLATURA PER WB10L - WB15L -WB20L ***// **WATERBLAST DUAL SKIVE FERRULE FOR WB10L - WB15L - WB20L ***

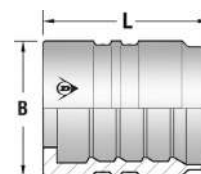
Code	ID			B	L
	Dash	mm	In	mm	mm
990000-04	04	6,0	1/4"	22,0	25,5
990000-05	05	8,0	5/16"	27,0	35,0
990000-06	06	10,0	3/8"	28,0	47,0
990000-08	08	13,0	1/2"	33,0	50,0
990000-12	12	19,0	3/4"	41,0	63,0
990000-16	16	25,0	1"	49,0	75,0



* Per WB20L: Soltanto 1/4" e soltanto 5/16" // For WB20L: 1/4" and 5/16" only

// **980000 - GHIERA WATERBLAST CON DOPPIA SPELLATURA PER WB20L**// **WATERBLAST DUAL SKIVE FERRULE FOR WB20L**

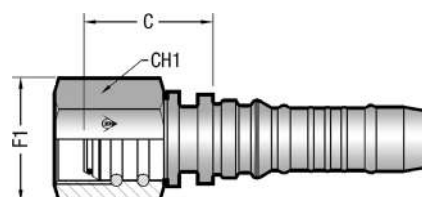
Code	ID			B	L
	Dash	mm	In	mm	mm
980000-06	06	10,0	3/8"	32,0	45,0
980000-08	08	13,0	1/2"	37,4	46,0
980000-12	12	19,0	3/4"	46,0	63,0



// WATERBLAST - INSERTI INSERTS

// A99001 - FEMMINA BSPP SV. 60° CON O'RING

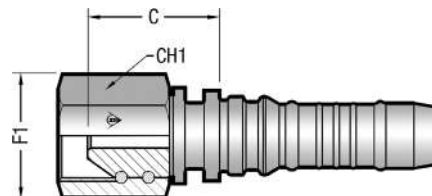
// BSPP FEMALE 60° WITH O'RING



Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In	Dash Size		mm	mm
A99001-04-04	SN	04	6,0	1/4"	04	1/4-19	26,0	22,0
A99001-06-05	SN	05	8,0	5/16"	06	3/8-19	31,0	25,0
A99001-06-06	TN	06	10,0	3/8"	06	3/8-19	32,1	22,0
A99001-08-08	TN	08	13,0	1/2"	08	1/2-14	36,0	30,0

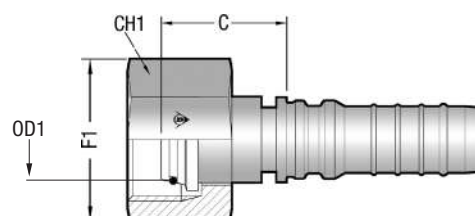
// A99002 - FEMMINA BSPP SV. 60° SENZA O'RING

// BSPP FEMALE 60° WITHOUT O'RING



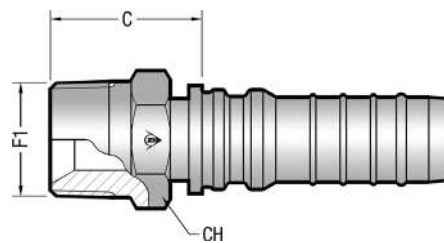
Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In	Dash Size		mm	mm
A99002-08-08	TN	08	13,0	1/2"	08	1/2-14	36,0	30,0

// A99179 - FEMMINA METRICA SV. 24° CON O'RING DIN 3865 SERIE PESANTE - DKOS - DADO A BATTUTA CON FORO DI SCARICO
// METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS - SLIP ON NUT WITH RELIEF BORE



Code	Nut Type	ID			F1	OD1	C	CH1
		Dash	mm	In		mm	mm	mm
A99179-02-04	SN	04	6,0	1/4"	M14X1.5	6	28,0	22,0
A99179-04-05	SN	05	8,0	5/16"	M18X1.5	10	34,3	27,0
A99179-06-06	SN	06	10,0	3/8"	M22X1.5	14	36,5	27,0
A99179-08-06	SN	06	10,0	3/8"	M24X1.5	16	39,5	30,0
A99179-08-08	SN	08	13,0	1/2"	M24X1.5	16	40,0	30,0
A99179-12-12	SN	12	19,0	3/4"	M36X2	25	47,3	46,0
A99179-16-16	SN	16	25,0	1"	M42X2	30	49,6	50,0

// 990170 - MASCHIO NPTF SV. 60° - AGN
// NPTF MALE 60° SEAT - AGN



Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
990170-04-04	NA	04	6,0	1/4"	04	1/4-18	27,5	17,0
990170-06-05	NA	05	8,0	5/16"	06	3/8-18	30,5	19,0
990170-06-06	NA	06	10,0	3/8"	06	3/8-18	31,0	19,0
990170-08-08	NA	08	13,0	1/2"	08	1/2-14	35,0	22,0
990170-12-12	NA	12	19,0	3/4"	12	3/4-14	37,9	30,0
990170-16-16	NA	16	25,0	1"	16	1-11 1/2	47,3	36,0



// RACCORDI INTERLOCK SERIE 17 INTERLOCK FITTINGS 17 SERIES

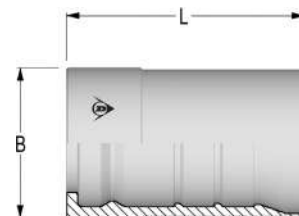
// GHIERE FERRULES	_____ 134	// INSERTI NPTF NPTF INSERTS	_____ 142
// DOPPIO INSERTO HOSE MENDER	_____ 135	// INSERTI ORFS ORFS INSERTS	_____ 143
// INSERTI BSP BSP INSERTS	_____ 136	// INSERTI FLANGE SAE SAE FLANGES	_____ 145
// INSERTI METRICI DIN DIN METRIC INSERTS	_____ 138	// INSERTI FLANGE SUPERCAT SUPERCAT FLANGES	_____ 149
// INSERTI JIC 37° JIC 37° INSERTS	_____ 140		

// INTERLOCK - GHIERE FERRULES

// 170000 - GHIERA INTERLOCK DOPPIA SPELLATURA PER TUBI 4 SPIRALI

// INTERLOCK DUAL SKIVE FERRULE FOR 4 SPIRAL HOSES

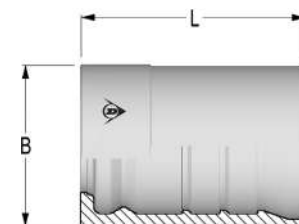
Code	ID			B	L
	Dash	mm	In	mm	mm
170000-06	06	10,0	3/8"	27,0	49,0
170000-08	08	13,0	1/2"	30,0	52,5
170000-10	10	16,0	5/8"	34,0	57,5
170000-12	12	19,0	3/4"	38,0	60,2
170000-16	16	25,0	1"	46,0	74,7
170000-20	20	31,0	1 1/4"	55,0	88,2
170000-24	24	38,0	1 1/2"	62,0	94,2
170000-32	32	51,0	2"	78,0	99,2



// 180000 - GHIERA INTERLOCK DOPPIA SPELLATURA PER TUBI 6 SPIRALI

// INTERLOCK DUAL SKIVE FERRULE FOR 6 SPIRAL HOSES

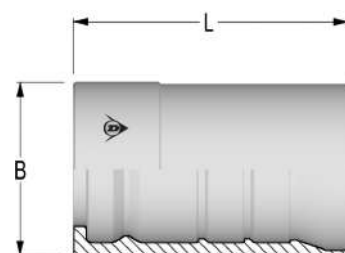
Code	ID			B	L
	Dash	mm	In	mm	mm
180000-10	10	16,0	5/8"	35,5	57,5
180000-12	12	19,0	3/4"	43,5	60,0
180000-16	16	25,0	1"	52,0	75,0
180000-20	20	31,0	1 1/4"	62,0	88,0
180000-24	24	38,0	1 1/2"	69,5	94,0
180000-32	32	51,0	2"	88,0	99,0



// 180022 - GHIERA INTERLOCK SPECIALE DOPPIA SPELLATURA PER TUBI 6 SPIRALI

// INTERLOCK SPECIAL DUAL SKIVE FERRULE FOR 6 SPIRAL HOSES

Code	ID			B	L
	Dash	mm	In	mm	mm
180022-32	32	51,0	2"	88,1	108,2

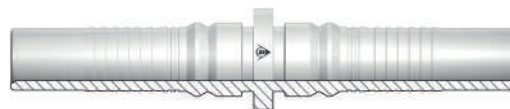


// INTERLOCK - DOPPIO INSERTO HOSE MENDER

// 170550 - DOPPIO INSERTO

// HOSE MENDER

Code	ID		
	Dash	mm	In
170550-10-10	10	16,0	5/8"
170550-12-12	12	19,0	3/4"
170550-16-16	16	25,0	1"
170550-20-20	20	32,0	1 1/4"
170550-24-24	24	38,0	1 1/2"
170550-32-32	32	51,0	2"



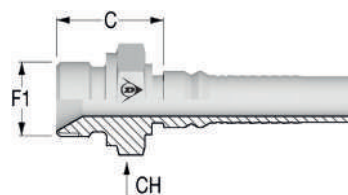
135

RACCORDI OLEODINAMICI HYDRAULIC FITTINGS

// INTERLOCK - INSERTI BSP *BSP INSERTS*

// 170120 - MASCHIO BSPP CILINDRICO SV. 60° - AGR

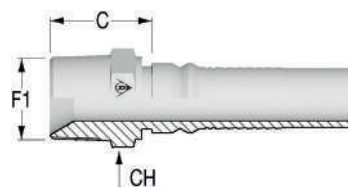
// BSPP MALE 60° FLARE - AGR



Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
170120-12-12	NA	12	19,0	3/4"	12	3/4-14	34,0	32,0
170120-16-16	NA	16	25,0	1"	16	1-11	40,0	41,0
170120-20-20	NA	20	32,0	1 1/4"	20	1 1/4-11	45,2	50,0
170120-24-24	NA	24	38,0	1 1/2"	24	1 1/2-11	48,5	55,0
170120-32-32	NA	32	51,0	2"	32	2-11	55,5	70,0

// 170130 - MASCHIO BSPT - AGR K

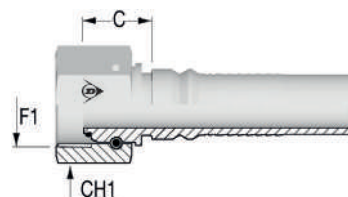
// BSPT MALE - AGR K



Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
170130-12-12	NA	12	19,0	3/4"	12	3/4-14	32,0	27,0
170130-16-16	NA	16	25,0	1"	16	1-11	42,0	36,0
170130-20-20	NA	20	32,0	1 1/4"	20	1 1/4-11	46,2	46,0
170130-24-24	NA	24	38,0	1 1/2"	24	1 1/2-11	48,0	50,0
170130-32-32	NA	32	51,0	2"	32	2-11	53,2	65,0

// A17001 - FEMMINA BSPP CILINDRICA SV. 60° CON O'RING - DKOR

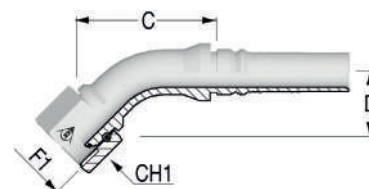
// BSPP FEMALE 60° CONE WITH O'RING - DKOR



Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In	Dash Size		mm	mm
A17001-08-08	CR	08	13,0	1/2"	08	1/2-14	19,5	27,0
A17001-12-12	TN	12	19,0	3/4"	12	3/4-14	22,5	32,0
A17001-16-12	TN	12	19,0	3/4"	16	1-11	IN PREPARAZ.	38,0
A17001-16-16	TN	16	25,0	1"	16	1-11	25,5	38,0
A17001-20-16	TN	16	25,0	1"	20	1 1/4-11	IN PREPARAZ.	50,0
A17001-20-20	TN	20	32,0	1 1/4"	20	1 1/4-11	30,2	50,0
A17001-24-20	TN	20	32,0	1 1/4"	24	1 1/2-11	IN PREPARAZ.	55,0
A17001-24-24	TN	24	38,0	1 1/2"	24	1 1/2-11	33,5	55,0
A17001-32-32	TN	32	51,0	2"	32	2-11	35,0	70,0

// A17061 - FEMMINA 45° BSPP CILINDRICA SV. 60° CON O'RING - DKOR 45°

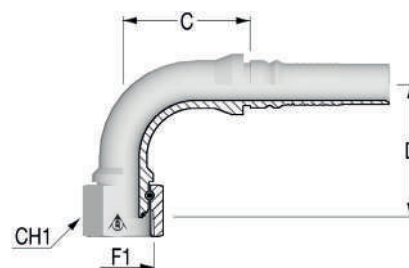
// 45° BSPP FEMALE 60° CONE WITH O'RING - DKOR 45



Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash Size	F1			
A17061-12-12	TN	12	19,0	3/4"	12	3/4-14	72,0	30,0	32,0
A17061-16-16	TN	16	25,0	1"	16	1-11	81,0	34,0	38,0
A17061-20-20	TN	20	32,0	1 1/4"	20	1 1/4-11	97,2	40,0	50,0
A17061-24-24	TN	24	38,0	1 1/2"	24	1 1/2-11	113,0	46,0	55,0
A17061-32-32	TN	32	51,0	2"	32	2-11	151,0	60,0	70,0

// A17051 - FEMMINA 90° BSPP CILINDRICA SV. 60° CON O'RING - DKOR 90°

// 90° BSPP FEMALE 60° CONE WITH O'RING - DKOR 90

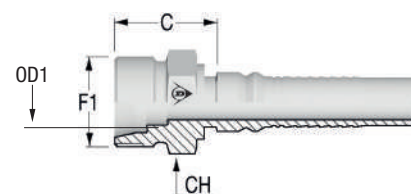


Code	Nut Type	ID			F1		C	D Drop	CH1
		Dash	mm	In	Dash Size	F1			
A17051-12-12	TN	12	19,0	3/4"	12	3/4-14	58,0	61,0	32,0
A17051-16-12	TN	12	19,0	3/4"	16	1-11	IN PREPARAZ.	IN PREPARAZ.	38,0
A17051-16-16	TN	16	25,0	1"	16	1-11	75,0	71,0	38,0
A17051-20-16	TN	16	25,0	1"	20	1 1/4-11	IN PREPARAZ.	IN PREPARAZ.	50,0
A17051-20-20	TN	20	32,0	1 1/4"	20	1 1/4-11	79,2	83,0	50,0
A17051-24-20	TN	20	32,0	1 1/4"	24	1 1/2-11	IN PREPARAZ.		55,0
A17051-24-24	TN	24	38,0	1 1/2"	24	1 1/2-11	93,5	96,0	55,0
A17051-32-32	TN	32	51,0	2"	32	2-11	134,0	125,0	70,0

// INTERLOCK - INSERTI METRICI DIN DIN METRIC INSERTS

// 171700 - MASCHIO METRICO SV. 24° DIN 3853 SERIE PESANTE - CES

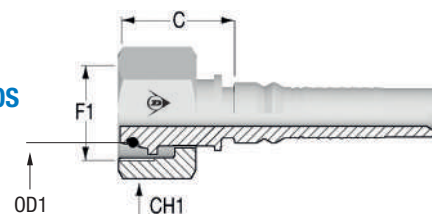
// METRIC MALE 24° SEAT - HEAVY - DIN 3853 - CES



Code	Nut Type	ID			F1	OD1	C	CH
		Dash	mm	In		mm	mm	mm
171700-08-08	NA	08	13,0	1/2"	M24X1.5	16	27,0	24,0
171700-10-10	NA	10	16,0	5/8"	M30X2	20	31,0	32,0
171700-12-12	NA	12	19,0	3/4"	M36X2	25	35,0	36,0
171700-16-16	NA	16	25,0	1"	M42X2	30	40,0	46,0
171700-20-20	NA	20	32,0	1 1/4"	M52X2	38	45,2	55,0

// A17179 - FEMMINA METRICA SV. 24° CON O'RING DIN 3865 SERIE PESANTE - DKOS

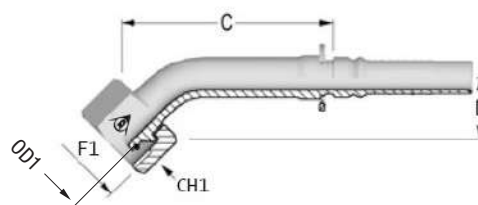
// METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS



Code	Nut Type	ID			F1	OD1	C	CH1
		Dash	mm	In		mm	mm	mm
A17179-08-08	SN	08	13,0	1/2"	M24X1.5	16	29,6	30,0
A17179-10-10	SN	10	16,0	5/8"	M30X2	20	34,4	36,0
A17179-10-12	TN	12	19,0	3/4"	M30X2	20	37,5	36,0
A17179-12-12	SN	12	19,0	3/4"	M36X2	25	37,6	46,0
A17179-12-16	TN	16	25,0	1"	M36X2	25	38,8	46,0
A17179-16-16	SN	16	25,0	1"	M42X2	30	40,7	50,0
A17179-16-20	TN	20	32,0	1 1/4"	M42X2	30	43,6	50,0
A17179-20-20	SN	20	32,0	1 1/4"	M52X2	38	45,3	60,0
A17179-20-24	TN	24	38,0	1 1/2"	M52X2	38	50,8	60,0

// A17987 - FEMMINA 45° METRICA SV. 24° CON O'RING DIN 3865 SERIE PESANTE - DKOS 45

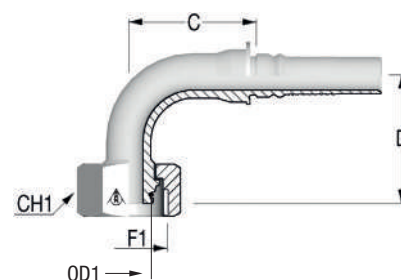
// 45° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 45



Code	Nut Type	ID			F1	OD1	C	D Drop	CH1
		Dash	mm	In		mm	mm	mm	mm
A17987-08-08	SN	08	13,0	1/2"	M24X1.5	16	83,0	29,0	30,0
A17987-10-10	SN	10	16,0	5/8"	M30X2	20	59,0	31,5	36,0
A17987-10-12	TN	12	19,0	3/4"	M30X2	20	74,0	33,0	36,0
A17987-12-12	SN	12	19,0	3/4"	M36X2	25	78,1	36,0	46,0
A17987-12-16	TN	16	25,0	1"	M36X2	25	86,5	37,5	46,0
A17987-16-16	SN	16	25,0	1"	M42X2	30	96,8	38,0	50,0
A17987-20-20	SN	20	32,0	1 1/4"	M52X2	38	112,7	48,0	60,0
A17987-20-24	TN	24	38,0	1 1/2"	M52X2	38	111,0	44,0	60,0

// A17977 - FEMMINA 90° METRICA SV. 24° CON O'RING DIN 3865 SERIE PESANTE - DKOS 90

// 90° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 90

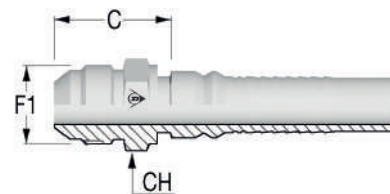


Code	Nut Type	ID			F1	OD1	C	D Drop	CH1
		Dash	mm	In		mm	mm	mm	mm
A17977-08-08	SN	08	13,0	1/2"	M24X1.5	16	52,0	50,0	30,0
A17977-10-10	SN	10	16,0	5/8"	M30X2	20	48,0	55,0	36,0
A17977-10-12	TN	12	19,0	3/4"	M30X2	20	61,0	67,5	36,0
A17977-12-12	SN	12	19,0	3/4"	M36X2	25	61,7	65,0	46,0
A17977-12-16	TN	16	25,0	1"	M36X2	25	76,5	76,5	46,0
A17977-16-16	SN	16	25,0	1"	M42X2	30	86,4	79,0	50,0
A17977-20-20	SN	20	32,0	1 1/4"	M52X2	38	90,9	101,0	60,0
A17977-20-24	TN	24	38,0	1 1/2"	M52X2	38	100,5	102,0	60,0

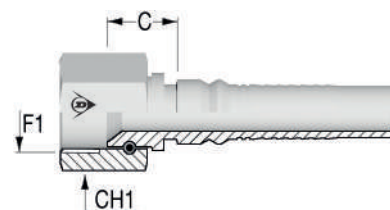
// INTERLOCK - INSERTI JIC 37° JIC INSERTS 37°

// 170200 - MASCHIO JIC SV. 37° - AGJ

// JIC MALE 37° CONE - AGJ



Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
170200-12-12	NA	12	19,0	3/4"	12	1 1/16-12	37,0	32,0
170200-16-12	NA	12	19,0	3/4"	16	1 5/16-12	40,0	36,0
170200-16-16	NA	16	25,0	1"	16	1 5/16-12	41,0	36,0
170200-20-16	NA	16	25,0	1"	20	1 5/8-12	44,5	46,0
170200-20-20	NA	20	32,0	1 1/4"	20	1 5/8-12	45,7	46,0
170200-24-20	NA	20	32,0	1 1/4"	24	1 7/8-12	49,7	50,0
170200-24-24	NA	24	38,0	1 1/2"	24	1 7/8-12	50,0	50,0
170200-32-32	NA	32	51,0	2"	32	2 1/2-12	61,0	65,0



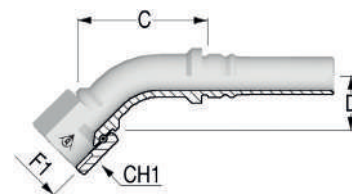
// A17005 - FEMMINA JIC SV. 37° - DKJ

// JIC FEMALE 37° SEAT - DKJ

Code	Nut Type	ID			F1	F1	C	CH1
		Dash	mm	In	Dash Size		mm	mm
A17005-12-10	TN	10	16,0	5/8"	12	1 1/16-12	18,7	32,0
A17005-12-12	TN	12	19,0	3/4"	12	1 1/16-12	18,7	32,0
A17005-16-12	TN	12	19,0	3/4"	16	1 5/16-12	21,5	38,0
A17005-16-16	TN	16	25,0	1"	16	1 5/16-12	22,5	38,0
A17005-20-16	TN	16	25,0	1"	20	1 5/8-12	24,5	50,0
A17005-20-20	TN	20	32,0	1 1/4"	20	1 5/8-12	25,7	50,0
A17005-24-20	TN	20	32,0	1 1/4"	24	1 7/8-12	28,2	55,0
A17005-24-24	TN	24	38,0	1 1/2"	24	1 7/8-12	29,0	55,0
A17005-32-32	TN	32	51,0	2"	32	2 1/2-12	34,0	70,0

// A17064 - FEMMINA 45° JIC SV. 37° - DKJ 45

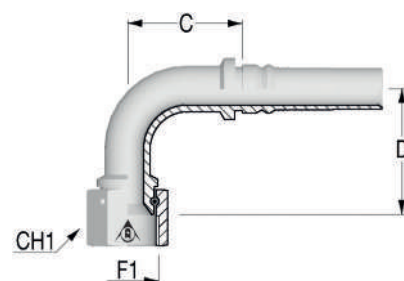
// 45° JIC FEMALE 37° SEAT - DKJ 45



Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A17064-12-12	TN	12	19,0	3/4"	12	1 1/16-12	66,0	27,5	32,0
A17064-16-12	TN	12	19,0	3/4"	16	1 5/16-12	72,0	30,0	38,0
A17064-16-16	TN	16	25,0	1"	16	1 5/16-12	79,5	31,0	38,0
A17064-20-20	TN	20	32,0	1 1/4"	20	1 5/8-12	93,0	37,0	50,0
A17064-24-24	TN	24	38,0	1 1/2"	24	1 7/8-12	121,0	38,0	55,0

// A17054 - FEMMINA 90° JIC SV. 37° - DKJ 90

// 90° JIC FEMALE 37° SEAT - DKJ 90

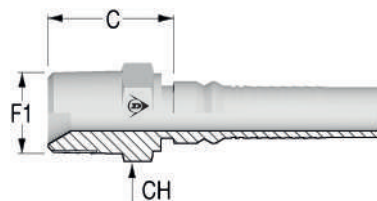


Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A17054-12-12	TN	12	19,0	3/4"	12	1 1/16-12	45,0	57,0	32,0
A17054-16-12	TN	12	19,0	3/4"	16	1 5/16-12	58,0	60,5	38,0
A17054-16-16	TN	16	25,0	1"	16	1 5/16-12	71,0	67,0	38,0
A17054-20-16	TN	16	25,0	1"	20	1 5/8-12	IN PREPARAZ.	IN PREPARAZ.	50,0
A17054-20-20	TN	20	32,0	1 1/4"	20	1 5/8-12	79,2	78,0	50,0
A17054-24-24	TN	24	38,0	1 1/2"	24	1 7/8-12	94,5	92,0	55,0
A17054-32-32	TN	32	51,0	2"	32	2 1/2-12	132,0	120,5	70,0

// INTERLOCK - INSERTI NPTF NPTF INSERTS

// 170170 - MASCHIO NPTF SV. 60° - AGN

// NPTF MALE 60° SEAT - AGN

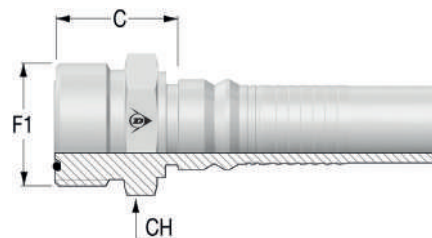


Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
170170-06-06	NA	06	10,0	3/8"	06	3/8-18	26,5	19,0
170170-08-08	NA	08	13,0	1/2"	08	1/2-14	30,0	22,0
170170-12-12	NA	12	19,0	3/4"	12	3/4-14	32,0	27,0
170170-16-16	NA	16	25,0	1"	16	1-11 1/2	42,0	36,0
170170-20-20	NA	20	32,0	1 1/4"	20	1 1/4-11 1/2	46,2	46,0
170170-24-24	NA	24	38,0	1 1/2"	24	1 1/2-11 1/2	48,0	50,0
170170-32-32	NA	32	51,0	2"	32	2-11 1/2	53,2	65,0

// INTERLOCK - INSERTI ORFS ORFS INSERTS

// 17A290 - MASCHIO ORFS

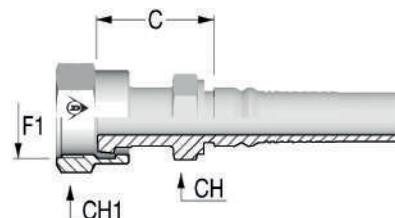
// ORFS MALE



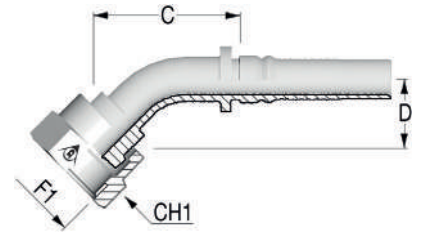
Code	Nut Type	ID			F1	F1	C	CH
		Dash	mm	In	Dash Size		mm	mm
17A290-12-12	NA	12	19,0	3/4"	12	1 3/16-12	30,2	30,0
17A290-16-16	NA	16	25,0	1"	16	1 7/16-12	35,8	38,0
17A290-24-24	NA	24	38,0	1 1/2"	24	2-12	41,0	55,0
17A290-20-20	NA	20	32,0	1 1/4"	20	1 11/16-12	39,1	46,0

// A17A26 - FEMMINA ORFS CON CONTRO-ESAGONO

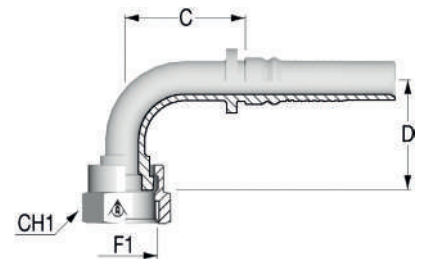
// ORFS FEMALE WITH STEM HEXAGON



Code	Nut Type	ID			F1	F1	C	CH	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A17A26-12-10	CR	10	16,0	5/8"	12	1 3/16-12	40,0	30,0	36,0
A17A26-12-12	CR	12	19,0	3/4"	12	1 3/16-12	40,0	30,0	36,0
A17A26-16-12	CR	12	19,0	3/4"	16	1 7/16-12	43,0	36,0	41,0
A17A26-12-16	CR	16	25,0	1"	12	1 3/16-12	42,0	32,0	36,0
A17A26-16-16	CR	16	25,0	1"	16	1 7/16-12	47,0	36,0	41,0
A17A26-20-16	CR	16	25,0	1"	20	1 11/16-12	49,0	46,0	50,0
A17A26-16-20	CR	20	32,0	1 1/4"	16	1 7/16-12	47,2	41,0	41,0
A17A26-20-20	CR	20	32,0	1 1/4"	20	1 11/16-12	47,2	46,0	50,0
A17A26-24-24	CR	24	38,0	1 1/2"	24	2-12	52,0	50,0	60,0

// A17A27 - FEMMINA 45° ORFS MEDIUM DROP - DK ORFS 45M**// 45° ORFS FEMALE - DK ORFS 45M**

Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A17A27-12-12	CR	12	19,0	3/4"	12	1 3/16-12	77,7	26,0	36,0
A17A27-16-12	CR	12	19,0	3/4"	16	1 7/16-12	68,4	28,0	41,0
A17A27-16-16	CR	16	25,0	1"	16	1 7/16-12	114,0	28,0	41,0
A17A27-20-16	CR	16	25,0	1"	20	1 11/16-12	83,4	28,0	50,0
A17A27-20-20	CR	20	32,0	1 1/4"	20	1 11/16-12	100,7	33,0	50,0

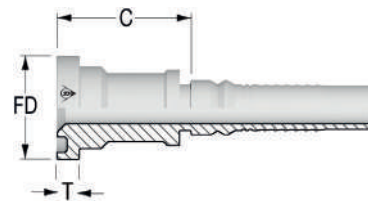
// A17A28 - FEMMINA 90° ORFS MEDIUM DROP - DK ORFS 90M**// 90° ORFS FEMALE - DK ORFS 90M**

Code	Nut Type	ID			F1	F1	C	D Drop	CH1
		Dash	mm	In	Dash Size		mm	mm	mm
A17A28-12-10	CR	10	16,0	5/8"	12	1 3/16-12	48,1	58,0	36,0
A17A28-12-12	CR	12	19,0	3/4"	12	1 3/16-12	64,2	58,0	36,0
A17A28-16-12	CR	12	19,0	3/4"	16	1 7/16-12	66,2	58,0	41,0
A17A28-16-16	CR	16	25,0	1"	16	1 7/16-12	75,2	66,0	41,0
A17A28-20-16	CR	16	25,0	1"	20	1 11/16-12	73,2	66,0	50,0
A17A28-20-20	CR	20	32,0	1 1/4"	20	1 11/16-12	91,7	81,0	50,0

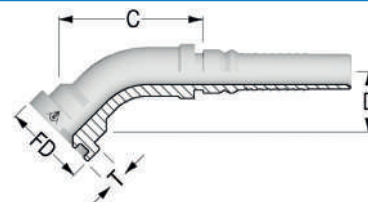
// INTERLOCK - INSERTI FLANGE SAE SAE FLANGES

// 170250 - FLANGIA SAE 3000 PSI J518 CODE 61 - SFL

// FLANGE SAE 3000 PSI J518 CODE 61 - SFL



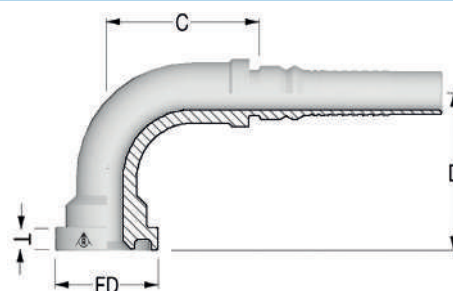
Code	ID			Flange		FD	T	C	WP
	Dash	mm	In	Dash Size	Flange Size				
170250-12-12	12	19	3/4"	12	3/4"	38,1	6,5	40,0	5000
170250-16-12	12	19	3/4"	16	1"	44,5	8,0	48,0	5000
170250-12-16	16	25	1"	12	3/4"	38,1	6,5	49,0	5000
170250-16-16	16	25,0	1"	16	1"	44,5	8,0	49,0	5000
170250-20-16	16	25,0	1"	20	1 1/4"	50,8	8,0	51,5	4000
170250-20-20	20	32,0	1 1/4"	20	1 1/4"	50,8	8,0	52,7	4000
170250-24-20	20	32,0	1 1/4"	24	1 1/2"	60,3	8,0	55,7	3000
170250-24-24	24	38,0	1 1/2"	24	1 1/2"	60,3	8,0	56,0	3000
170250-32-24	24	38,0	1 1/2"	32	2"	71,4	9,5	67,5	3000
170250-32-32	32	51,0	2"	32	2"	71,4	9,5	69,0	3000



// 17B370 - FLANGIA 45° SAE 3000 PSI J518 CODE 61- SFL 45

// 45° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 45

Code	ID			Flange		FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size	Flange Size					
17B370-12-12	12	19	3/4"	12	3/4"	38,1	6,5	69,0	25,0	5000
17B370-16-12	12	19	3/4"	16	1"	44,5	8,0	93,0	28,0	5000
17B370-12-16	16	25	1"	12	3/4"	38,1	6,5	IN PREPARAZIONE	IN PREPARAZIONE	IN PREPARAZIONE
17B370-16-16	16	25	1"	16	1"	44,5	8,0	83,0	35,0	5000
17B370-20-16	16	25,0	1"	20	1 1/4"	50,8	8,0	95,6	30,0	4000
17B370-20-20	20	32,0	1 1/4"	20	1 1/4"	50,8	8,0	100,9	32,5	4000
17B370-24-20	20	32,0	1 1/4"	24	1 1/2"	60,3	8,0	92,8	40,0	3000
17B370-24-24	24	38,0	1 1/2"	24	1 1/2"	60,3	9,5	103,7	43,0	3000
17B370-32-24	24	38,0	1 1/2"	32	2"	71,4	9,5	132,7	56,5	3000
17B370-32-32	32	51,0	2"	32	2"	71,4	9,5	138,1	54,0	3000

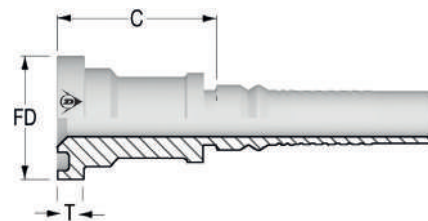


// 17B380 - FLANGIA 90° SAE 3000 PSI J518 CODE 61 - SFL 90

// 90° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 90

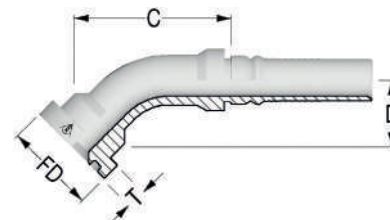
Code	ID			Flange		FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size	Flange Size					
17B380-08-12	12	19	3/4"	8	1/2"	30,2	6,5	49,0	42,0	5000
17B380-12-12	12	19	3/4"	12	3/4"	38,1	6,5	63,0	55,0	5000
17B380-16-12	12	19	3/4"	16	1"	44,5	8,0	64,0	59,0	5000
17B380-12-16	16	25	1"	12	3/4"	38,1	6,5	70,0	55,0	5000
17B380-16-16	16	25,0	1"	16	1"	44,5	8,0	72,2	64,0	5000
17B380-20-16	16	25,0	1"	20	1 1/4"	50,8	8,0	70,2	69,0	4000
17B380-20-20	20	32,0	1 1/4"	20	1 1/4"	50,8	8,0	86,2	81,0	4000
17B380-24-20	20	32,0	1 1/4"	24	1 1/2"	60,3	8,0	81,2	85,0	3000
17B380-24-24	24	38,0	1 1/2"	24	1 1/2"	60,3	8,0	95,5	93,0	3000
17B380-32-24	24	38,0	1 1/2"	32	2"	71,4	9,5	130,3	97,0	3000
17B380-32-32	32	51,0	2"	32	2"	71,4	9,5	134,4	130,0	3000

// 17B810 - FLANGIA SAE 6000 PSI J518 CODE 62 - SFS
// FLANGE SAE 6000 PSI J518 CODE 62 - SFS



Code	ID			Flange	Flange Size	FD	T	C	WP
	Dash	mm	In	Dash Size		mm	mm	mm	psi
17B810-12-12	12	19,0	3/4"	12	3/4	41,3	9,0	50,0	6000
17B810-16-12	12	19,0	3/4"	16	1	47,6	9,5	53,0	6000
17B810-12-16	16	25,0	1"	12	3/4	41,3	9,0	51,0	6000
17B810-16-16	16	25,0	1"	16	1	47,6	9,5	54,0	6000
17B810-20-16	16	25,0	1"	20	1 1/4	54,0	10,5	61,0	6000
17B810-16-20	20	32,0	1 1/4"	16	1	47,6	9,5	80,2	6000
17B810-20-20-87	20	32,0	1 1/4"	20	1 1/4	54,0	10,5	87,1	6000
17B810-20-20-79	20	32,0	1 1/4"	20	1 1/4	54,0	10,5	79,2	6000
17B810-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	10,5	62,2	6000
17B810-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	12,5	68,2	6000
17B810-20-24	24	38,0	1 1/2"	20	1 1/4	54,0	10,5	62,5	6000
17B810-24-24-104	24	38,0	1 1/2"	24	1 1/2	63,5	12,5	104,5	6000
17B810-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	12,5	68,5	6000
17B810-32-24	24	38,0	2"	32	2	79,4	12,5	80,5	6000
17B810-32-24-88	24	38,0	2"	32	2	79,4	12,5	88,0	6000
17B810-32-32	32	51,0	2"	32	2	79,4	12,5	87,0	6000
17B810-32-32-104	32	51,0	2"	32	2	79,4	12,5	104,0	6000

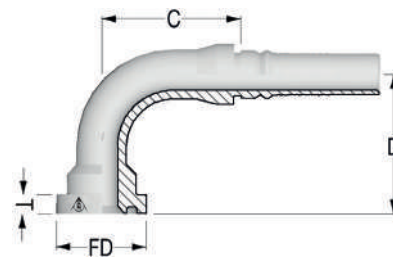
// 17B470 - FLANGIA 45° SAE 6000 PSI J518 CODE 62 - SFS 45
// 45° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 45



Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
17B470-12-12	12	19,0	3/4"	12	3/4	41,3	9,0	72,1	30,0	6000
17B470-16-12	12	19,0	3/4"	16	1	47,6	9,5	76,8	33,0	6000
17B470-12-16	16	25,0	1"	12	3/4	41,3	9,0	80,3	29,5	6000
17B470-16-16	16	25,0	1"	16	1	47,6	9,5	94,8	35,0	6000
17B470-20-16	16	25,0	1"	20	1 1/4	54,0	10,5	105,3	44,0	6000
17B470-16-20	20	32,0	1 1/4"	16	1	47,6	9,5	104,7	34,5	6000
17B470-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	10,5	102,0	39,5	6000
17B470-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	12,5	111,7	48,0	6000
17B470-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	12,5	136,3	48,0	6000
17B470-32-24	24	38,0	1 1/2"	32	2	79,4	12,5	129,1	55,0	6000
17B470-32-32	32	51,0	2"	32	2	79,4	12,5	160,6	63,0	6000

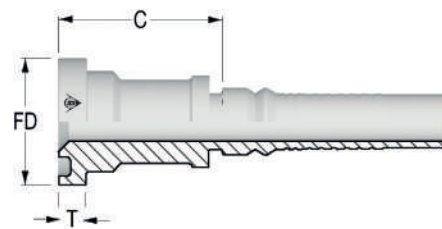
// 17B480 - FLANGIA 90° SAE 6000 PSI J518 CODE 62 - SFS 90

// 90° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 90



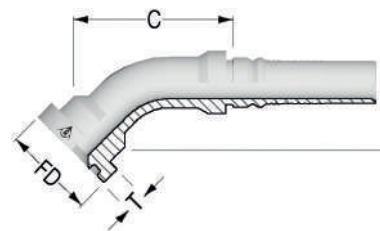
Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
17B480-12-12	12	19,0	3/4"	12	3/4	41,3	9,0	61,2	64,0	6000
17B480-16-12	12	19,0	3/4"	16	1	47,6	9,5	61,2	66,0	6000
17B480-12-16	16	25,0	1"	12	3/4	41,3	9,0	70,2	61,0	6000
17B480-16-16	16	25,0	1"	16	1	47,6	9,5	70,4	74,0	6000
17B480-20-16	16	25,0	1"	20	1 1/4	54,0	10,5	77,2	80,0	6000
17B480-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	12,5	88,2	91,0	6000
17B480-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	12,5	92,9	103,5	6000
17B480-24-24	24	38,0	1 1/2"	24	1 1/2	63,5	12,5	106,3	109,0	6000
17B480-32-24	24	38,0	1 1/2"	32	2	79,4	12,5	106,5	121,5	6000
17B480-32-32	32	51,0	2"	32	2	79,4	12,5	146,0	138,5	6000

// 18B810 - FLANGIA SAE 6000 PSI J518 CODE 62 - SFS - VERSIONE SPECIALE
// FLANGE SAE 6000 PSI J518 CODE 62 - SFS - SPECIAL VERSION



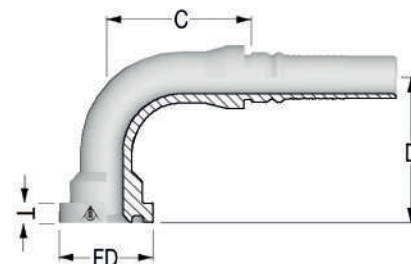
Code	ID			Flange	Flange Size	FD	T	C	WP
	Dash	mm	In	Dash Size		mm	mm	mm	psi
18B810-24-32	32	51,0	2"	24	1 1/2	63,5	12,5	106,0	6000
18B810-32-32	32	51,0	2"	32	2	79,4	12,5	104,0	6000
18B810-40-40	40	63,0	2 1/2"	40	2 1/2	108,0	12,5	124,3	6000

// 18B470 - FLANGIA 45° SAE 6000 PSI J518 CODE 62 - SFS 45 - VERSIONE SPECIALE
// 45° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 45 - SPECIAL VERSION



Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
18B470-32-32	32	51,0	2"	32	2	79,4	12,5	141,0	63,0	6000

// 18B480 - FLANGIA 90° SAE 6000 PSI J518 CODE 62 - SFS 90 - VERSIONE SPECIALE
// 90° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 90 - SPECIAL VERSION

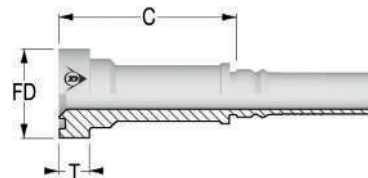


Code	ID			Flange	Flange Size	FD	T	C	D Drop	WP
	Dash	mm	In	Dash Size		mm	mm	mm	mm	psi
18B480-24-32	32	51,0	2"	24	1 1/2	63,5	12,5	134,0	112,0	6000
18B480-32-32	32	51,0	2"	32	2	79,4	12,5	132,0	145,0	6000

// INTERLOCK - INSERTI FLANGE SUPERCAT SUPERCAT FLANGES

// 17B830 - FLANGIA SUPERCAT

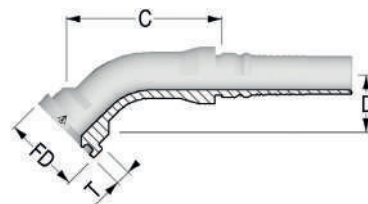
// 17B830 - FLANGE SUPERCAT



Code	Nut Type	ID			Flange	FD	T	C	WP
		Dash	mm	In	Dash Size		mm	mm	psi
17B830-12-12	12	19,0	3/4"	12	3/4	41,3	14,30	82,0	6000
17B830-16-12	12	19,0	3/4"	16	1	47,6	14,30	82,0	6000
17B830-16-16	16	25,0	1"	16	1	47,6	14,30	90,0	6000
17B830-20-16	16	25,0	1"	20	1 1/4	54,0	14,30	90,0	6000
17B830-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	14,30	86,2	6000
17B830-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	14,30	83,2	6000

// 17B510 - FLANGIA 45° SUPERCAT

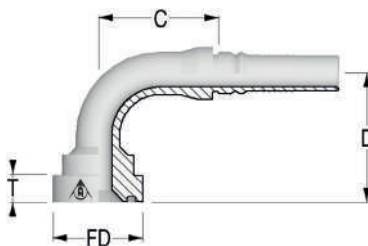
// 45° FLANGE SUPERCAT



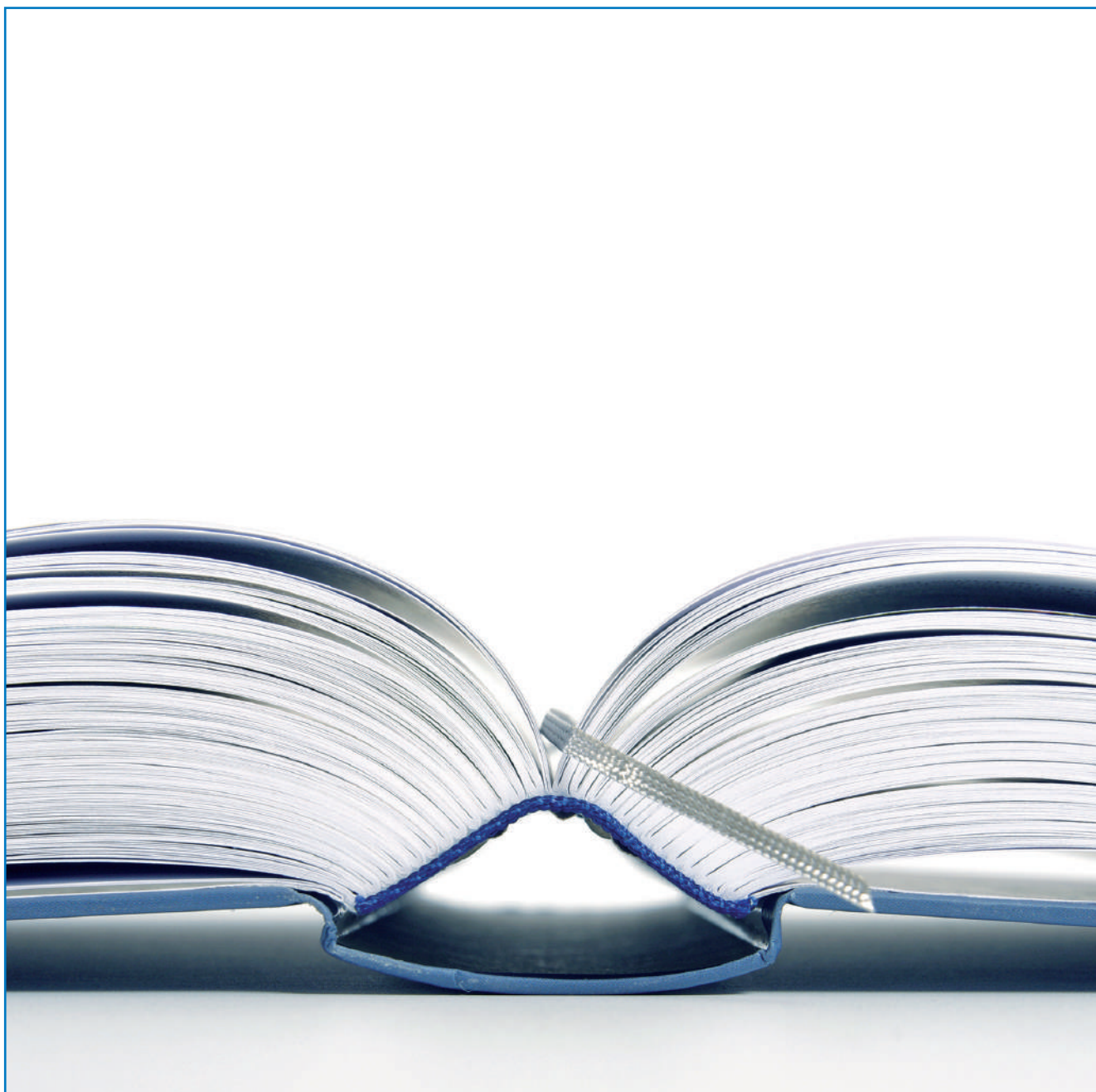
Code	Nut Type	ID			Flange	FD	T	C	D Drop	WP
		Dash	mm	In	Dash Size		mm	mm	mm	psi
17B510-12-12	12	19,0	3/4"	12	3/4	41,3	14,30	82,9	34,0	6000
17B510-16-12	12	19,0	3/4"	16	1	47,6	14,30	87,4	34,0	6000
17B510-16-16	16	25,0	1"	16	1	47,6	14,30	93,9	40,0	6000
17B510-20-16	16	25,0	1"	20	1 1/4	54,0	14,30	95,4	40,0	6000
17B510-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	14,30	103,6	43,0	6000
17B510-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	14,30	110,1	49,5	6000

// 17B520 - FLANGIA 90° SUPERCAT

// 90° FLANGE SUPERCAT



Code	Nut Type	ID			Flange	FD	T	C	D Drop	WP
		Dash	mm	In	Dash size		mm	mm	mm	psi
17B520-12-12	12	19,0	3/4"	12	3/4	41,3	14,30	63,7	67,0	6000
17B520-16-12	12	19,0	3/4"	16	1	47,6	14,30	65,2	70,0	6000
17B520-16-16	16	25,0	1"	16	1	47,6	14,30	80,4	79,0	6000
17B520-20-16	16	25,0	1"	20	1 1/4	54,0	14,30	75,4	82,5	6000
17B520-20-20	20	32,0	1 1/4"	20	1 1/4	54,0	14,30	89,2	93,0	6000
17B520-24-20	20	32,0	1 1/4"	24	1 1/2	63,5	14,30	91,4	101,0	6000



// APPENDICE APPENDIX

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// LINEE GUIDA DEI TUBI

DEFINIZIONE DEI NUOVI STANDARD

DUNLOP HIFLEX si prende cura dell'ambiente e delle attrezzature attraverso i nuovi prodotti DUNLOP HIFLEX: gli spiraliati POWERFLEXBIO 3000, 4000, 5000, 5000 PLUS, 6000, i bassa temperatura, i Commander, gli Hi-Tuff, i Tuflex, ognuno dei quali è accompagnato da una gamma completa di raccordi. Tutti questi prodotti fanno parte dell'ampia gamma di tubi e componenti oleodinamici DUNLOP HIFLEX per alta e altissima pressione, che hanno stabilito gli standard di affidabilità e durevolezza.

DESIGN

Il marchio DUNLOP HIFLEX è diventato su scala mondiale sinonimo di qualità e reputazione basate su prodotti top di gamma, impegno nella ricerca e nello sviluppo sostenuti da investimenti continui.

Il team di ricerca e sviluppo DUNLOP HIFLEX fornisce prodotti innovativi in grado di assicurare le migliori performance e l'ottimizzazione dei costi per i suoi clienti.

I tubi e i raccordi DUNLOP HIFLEX sono stati progettati e sviluppati per essere utilizzati insieme, garantendo così performance affidabili, indipendentemente dai settori in cui vengono applicati. I nostri prodotti eccedono le normative SAE, DIN, JIS e alcuni tubi sono anche conformi agli standard di resistenza alle fiamme richiesti da MSHA e LOBA.

LEADERSHIP NEI TUBI E NEI RACCORDI IDRAULICI

DUNLOP HIFLEX è arrivata ad essere leader mondiale nella produzione di sistemi e componenti per l'oleodinamica. Le richieste di nuovi equipaggiamenti che utilizzavano tecnologie sempre più all'avanguardia sono state per DUNLOP HIFLEX uno stimolo volto a migliorare la propria gamma di produzione, introducendo nuove tipologie di tubi idraulici sempre più performanti. Questi prodotti sono stati introdotti in molti campi applicativi, quali:

- Miniere
- Movimento terra
- Stampaggio
- Disboscamento
- Agricoltura
- Perforazione
- Oil & Gas
- Rifiuti/Riciclaggio
- Sollevamento
- Ferroviario
- Industria
- Edilizia
- Industria della carta e del legno

// HOSES GUIDELINES

SETTING NEW STANDARD

DUNLOP HIFLEX cares for the environment and for your equipment among DUNLOP HIFLEX's newest products are POWERFLEXBIO 3000, 4000, 5000, 5000 PLUS, 6000 spiralhose, low temperature, Temp Tech, Hi-Tuff, Tuflex hose and a complete coupling line.

They join the extensive range of DUNLOP HIFLEX hose, the high pressure hydraulic components that have set the standard for reliability and durability.

DESIGN

Throughout the world DUNLOP HIFLEX has build up a name synonymous with quality, a reputation based on first class product, a commitment to research and development and ongoing capital investment.

The development and product engineering staff in DUNLOP HIFLEX, continue to provide fluid conveying product innovations that assure better performance and cost saving to our customers.

DUNLOP HIFLEX hose and couplings are designed to work together as a system for problem free performance, no matter what machine you operate. The performance of all our product exceeds SAE, DIN, JIS requirements and some hoses meet the MSHA and LOBA flame resistance requirements, as well.

LEADERSHIP IN HYDRAULIC HOSE AND COUPLING COMPONENTS

DUNLOP HIFLEX has developed into a world leading manufacturer, of fluid power and fluid system components. A positive attitude towards the demands from new equipment which is using the latest technology has seen DUNLOP HIFLEX introduce many outstanding new hydraulic hose types. These hoses have found acceptance in a wide range of industry, some examples are:

- Mining
- Earthmoving
- Moulding
- Logging
- Agriculture
- Drilling
- Petroleum
- Waste/Refuse
- Crane Railroad
- Manufacturing
- Construction
- Pulp and Plywood
- Mills

UN'AZIENDA GLOBALE

Grazie alle proprie filiali e ai distributori sparsi in tutto il mondo, i prodotti DUNLOP HIFLEX sono facili e veloci da reperire. Il rivenditore DUNLOP HIFLEX ha personale qualificato in grado di capire e soddisfare le richieste dei clienti garantendo qualità e prestazioni durature nel tempo.

UN IMPEGNO PRECISO

Prestando sempre attenzione ai bisogni del cliente, DUNLOP HIFLEX continua a sperimentare nuovi prodotti per il mercato di domani, oltre a modificare quelli già esistenti per garantire performance sempre più elevate.

Grazie al suo impegno verso l'innovazione e i servizi, i prodotti DUNLOP HIFLEX sono famosi in tutto il mondo per qualità, affidabilità e leadership.

TEST E COLLAUDI

I laboratori DUNLOP HIFLEX sono completamente attrezzati per svolgere test secondo gli standard SAE, ISO, DIN e JIS. Tutti i nuovi prodotti vengono inoltre sottoposti a sollecitazioni che ne garantiscono l'efficacia prima di venire immessi nel mercato.

QUALITA' MONDIALE

DUNLOP HIFLEX sta lavorando a programmi di qualità riconosciuti che richiedono standard rigorosi. Molti dei nostri clienti ci stanno chiedendo certificazioni ISO o equivalenti come prerequisiti d'acquisto. Questo standard rappresenta la garanzia di una qualità duratura nel tempo.

Per DUNLOP HIFLEX questo è soltanto l'inizio: "farlo bene fin dal principio".

NOTE IMPORTANTI PER GLI UTILIZZATORI

La cautela nell'utilizzo di tubi assemblati è necessaria non solo per garantire al prodotto una lunga durata, ma anche per evitare danni potenzialmente pericolosi. Tubi danneggiati, logorati, assemblati male o installati in maniera errata possono provocare perdite d'olio in grado di procurare gravi lesioni, morte e distruzione dell'ambiente circostante.

I consumatori hanno l'obbligo di verificare periodicamente lo stato di conservazione dei prodotti. È bene evitare costose perdite di tempo e stabilire invece un programma di ispezione e sostituzione dei tubi assemblati prima che sia troppo tardi; tener conto di fattori quali: grado di pericolosità delle applicazioni, frequenza nell'uso delle attrezzature e precedenti performance dei tubi assemblati in casi analoghi.

GLOBAL COMPANY

Due to our world-wide organisation of subsidiaries and distributors you will always be near a source for DUNLOP HIFLEX products. Your DUNLOP HIFLEX dealer has trained personnel to consult with you on your hose and coupling requirements guaranteeing consistent quality and performance.

OUR COMMITMENT

By remaining alert to customer's needs, DUNLOP HIFLEX is constantly engineering new products for tomorrow's markets as well as modifying them for even higher performances.

DUNLOP HIFLEX commitment to innovation and service makes our products known throughout the world for quality, reliability and leadership, when you need quality hose and couplings, use the best available.

TESTING

DUNLOP HIFLEX laboratories are fully equipped to carry out tests according to standards like SAE, ISO, DIN and JIS. New products are also subjected to laboratory simulation of actual service prior to being released on the market.

WORLD CLASS QUALITY

DUNLOP HIFLEX is working to internationally recognised quality programs requiring stringent standards. Many of our customers are demanding ISO qualification or equivalent as a prerequisite for purchasing. This standard is an assurance of consistent quality.

For DUNLOP HIFLEX this is just the start "do it right from the beginning".

IMPORTANT NOTE FOR USERS

Hose assemblies require caution in use not only to provide long service life but also to guard against potentially dangerous failure.

Serious injury, death and destruction of property can result from the rupture or blowing-apart of a hydraulic hose assembly that is damaged, worn out, badly assembled or installed incorrectly.

Users should follow good maintenance practices. Avoid expensive downtime by establishing a program of inspection, testing and replacement of hose assemblies before failure occurs; taking into account factors including: severity of application, frequency of equipment use, past performance of hose assemblies.

E' opportuno programmare quindi la manutenzione, fare i dovuti controlli e monitorare le ispezioni periodiche.

L'ispezione, i test e la manutenzione dei tubi assemblati devono essere effettuati unicamente da personale qualificato e l'intero processo deve essere ripetuto regolarmente.

Gli utilizzatori devono osservare molto attentamente le precauzioni elencate al paragrafo "prestare attenzione a", così come seguire minuziosamente tutte le raccomandazioni riguardanti la selezione di tubi e raccordi.

Inoltre, bisogna prestare molta attenzione a non eccedere il raggio di curvatura minimo indicato per ogni tipologia e misura di tubo. Non meno importante, la massima pressione di esercizio non deve essere maggiore di quella indicata.

Le istruzioni di montaggio dei raccordi sui vari tipi di tubi devono essere seguite attentamente in modo tale da garantire un processo di assemblaggio sicuro.

Rispettando tutte queste raccomandazioni sull'assemblaggio e sull'installazione, il risultato sarà quello di raggiungere ottimi risultati in termini di sicurezza e longevità di qualsiasi applicazione sulle quali sono installati i nostri prodotti.

Non dimenticare mai che un fluido sottoposto ad alte pressioni può essere pericoloso!! Uno scoppio o una perdita di fluido può causare danni gravi alle attrezzature e serie conseguenze alle persone nelle vicinanze.

Document your maintenance, inspections and testing.

Only properly trained persons should inspect, test or service hose assemblies and this training should be updated regularly.

Users should carefully observe the precautions listed below under "be aware that" as well as following closely all recommendations for the selection of hose and couplings.

In addition, care should be taken not to exceed the minimum bend radius listed for each hose size and type. Maximum operating pressure should not exceed the pressures listed.

Instruction for assembling fittings to different hoses should be followed carefully to ensure the safe performance of the complete assembly.

By following the recommendations on hose assembly routing and installation, improved safety and longer service life of any hose installation will result.

Hydraulic fluid under pressure can be potentially dangerous!! An explosive burst or stream of escaping fluid can cause damage to equipment as well as serious injury to persons nearby.

PRESTARE ATTENZIONE A...

1. Un fluido sottoposto a pressioni elevate che fuoriesce da un piccolo foro può essere invisibile e capace di penetrare la pelle e altri tessuti del corpo, causando danni potenzialmente gravi.
2. Fluidi o sostanze chimiche ustionanti possono causare serie bruciature.
3. I fluidi sotto pressione, se non tenuti sotto controllo, sono in grado di esercitare una tremenda forza esplosiva.
4. Tutti i tubi idraulici elencati in questo catalogo sono conduttori di elettricità.
5. Alcuni fluidi sono altamente infiammabili.
6. Posizionare sempre una protezione tra l'operatore e qualsiasi linea idraulica in pressione durante il processo produttivo... o altrimenti disattivare la pressione.
7. Indossare occhiali di protezione.
8. Non controllare a mani nude se sono presenti eventuali perdite. Non toccare un tubo sottoposto a pressione idraulica con nessuna parte del corpo; se il fluido punge la pelle, anche se non viene avvertito nessun dolore, è in corso una situazione di grave emergenza. Richiedere immediatamente assistenza medica, altrimenti si rischia la perdita della parte del corpo danneggiata o addirittura la morte.
9. Mantenere le dovute distanze da zone pericolose nelle quali vengono eseguiti i test sui tubi assemblati in pressione. Usare protezioni idonee.
10. Se si viene sottoposti a danni o reazioni gravi, sottoporsi immediatamente all'attenzione di un medico.
11. Usare solo tubi termoplastici non conduttivi dove la conduttività elettrica non è desiderata: per esempio, nelle attrezzature utilizzate sulle linee elettriche.

I tubi e i raccordi DUNLOP HIFLEX sono stati progettati e sviluppati per essere utilizzati insieme.

L'uso di raccordi DUNLOP HIFLEX su tubi di diversa produzione e viceversa può risultare pericoloso e non affidabile. DUNLOP HIFLEX non raccomanda né autorizza tale impiego.

DUNLOP HIFLEX non si prende nessuna responsabilità nei casi in cui i suoi tubi vengano assemblati senza seguire le raccomandazioni e le tabelle di pressatura suggerite.

BE AWARE THAT...

1. *Highly pressurised fluid escaping from a small pinhole can be almost invisible and, yet, exert extreme force capable of penetrating the skin and other body tissues, causing possible severe injury.*
2. *Hot fluids or chemicals can cause severe burns.*
3. *Pressurised fluids, if released uncontrolled, can exert a tremendous explosive force.*
4. *All hydraulic hoses listed in this catalogue are electrically conductive.*
5. *Some hydraulic fluids are highly flammable.*
6. *Always position a shield between you and any pressurised hydraulic lines when working next to them... or shut the pressure off.*
7. *Wear safety glasses.*
8. *Do not use your hands to check for leaks. Do not touch a pressurised hydraulic hose assembly with any part of your body, if fluid punctures the skin, even if no pain is felt, a serious emergency exists. Obtain medical assistance immediately. Failure to do so can result in loss of the injured body part or death.*
9. *Stay out of hazardous areas while testing hose assemblies under pressure. Use proper safety protection.*
10. *If an injury or reaction occurs, get medical attention right away.*
11. *Use only non conductive thermoplastic hoses where electrical conductivity is not desired: for instance, equipment working on electric power lines.*

DUNLOP HIFLEX hoses and fittings are designed, engineered and tested to be used together in an assembly.

The use of DUNLOP HIFLEX fittings on other manufactures hose or the use of DUNLOP HIFLEX hose with other manufactures fittings may result in the production of unreliable or unsafe assemblies. It is neither recommended nor authorised by DUNLOP HIFLEX.

DUNLOP HIFLEX disclaims any liability for any hose assemblies which have not been produced in conformance with DUNLOP HIFLEX assembly recommendations and current crimp data charts.

DUNLOP HIFLEX ha effettuato dei test a impulsi per verificare la validità di quanto riportato nel presente catalogo. Una semplice prova di scoppio o di pressione non può determinare la combinazione di un tubo e un raccordo.

Qualsiasi reclamo inerente a difetti del prodotto deve essere riportato per iscritto nell'apposito format ISO 9001 entro 8 giorni dal momento del ricevimento del prodotto. Per DUNLOP HIFLEX questo rappresenterà una ragionevole opportunità per esaminare ed investigare sul presunto difetto.

Il rimedio esclusivo per il cliente in relazione a qualsiasi reclamo di qualsivoglia natura sarà il rimborso del valore d'acquisto o la sostituzione del prodotto a discrezione di DUNLOP HIFLEX e in nessun caso DUNLOP HIFLEX sarà responsabile per qualsiasi danno incidentale o consequenziale.

Extensive impulse testing has been performed by DUNLOP HIFLEX to verify the recommendations contained in this catalogue. A simple burst or pressure test cannot determine a hose and coupling combination.

Any claim for defects must be made in writing on the appropriate ISO 9001 complaint form within 8 days from receipt of the product. DUNLOP HIFLEX will have a reasonable opportunity thereafter to examine and investigate the alleged defect.

The customer's exclusive remedy with respect to any claim of any kind whatsoever shall be refund of the purchase price or replacement of the product at the option of DUNLOP HIFLEX and in no event shall DUNLOP HIFLEX be liable for any incidental or consequential damages whatsoever.

SPECIFICHE DI RIFERIMENTO

SAE - Society of Automotive Engineers
 LOBA - Landesobergamt Nordrhein - Westfalen
 DNV - GL Det Norske Veritas - Germanischer Lloyd
 AS - Australian Standard
 EN - European Norm
 BV - Bureau Veritas
 DIN - Deutsche Institute Normen
 ISO - International organization for Standardization
 CERCHAR - Centre d'Etudes et Recherches Des Charbonnages de France
 KR - Korean Register
 MA - Chinese Mining
 MSHA - U.S. Mine Safety and Health Administration

La lista sotto riportata è da intendere unicamente come guida per identificare a quali tipologie di tubo DUNLOP HIFLEX corrispondono le varie agenzie.

REFERENCE SPECIFICATIONS

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 MSHA - U.S. Mine Safety and Health Administration

The listing below are intended only as guides in identifying which DUNLOP HIFLEX hoses comply with requirements of various agencies.

Hose	SAE J517	EN	ISO	Dunlop Hiflex Proprietary Hose	DNV GL	ABS	BV	NKK	RIINA	Lloyd's Register	MSHA ²	USDOT ³	KR	MA
SAE 100 R4	100 R4						X							
122G Plus - 1SN/R1AT	100 R1AT	853 1SN	1436		X	X	X	X	X	X			X	
222G Plus - 2SN/R2AT	100 R2AT	853 2SN	1436		X	X	X	X	X	X	X		X	X
121 Slimline		857 1SC	11237		X		X							
241 Superslimline	100 R16	857 2SC	11237		X	X	X	X	X	X	X		X	
221G Plus 2SC	100 R16	857 2SC	11237		X	X	X				X			X
Powerflexbio 3000	EX SAE R12		18752	X	X*	X	X		X	X*	X			
Powerflexbio 4000			18752	X	X	X	X		X	X*	X			
Powerflexbio 5000			18752	X	X	X	X		X	X*	X			
Powerflexbio 5000P			18752	X	X	X	X		X	X*	X			
Powerflexbio 6000	EX SAE R15		18752	X	X	X	X		X	X*	X			
Firesafe 5000				X	X					X	X*			
490 Powertrak - AT7K				X							X			
560 Powertrak - AT8K				X							X			
Commander 1SN	100 R1AT		1436	X	X*	X*					X			

1. Le certificazioni DNV vengono fornite solo con l'utilizzo di raccordi a pressare
2. I tubi con copertura certificata MSHA sono sempre marcati "MSHA"

1. DNV approvals are with permanent (crimp) type fittings only
2. Hoses with MSHA approved cover are always branded "MSHA"

FATTORI BASE DELLA GUIDA ALLA SICUREZZA PER LA SELEZIONE, L'INSTALLAZIONE E LA MANUTENZIONE DI TUBI SCIOLTI E ASSEMBLATI

I tubi oleodinamici hanno una durata limitata che dipende dalle condizioni a cui vengono sottoposti.

Se i tubi vengono sottoposti a condizioni più severe rispetto a quelle consigliate, la loro durata viene ridotta in modo significativo. Anche l'esposizione a una combinazione di più limiti consentiti (per esempio: uso continuo alla massima pressione di lavoro garantita, alla massima temperatura consigliata e al minimo raggio di curvatura consentito) possono compromettere la durata del tubo.

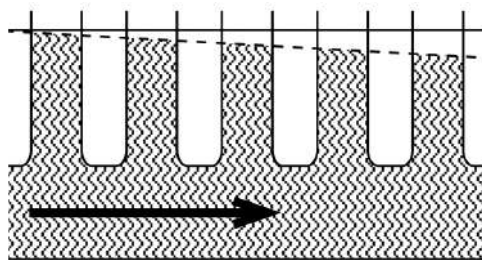
AVVERTENZA: IL MANCATO RISPETTO DELLE CORRETTE PROCEDURE DI SELEZIONE, INSTALLAZIONE E MANUTENZIONE PUO' CAUSARE SERIE LESIONI CORPOREE E DANNI ALLE COSE.

1. SELEZIONE

La lista sotto riportata contiene alcuni fattori da considerare prima della selezione del tubo:

1.2 Dimensioni della linea: Per raggiungere la massima efficienza in un sistema idraulico è necessario ridurre al minimo le perdite di pressione.

Quando il fluido scorre attraverso un tubo, l'attrito genera calore; quindi parte dell'energia viene persa sotto forma di energia termica, il che si traduce in una perdita di pressione.



Queste perdite di pressione dipendono da:

- Velocità del fluido (per un dato flusso volumetrico, la velocità di flusso del fluido aumenta con la riduzione dell'area della sezione trasversale di una linea di flusso e viceversa)
- Lunghezza della linea di flusso
- Viscosità del fluido
- Densità del fluido
- Tipo di flusso (laminare o turbolento)

Tipi di flusso – il tipo di flusso cambia da laminare a turbolento ad una determinata velocità di flusso. Questa velocità è data dal Reynold's Number Re.

SAFETY GUIDE BASIC FACTORS FOR THE SELECTION, INSTALLATION AND MAINTENANCE OF HOSES AND HOSES ASSEMBLIES

Hydraulic hoses have a limited life dependent on service conditions to which is applied.

Subjecting hose to conditions more severe than the recommended limits significantly reduce service life. Exposure to combinations of recommended limits (i.e., continuous use at maximum rated working pressure, maximum recommended operating temperature and minimum bend radius) will also reduce service life.

WARNING: FAILURE TO FOLLOW PROPER SELECTION, INSTALLATION AND MAINTENANCE PROCEDURES BODILY INJURY, AND DAMAGE TO PROPERTY.

1 SELECTION

The following is a list of factors which must be considered before the selection of a hose can be made:

1.2 Line size: In order to achieve maximum efficiency in a hydraulic system it is necessary to keep pressure losses (resistance to the volumetric flow) to a minimum when a fluid is conveyed by the different types of flow lines.

When a fluid flows through a flow line, heat is generated by friction. Thus part of the energy is lost as heat energy, which results in a pressure loss.

These pressure losses depend upon:

- flow velocity (for a given volumetric flow, the fluid flow velocity increases with a decrease in the cross sectional area of a flow line and vice versa)
- length of the flow line
- the viscosity of the fluid flowing
- the density of the fluid flowing
- the type of flow (laminar or turbulent)

Types of flow - The type of flow changes from laminar to turbulent at a certain flow velocity. This velocity is given by the Reynold's Number Re.

Per le linee di flusso cilindriche si applica la seguente formula:

$$Re = (V \times D) / U$$

dove:

V= velocità (m/s)

D= diametro interno della portata (m)

U = viscosità cinematica (m²/s)

Non appena il valore dell'Re supera 2300, il flusso laminare cambia in flusso turbolento.

Flusso laminare – nel flusso laminare, le singole particelle di fluido si spostano fino a determinate velocità in strati uniformi l'una accanto all'altra. Difficilmente disturbano o si influenzano a vicenda.

Flusso turbolento – se il valore dell' Re supera 2300, il flusso diventa vorticoso e turbolento. Le singole particelle non si muovono più in una direzione in modo ordinato, ma si muovono e si ostacolano a vicenda.

For cylindrical flow lines the following formula applies:

$$Re = (V \times D) / U$$

where:

V= velocity (m/s)

D= flow line internal dia (m)

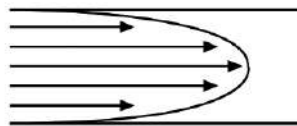
U= kinematic viscosity (m²/s)

As soon as the value for Re exceeds 2300, the laminar flow changes to turbulent flow.

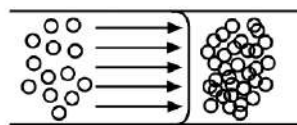
Laminar flow - In laminar flow, the individual fluid particles move up to certain speeds in uniform layers alongside each other. They scarcely disturb or influence each other.

Turbulent flow - If the value for Re exceeds 2300, flow becomes whirling and turbulent. The individual particles no longer move in one direction in an orderly fashion, but influence and hinder each other.

FLUSSO LAMINARE
LAMINAR



FLUSSO TURBOLENTO
TURBOLENT



Linee di aspirazione: 0.5 - 1.2 m/s; 1.6 - 4 piede/s

Linee di ritorno: 2 - 3 m/s; 6.5 - 10 piede/s

Linee di pressione: 4 - 7.5 m/s; 13 - 25 piede/s

Suction lines: 0.5 - 1.2 m/s; 6 - 4 feet/s

Return lines: 2 - 3 m/s; 6.5 - 10 feet/s

Pressure lines: 4 - 7.5 m/s; 13 - 25 feet/s

NORMOGRAMMA DELLA PORTATA

Il grafico alla pagina seguente (pag. 160) è necessario per poter individuare la misura del tubo conoscendo la portata e la velocità.

Esempio: a 45 l/min, qual è la giusta dimensione del tubo all'interno del range di velocità raccomandato per le linee di pressione?

- Individuare 45 l/min nella colonna di sinistra e 7,5 m/s nella colonna di destra (l'intervallo di velocità massimo consigliato per le linee di pressione).
- Posare una linea retta tra questi due punti. I diametri interni mostrati nella colonna centrale sono superiori a 9,5 mm, quindi bisogna usare 12,7 mm (1/2").

Per il tubo aspirazione, seguire la stessa procedura, usando però il range di velocità raccomandato per le linee di aspirazione nella colonna di destra.

Dove:

Q = flusso in litri per secondi (l/sec)

V = velocità in metri per secondi (m/s)

d = diametro interno del tubo (mm e dash size)

È quindi importante calcolare correttamente le dimensioni desiderate della linea di portata. Le linee di pressione sottodimensionate determinano una alta velocità del fluido, causando un'eccessiva caduta di pressione e un accumulo di calore, che compromettono le prestazioni generali del sistema.

Le linee di aspirazione sottodimensionate possono causare la cavitazione all'ingresso della pompa idraulica, influenzando le prestazioni, riducendo la durata della pompa e creando livelli di rumore eccessivi.

FLOW CAPACITY NORMOGRAM

Flow Capacities of Hose at Recommended Flow Velocities. The chart below is provided as an aid in the determination of the correct hose size.

Example at 45 l/min, what is the proper hose size within the recommended velocity range for pressure lines?

- *Locate 45 l/min in the left-hand column and 7,5 m/s in the right-hand column (the maximum recommended velocity range for pressure lines).*
 - *Lay a straight line across these two points. The inside diameters shown in the centre column is above 9,5 mm so we have to use 12,7 mm (1/2").*
- For suction hose, follow the same procedure except use recommended velocity range for intake lines in the righthand column.*

Where:

Q = flow in liters per seconds (l/sec)

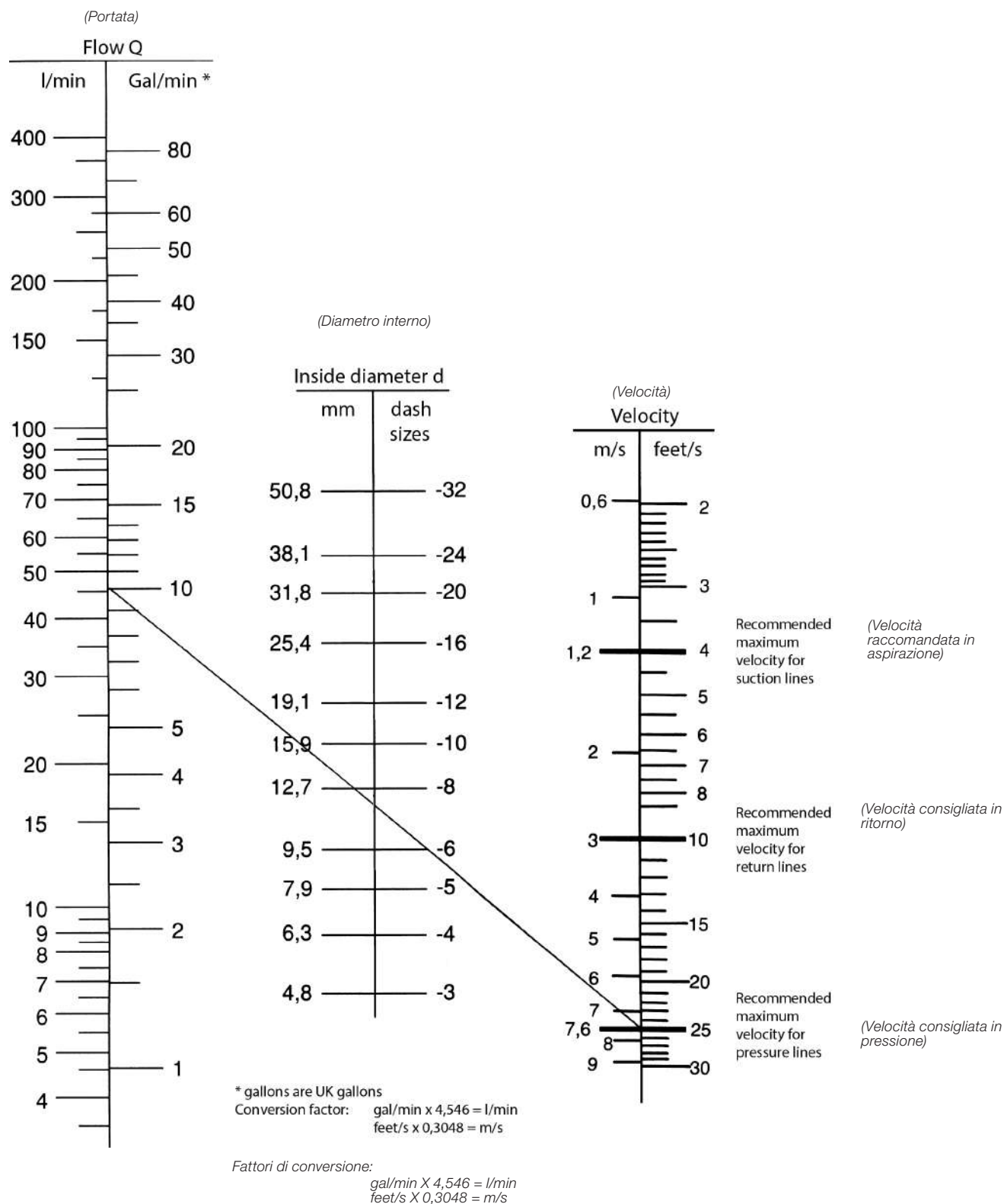
V = velocity in meters per seconds (m/s)

d = hose inside diameter (mm & dash size)

It is therefore important to calculate correctly the required flow line sizes. Undersized pressure lines results in high fluid velocity causing an excessive pressure drop, and heat built up, which impair overall system performance.

Undersized suction lines can cause cavitation at the hydraulic pump inlet, affecting performance, shortening pump life, and creating excessive noise levels.

NORMOGRAMMA DELLA PORTATA / FLOW CAPACITY NORMOGRAM



INFORMAZIONI TECNICHE – NORMOGRAMMA DEL FLUSSO

Il presente normogramma è fondamentale per riuscire a trovare la misura del tubo conoscendo la portata e la velocità.

Per individuare il diametro corretto bisogna tracciare una linea tra il valore della portata (l/min) e la velocità consigliata (m/sec) in base al tipo di mandata (pressione o ritorno). Il valore indicato dal punto in cui questa linea intersecherà la colonna centrale, evidenzierà la misura interna del tubo (mm/pollici) da utilizzare.

Il normogramma della portata del flusso è un ausilio per determinare la dimensione del diametro interno del tubo corretto, la velocità di flusso desiderata e la velocità raccomandata. Con l'uso di due fattori noti, il terzo può essere determinato.

1.2 Pressione

Dopo aver determinato il sistema di pressione per un impianto idraulico, la selezione del tubo deve essere effettuata in modo che la massima pressione di esercizio consigliata, specificata da un determinato tubo, sia uguale o maggiore della pressione dell'impianto. La pressione dinamica è comune per tutti i sistemi idraulici. I picchi di pressione che superano la massima pressione di esercizio influiscono sulla durata dei componenti del sistema, incluso un tubo assemblato, e devono quindi essere presi in considerazione.

1.3 Temperatura

È necessario assicurarsi che la temperatura d'esercizio del fluido trasportato e la temperatura ambiente non eccedano i limiti del tubo. Prestare particolare attenzione durante l'installazione in prossimità di collettori caldi o metallo fuso.

1.4 Compatibilità del fluido

La selezione del tubo deve garantire la compatibilità dell'anima, della copertura, del rinforzo e dei raccordi con il fluido utilizzato.

Ulteriore attenzione va prestata per la selezione di tubazioni per applicazioni gassose. Per alcuni fluidi resistenti al fuoco è necessaria la stessa tipologia di tubo che si utilizza per il petrolio. Alcuni necessitano di tubi speciali, altri invece non possono essere utilizzati con nessuna tipologia di tubo.

Per le applicazioni gassose, ove compatibili con i tubi DUNLOP HIFLEX e a una pressione superiore a 10 bar, la copertura del tubo deve essere microforata.

TECHNICAL INFORMATION – NORMOGRAM OF THE FLOW

The normogram herewith is pivotal to help you find the hose diameter by knowing the liquid flow and speed.

In order to find the correct diameter you should trace a line between the flow value (l/min) and the suggested speed (m/sec) according to the kind of delivery (pressure or return). The value touched by the line in the central column will indicate the hose ID (mm/inches) that must be used.

The flow capacity normogram is an aid to determine the correct hose internal diameter size, desired flow rate and recommended velocity. By the use of any two known factors, the third can be determined.

1.2 Pressure

After determining the system pressure for a hydraulic system, hose selection must be made so that the recommended maximum operating pressure specified by a given hose, is equal or greater than the system pressure. Dynamic pressure is common for all hydraulic systems. Pressure surges which exceed the maximum working pressure (pressure relief valve setting) affect the service life of system components, including a hose assembly and therefore need to be taken into consideration. Hoses used for suction lines must be selected to ensure the hose will withstand the negative pressure of the system.

1.3 Temperature

Care must be taken to ensure that the operating temperature of the fluid being conveyed and ambient temperatures, do not exceed the limitations of the hose. Special care must be taken when routing near hot manifolds or molten metal.

1.4 Fluid Compatibility

Hose selection must assure compatibility of the hose tube, cover, reinforcement, and fittings with the fluid used.

Additional caution must be observed in hose selection for gaseous applications. Some fire resistant fluids require the same hose as petroleum oil. Some use a special hose, while a few fluids will not work with any hose at all.

For gas application, where compatible with DUNLOP HIFLEX hoses, and at pressure above 10 bar, the hose cover shall be pin-pricked.

1.5 Permeazione

La permeazione (ovvero l'infiltrazione attraverso il tubo) avviene dall'interno del tubo verso l'esterno quando il flessibile viene utilizzato con gas, liquidi e carburanti refrigeranti (come elio, olio combustibile, gas naturale e freon). Questa permeazione può provocare alte concentrazioni di vapori che sono potenzialmente infiammabili, esplosivi o tossici e la perdita di fluido. Anche se la compatibilità del liquido è accettabile, è necessario tenere conto del fatto che la permeazione si verificherà e potrebbe essere pericolosa. Si verificherà anche la permeazione di umidità dall'esterno all'interno del tubo. Se questa permeazione dovesse avere effetti dannosi (in particolare per i sistemi di refrigerazione e di condizionamento), dovrebbero essere messe in atto appropriate precauzioni per la salvaguardia del sistema.

1.6 Posa

È necessario prestare attenzione alla posa ottimale per ridurre al minimo i problemi che ne potrebbero derivare. Afferrare, proteggere o guidare il tubo con l'uso di morsetti se necessario per ridurre il rischio o il danno a causa di un'eccessiva flessione, frustata o contatto con altre parti mobili o con degli agenti corrosivi; determinare le lunghezze e le configurazioni del tubo che consentiranno la corretta installazione e protezione da abrasione, impigliamento o attorcigliamento e fornire connessioni resistenti alle perdite.

1.7 Ambiente

Prestare attenzione affinché il tubo e i raccordi siano compatibili e protetti dall'ambiente al quale sono esposti.

Condizioni ambientali quali (e non solo) luce ultravioletta, calore, ozono, umidità, acqua, acqua salata, sostanze chimiche e inquinanti atmosferici possono causare degrado e danni prematuri, pertanto, devono essere presi in considerazione.

1.8 Sollecitazioni meccaniche

Le forze esterne possono ridurre significativamente la durata del tubo. Le sollecitazioni meccaniche che devono essere considerate comprendono carichi eccessivi, torsioni, attorcigliamenti, carichi di trazione o laterali, raggio di curvatura e vibrazioni. Potrebbe essere necessario l'uso di raccordi o adattatori girevoli per evitare una torsione del tubo. Per applicazioni speciali possono essere necessari dei test prima della selezione del tubo.

1.5 Permeation

Permeation (that is, seepage through the hose) will occur from inside the hose to outside when hose is used with gases, liquid and gas fuels, and refrigerants (including but not limited to such materials such as helium, fuel oil, natural gas or freon). This permeation may result in high concentrations of vapours which are potentially flammable, explosive, or toxic and in loss of fluid. Even though the fluid compatibility is acceptable, you must take into account the fact that permeation will occur and could be hazardous. Permeation of moisture from outside the hose to inside the hose will also occur. If this moisture permeation would have detrimental effects (particularly but not limited to refrigeration and air conditioning systems), incorporation of sufficient drying capacity in the system or other appropriate system safeguards should be selected and used.

1.6 Routing

Attention must be given to optimum routing to minimise inherent problems; restrain, protect or guide hose with the use of clamps if necessary to minimise risk or damage due to excessive flexing, whipping or contact with other moving parts or corrosives; determine hose lengths and configurations that will result in proper routing and protection from abrasion, snagging or kinking and provide leak resistant connections.

1.7 Environment

Care must be taken to ensure that the hose and fittings are either compatible with or protected from the environment to which they are exposed. Environmental conditions including but not limited to ultraviolet light, heat, ozone, moisture, water, salt water, chemicals, and air pollutants can cause degradation and premature failure and, therefore, must be considered.

1.8 Mechanical Loads

External forces can significantly reduce hose life. Mechanical loads which must be considered include excessive flexing, twist, kinking, tensile or side loads, bend radius, and vibration. Use of swivel type fittings or adaptors may be required to ensure no twist is put into the hose. Unusual applications may require special testing prior to hose selection.

1.9 Abrasione

Se da un lato un tubo è progettato in modo tale che abbia un ragionevole livello di resistenza all'abrasione, dall'altro lato è necessario prestare attenzione a proteggere il tubo da abrasioni eccessive che possono provocare erosione, strappare o tagliare la copertura del tubo. L'esposizione del rinforzo accelera in maniera significativa il guasto del tubo.

1.10 Compatibilità dei raccordi

È necessario prestare attenzione per garantire un'adeguata compatibilità tra il tubo e i raccordi da usare in base alle raccomandazioni del produttore, convalidate dai test sugli standard del settore, quali SAE J517, DIN 20024, JIS B 8360.

1.11 Lunghezza

Nel determinare la corretta lunghezza del tubo flessibile, è necessario considerare il tipo di movimento che dovrà fare, la variazione della lunghezza del tubo causata dalla pressione esercitata dai fluidi e le eventuali tolleranze dimensionali sia del tubo che della macchina.

1.12 Norme e specifiche

Nella scelta del tubo flessibile occorre verificare le specifiche e le normative richieste, accertandosi che il tubo corrispondente sia adatto al tipo di applicazione.

1.13 Pulizia del tubo

I componenti del tubo possono essere richiesti con diversi livelli di pulizia. È necessario prestare attenzione per garantire che i componenti selezionati abbiano un elevato livello di pulizia per le applicazioni a cui verranno sottoposti.

1.14 Saldatura e brasatura

Il riscaldamento di parti cromate, inclusi raccordi e adattatori, sopra i 232°C (450°F) come avviene durante la saldatura o la brasatura, può emettere gas mortali.

1.15 Conduttività elettrica

Alcune applicazioni richiedono tubi non conduttivi, in modo tale da prevenire il flusso di corrente elettrica. Altre applicazioni richiedono invece che il tubo sia sufficientemente conduttivo per scaricare l'elettricità statica. Bisogna prestare estrema attenzione quando si selezionano tubi e raccordi per queste o altre applicazioni in cui la conduttività o non conduttività elettrica è un fattore richiesto. Per le applicazioni che necessitano di un tubo elettricamente non conduttivo, come applicazioni in prossimità di linee elettriche, il

1.9 Abrasion

While a hose is designed with a reasonable level of abrasion resistance, care must be taken to protect the hose from excessive abrasion which can result in erosion, snagging, and cutting of the hose cover. Exposure of the reinforcement will significantly accelerate hose failure.

1.10 Proper End Fitting

Care must be taken to ensure proper compatibility exists between the hose and coupling selected based on the manufacturer's recommendations substantiated by testing to industry standards such as SAE J517, DIN 20024, JIS B 8360.

1.11 Length

When establishing proper hose length, motion absorption, hose length changes due to pressure, as well as hose and machine tolerances must be considered.

1.12 Specifications and Standards

When selecting hose and fittings, government, industry, and manufacturer's specifications and recommendations must be reviewed as applicable.

1.13 Hose Cleanliness

Hose components may vary in cleanliness levels. Care must be taken to ensure that the assemblies selected have an adequate level of cleanliness for the application.

1.14 Welding and Brazing

Heating of plated parts, including hose fittings and adaptors, above 232° C (450° F) such as during welding, brazing, or soldering may emit deadly gases.

1.15 Electrical Conductivity

Certain applications require that a hose be non-conductive to prevent electrical current flow. Other applications require the hose to be sufficiently conductive to drain off static electricity. Extreme care must be exercised when selecting hose and fittings for these or any other applications in which electrical conductivity or non-conductivity is a factor. For applications that require hose to be electrically non-conductive, including but not limited to applications near high voltage electric lines, only special non



produttore di tale attrezzatura deve essere consultato per accertarsi che il tubo e i raccordi selezionati siano adatti alle applicazioni.

Non utilizzare alcun tubo o raccordo DUNLOP HIFLEX per applicazioni che richiedono tubi non conduttivi, inclusi ma non limitati ad applicazioni in prossimità di linee elettriche ad alta tensione, a meno che l'applicazione non sia espressamente approvata nella scheda tecnica DUNLOP HIFLEX del prodotto; in tal caso, nel MANUALE SULLA SICUREZZA il tubo viene segnalato in arancione e contrassegnato come "non conduttivo" e il produttore dell'attrezzatura su cui deve essere impiegato tale tubo approva specificatamente il flessibile e i raccordi DUNLOP HIFLEX idonei alle applicazioni in questione.

DUNLOP HIFLEX non fornisce alcun tubo o raccordo per verniciatura a spruzzo o applicazioni simili. Per tali applicazioni sono necessari tubi e raccordi speciali, per evitare l'accumulo di elettricità statica che potrebbe provocare una scintilla in grado di sfociare in un'esplosione o in un incendio.

La conduttività o non conduttività elettrica di tubo e raccordi dipende da molti fattori e può essere soggetta a cambiamenti. Questi fattori includono vari materiali usati per realizzare tubo e raccordi, metodi di produzione (incluso il controllo dell'umidità), età e stato di deterioramento, livello di umidità all'interno del tubo per un determinato periodo di tempo e altri fattori.

2. INSTALLAZIONE

Dopo aver selezionato il tubo corretto, è necessario considerare i seguenti fattori prima di assemblarlo e installarlo.

2.1 Controlli prima dell'assemblaggio

Prima dell'installazione è necessario eseguire un attento esame del tubo. Tutti i componenti devono essere controllati per tipologia, dimensioni e lunghezza corretti. Il tubo deve essere esaminato per verificarne pulizia, ostruzioni, bolle, copertura danneggiata e qualsiasi altro difetto visibile.

2.2 Assemblaggio di tubi e raccordi

Non assemblare un raccordo DUNLOP HIFLEX su un tubo DUNLOP HIFLEX se non specificato da DUNLOP HIFLEX. Non montare raccordi DUNLOP HIFLEX su tubi di diversa produzione e viceversa, a meno che DUNLOP HIFLEX non ne approvi l'assemblaggio per iscritto e l'utente verifichi assemblaggio e applicazioni

conductive. The manufacturer of the equipment in which the non-conductive hose is to be used must be consulted to be certain that the hose and fittings that are selected are proper for the application.

Do not use any DUNLOP HIFLEX hose or fitting for any application requiring non-conductive hose, including but not limited to applications near high voltage electric lines, unless the application is expressly approved in the DUNLOP HIFLEX technical publication for the product, the SAFETY GUIDE hose is both orange in colour and marked "non-conductive", and the manufacturer of the equipment on which the hose is to be used specifically approves the particular DUNLOP HI- FLEX hose and fitting for such use.

DUNLOP HIFLEX does not supply any hose or fittings for conveying paint in airless paint spraying or similar applications and therefore should not be used. A special hose and fitting assembly is required for this application, to avoid static electricity buildup which could cause a spark that may results in an explosion and/or fire.

The electrical conductivity or non-conductivity of hose and fittings is dependant upon many factors and may be susceptible to change. These factors include but are not limited to the various materials used to make the hose and the fittings, manufacturing methods (including moisture control), how the fittings contact the hose, age and amount of deterioration or damage or other changes, moisture content of the hose at and particular time, and others factors.

2. INSTALLATION

After the selection of the correct hose, the following factors must be considered prior to hose and fitting assembly and installation.

2.1 Pre-Installation Inspection

Prior to installation, a careful examination of the hose must be performed. All components must be checked for correct style, size, and length. The hose must be examined for cleanliness, obstructions, blisters, cover looseness, or any other visible defects.

2.2 Hose and Fitting Assembly

Do not assemble an DUNLOP HIFLEX fitting on an DUNLOP HIFLEX hose that is not specified by DUNLOP HIFLEX for that hose. Do not assemble DUNLOP HIFLEX fittings on another manufacturer's hose or an DUNLOP HIFLEX hose on another manufacturer's fitting unless DUNLOP HIFLEX approves the assembly

tramite analisi e test.

È necessario seguire le istruzioni DUNLOP HIFLEX relative all'assemblaggio nel momento in cui vengono montati i raccordi sul tubo.

2.3 Taglio

Deve essere effettuato con un'attrezzatura idonea che consenta di mantenere una certa uniformità, senza strappi, deformazioni, apertura dei rinforzi d'acciaio. Il taglio deve essere rigorosamente a 90°. Una regola che dovrebbe essere seguita, è quella di tagliare i primi e gli ultimi centimetri di ogni nuovo rotolo.

2.4 Spellatura

Nel caso il tubo che stiamo utilizzando la richieda, si deve eseguire la spellatura facendo attenzione a non deformare il tubo o intaccare le spirali d'acciaio. E' importante ripulire il più possibile il tubo dallo strato di gomma, lasciando un residuo a protezione del rinforzo. In riferimento alla misura e alla tipologia del raccordo da usare, controllare la lunghezza della spellatura indicata dal costruttore.

2.5 Accessori correlati

Pressare tubi e raccordi DUNLOP HIFLEX usando unicamente macchine pressatubi approvate da DUNLOP HIFLEX e in conformità con le istruzioni di montaggio del tubo DUNLOP HIFLEX.

2.6 Parti

Non utilizzare alcun raccordo DUNLOP HIFLEX (come boccole, inserti, ecc.) che non sia compatibile con la tipologia di tubo DUNLOP HIFLEX utilizzata.

2.7 Riutilizzabile/Permanente

Non riutilizzare nessun raccordo fuoriuscito o estratto da un tubo assemblato. Non riutilizzare un raccordo DUNLOP HIFLEX pressato o piegato, o parte di esso.

2.8 Raggio minimo di curvatura

L'installazione di un tubo al di sotto del raggio minimo di curvatura elencato può ridurre significativamente la durata del tubo. Bisogna prestare particolare attenzione per evitare brusche flessioni in corrispondenza della giuntura tubo/raccordo.

2.9 Angolo di torsione e orientamento

Le installazioni dei tubi devono essere tali che il relativo movimento dei componenti della macchina

in writing, and the user verifies the assembly and the application through analysis and testing.

The DUNLOP HIFLEX published hose assembly instructions must be followed for assembling the fittings on the hose.

2.3 Cutting

It must be carried out with a suitable piece of equipment that allows to retain a certain uniformity, without tearing, deformations, opening of steel reinforcements. The cut must be strictly 90°. Generally the first and last centimeters of each new roll must be cut.

2.4 Skiving

If the hose has to be skived, be careful not to deform it or to damage the steel spirals. It is important to clean the hose from the rubber layer as much as possible, leaving a residue to protect the reinforcement check the length of the strip indicated by the manufacturer in reference to the size and type of fitting to be used.

2.5 Related Accessories

Crimp or swage DUNLOP HIFLEX hose or fittings only with DUNLOP HIFLEX approved swage or crimp machines and in accordance with the DUNLOP HIFLEX published hose assembly instructions.

2.6 Parts

Do not use any DUNLOP HIFLEX hose fitting part (including but not limited to sockets, or inserts) except with the correct DUNLOP HIFLEX mating parts, in accordance with DUNLOP HIFLEX published hose assembly.

2.7 Reusable/Permanent

Do not reuse any reusable hose coupling that has blown or pulled off a hose. Do not reuse an DUNLOP HIFLEX permanent (that is, crimped or swaged) hose fitting or any part thereof.

2.8 Minimum Bend Radius

Installation of a hose at less than the minimum listed bend radius may significantly reduce the hose life. Particular attention must be given to avoid sharp bending at the hose/fitting juncture.

2.9 Twist Angle and Orientation

Hose installations must be such that relative motion of machine components does not produce twisting.



non produca torsioni.

2.10 Fissaggio

In alcune tipologie di applicazioni può essere importante fissare, proteggere o indirizzare il tubo flessibile con accessori adatti a questo tipo di servizio. Si possono così evitare sia contatti con altri componenti meccanici, sia movimenti inediti causati da picchi di pressione o eccessiva depressione, che potrebbero comportare svariate problematiche all'interno dell'impianto. E' necessario accertarsi che tali punti di fissaggio non causino ulteriori sollecitazioni o punti di usura.

2.11 Collegamento dei raccordi

Al momento di collegare l'estremità del flessibile con l'impianto, è importante verificarne l'esatto fissaggio, evitando torsioni dannose che ne comprometterebbero il normale funzionamento.

2.12 Controllo danni esterni

Dopo aver terminato il montaggio del flessibile sull'impianto, controllare attentamente che la posizione definitiva del tubo assemblato non comporti eventuali carichi di trazione, torsioni, eccessivi allungamenti, rischi di abrasione, filettature danneggiate o eventuali danni esterni che comprometterebbero il normale funzionamento.

2.13 Verifica sull'impianto

Dopo aver terminato il montaggio dei flessibili, occorre eliminare tutta l'aria al suo interno, verificando che l'impianto una volta avviato, portandolo alla massima pressione di lavoro, funzioni correttamente escludendo qualsiasi tipo di perdita.

3. ISTRUZIONI PER LA MANUTENZIONE DI TUBI E RACCORDI

Anche dopo una corretta selezione e installazione, la durata del tubo può essere ridotta in maniera significativa senza un programma di manutenzione costante. La frequenza dovrebbe essere determinata dall'intensità delle applicazioni e dal potenziale di rischio. Deve essere stabilito un programma di manutenzione in cui i seguenti punti siano d'obbligo:

3.1 Stoccaggio dei tubi flessibili

Le proprietà fisiche e le prestazioni della gomma si modificano nel tempo. La durata che dipende anche dal tipo di gomma impiegata, si può notevolmente ridurre anche a causa di altri fattori esterni. Per evitare di danneggiare il prodotto è importante tener conto delle seguenti precauzioni.

2.10 Securement

In many applications, it may be necessary to restrain, protect, or guide the hose to protect it from damage by unnecessary flexing, pressure surges, and contact with other mechanical components. Care must be taken to ensure such restraints do not introduce additional stress or wear points.

2.11 Proper Connection of Ports

Proper physical installation of the hose requires a correctly installed port connection while ensuring that no twist or torque is transferred to the hose.

2.12 External Damage

Proper installation is not complete without ensuring that tensile loads, side loads, kinking, flattening, potential abrasion, thread damage, or damage to sealing surfaces are corrected or eliminated.

2.13 System Checkout

After completing the installation all air entrapment must be eliminated and the system pressurised to the maximum system pressure and checked for proper function without any leaks. Personnel must stay out of potential hazardous areas while testing.

3. HOSES AND FITTINGS MAINTENANCE INSTRUCTIONS

Even with proper selection and installation, hose life may be significantly reduced without a continuing maintenance program. Frequency should be determined by the severity of the application and risk potential. A maintenance program must be established and followed to include the following as a minimum:

3.1 STORAGE OF HOSES

The physical properties and performance of the rubber change over time. The duration can be reduced also due to other external factors. To avoid the damaging of the product it is important to take the following precautions into account.

3.2 Durata dello stoccaggio

È importante far ruotare il magazzino il più frequentemente possibile. La durata consigliata è di 4 anni per i tubi flessibili (data di riferimento di marcatura sul tubo) e di 2 anni per i tubi flessibili assemblati (data di riferimento di marcatura sulla ghiera). Nel caso in cui queste tempistiche siano superate, è importante verificare, prima dell'utilizzo, lo stato esteriore del flessibile.

3.3 Temperatura e umidità

La temperatura ottimale per lo stoccaggio dei tubi flessibili è tra i 10 °C e i 25 °C. È importante che i tubi non siano conservati in ambienti dove può esserci una temperatura superiore ai 40 °C o inferiore a 0 °C. Nel caso i materiali si trovino in ambienti al di sotto dei -15 °C si consiglia di adottare delle precauzioni per la loro movimentazione. Controllare che vicino ai prodotti non vi siano né fonti di calore né condizioni di alta e bassa umidità (massima umidità consigliata 65%).

3.4 Luce

È importante che l'ambiente dove si conservano i tubi sia abbastanza buio. Evitare la luce diretta del sole o l'eccessiva intensa luce artificiale.

3.5 Ossigeno ed ozono

I tubi tenuti in magazzino dovrebbero essere protetti per non permettere all'aria di aggredire la gomma. È consigliabile non tenere nello stesso magazzino in cui sono conservati i flessibili, oggetti in grado di produrre ozono. Alcuni esempi sono il materiale elettrico ad alta tensione, le lampade, i motori elettrici, i tubi a vapore di mercurio o qualsiasi altro materiale in grado di provocare scintille o archi elettrici.

3.6 Contatti dannosi

È importante non mettere i flessibili a contatto con grassi, oli, solventi, carburanti, composti chimici volatili, acidi, disinfettanti o altri liquidi organici in genere. Alcuni metalli tipo ferro, rame, leghe o manganese, provocano degli effetti negativi ai flessibili se messi a stretto contatto. Altri materiali che possono aggravare lo stato del tubo sono il cloruro di polivinile (PVC) e il tessuto o il legname impregnati di creosoto.

3.7 Stoccaggio ideale

Non sistemare il tubo in postazioni dove può venire a contatto con oggetti taglienti e spigolosi. Nel posizionare il materiale, è importante fare attenzione che non vi sia nessun tipo di deformazione, di

3.2 Storage duration

It is important to rotate the warehouse as frequently as possible. The recommended duration is 4 years for flexible pipes (marking date specified on the pipe) and 2 years for assembled flexible pipes (marking date specified on the ring). In the event that these times are exceeded, it is important to check the exterior condition of the hose before using it.

3.3 Temperature and humidity

The optimal temperature for the storage of flexible pipes is between 10° C and 25 ° C. It's important that the hoses aren't stored in environments where there may be a temperature above 40 ° C or below 0 ° C. If the materials are retained in rooms below - 15 ° C it's advisable to take precautions for their handling. Check that there are no heat sources or high and low humidity conditions near the products (maximum recommended humidity 65%).

3.4 Light

It's important that the environment where the pipes are kept is dark enough. Avoid direct sunlight, or intense artificial light.

3.5 Oxygen and ozone

The hoses stored in the warehouse should be protected to prevent air from attacking the rubber. It's advisable not to keep ozone in the same warehouse where the hoses are stored, such as high voltage electrical equipment, lamps, electric motors, mercury vapor hoses or any other material capable of cause sparks.

3.6 Harmful contacts

It's important not to put the hoses in contact with greases, oils, solvents, fuels, volatile chemical compounds, acids, disinfectants or other organic liquids in general. Some metals (such as iron, copper, alloys or manganese) cause negative effects to the flexible if put in close contact. Other materials that can aggravate the condition of the hose are polyvinyl chloride (PVC) and creosote-impregnated fabric or wood.

3.7 Ideal storage

Avoid contact with sharp and cutting objects. When you place the material, it's important to ensure that there is no type of deformation, elongation, stress or compressions.



allungamento, di sollecitazione o di compressione.

3.8 Consigli utili

Prima di utilizzare il tubo è importante verificare la pulizia interna. Un flessibile inquinato internamente da oggetti solidi può danneggiare l'impianto a cui sarà collegato. È consigliabile chiudere prima possibile le estremità del tubo con dei tappi, per evitare che lo sporco entri all'interno del flessibile. Per pulire la condotta usare detergenti, evitando qualsiasi tipo di solvente. Non usare in alcun caso sul tubo accessori taglienti, appuntiti o abrasivi. Nel sistemare i flessibili assemblati in magazzino fare attenzione a non danneggiare i raccordi all'estremità. Nel caso di rotoli, sistemarli in modo orizzontale, evitando che nel soprammetterli si danneggino. Evitare di collocarli su dei paletti o su dei ganci. Proteggere i prodotti dai roditori che potrebbero rovinarli in modo irreversibile.

3.9 Ognuna delle seguenti condizioni richiede l'arresto immediato e la sostituzione del tubo assemblato:

- Allentamento del raccordo dal tubo
- Copertura danneggiata, tagliata o abrasa (esposizione dell'armatura del flessibile)
- Tubo duro, rigido, surriscaldato o carbonizzato
- Raccordo incrinato, danneggiato o corrosivo
- Perdite nel raccordo o nel tubo
- Tubo piegato, distrutto, schiacciato o attorcigliato
- Copertura degradata, allentata, con presenza di bolle

3.10 Ispezione visiva di tutto il resto

In caso di necessità serrare, riparare o sostituire le seguenti voci:

- Perdite dalle estremità raccordate
- Sporco eccessivo
- Morsetti, protezioni, fascette
- Presenza di aria, livello e tipologia del fluido

3.11 Test funzionale

Azionare il sistema alla massima pressione operativa e controllare eventuali malfunzionamenti e la mancanza di perdite. Durante il test, il personale deve rimanere fuori dall'area interessata, diventata potenzialmente pericolosa.

3.12 Controlli periodici

Per una ottimale manutenzione dell'impianto, tenere conto degli interventi periodici necessari, considerando ciò che la legge richiede per quelle applicazioni, in rapporto anche alla gravità di un guasto che potrebbe determinare tempi di inattività inaccettabili, danni pericolosi o rischio di lesioni a persone o cose.

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3.8 Useful tips

Before using the pipe it's important to check the internal cleaning. A hose polluted internally by solid objects can damage the system to which it will be connected. It is advisable to close the ends of the pipe with caps as soon as possible, to prevent dirt from entering the hose. To clean the internally hose use detergents, avoiding any type of solvent. Never use sharp, pointed or abrasive accessories on the hose. When placing the assembled hoses in the warehouse, be careful not to damage the fittings at the end. In the case of rolls, arrange them horizontally, preventing damage. Avoid placing them on posts or hooks. Protect products from rodents that could irreversibly damage them.

3.9 Visual Inspection Hose/Fitting

Any of the following conditions require immediate shut down and replacement of the hose assembly:

- *Fitting slippage on hose*
- *Damaged, cut or abraded cover (any reinforcement exposed)*
- *Hard, stiff, heat cracked, or charred hose*
- *Cracked, damaged, or badly corroded fittings*
- *Leaks at fitting or in hose*
- *Kinked, crushed, flattened or twisted hose*
- *Blistered, soft, degraded, or loose cover*

3.10 Visual Inspection All Other

The following items must be tightened, repaired or replaced as required:

- *Leaking port conditions*
- *Remove excess dirt build-up*
- *Clamp, guards, shields*
- *System fluid level, fluid type and any air entrapment*

3.11 Functional Test

Operate the system at maximum operating pressure and check for possible malfunctions and freedom from leaks. Personnel must stay out of potential hazardous areas while testing.

3.12 Replacement Intervals

Specific replacement intervals must be considered based on previous service life, government or industry recommendations, or when failures could result in unacceptable downtime, damage, or injury risk.

Compatibilità dei materiali

Il tubo flessibile è stato progettato per essere utilizzato in sistemi idraulici con fluidi sintetici, derivati del petrolio, a base acquosa, lubrificanti, idrocarburi e combustibili. Tutti i materiali utilizzati per la costruzione del tubo flessibile sono stati scelti per la loro compatibilità con questa tipologia di fluidi. Nel caso in cui all'interno del tubo debbano passare materiali diversi da quelli elencati o riportati nelle relative schede tecniche, è opportuno contattare l'ufficio tecnico di Hiflex.

Fattori di sicurezza

Al fine di garantire adeguati margini di sicurezza utilizzando tubi flessibili, è opportuno scegliere il tipo di prodotto calcolando il rapporto tra pressione minima di scoppio e pressione massima di esercizio, in relazione al tipo di fluido che dovrà passare all'interno della condotta. La tabella seguente è tratta dalla normativa ISO 7751 (International Standard).

N.	Tipo di utilizzo Type of use	Rapporto tra pressione di prova e pressione massima d'esercizio Ratio between test pressure and maximum working pressure	Rapporto tra pressione minima di scoppio e pressione massima d'esercizio Ratio between minimum burst pressure and maximum operating pressure
1	Acqua con pressione massima d'esercizio fino a 10 bar Water with maximum operating pressure up to 10 bar	1,5	3,0
2	Altri liquidi, sostanze solide sospese in liquidi o aria con pressione massima di esercizio superiore a 10 bar Other liquids, solid substances suspended in liquids or air with maximum working pressure higher than 10 bar	2,0	4,0
3	Aria compressa e altri gas Compressed air and other gases	2,0	4,0
4	Liquidi allo stato gassoso soggetti ad una diminuzione di pressione. Liquids in the gaseous state when subjected to a decrease in pressure.	2,0	5,0
5	Vapore Vapor	5,0	10,0
6	Acqua ad altissima pressione Very high pressure water	1,5	2,5

IMPORTANTE!

I tubi flessibili idraulici possono lavorare a delle pressioni talmente elevate da essere considerati altamente pericolosi. La parte più soggetta ad una rottura è il punto di connessione del raccordo con il tubo. Per questo si consiglia di impiegare sempre tubi e raccordi originali Hiflex. I nostri prodotti sono stati studiati, progettati e sviluppati per essere utilizzati insieme. Usando tubi e raccordi originali e seguendo le tabelle tecniche di assemblaggio Hiflex, si possono ottenere risultati conformi alle normative richieste, raggiungendo una totale sicurezza sul tubo flessibile assemblato. La vita di un tubo flessibile assemblato risulterà superiore se, oltre a questi accorgimenti,

Material compatibility

The flexible hose has been designed to be used in hydraulic systems with synthetic fluids, petroleum-based, water-based, lubricants, hydrocarbons and fuels. All the materials used for the construction of the hose have been chosen for their compatibility with this type of fluids. In the event that materials other than those listed or given in the relative technical sheets must pass through the pipe, contact the Hiflex technical office.

Safety factors

In order to guarantee safety using flexible hoses, it's appropriate to choose the type of product by calculating the ratio between minimum burst pressure and maximum operating pressure, in relation to the type of fluid that will have to pass inside the duct. The following table is taken from the ISO 7751 (International Standard) standard.

IMPORTANT!

Hydraulic hoses can work at such high pressures that they are considered highly dangerous. The part most subject to break is the connection point of the connector with the pipe. For this reason it is recommended to always use original Hiflex pipes and fittings. Our Products have been studied, designed and developed to be used together. By using original pipes and fittings and following the Hiflex technical assembly tables, the results can be obtained that comply with the required standards, achieving total safety on the assembled flexible hose. The life of an assembled flexible hose will be higher if a correct maintenance program is followed. Not following these instructions

seguirà un corretto programma di manutenzione. Queste indicazioni sono essenziali per garantire una perfetta funzionalità del prodotto assemblato. Non seguirle potrebbe causare la rottura del flessibile assemblato, con il rischio di causare danni a persone o a cose.

Situazioni di elevato pericolo

Nel montare un tubo flessibile assemblato è importante verificare i rischi che potrebbe comportare una scelta errata del tubo o del raccordo, di un suo uso improprio o i pericoli che potrebbero derivare da un eventuale guasto. Le conseguenze di queste scelte errate potrebbero causare infortuni, gravi danni o incidenti mortali, nel caso di:

- Perdita ad alta pressione del fluido trasportato.
- Distacco del raccordo.

Tossicità, ustioni o qualsiasi altra situazione di pericolo causate dalla perdita del fluido trasportato.

- Pericolosi colpi di frusta del flessibile.
- Incendio o esplosione del fluido trasportato.
- Scintille o esplosioni causate da una concentrazione di elettricità statica.
- Scintille o esplosioni causate da un utilizzo di liquidi o sostanze altamente infiammabili.
- Contatto del flessibile con oggetti spostati dalla loro normale posizione nell'impianto o mossi dal passaggio del fluido nel flessibile.
- Contatti di corrente su linee per l'alta tensione o altre fonti di corrente

Sostituzione immediata di un flessibile assemblato

Nel caso in cui si verifichi anche solo una delle seguenti condizioni, è opportuno sostituire il tubo flessibile assemblato:

- Il raccordo risulta corrosivo, crepato o visibilmente danneggiato.
- Il raccordo si è spostato dalla posizione ottimale.
- Situazioni di perdite del fluido trasportato.
- Situazioni in cui la copertura risulta distaccata, usurata, ammorbidente o si noti la presenza di bolle.
- Il tubo risulta in torsione, schiacciato o in una qualsiasi altra situazione di non normalità.
- Esposizione del rinforzo del tubo causata da abrasioni, tagli o altri danni.
- Danni dovuti al calore con conseguenze di indurimento del tubo, presenza di crepe o bruciature.

could cause the assembled hose to break, with the risk of causing damage to people or things.

Situations of high danger

When assembling a flexible pipe, it is important to check the risks that could lead to an incorrect choice of the pipe or fitting, its improper use or the dangers that could arise from a possible fault. The consequences of these incorrect choices could cause injuries, serious damages or fatal accidents, in the case of:

- *High pressure loss of the transported fluid.*
- *Detachment of the fitting.*

Toxicity, burns or any other dangerous situation caused by the loss of the fluid transported.

- *Dangerous whiplash from the hose.*
- *Fire or explosion of the fluid transported.*
- *Sparks or explosions caused by a concentration of static electricity.*
- *Sparks or explosions caused by the use of highly flammable liquids or substances.*
- *Contact of the hose with objects moved from their normal position in the system or moved by the passage of the fluid in the hose.*
- *Current contacts on high voltage lines or other current sources*

Immediate replacement of an assembled hose

In the event that only one of the following conditions occurs, it's advisable to replace the assembled flexible hose:

- *The fitting is corroded, cracked or visibly damaged.*
- *The fitting has moved from the optimal position.*
- *Situations of leakage of the fluid transported.*
- *Situations in which the cover is detached, worn, softened or note the presence of bubbles.*
- *The hose is twisted, crushed or in any other non-normal situation.*
- *Exposure of the tube reinforcement caused by abrasion, cuts or other damage.*
- *Damage due to heat with consequences of hardening of the pipe, presence of cracks or burns.*

Considerato la vastità delle applicazioni nelle quali possono essere utilizzati i nostri prodotti, Hi-flex Italia non può né dichiarare né garantire l'idoneità di un determinato tubo o raccordo in un preciso utilizzo finale.

Nella scelta di un tubo e un raccordo, gli aspetti tecnici determinanti da tenere in considerazione sono molteplici. E' responsabilità dell'utente eseguire la propria analisi tecnica e i vari test, per determinare i seguenti punti:

- Scelta dei tubi e dei raccordi.
- Controllare che le caratteristiche dei prodotti siano conformi a quelle richieste dal tipo di applicazioni, verificando di aver eliminato eventuali rischi per la sicurezza o per la salute.
- Negli impianti nei quali l'utente installerà i tubi e i raccordi, accertarsi di aver esposto le avvertenze richieste sulla salute e sulla sicurezza.

Per ulteriori richieste o chiarimenti, si prega contattare l'ufficio tecnico di Hi-flex Italia.

Responsability of the user hydrated the vastness of the applications in which our products, Hi-flex Italia can declare or guarantee the suitability of a specific pipe or fitting in a specific end use.

When choosing a pipe and a fitting, the crucial technical aspects to consider are many. It is responsibility of the user to carry out his own technical analysis and the various tests, to determine the following points:

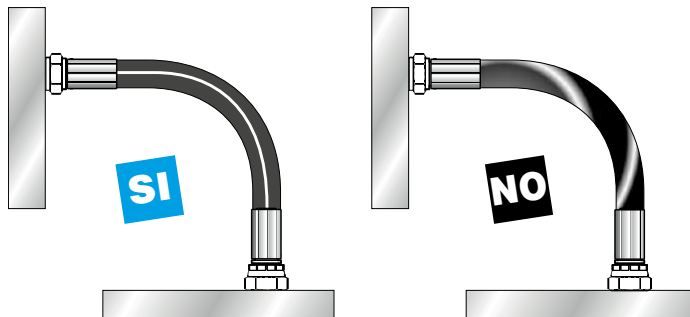
- *Choice of pipes and fittings*
- *Check that the characteristics of the products comply with those required by the type of application, verifying that they have eliminated any risks to safety or health.*
- *In systems where the user will install the pipes and fittings, make sure that the required health and safety warnings have been displayed.*

For further requests or clarifications, please contact the Hi-flex Italia technical office.

GUIDA ALL'INSTALLAZIONE DEI TUBI

Torsione

Evitare qualsiasi tipo di torsione. È importante accertarsi che non si verifichino situazioni gravose che possano ridurre la normale durata del flessibile.

**Twist**

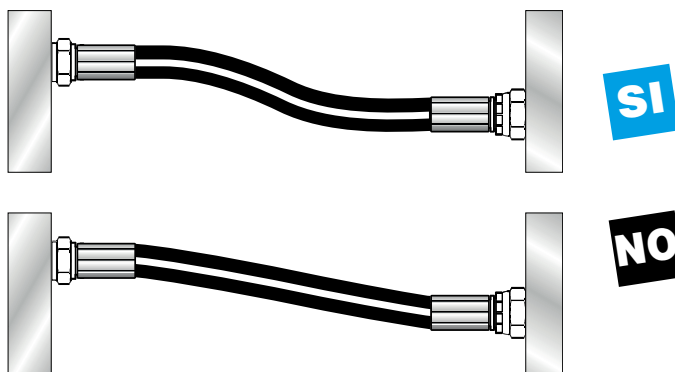
Hose should not be twisted. Hose is weakened when installed in twisted position.

Variazione di lunghezza

Evitare di montare il flessibile troppo in tensione. Nel tempo e durante i vari movimenti si possono verificare delle variazioni di lunghezza. È opportuno prevederle, calcolando una lunghezza leggermente superiore a quella richiesta. Si ricorda che le norme DIN e SAE prevedono che il tubo alla pressione di esercizio possa subire un allungamento (max +2%) o un accorciamento (max -4%).

Length variation

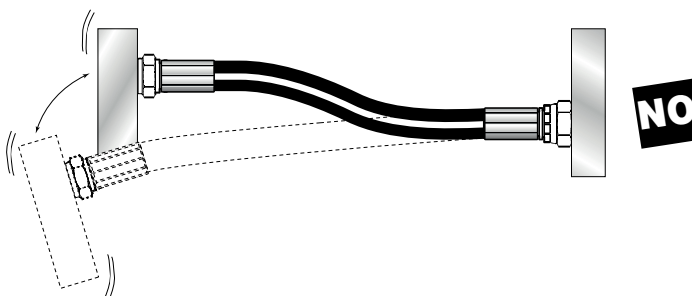
Avoid mounting the hose too tightly. Excessive length destroys the trim appearance of an installation. Please note that the DIN and SAE regulations stipulate that the pipe at working pressure may be stretched (max + 2%) or shortened (max -4%).

**Flessibile in movimento**

Nel caso di flessibili in movimento, fare particolare attenzione ad evitare eventuali torsioni, tensioni o abrasioni dannose per il normale funzionamento.

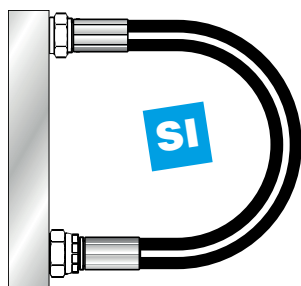
Flexible hose in motion

In the case of moving hoses, take particular care to avoid any twisting, tension or abrasion that is harmful to normal operation.

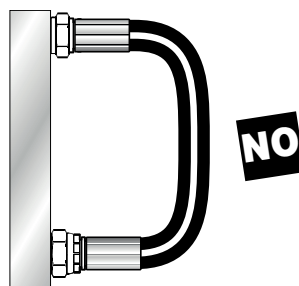


Raggio di curvatura

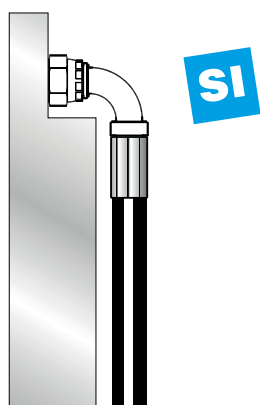
Controllare che il flessibile, una volta installato, non abbia un raggio di curvatura minore rispetto a quello riportato nella rispettiva scheda tecnica.

**Bending radius**

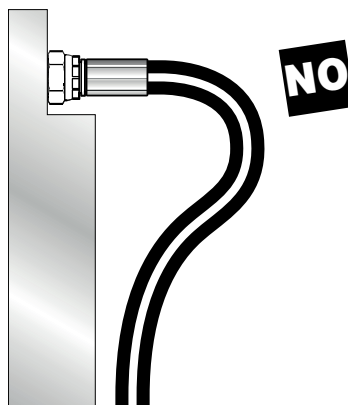
Never use a bending radius less than the minimum amount shown in the data sheet.

**Scelta dei raccordi**

Nella scelta del tipo di raccordo è opportuno considerare quale tipologia riduce o elimina le posizioni non corrette che il flessibile potrebbe assumere una volta montato sull'impianto.

**Choice of fittings**

When choosing the type of connection it is advisable to consider which type reduces or eliminates the incorrect positions that the hose could take once it is fitted on the system.



Come determinare l'angolo di orientamento e la lunghezza del tubo flessibile assemblato

Nel caso in cui, nel tubo flessibile, entrambi i raccordi siano curve oppure occhi, è necessario determinare l'angolo di orientamento richiesto.

Per trovare la gradazione necessaria, è sufficiente, prima di pressare i raccordi, posizionarli come segue: mettere verticalmente il raccordo più lontano e girare in senso orario il raccordo più vicino.

si fa ruotare il raccordo più vicino all'operatore finché le verticali dei raccordi non formano un angolo della gradazione richiesta.

How to determine the orientation angle and length of the assembled hose

If in the hose, both fittings are either curves or banjos, the required orientation angle must be determined.

To find the required angle, simply position the fittings as follows before pressing them in:

place the further fitting vertically and turn the nearest fitting clockwise.

rotate the fitting closer to the operator until the verticals of the fittings form an angle of the required graduation.

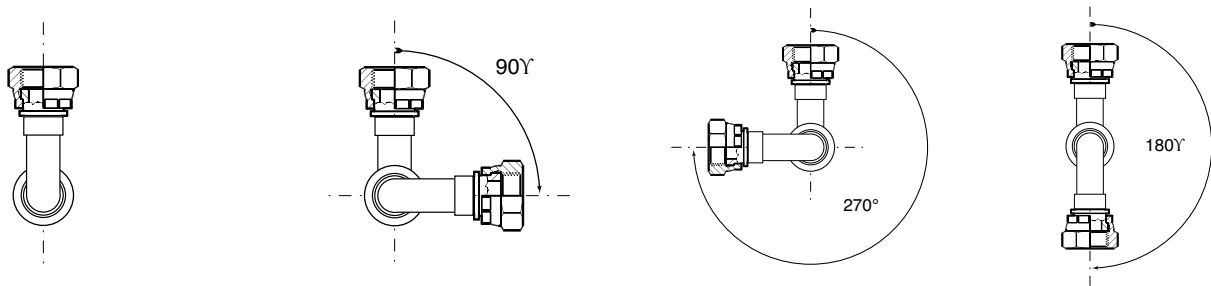
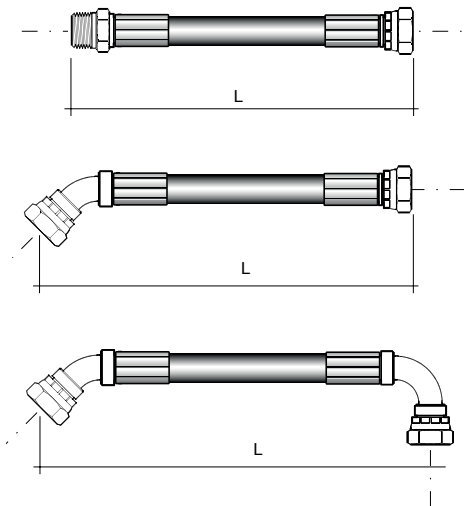


TABELLA DELLE TOLLERANZE SUI TUBI FLESSIBILI ASSEMBLATI (NORMATIVA DIN 20066) TOLERANCE TABLE ON ASSEMBLED HOSE (REGULATION DIN 20066)		
Lunghezza del tubo assemblato mm. LENGTH OF ASSEMBLED HOSE	Fino a 1" UP TO 1"	Oltre 1"/ OVER 1"
Fino a 630 Up to 630	± 4 mm	± 8 mm
Da 631 a 1250 From 631 to 1250	± 8 mm	± 13 mm
da 1251 a 2500 From 1251 to 2500	± 13 mm	± 15 mm
da 2501 a 8000 From 2501 to 8000	+1.5% / -0.5%	
Oltre 8000 Over 8000	+3% / -1%	



// LINEE GUIDA DEI RACCORDI

IDENTIFICAZIONE DEL RACCORDO

DASH

Nel campo dell'idraulica e dei fluidi, la maggior parte delle misure viene effettuata in DASH. DASH è un'abbreviazione universalmente utilizzata per la misurazione dei componenti e corrisponde al numeratore di una frazione il cui denominatore è sempre 16. Per esempio, DASH -04 corrisponde a 4/16, cioè 1/4 di pollice. I DASH sono sempre nominali e vengono utilizzati per facilitare l'ordinazione dei componenti.

I Raccordi standard dei sistemi idraulici possono essere di tipo: Americano, Britannico, Francese, Tedesco, Giapponese.

FILETTATURA STANDARD AMERICANA

NPTF (National Pipe Tapered Fuel)

NPTF è un tipo di filettatura con tenuta a secco utilizzata per terminali maschio e femmina. Questo tipo di filettatura è molto utilizzata nei sistemi di trasmissione di potenza, anche se il suo utilizzo in applicazioni idrauliche non è raccomandato dalla National Fluid Power Association (N.F.P.A.). I maschi NPTF si accoppiano con le femmine NPTF, NPSF o NPSM.

I maschi NPTF hanno filettatura conica e una sede invertita a 30°. Le femmine NPTF hanno filettatura conica. La tenuta avviene per deformazione della filettatura. Le femmine NPSM hanno filettatura cilindrica ed una sede invertita a 30°.

La tenuta avviene sulla sede a 30° del filetto. La filettatura NPTF è simile, ma non intercambiabile, con quella BSPT: il passo è diverso nella maggior parte dei casi. Inoltre, l'angolo del filetto è di 60° invece di 55°, come accade nei BSPT.

NPSF (National Pipe Straight Thread for Fuels)

La filettatura NPSF è talvolta utilizzata per terminali femmina e si accoppia con terminali maschio NPTF. Tuttavia, la norma SAE raccomanda l'utilizzo della filettatura NPTF, piuttosto che di quella NPSF per terminali femmina.

NPSM (National Pipe Straight Mechanical)

La filettatura NPSM si utilizza per giunti meccanici ed in particolare sui dadi femmina girevoli posti su adattatori di acciaio, la resistenza alle perdite è data non dalla tenuta creata tra i filetti, ma dalla sede conica posta sul terminale del raccordo. Questo tipo di connessione è a volte utilizzato in sistemi di trasmissioni di potenza.

// FITTINGS GUIDELINES

FITTING IDENTIFICATION

DASH NUMBERS

Most fluid piping system sizes are measured by dash numbers. These are universally used abbreviations for the size of component expressed as the numerator of the fraction with the denominator always being 16. For example, a -04 port is 4/16 or 1/4 inch. Dash numbers are usually nominal (in name only) and are abbreviations that make ordering of components easier. There are many coupling systems used for hydraulic connections.

They are identified as: American, British, French, German, Japanese.

AMERICAN THREAD TYPES

NPTF (National Pipe Tapered Fuel)

This is a dryseal thread, the National pipe tapered thread for fuels. This is used for both male and female ends. This connection is still widely used in fluid power systems, even though it is not recommended by the National Fluid Power Association (N.F.P.A.) for use in hydraulic applications.

The NPTF male will mate with the NPTF, NPSF or NPSM female.

The NPTF male has tapered threads and a 30° inverted seat. The NPTF female has tapered threads and no seat. The seal takes place by deformation of the threads. The NPSM female has straight threads and a 30° inverted seat. The seal takes place on the 30° seat.

The NPTF connector is similar to, but not interchangeable with, the BSPT connector. The thread pitch is different in most sizes. Also, the thread angle is 60° instead of the 55° angle found on BSPT threads.

NPSF (National Pipe Straight Thread for Fuels)

The National pipe straight thread for fuels. This is sometimes used for female ends and properly mates with the NPTF male end. However, the SAE recommends the NPTF thread in preference to the NPSF for female ends.

NPSM (National Pipe Straight Mechanical)

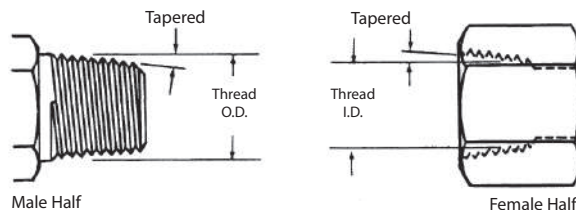
National pipe straight thread for mechanical joint. This is used on the female swivel nut of iron pipe swivel adapters. The leak-resistant joint is not made by the sealing fit of threads, but by a tapered seat in the coupling end. This connection is sometimes used in fluid power systems.

Tabella di identificazione della filettatura / *Thread Identification Table*

National Pipe Straight Mechanical (NPSM)

National Pipe Tapered for Fuels (NPTF)

Sezione tubo Tube Size		Filetto Thread Size	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.	
Dash	in	in -TPI	mm	in	mm	in
-2	1/8	1/8-27	8.7	0.34	10.3	0.41
-4	1/4	1/4-18	11.9	0.47	14.3	0.56
-6	3/8	3/8-18	15.1	0.59	17.5	0.69
-8	1/2	1/2-14	18.3	0.72	21.4	0.84
-12	3/4	3/4-14	23.8	0.94	27.0	1.06
-16	1	1-11.1/2	30.2	1.19	33.3	1.31
-20	1.1/4	1 1/4-11.1/2	38.9	1.53	42.9	1.69
-24	1.1/2	1 1/2-11.1/2	44.5	1.75	48.4	1.91
-32	2	2 - 11.1/2	57.2	2.25	60.3	2.38



SAE J514 Straight Thread O'Ring Boss (ORB)

Questo genere di connessione è usato per gli attacchi macchina ed è raccomandato dalla N.F.P.A. per fornire un ulteriore controllo delle perdite in sistemi idraulici a media ed alta pressione. Un O'Ring Boss maschio si accoppia esclusivamente con un O'Ring Boss femmina.

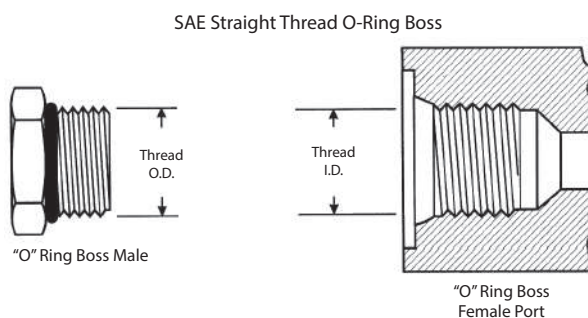
SAE J514 Straight Thread O'Ring Boss (ORB)

This port connection is recommended by the N.F.P.A. for optional leakage control in medium and high pressure hydraulic systems. The O'Ring boss male will mate with an O'Ring boss female only.

Tabella di identificazione della filettatura / *Thread Identification Table*

SAE J514 Straight Thread O'Ring Boss(NPTF)

Sezione tubo Tube Size		Filetto Thread Size	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.	
Dash	in	in -TPI	mm	in	mm	in
-2	1/8	5/16-24	6.9	0.27	7.8	0.31
-3	3/16	3/8-24	8.5	0.34	9.4	0.37
-4	1/4	7/16-20	9.9	0.39	11.2	0.44
-5	5/16	1/2-20	11.5	0.45	12.6	0.49
-6	3/8	9/16-18	12.9	0.51	14.1	0.56
-8	1/2	3/4-16	17.5	0.69	18.9	0.74
-10	5/8	7/8-14	20.5	0.81	22.1	0.87
-12	3/4	1.1/16-12	24.9	0.98	26.9	1.06
-14	7/8	1.3/16-12	28.1	1.11	30.3	1.18
-16	1	1.5/16-12	31.3	1.23	33.1	1.31
-20	1.1/4	1.5/8-12	39.2	1.54	41.1	1.62
-24	1.1/2	1.7/8-12	45.6	1.79	47.4	1.87
-32	2	2.1/2-12	61.4	2.42	63.3	2.49



I maschi hanno filettatura cilindrica e un O'Ring. Le femmine hanno una filettatura cilindrica ed una superficie di tenuta. La tenuta si ottiene per mezzo dell'O'Ring posto sui maschi, quando questo va a contatto con la superficie di tenuta delle femmine.

I filetti mantengono la connessione meccanicamente.

The male has straight threads and an O'Ring. The female has straight threads and a sealing face. The seal is made at the O'Ring on the male and the sealing face on the female.

The threads hold the connection mechanically.

SAE J514 37° (JIC)

In applicazioni idrauliche ad alta pressione, la Society of Automotive Engineers (SAE) raccomanda sempre l'utilizzo di un'ogiva a 37° di una svasatura a 37°. I raccordi con ogiva o svasatura a 37° sono comunemente conosciuti come JIC.

I maschi JIC con ogiva a 37° si accoppiano solo con femmine JIC. I maschi JIC hanno filettatura cilindrica ed un'ogiva a 37°.

Le femmine JIC hanno filettatura cilindrica ed una svasatura a 37°. La tenuta avviene sulla sede a 37°, stabilendo una linea di contatto tra l'ogiva del maschio e la svasatura della femmina. I filetti mantengono la connessione meccanicamente.

Tabella di identificazione della filettatura / Thread Identification Table**SAE J514 37° Flare (JIC)**

Sezione tubo Tube Size		Filetto Thread Size	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.	
Dash	in	in -TPI	mm	in	mm	in
-2	1/8	5/16-24	6.9	0.27	7.8	0.31
-3	3/16	3/8-24	8.5	0.34	9.4	0.37
-4	1/4	7/16-20	9.9	0.39	11.2	0.44
-5	5/16	1/2-20	11.5	0.45	12.6	0.49
-6	3/8	9/16-18	12.9	0.51	14.1	0.56
-8	1/2	3/4-16	17.5	0.69	18.9	0.74
-10	5/8	7/8-14	20.5	0.81	22.1	0.87
-12	3/4	1.1/16-12	24.9	0.98	26.9	1.06
-14	7/8	1.3/16-12	28.1	1.11	30.3	1.18
-16	1	1.5/16-12	31.3	1.23	33.1	1.31
-20	1.1/4	1.5/8-12	39.2	1.54	41.1	1.62
-24	1.1/2	1.7/8-12	45.6	1.79	47.4	1.87
-32	2	2.1/2-12	61.4	2.42	63.3	2.49

ATTENZIONE

Nei DASH -02, -03, -04, -05, -08 e -10 la filettatura dei SAE 45° e SAE 37° è la medesima. Tuttavia, gli angoli della superficie di tenuta non corrispondono. E' opportuno misurare attentamente gli angoli, per evitare errori.

SAE J512 45°

Si definiscono SAE J512 45° i raccordi con ogiva o svasatura a 45°. Per queste applicazioni sono generalmente utilizzati i tubi di rame, per i quali è più facilmente ottenibile una svasatura a 45°. Si utilizzano raccordi SAE J512 45° in applicazioni a bassa pressione, come ad esempio in sistemi di refrigerazione, nel settore automobilistico e dei veicoli pesanti. I maschi SAE 45° si accoppiano solamente con le femmine 45°. I maschi SAE hanno filettatura cilindrica ed un'ogiva a 45°. Le femmine SAE hanno filettatura cilindrica ed una svasatura a 45°.

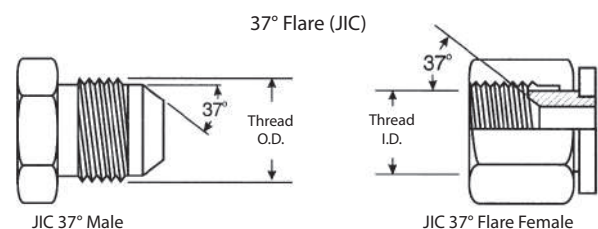
La tenuta avviene sulla sede a 45°. I filetti mantengono la connessione meccanicamente.

SAE J514 37° (JIC)

The Society of Automotive Engineers (SAE) specifies a 37° angle flare or seat be used with high pressure hydraulic tubing. These are commonly called JIC couplings.

The JIC 37° flare male will mate with a JIC female only. The JIC male has straight threads and a 37° flare seat. The JIC female has straight threads and a 37° flare seat.

The seal is made on the 37° flare seat by establishing a line contact between the male flare and the female cone seat. The threads hold the connection mechanically.

**CAUTION**

In the -02, -03, -04, -05, -08 and -10 sizes, the threads of the SAE 45° flare and the SAE 37° flare are the same. However, the sealing surface angles are not the same. Carefully measure the seat angle to differentiate.

SAE J512 45°

The Society of Automotive Engineers (SAE) specifies a 37° angle flare or seat be used with high pressure hydraulic tubing. These are commonly called JIC couplings.

The JIC 37° flare male will mate with a JIC female only. The JIC male has straight threads and a 37° flare seat. The JIC female has straight threads and a 37° flare seat.

The seal is made on the 37° flare seat by establishing a line contact between the male flare and the female cone seat. The threads hold the connection mechanically.

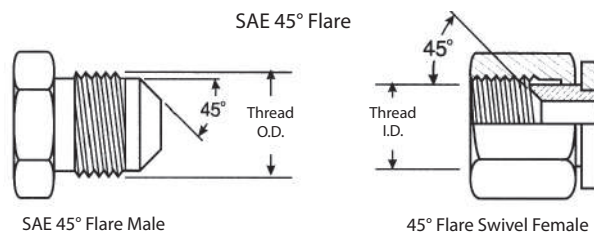
The threads hold the connection mechanically.



Tabella di identificazione della filettatura / *Thread Identification Table*

SAE J512 45°

Sezione tubo Tube Size		Filetto Thread Size	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.	
Dash	in	in -TPI	mm	in	mm	in
-2	1/8	5/16-24	6.9	0.27	7.9	0.31
-3	3/16	3/8-24	8.6	0.34	9.6	0.38
-4	1/4	7/16-20	9.9	0.39	11.2	0.44
-5	5/16	1/2-20	11.4	0.45	12.7	0.50
-6	3/8	5/8-18	14.2	0.56	15.7	0.62
-7	7/16	11/16-16	15.7	0.62	17.3	0.68
-8	1/2	3/4-16	17.0	0.68	19.0	0.75
-10	5/8	7/8-14	20.3	0.80	22.3	0.88
-12	3/4	1.1/16-14	25.1	0.99	26.9	1.06
-14	7/8	1.1/4-12	29.5	1.16	31.7	1.25
-16	1	1.3/8-12	32.5	1.28	35.0	1.38

**ATTENZIONE**

Nei DASH -02, -03, -04, -05, -08 e -10 la filettatura dei SAE 45° e SAE 37° è la medesima. Tuttavia, gli angoli della superficie di tenuta non corrispondono. E' opportuno misurare attentamente gli angoli per evitare errori.

CAUTION

In the -02, -03, -04, -05, -08 and -10 sizes, the threads of the SAE 45° flare and the SAE 37° flare are the same. However, the sealing surface angles are not the same. Carefully measure the seat angle to differentiate.

SAE J1453 O'Ring Face Seal (ORFS)

La tenuta avviene quando l'O'Ring sul maschio va a contatto con la superficie piatta della femmina. Questo genere di raccordi è adatto a sistemi idraulici in cui è possibile utilizzare un elastomero per evitare le perdite ed in cui la resistenza ad eventuali perdite è indispensabile. Ad oggi, questo tipo di raccordi offre il miglior controllo possibile per eventuali perdite.

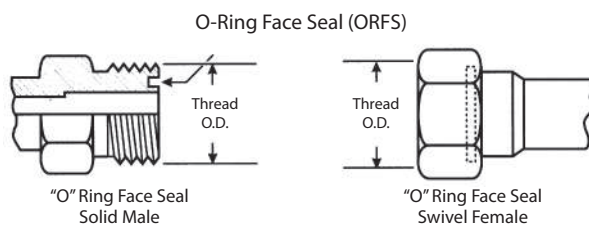
SAE J1453 O'Ring Face Seal (ORFS)

A seal is made when the O'Ring in the male contacts the flat face on the female. Couplings are intended for hydraulic systems where elastomeric seals are acceptable to overcome leakage and leak resistance is crucial. This connection offers the very best leakage control available today.

Tabella di identificazione della filettatura / *Thread Identification Table*

SAE J1453 O'Ring Face Seal (ORFS)

Sezione tubo Tube Size		Filetto Thread Size	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.	
Dash	in	in -TPI	mm	in	mm	in
-4	1/4	9/16-18	12.9	0.51	14.1	0.56
-6	3/8	11/16-16	15.9	0.63	17.3	0.68
-8	1/2	13/16-16	19.1	0.75	20.5	0.81
-10	5/8	1-14	23.6	0.93	25.2	0.99
-12	3/4	1.3/16-12	28.1	1.11	30.0	1.18
-16	1	1.7/16-12	34.4	1.36	36.3	1.43
-20	1.1/4	1.11/16-12	40.8	1.61	42.7	1.68
-24	1.1/2	2-12	48.7	1.92	50.6	1.99



I raccordi maschio e femmina hanno filettatura cilindrica e faccia piana lavorata a macchina. La tenuta avviene premendo l'O'Ring contro la faccia piana della femmina, come accade per le semiflange. I filetti mantengono la connessione meccanicamente.

The male connector has a straight thread and a machined flat face. The female has a straight thread and a machined flat face. The seal takes place by compressing the O'Ring onto the flat face of the female, similar to the split flange type fitting. The threads hold the connection mechanically.

SAE J512 Inverted Flare

Questo tipo di raccordi è utilizzato spesso nel settore automobilistico. I maschi possono essere svasati a 45° nella forma di raccordo da tubo o con sede a 42° nella forma di adattatore tornito. Le femmine hanno filettatura cilindrica con ogiva a 42°. La tenuta avviene sulla superficie svasata di contatto. I filetti mantengono la connessione meccanicamente.

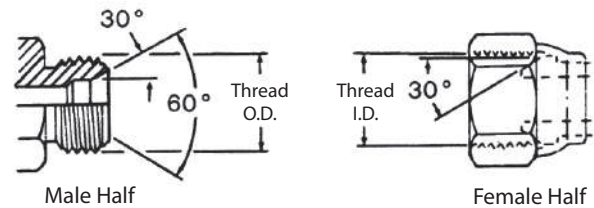
SAE J512 Inverted Flare

This connection is frequently used in automotive systems. The male connector can either be a 45° flare in the tube fitting form or a 42° seat in the machined adapter form. The female has a straight thread with a 42° inverted flare. The seal takes place on the flared surface. The threads hold the connection mechanically.

Tabella di identificazione della filettatura/ Thread Identification Table

SAE J512 Inverted Flare

Sezione tubo Tube Size		Filetto Thread Size		Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.	
Dash	in	in - TPI	mm	in	mm	in	
-2	1/8	5/16-28	6.9	0.27	7.9	0.31	
-3	3/16	3/8-24	8.6	0.34	9.6	0.38	
-4	1/4	7/16-24	9.9	0.39	11.2	0.44	
-5	5/16	1/2-20	11.4	0.45	12.7	0.50	
-6	3/8	5/8-18	14.2	0.56	15.7	0.62	
-7	7/16	11/16-18	15.7	0.62	17.3	0.68	
-8	1/2	3/4-18	17.0	0.68	19.0	0.75	
-10	5/8	7/8-18	20.3	0.80	22.3	0.88	
-12	3/4	1.1/16-16	25.1	0.99	26.9	1.06	



SAE J1467 Clip Fastener

Questo genere di raccordatura radiale con O'Ring è generalmente utilizzato per applicazioni idrauliche in miniere.

I maschi hanno un O'Ring esterno ed uno spallamento, più un canalino per l'inserimento della clip. Le femmine hanno un foro liscio, con due fori laterali per la clip.

SAE J1467 Clip Fastener

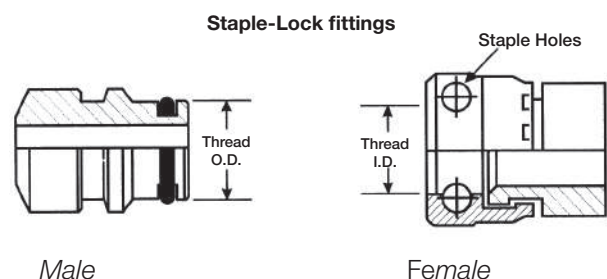
This is a radial O'Ring seal connection commonly used for hydraulic applications in underground mines.

The male contains an exterior O'Ring and backup ring, plus a groove to accept the "staple". The female has a smooth bore with two holes for the staple.

Tabella di identificazione della filettatura / Thread Identification Table

SAE J1467 Inverted Flare

Sezione tubo Tube Size		Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.	
Dash	in	mm	in	mm	in
-4	1/4	14.9	19/32	15.1	19/32
-6	3/8	19.9	51/64	20.1	51/64
-8	1/2	23.9	61/64	24.1	61/64
-12	3/4	28.9	1.9/64	29.1	1.9/64
-16	1	38.9	1.35/64	39.1	1.35/64
-20	1.1/4	45.9	1.13/16	46.1	1.13/16
-24	1.1/2	54.9	1.11/64	55.2	2.11/64
-32	2	63.9	1.17/32	64.2	2.17/32



Si inserisce una clip a forma di "U" tra i due fori, la si fa passare attraverso il canalino nel maschio per connettere i due raccordi. La tenuta avviene attraverso il contatto tra l'O'Ring nel maschio ed il foro liscio nella femmina.

A "U" shaped retaining clip or staple is inserted through the two holes, passing through the groove in the male to lock the connection together. The seal takes place by contact between the O'Ring in the male and the smooth bore of the female.

Flangia SAE J518/ISO - DIS 6162/JIS B8363 O'Ring

Questo genere di connessione è molto utilizzato nelle applicazioni idrauliche. Esistono due codici differenti per due pressioni differenti: per la serie "standard", si fa riferimento al Cod. 61, Form R, PN 35/350 bar, Tipo I; per la serie "applicazioni severe", "6000 psi" si fa riferimento al Cod. 62, Form S, PN 415 bar, Tipo II. Il disegno delle due flange è lo stesso, ma la spaziatura tra i fori e i diametri della testa flangiata sono maggiori per il Cod. 62, quello da utilizzare con pressioni più alte. Le femmine (attacco macchina) sono composte da un foro centrale non filettato e quattro fori per le viti disposti ai quattro angoli. I maschi sono composti da una testa flangiata, scanalata per l'alloggiamento di un O'Ring e da una flangia intera (o una semiflanguia) con forature corrispondenti a quelle della femmina. La tenuta avviene sull'O'Ring, comprimendolo tra la testa flangiata e la superficie piana intorno all'attacco macchina.

Per tenere insieme il raccordo si utilizzano viti filettate. Le flange SAE J518, DIN 20066, ISO/DIS 6162 e JIS B 8363 sono intercambiabili, tranne che per le dimensioni dei fori.

La testa di tutte le flange Cod. 61 è conforme alle norme SAE J518 Cod. 61 per le connessioni idrauliche a semiflanguia. La testa delle flange Cod. 61 è progettata per resistere a pressioni di esercizio massime da 3000 a 5000 psi, a seconda della dimensione della flangia.

SAE J518/ISO - DIS 6162/JIS B8363 O'Ring Flange

This connection is commonly used in fluid power system. There are two pressure ratings. Code 61 Form R, PN 35/350 bar, Type I, is referred to as the "standard" series and Code 62 Form S, PN 415 bar, Type II, is the "heavy duty" "6000 psi" series. The design concept for both series is the same, but the bolt hole spacing and flanged head diameters are larger for the higher pressure, Code 62 connection. The female (port) is an unthreaded hole with four bolt holes in a rectangular pattern around the port.

The male consists of a flanged head, grooved for an O'Ring, and either a captive flange or split flange halves with bolt holes to match the port. The seal takes place on the O'Ring, which is compressed between the flange head and the flat surface surrounding the port.

The threaded bolts hold the connection together. SAE J518, DIN 20066, ISO/DIS 6162 and JIS B 8363 are interchangeable, except for bolt sizes.

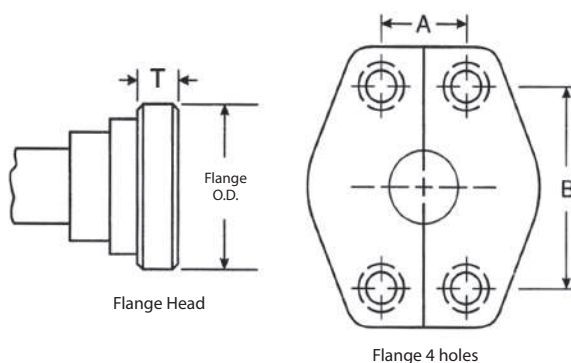
All Code 61 flange head hose couplings meet or exceed SAE J518 Code 61 requirements for hydraulic split flange connections. The Code 61 flange head design can withstand a maximum operating pressure of 3000 to 5000 psi depending on size.

Flange Size	SAE Cod 61 FORM R - PN 35/350 - TYPE I								SAE Cod 62 FORM S - PN 415 - TIPO II								CATERPILLAR							
Dash	Flange		Flange Head T		A		B		Flange		Flange Head T		A		B		Flange		Flange Head T		A		B	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
-8	1.19	30.2	.265	6.7	.69	17.5	1.50	38.1	1.25	31.8	.305		.71	18.2	1.59	40.5								
-10*	1.34	34.0	.265	6.7	.78	19.8	1.69	42.9																
-12	1.50	38.1	.265	6.7	.87	22.2	1.89	47.6	1.63	41.3	.345	8.7	.94	23.8	2.00	50.8	1.63	41.3	.56	14.2	.94	23.8	2.00	50.8
-16	1.75	44.5	.315	8.0	1.03	26.2	2.05	52.4	1.88	47.6	.375	9.5	1.10	27.8	2.25	57.2	1.88	47.6	.56	14.2	1.10	27.8	2.25	57.2
-20	2.00	50.8	.315	8.0	1.19	30.2	2.31	58.7	2.13	54.0	.405	10.3	1.26	31.8	2.63	66.7	2.13	54.0	.56	14.2	1.26	31.8	2.63	66.7
-24	2.38	60.3	.315	8.0	1.41	35.7	2.75	69.9	2.50	63.5	.495	12.6	1.44	36.6	3.13	79.4	2.50	63.5	.56	14.2	1.44	36.6	3.13	79.4
-32	2.81	71.4	.375	9.5	1.69	42.9	3.06	77.8	3.13	79.4	.495	12.6	1.73	44.4	3.81	96.8	3.13	79.4	.56	14.2	1.73	44.4	3.81	96.8
-40	3.31	84.1	.375	9.5	2.00	50.8	3.50	88.9																

T = spessore / Thickness

-10* misura di una flangia non SAE / is a non SAE size flange

SAE Code 61 and Code 62
flange 4 holes



Istruzioni sulla misurazione

Flangia a quattro fori: innanzitutto, misurare con il calibro il diametro dell'attacco macchina. Quindi misurare l'interasse tra i centri dei due fori sul lato corto (dimensione "A"), o misurare il diametro esterno della testa della flangia.

Esistono tre eccezioni:

1. La misura -10, molto comune fuori dal Nord America, non è una misura standard SAE.
2. Le flange Caterpillar, che hanno lo stesso D.E. delle SAE Cod. 62, hanno un maggiore spessore di testa.
3. Le flange Poclain sono completamente differenti dalle flange SAE.

How to measure

Four Bolt Flange - First measure the port hole diameter using the caliper. Next, measure the longest bolt hole spacing from centre-to-centre (Dimension "A") or measure the flange head diameter. O.D.

1. *The size -10, which is common outside of North America is not an SAE Standard size.*
2. *Caterpillar flanges, which are the same flange O.D. as SAE Code 62, have a thicker flange head.*
3. *Poclain flanges, which are completely different from SAE flanges.*

STANDARD BRITANNICI

British Standard Pipe Parallel (BSPP)

La filettatura tipo "British Standard Pipe Parallel" è nota in Inghilterra anche con il nome di filettatura "Whitworth". I maschi BSPP si accoppiano solo con femmine BSPP o attacchi macchina femmina.

I maschi BSPP hanno filettatura cilindrica e svasatura a 30°. Le femmine BSPP hanno filettatura cilindrica e ogiva a 30°.

Gli attacchi macchina femmina hanno filettatura cilindrica e lamatura. La tenuta sull'attacco macchina si ottiene con un O'Ring o una rondella di metallo tenero sul maschio.

I connettori BSPP sono simili a quelli NPSM, ma i due non sono intercambiabili: nella maggior parte dei casi, il passo della filettatura è differente e l'angolo della filettatura è di 55°, invece di 60° dei connettori NPSM. Le femmine girevoli BSPP hanno un'ogiva conica, che fa tenuta sulla sede conica del maschio.

BRITISH CONNECTIONS

British standard PipeParallel (BSPP)

Popular couplings British Standard Pipe (BSP) threads, also known as Whitworth threads.

The BSPP (parallel) male will mate with a BSPP (parallel) fe- male or a female port.

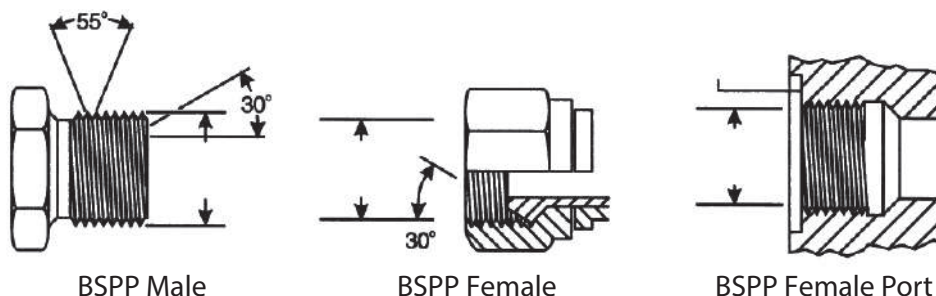
The BSPP male has straight threads and a 30° seat.

The BSPP female has straight threads and a 30° seat.

The female port has straight threads and a spotface.

The seal on the port is made with an O'Ring or soft metal washer on the male. The BSPP (parallel) connector is similar to, but not interchangeable with, the NPSM connector. The thread pitch is different in most sizes, and the thread angle is 55° instead of the 60° angle found on NPSM threads. The female swivel BSPP has a tapered nose which seals on the cone seat of the male.

British Standard Pipe Parallel BSPP



British Standard Pipe Tapered (BSPT)

I maschi BSPT si accoppiano con femmine BSPT, o femmine BSPP. I maschi BSPT hanno una filettatura conica. La tenuta tra un maschio BSPT ed una femmina BSPT o un attacco macchina femmina BSPP avviene per mezzo di una distorsione sulla filettatura. E' raccomandato l'uso di un sigillante.

I connettori BSPT sono simili a quelli NPTF, ma i due non sono intercambiabili: nella maggior parte dei casi, il passo della filettatura è differente e l'angolo di filettatura è di 55°, invece di 60° dei connettori NPTF.

British Standard Pipe Tapered (BSPT)

The BSPT (tapered) male will mate with a BSPT (tapered) female, or a BSPP (parallel) female. The BSPT male has tapered threads. When mating with either the BSPT (tapered) female or the BSPP (parallel) female port, the seal is made on the threads accomplished by thread distortion. A thread sealant is recommended.

The BSPT connector is similar to, but not interchangeable with, the NPTF connector. The thread pitch is different in most cases, and the thread angle is 55° instead of the 60° angle found on NPTF threads.

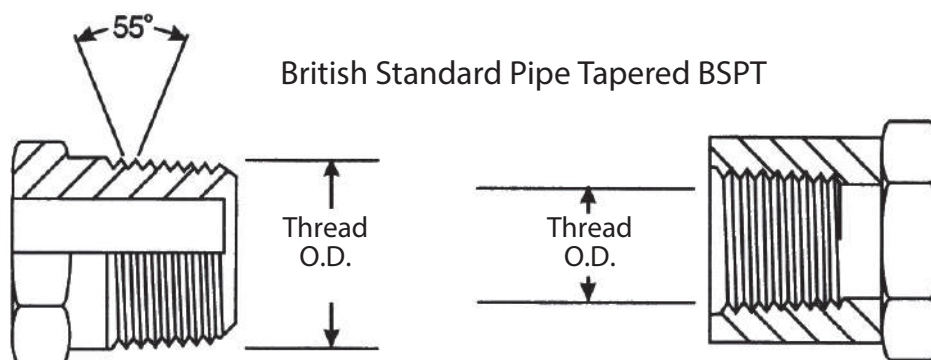


Tabella di identificazione della filettatura / Thread Identification Table

BSPP - (British Standard Pipe Parallel) BSPT - (British Standard Pipe Tapered)

Dash Size	Inch size	Filetto Thread Size	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.	
	in	in - TPI	mm	in	mm	in
-2	1/8	1/8-28	8.7	0.34	9.5	0.38
-4	1/4	1/4-19	11.1	0.44	13.5	0.56
-6	3/8	3/8-19	15.1	0.59	16.7	0.66
-8	1/2	1/2-14	18.3	0.72	20.6	0.81
-10	5/8	5/8-14	20.6	0.81	23.0	0.91
-12	3/4	3/4-14	23.8	0.94	26.2	1.03
-16	1	1-11	30.2	1.19	33.3	1.31
-20	1-1/4	1.1/4-11	38.9	1.53	41.1	1.66
-24	1-1/2	1.1/2-11	45.2	1.78	47.6	1.88
-32	2	2-11	56.4	2.22	59.5	2.34

STANDARD FRANCESI

I GAS francesi hanno una sede di 24° e filettature metriche. I raccordi GAS francesi sono simili ai tedeschi DIN, ma per alcune misure le filettature sono differenti, poichè i francesi utilizzano filettatura fine in tutte le misure. Le flange francesi differiscono da quelle SAE, in quanto hanno una protuberanza che fuoriesce dalla flangia. Queste flange sono dette "Poclain".

Conessioni millimetriche e GAS 24°

Queste connessioni sono composte da un maschio in comune e da due femmine diverse.

I maschi metrici francesi (GAS) si accoppiano solo con femmine svasate a 24° o adattatori femmina.

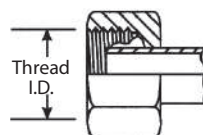
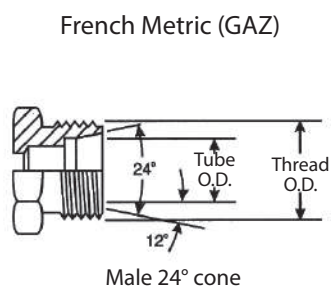
I maschi hanno sede a 24° e filettatura metrica cilindrica. Le femmine hanno una sede a 24° o un manicotto e filettatura metrica cilindrica. La serie millimetrica è utilizzata con tubi aventi DE intero e la serie GAS è utilizzata con tubi aventi DE decimali.

FRENCH CONNECTIONS

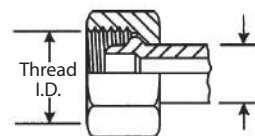
French GAZ have a 24° seat and metric threads. These are similar to German DIN couplings, but the threads are different in some sizes, the French use fine threads in all sizes. French flanges are different than SAE, they have a lip that protrudes from the flange face. These are Poclain style flanges.

Millimetric and GAZ 24°

This connection consists of a common male and two different females. The French Metric (GAZ) male will mate with the female 24° cone or the female tube fitting. The male has a 24° seat and straight metric threads. The female has a 24° seat or a tubing sleeve and straight metric threads. The Millimetric Series is used with whole number metric O.D. tubing and the GAZ Series is used with fractional number metric O.D. pipe size tubing.



Female 24° cone



Female tube fitting

Tabella di identificazione della filettatura connessione metrica francese (millimetrica)

Thread Identification Table French Metric Millimetric

Filetto Metrico Metric Thread	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.		Tube D.E. Tube O.D.	
	mm	in	mm	in	mm	in
M12 X 1.0	11.0	0.43	12.0	0.47	6	0.24
M14 X 1.5	12.5	0.49	14.0	0.55	8	0.31
M16 X 1.5	14.5	0.57	16.0	0.63	10	0.39
M18 X 1.5	16.5	0.65	18.0	0.71	12	0.47
M20 X 1.5	18.5	0.73	20.0	0.79	14	0.55
M22 X 1.5	20.5	0.81	22.0	0.87	15	0.59
M24 X 1.5	22.5	0.89	24.0	0.94	16	0.63
M27 X 1.5	25.5	1.00	27.0	1.06	18	0.71
M30 X 1.5	28.5	1.12	30.0	1.18	22	0.87
M33 X 1.5	31.5	1.24	33.0	1.30	25	0.98
M36 X 1.5	34.5	1.36	36.0	1.42	28	1.10
M39 X 1.5	37.5	1.48	39.0	1.54	30	1.18
M42 X 1.5	40.5	1.59	42.0	1.65	32	1.26
M45 X 1.5	43.5	1.71	45.0	1.77	35	1.38
M48 X 1.5	46.5	1.83	48.0	1.89	38	1.50
M52 X 1.5	50.5	1.99	52.0	2.05	40	1.57
M54 X 2.0	51.9	2.04	54.0	2.13	45	1.77

Tabella di identificazione della filettatura Connessione metrica Francese (GAS 24°)

Thread Identification Table French Metric GAZ 24° Cone

Dash Size	Filetto metrico Metric Thread (dia x pitch)	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.		D.E. tubo Cono 60° Tube O.D.	
		mm	in	mm	in	mm	in
-6	M20 X 1.5	18.5	0.73	20.0	0.78	13.25	0.52
-8	M24 X 1.5	22.5	0.89	24.0	0.94	16.75	0.66
-10	M30 X 1.5	28.5	1.12	30.0	1.18	21.25	0.83
-12	M36 X 1.5	34.5	1.36	36.0	1.41	26.75	1.05
-16	M45 X 1.5	43.5	1.71	45.0	1.77	33.50	1.32
-20	M52 X 1.5	50.5	1.99	52.0	2.04	42.25	1.66

Flangia GAS Poclain 24°

Generalmente le flange ad alta pressione 24° Poclain (GAS francesi) si trovano su equipaggiamenti Poclain. Le flange maschio si accoppiano con le flange femmina o con gli attacchi macchina. La tenuta avviene sulla sede a 24°.

GAZ Poclain 24° Flange

The Poclain (French GAZ) 24° high pressure flange is usually found on Poclain equipment. The male flange will mate with a female flange or a port. The seal is made on the 24° seat.

Dimensione nominale Nominal	A		B		E	
	mm	in	mm	in	mm	in
1/2	39.9	1.57	18.3	.72	14	.55
5/8	39.9	1.57	18.3	.72	14	.55
3/4	50.8	2	23.9	.94	18	.71

STANDARD DIN TEDESCHI

Un raccordo di tipo metrico è chiamato anche raccordo DIN. Le flange sono le Cod. 61 e Cod. 62.

DIN 2353 24°

I maschi DIN 2353 si accoppiano con uno qualsiasi dei 3 raccordi femmina mostrati in tabella.

I maschi hanno sede a 24°, filettatura metrica cilindrica ed una lamatura che si accoppia con il DE del tubo. Le femmine possono essere o con sede svasata a 24° con O'ring (tipo DKO), o un adattatore metrico o un raccordo universale svasato a 24° o 60°.

GERMAN DIN CONNECTIONS

A coupling referred to as metric, usually means a DIN coupling. Flanges are standard Code 61 or Code 62.

DIN 2353 24° Cone

The DIN 24° cone male will mate with any of the three females shown below.

The male has a 24° seat, straight metric threads, and a recessed counterbore which matches the tube O.D. used with it. The mating female may be a 24° cone with O'ring, (DKO type) a metric tube fitting or a universal 24° or 60° cone.

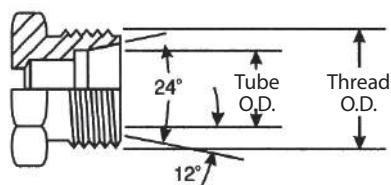
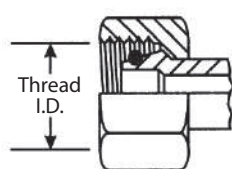
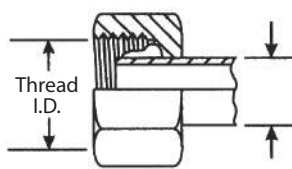
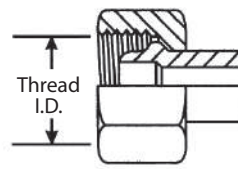
DIN 24° Male and Mating Females**Male 24° cone DIN 2353****Female
24° cone with
"O" Ring****Female
Metric Tube****Female
Universal or
60° cone**

Tabella di identificazione della filettatura / Thread Identification Table
DIN 2353 24°

Filetto Metrico Metric Thread	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.		D.E. tubo Cono 60° Tube O.D.			
(dia x pitch)	DI I.D.		DE O.D.		Serie Leggera Light series		Serie Pesante Heavy Series	
	mm	in	mm	in	mm	in	mm	in
M12 X 1.5	10.5	0.41	12	0.47	6	0.24		
M14 X 1.5	12.5	0.49	14	0.55	8	0.31	6	0.24
M16 X 1.5	14.5	0.57	16	0.63	10	0.39	8	0.31
M18 X 1.5	16.5	0.65	18	0.71	12	0.47	10	0.39
M20 X 1.5	18.5	0.73	20	0.79			12	0.47
M22 X 1.5	20.5	0.81	22	0.87	15	0.59	14	0.55
M24 X 1.5	22.5	0.89	24	0.94			16	0.63
M26 X 1.5	24.5	0.96	26	1.02	18	0.71		
M30 X 2.0	27.9	1.10	30	1.18	22	0.87	20	0.79
M36 X 2.0	33.9	1.33	36	1.42	28	1.10	25	0.98
M42 X 2.0	39.9	1.57	42	1.65			30	1.18
M45 X 2.0	42.9	1.69	45	1.77	35	1.38		
M52 X 2.0	49.9	1.96	52	2.05	42	1.65	38	1.50

Esistono raccordi DIN serie pesante e serie leggera. Per identificarli è necessario misurare sia la filettatura che il DE del tubo (la serie pesante ha DE del tubo più piccolo e sezione più spessa rispetto alla serie leggera).

There is a light and heavy series DIN coupling. Proper identification is made by measuring both the thread size and the tube O.D. (The heavy series has a smaller tube O.D. than the light, but has a thicker wall section).

DIN 3863 60°

Molto utilizzati nei sistemi idraulici. I maschi DIN 60° si accoppiano solamente con raccordi femmina universali a 24° o 60°. I maschi hanno una sede a 60° e filettatura metrica cilindrica. Le femmine hanno sede universale a 24° e 60° e filettatura cilindrica metrica. La tenuta avviene per mezzo del contatto tra il cono e la femmina girevole. I filetti mantengono la connessione meccanicamente.

DIN 3863 60° Cone

This connection is frequently used in hydraulic systems.

The DIN 60° cone male will mate with the female universal 24° or 60° cone only.

The male has a 60° seat and straight metric threads. The female has a 24° and 60° universal seat and straight metric threads. The seal takes place by contact between the cone of the male and the nose of the flareless swivel.

The threads hold the connection mechanically.

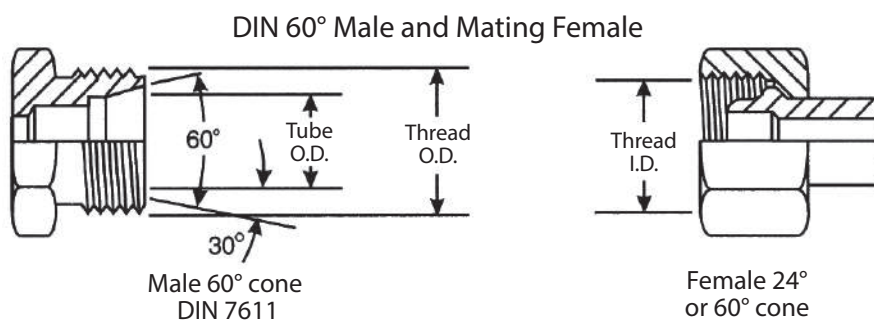


Tabella di identificazione della filettatura DIN 60°
Thread Identification Table DIN 60°

Filetto Metrico Metric Thread	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.		DE tubo Cono 60° Tube O.D.	
(dia x pitch)	mm	in	mm	in	mm	in
M12 X 1.5	10.5	0.41	12	0.47	6	0.24
M14 X 1.5	12.5	0.49	14	0.55	8	0.31
M16 X 1.5	14.5	0.57	16	0.63	10	0.39
M18 X 1.5	16.5	0.65	18	0.71	12	0.47
M22 X 1.5	20.5	0.81	22	0.87	15	0.59
M26 X 1.5	24.5	0.96	26	1.02	18	0.71
M30 X 1.5	28.5	1.12	30	1.18	22	0.87
M38 X 1.5	36.5	1.44	38	1.50	28	1.10

Tubo Liscio Metrico

I tubi lisci metrici si compongono di tre parti attaccate ad un raccordo maschio. Le tre parti sono: un tubo liscio, un anello tagliante ed un dado metrico. Il dado è posto sopra il tubo liscio, seguito dall'anello (vedere figura). Per i raccordi DIN serie leggera, si utilizza generalmente un dado metrico DIN serie leggera; per i raccordi DIN serie pesante, si utilizza generalmente un dado metrico DIN serie pesante.

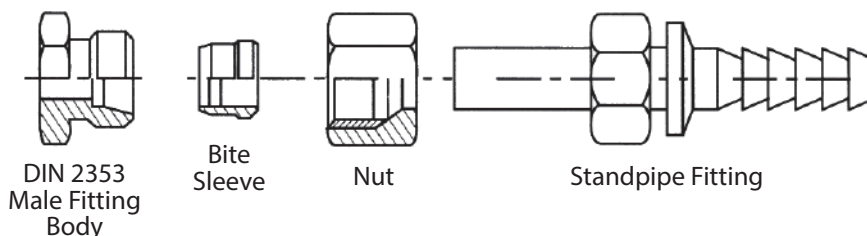
L'anello tagliante ed il tubo liscio vengono scelti in base al DE del tubo.

Metric Standpipe

A metric standpipe is comprised of three components attached to a male fitting. The components are a Standpipe, Bite Sleeve and Metric Nut. The nut is placed over the Standpipe, followed by the Bite Sleeve (see illustration below). For DIN light assemblies, a DIN light metric nut is used. For DIN heavy assemblies, a DIN heavy metric nut is used.

Bite Sleeve and Standpipe are selected on the basis of tube O.D.

Metric Standpipe Assembly



DE Tubo Tube O.D.	Filetto Dado Metrico Metric Nut Thread	
	Leggero Light	Pesante Heavy
6	M12 x 1.5	
8	M14 x 1.5	M16 x 1.5
10	M16 x 1.5	M18 x 1.5
12	M18 x 1.5	M20 x 1.5
15	M22 x 1.5	
16		M24 x 1.5
18	M26 x 1.5	
20		M30 x 2.0
22	M30 x 1.5	
25		M36 x 2.0
28	M36 x 2.0	
30		M42 x 2.0
35	M45 x 2.0	
38		M52 x 2.0
42	M52 x 2.0	

STANDARD GIAPPONESI

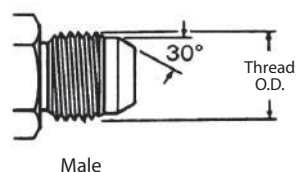
Nei macchinari giapponesi si utilizzano raccordi JIS (Japanese Industrial Standard), con sede a 30° e filettatura BSPP. Tutte le flange sono Cod. 61 e Cod. 62 (tranne DASH -10).

JIS 30°, filettatura parallela - JIS B 0202

I maschi JIS 30° si accoppiano solo con femmine JIS 30°. I maschi e le femmine hanno filettatura parallela e sede a 30°.

La tenuta avviene sulla sede a 30°.

La filettatura dei JIS 30° è conforme ai JIS B 0202 ed è la stessa della filettatura BSPP. Sia i raccordi standard inglesi, che quelli standard giapponesi hanno sede a 30°, ma non sono intercambiabili, in quanto la sede dei raccordi inglesi è invertita.

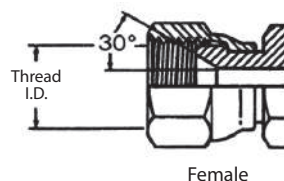


JAPANESE CONNECTIONS

Japanese equipment uses JIS (Japanese Industrial Standard) couplings with a 30° seat and British Standard Pipe Parallel threads. All flanges are Code 61 or Code 62 (except -10).

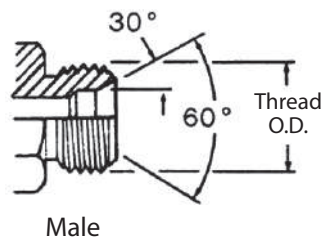
JIS 30° Flare Parallel Pipe Threads - JIS B 0202

These Japanese 30° flare male coupling will mate with a Japanese 30° flare female only. The male and female have straight threads and a 30° seat. The seal is made on the 30° seat. The threads on the Japanese 30° flare connector conform to JIS B 0202, the same as the BSPP threads. Both the British and Japanese connectors have a 30° seat, but they are not interchangeable, because the British seat is inverted.



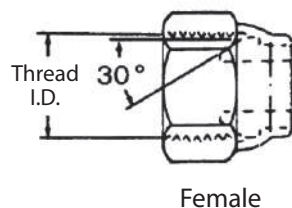
JIS 30°, sede invertita, filettatura parallela - JIS B 0202

I raccordi JIS paralleli sono simili ai BSPP. I JIS paralleli e i BSPP sono intercambiabili.



JIS 30° Inverted Seat, Parallel Pipe Threads - JIS B 0202

The JIS parallel is similar to the BSPP connection. The JIS parallel thread and the BSPP connection are interchangeable.

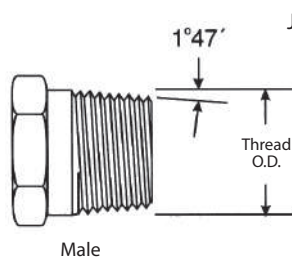


JIS, filettatura conica - JIS B 0203

I raccordi JIS con filettatura conica sono simili ai BSPT e perfettamente intercambiabili. I raccordi standard giapponesi non hanno svasatura a 30° e non si accoppiano con femmine BSPP. La filettatura è conforme ai JIS B 0203, la stessa della filettatura dei BSPT. La sigillatura dei PT viene fatta sulla filettatura.

JIS Tapered Pipe Thread (PT) - JIS B 0203

The JIS tapered pipe thread connection is similar to the BSPT connection and fully interchangeable. The Japanese connection does not have a 30° Flare, and will not mate with the BSPP female. The thread conforms to JIS B 0203, same as BSPT threads. The seal on the JIS tapered pipe thread connection is made on the threads.



Japanese Tapered Pipe Thread

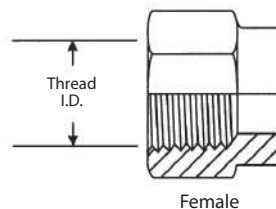


Tabella di identificazione della filettatura
Thread Identification Table

Dash Size	Inch Size	Filetto Thread	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.	
		(in-TPI)	mm	in	mm	in
-2	1/8	1/8-27	8.7	0.34	9.5	0.38
-4	1/4	1/4-18	11.1	0.44	13.5	0.56
-6	3/8	3/8-18	15.1	0.59	16.7	0.66
-8	1/2	1/2-14	18.3	0.72	20.6	0.81
-10	5/8	5/8-14	20.6	0.81	23.0	0.91
-12	3/4	3/4-14	23.8	0.94	26.2	1.03
-16	1	1-11	30.2	1.19	33.3	1.31
-20	1-1/4	1-1/4-11	38.9	1.53	41.1	1.66
-24	1-1/2	1-1/2-11	45.2	1.78	47.6	1.88
-32	2	2-11	56.4	2.22	59.5	2.34

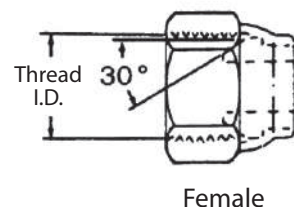
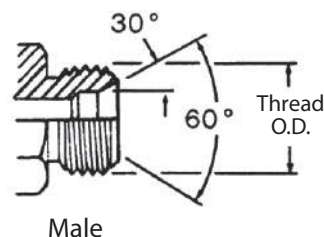
Komatsu 30°, filettatura parallela

I raccordi Komatsu 30° sono identici in tutto ai JIS 30° filettatura parallela, tranne che per la filettatura: i raccordi Komatsu utilizzano una filettatura metrica parallela, conforme a JIS B 0207. I raccordi Komatsu hanno la tenuta sulla svasatura a 30°.

Komatsu Style 30° Flare Parallel Threads

The Komatsu style 30° Flare Parallel thread coupling is identical to the Japanese 30° Flare parallel except for the threads. The Komatsu uses Metric fine threads which conform to JIS B 0207. The Komatsu connector seals on the 30° Flare.

Dash Size	Inch Size	Filetto Thread	Filetto femmina D.I. Female Thread I.D.		Filetto maschio D.E. Male Thread O.D.	
		(in-TPI)	mm	in	mm	in
-6	3/8	M18x1.5	18		16.4	
-8	1/2	M22x1.5	22		20.4	
-10	5/8	M24x1.5	24		22.4	
-12	3/4	M30x1.5	30		28.4	
-16	1	M33x1.5	33		31.4	
-20	1-1/4	M36x1.5	36		34.4	
-24	1-1/2	M42x1.5	42		40.4	



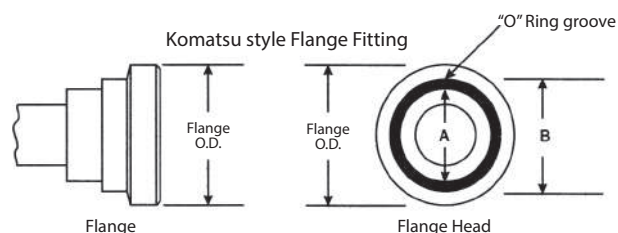
Flangia Komatsu

Le flange Komatsu sono praticamente identiche alle SAE Cod. 61, e le due sono interamente intercambiabili. Per tutte le dimensioni, gli O'Ring cambiano. Nel sostituire ad una flangia Komatsu una flangia SAE, si deve anche sostituire l'O'Ring con un O'Ring SAE.

Komatsu Flange Fitting

The Komatsu Flange fitting is nearly identical to and fully interchangeable with the SAE Code 61 flange fitting. In all sizes the O-ring dimensions are different. When replacing a Komatsu flange with an SAE style flange, an SAE style O-ring must be used.

Flange Dash	Dimensione Flange Size	A	B
Size	in		
-8	1.19	.73	.98
-10*	1.34	.73	1.10
-12	1.50	.85	1.22
-16	1.75	1.12	1.50
-20	2.00	1.36	1.73
-24	2.38	1.75	2.12
-32	2.81	2.22	2.56



Pressione massima di esercizio (bar) in relazione alla filettatura e alla misura del tubo

Maximum working pressure (bar) in relation to threading and pipe size

Normativa di riferimento Reference standard	Filetto dei raccordi in pollici Thread of the fittings in inches										
	1/8"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
BSP 60° femmina / female	350	630	-	550	430	-	350	280	250	210	210
BSP 60° maschio / male	350	630	-	550	430	-	350	280	250	210	210
JIC 37° femmina/ female	-	410	410	345	345	345	345	275	200	170	170
JIC 37° maschio/ male	-	410	410	345	345	345	345	275	200	170	170
JIS 60° femmina/ female	-	350	350	350	350	-	280	210	175	-	-
JIS 60° maschio/ male	-	350	-	350	350	-	280	210	175	-	-
JIS 30° femmina/ female	-	350	350	350	350	280	280	210	175	-	-
KOMATSU 30° metrico / metric	-	350	350	350	350	350	280	210	175	-	-
NPTF maschio / male	345	345	-	275	240	-	210	170	150	140	140
ORFS femmina/ female	-	410	-	410	410	410	410	275	275	-	-
ORFS maschio/ male	-	410	-	410	410	410	410	275	275	-	-
SAE 45° femmina/ female	-	410	410	345	345	345	345	275	200	170	170
SAE 45° maschio/ male	-	410	410	345	345	345	345	275	200	170	170
SAE 3000 flangia / flange	-	-	-	-	345	345	345	345	275	210	210
SAE 6000 flangia / flange	-	-	-	-	-	-	410	410	410	410	410
SAE maschio / male	-	410	410	345	345	345	345	275	200	170	170

Normativa di riferimento Reference standard	Serie metrica leggera (mm) Light metric series										
	6	8	10	12	15	18	22	28	35	42	
DIN 24° femmina / female	250	250	250	250	250	160	160	100	100	100	
DIN 24° femmina con O'Ring / female with O'Ring	250	250	250	250	250	160	160	100	100	100	
DIN 24° maschio / male	250	250	250	250	250	160	160	100	100	100	
Codolo metrico / female	Per i progetti di nuova generazione è sconsigliato usare questo tipo di raccordo This insert is not recommended for new project										

Normativa di riferimento Reference standard	Serie metrica pesante (mm) Heavy metric series										
	8	10	12	14	16	20	25	30	38		
DIN 24° femmina/ female	630	630	630	630	400	400	400	250	250		
DIN 24° femmina con o'Ring / female with O'Ring	630	630	630	630	400	400	400	250	250		
DIN 24° maschio / male	630	630	630	630	400	400	400	250	250		
Codolo metrico/ female	Per i progetti di nuova generazione è sconsigliato usare questo tipo di raccordo This insert is not recommended for new project										

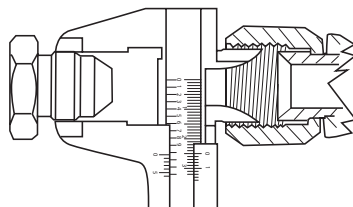
Normativa di riferimento Reference standard	Serie gas francese (mm) French gas series										
			13	17	21	27	33				
Femmina / female			360	270	255	200	170				
Maschio / male			360	270	255	200	170				
Codolo serie gas francese / metric French hose	Per i progetti di nuova generazione è sconsigliato usare questo tipo di raccordo This insert is not recommended for new project										

Normativa di riferimento Reference standard	Serie metrica francese (mm) French metric series										
	10	12	14	18	20	22	30				
Femmina / female	200	-	140	160	140	130	122				
Maschio / male	-	250	-	-	-	-	-				

La pressione massima di lavoro in un tubo assemblato è determinata dalla pressione minima di esercizio del tubo o del raccordo utilizzati.
The minimum working pressure of the pipe or fitting used determines the maximum pressure in an assembled pipe.

COME DETERMINARE IL TIPO DI FILETTATURA CON L'USO DI CALIBRI

Misurando con un calibro il diametro esterno della filettatura di un maschio o il diametro interno della filettatura di una femmina, si otterrà una misura in mm. Individuando questo valore in millimetri nella tabella sottostante, si troverà il tipo di filettatura pertinente.



HOW TO DETERMINE THE THREAD TYPE USING CALLIPERS

By measuring with a caliper the outside diameter of the thread of a male or the inside diameter of the thread of a female you will get a measure in mm. By finding this value in mm on the below table, you'll be able to find the relevant thread type.

Maschio D.E. Male O.D.	mm	Femmina D.I. Female I.D.
	8,7	G1/8" BSP
1/8" – 27 NPTF	9,5	
G1/8" BSP	9,6	
M 10 x 1	9,8	
	9,9	7/16" – 20 JIC
	10,5	M 12 x 1,5
7/16" – 20 JIC	11,0	
	11,4	1/2" – 20 SAE
	11,6	G1/4" BSP
M 12 x 1,5	11,9	
1/4" – 18 NPTF	12,5	
	12,5	M 14 x 1,5
1/2" – 20 SAE	12,6	
	12,9	9/16" – 18 JIC
G1/4" BSP	13,0	
M 14 x 1,5	13,9	
9/16" – 18 JIC	14,2	
	14,5	M16 x 1,5
	15,1	G3/8" BSP
M 16 x 1,5	15,8	
3/8" – 18 NPTF	15,9	
	16,5	M18 x 1,5
G3/8" BSP	16,6	
	17,5	3/4" – 16 JIC
M 18 x 1,5	17,9	
	18,4	20 x 1,5 DKF
3/4" – 16 JIC	18,8	
	18,8	G1/2" BSP
1/2" – 14 NPT	19,8	
20 x 1,5 CEF	19,9	
	20,4	7/8" – 14 SAE
	20,5	M 22 x 1,5
G1/2" BSP	20,8	
	20,9	G5/8" BSP
M 22 x 1,5	21,9	
7/8" – 14 SAE	22,1	
	22,5	24 x 1,5 DKF
G5/8" BSP	22,8	
24 x 1,5 CEF	23,9	
	24,5	G3/4" BSP
	24,8	1 1/16" – 12 JIC
3/4" – 14 NPTF	25,1	
	25,5	M26 x 1,5
M 26 x 1,5	25,9	
G3/4" BSP	26,3	
1 1/16" – 12 JIC	26,8	

Maschio D.E. Male O.D.	mm	Femmina D.I. Female I.D.
	27,9	1 3/16" – 12 JIC
	28,0	M 30 x 2
	28,5	30 x 1,5 DKF
M 30 x2	29,8	
30 x 1,5 CEF	29,9	
1 3/16" – 12 JIC	30,1	
	30,7	G1" BSP
	31,2	1 5/16" – 12 JIC
1" – 11 1/2 NPTF	31,4	
	31,5	M 33 x 1,5
G1" BSP	33,1	
1 5/16" – 12 JIC	33,2	
	34,0	M 36 x 2
	34,5	36 x 1,5 DKF
M 36 x 2	35,8	
36 x 1,5 CEF	35,9	
	36,5	M 36 x 1,5
M 38 x 1,5	37,9	
	38,8	1 5/8" – 12 JIC
	39,4	G1 1/4" BSP
	39,8	M 42 x 1,5
1 1/4"–11 1/2 NPTF	40,2	
	40,5	M 42 x 1,5
1 5/8" – 12 JIC	41,1	
1 1/4" – 11 BSP	41,7	
M 42 x2	41,8	
	42,4	M 45 x 2
	43,3	45 x 1,5 DKF
M 45 x2	44,8	
45 x 1,5 CEF	44,9	
	45,1	1 7/8" – 12 JIC
	45,2	G1 1/2" BSP
1 1/2"–11 1/2 NPTF	46,3	
1 7/8" – 12 JIC	47,5	
G1 1/2" BSP	47,7	
	49,6	M 52 x 2
	50,3	52 x 1,5 DKF
M 52 x2	51,8	
52 x 1,5 CEF	51,9	
	57,4	G2" BSP
2" – 11 1/2 NPTF	58,3	
G2" BSP	59,4	
	61,1	2 1/2" – 12 JIC
	62,5	M 65 x 2
2 1/2" – 12 JIC	63,3	

COPPIE DI SERRAGGIO RACCOMANDATE PER RACCORDI E ADATTATORI RECOMMENDED FITTINGS AND ADAPTERS INSTALLATION TORQUE

SAE J514 37° (JIC) / SAE J514 37° CONE (JIC)

Dash	Thread	Lb.ft		N.m	
		Min	Max	Min	Max
-4	7/16-20	11	12	15	16
-5	1/2-20	14	15	19	21
-6	9/16-18	18	20	24	28
-8	3/4-16	36	39	49	53
-10	7/8-14	57	63	77	85
-12	1 1/16-12	79	88	107	119
-14	1 3/16-12	94	103	127	140
-16	1 5/16-12	108	113	147	154
-20	1 5/8-12	127	133	172	181
-24	1 7/8-12	158	167	215	226
-32	2 1/2-12	245	258	332	350

SAE J1453 O'Ring Face Seal (ORFS) / SAE J1453 O'Ring Face Seal (ORFS)

Dash	Thread	Lb.ft		N.m	
		Min	Max	Min	Max
-4	9/16-18	18	21	25	28
-6	11/16-16	30	32	40	44
-8	13/16-16	41	44	55	60
-10	1-14	46	50	60	68
-12	1 3/16-12	65	70	90	95
-16	1 7/16-12	92	100	125	135
-20	1 11/16-12	125	140	170	190
-24	2-12	150	165	200	225

Flangia SAE J518 - 61 / SAE Flange J518 Code 61

Dash	Thread	Lb.ft		N.m	
		Min	Max	Min	Max
-8	1/2	15	19	20	25
-12	3/4	21	29	28	40
-16	1	27	35	37	48
-20	1 1/4	35	46	48	62
-24	1 1/2	46	58	62	79
-32	2	54	66	73	90
-40	2 1/2	79	91	107	124
-48	3	137	149	186	203

SAE J518 - 62

Dash	Thread	Lb.ft		N.m	
		Min	Max	Min	Max
-8	1/2	15	19	20	25
-12	3/4	25	33	34	45
-16	1	42	50	56	68
-20	1 1/4	63	75	85	102
-24	1 1/2	117	133	158	181
-32**	2	200	217	271	294

BSPP senza O'Ring / BSPP without O'Ring

Dash	Thread	Lb.ft	N.m
-2	1/8-28	7	10
-4	1/4-19	15	20
-6	3/8-19	26	35
-8	1/2-14	44	60
-10	5/8-14	52	70
-12	3/4-14	85	115
-16	1-11	103	140
-20	1 1/4-11	155	210
-24	1 1/2-11	214	290
-32	2-11	295	400

BSPP con O'Ring / BSPP with O'Ring

Dash	Thread	Lb.ft	N.m
-2	1/8-28	N/A	N/A
-4	1/4-19	15	20
-6	3/8-19	26	35
-8	1/2-14	37	50
-10	5/8-14	44	60
-12	3/4-14	63	85
-16	1-11	85	115
-20	1 1/4-11	140	190
-24	1 1/2-11	177	240
-32	2-11	221	300

JIS (B8363)

Dash	Thread	Lb.ft	N.m
-4	1/4-19	19	25
-6	3/8-19	25	34
-8	1/2-14	49	64
-10	5/8-14	100	132
-12	3/4-14	100	132
-16	1-11	149	196
-20	1 1/4-11	171	225
-24	1 1/2-11	194	255
-32	2-11	240	316

Metrico/Metric

Dash	Lb.ft		N.m	
	Min	Max	Min	Max
M12x1,5	8	11	15	20
M14x1,5	13	18	25	30
M16x1,5	19	26	35	40
M18x1,5	22	30	40	45
M20x1,5	24	33	45	50
M22x1,5	32	44	60	70
M24x1,5	41	55	75	85
M26x1,5	46	63	85	95
M30x2	57	77	105	120
M36x2	74	100	135	150
M42x2	111	151	205	230
M45x2	136	184	250	280
M52x2	147	199	270	300

METODO DI SERRAGGIO JIC FFFT

Il metodo FFFT (Flats From Finger Tight) permette di assemblare raccordi e adattatori alla giusta quota di serraggio senza una chiave dinamometrica. La rotazione applicata secondo il valore indicato in Tab.1 garantisce una buona tenuta, evita sia svitamenti, sia serraggi eccessivi che possono provocare una rottura del dado o del cono.

Istruzioni per l'assemblaggio:

- stringere a mano il giunto
- fare un segno longitudinale su uno dei piani dell'esagono fino al corpo dell'esagono come mostrato in Fig. 1
- stringere ulteriormente il giunto per il numero di fori come indicato in Tab. 1

JIC FFFT TORQUE METHOD

The FFFT (Flats From Finger Tight) method allows to assemble fittings and adapters at the correct torque value without a dynamometric wrench. The rotation applied according the value shown in Tab.1 ensures a good sealing, avoid unscrewing and over torque that can cause nut or cone crack.

Assembling instruction:

- hand tighten the joint
- make a longitudinal mark on one of the flats of hex and continue it on the body hex as shown in Fig.1
- tighten the joint further by the number of flat as shown in Tab.1

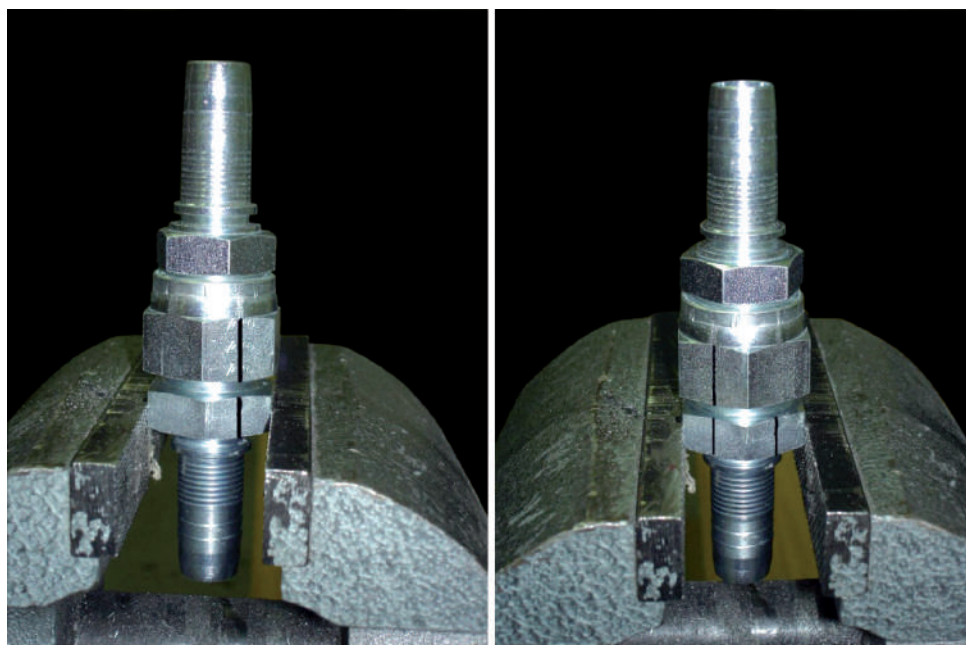


Fig. 1

Valore di montaggio – acciaio al carbonio – SAE J514 JIC 37° Assembling value - carbon steel material - SAE J514 JIC 37° flare						
Dash size	Thread Min	Lb*ft		N*m		FFFT 0/+0.25
		Min	Max	Min	Max	
-4	7/16-20	11	12	15	16	2
-5	1/2-20	14	15	19	21	2
-6	9/16-18	18	20	24	28	2
-8	3/4-16	36	39	49	53	1.5
-10	7/8-14	57	63	77	85	1.5
-12	1 1/16-12	79	88	107	119	1
-14	1 3/16-12	94	103	127	140	1
-16	1 5/16-12	108	113	147	154	1
-20	1 5/8-12	127	133	172	181	1
-24	1 7/8-12	158	167	215	226	1
-32	2 1/2-12	245	258	332	350	1

Tab. 1

// LISTA COMPATIBILITÀ OLI

// OIL COMPATIBILITY LIST

Oli / Oil	standard braided hoses	standard spiralled hoses	Powerflex bio hoses
AGIP Arnica 46	A	B	A
AGIP Arnica Extra Plus	A	C	A
ALUCHEM Alusynt C46	A	B	A
ALUCHEM Alusynt CP 32	A	B	A
ALUCHEM Alusynt CP 46	A	A	A
AVIA Syntofluid PE-B 10	A	B	A
AVIA Syntofluid PE-B 30	A	B	A
AVIATICON HY-HF 46	A	nr	A
BLASER Foodoil SH 46	A	A	A
BOBCAT Bio Hydraulic SBH	A	nr	A
BOBCAT MS68	A	A	A
BP Biohyd SE-S46	A	C	A
BP Energol HLP-HM46	A	B	A
CASTROL ATF Heavy Duty	A	A	A
CASTROL BioBar 46	A	C	A
CASTROL Biostat 100	A	C	A
CASTROL Biostat 150	A	C	A
CASTROL Hyspin AWH-M68	A	A	A
CASTROL Syntrans MAX SAE 75W-80	A	A	A
CASTROL Transmax DEX-III Multivehicle	A	A	A
CASTROL Tribol Bio Top 1418/220	A	C	A
CAT HYDO Advanced 10	A	A	A
CHEVRON Chetus PAO	A	A	A
CHEVRON TEXACO Meropa 320	A	A	A
CHEVRON TEXACO Meropa WM 320	A	A	A
CHEVRON TEXACO Pinnacle WM 320	A	A	A
CHEVRON TEXACO Rando WM 32	A	C	A
CHEVRON TEXACO Synstar HFDU 46	-	B	-
COGNIS Breox SL 320	A	A	A
DELUTEC DeLudraw N8	A	C	A
ESSO MOBIL AERO HF-MIL-PRF-5606-NATO H 515	A	nr	A
ESSO MOBIL Univis N46	A	A	A
EXXON Mobilgear SHC XMP320	A	A	A
EXXON Mobil Delvac Super 1400 15W40	A	A	A
EXXON Mobil SHC Aware™ H 46	A	C	A
EXXON MOBIL Teresstic T68	A	A	A
FRAGOL Hydrolub 125G	A	A	A
FUCHS Gear Master ECO320	A	B	A
FUCHS Geralyn SF 46	A	A	A
FUCHS Hydrotherm 46M (70°C)	B	A	B
FUCHS Plantohyd 46S	A	C	A
FUCHS Plantosyn HVI 46	A	nr	A
FUCHS Renolin PG46	A	C	A
FUCHS Renolin Unisyn CLP320	A	A	A
FUCHS Titan EG 5080	A	A	A
GAZPROMNEFT Hydraulic HDZ 46	A	A	A
HAFA Biohydro SAT	A	nr	A



// LISTA COMPATIBILITÀ OLI

// OIL COMPATIBILITY LIST

Oli / Oil	standard braided hoses	standard spiralled hoses	Powerflex bio hoses
HOUGHTON Cosmolubric B230	A	C	A
HOUGHTON Cosmolubric HF-122	A	C	A
HOUGHTON Vital Fluid SL46	A	B	A
INGERSOLL RAND Techtrol Gold III	A	C	A
JOHN DEERE Bio Hy Gard II Hydraulik	A	C	A
KAESER Sigma MOL	A	A	A
KAESER Sigma S-460	A	B	A
KLÜBER Klüberbio EG 2-100	A	nr	A
KLÜBER Klüberbio EG 2-150	A	nr	A
KLÜBER Klüberbio LR 9-32, 46, 68	A	C	A
KLÜBER Klüberbio RM 2-100	A	nr	-
KLÜBER Klüberbio RM 2-150	A	nr	-
Kompressol HFDU 46	A	B	A
KROON OIL Perlus Biosynth 46	A	C	A
M. FLEISCHE OHG Pyrosafe 27	A	A	A
MKU Pressol Spezial MF 326	A	B	A
MOMENTIVE Element 14 PDMS 10-A	A	A	A
MOTOREX Oekosynt HEES 22	A	nr	A
MOTOREX Oekosynt HEES 32	A	nr	A
MOTOREX Oekosynt HEES 46	A	nr	A
MOTOREX Oekosynt HEES 68	A	nr	A
MOTOREX Oekosynt HFDU 46	A	A	A
NICHE Pelagic 100 (23°C)	B	A	B
NYCO C-635 CY 6040	A	nr	A
NYNAS Nytro 10XN	A	C	A
NYNAS Nytro Taurus	A	C	A
OEST DOPP-SYNT 70	A	nr	A
PAKELO Safety Fluid ESO-B	A	A	A
PANOLIN Atlantis 32	A	nr	A
PANOLIN HLP Synth 22	A	C	A
PANOLIN HLP Synth 32	A	C	A
PANOLIN HLP Synth 46	A	C	A
PANOLIN Orcon HYD 46	A	A	A
PETROCANADA CHEMIE Ultra Safe HFC 620	A	A	A
PETROCANADA Duron E - SAE 15W-40	A	A	A
PETROFER Ultra Safe 620 (max 70°C)	A	A	A
PETRONAS Akcela HY-Tran ULTRA	A	A	A
PETRONAS Ambra Multi G 10W-30	A	A	A
PETRONAS Tutela Brake Fluid DOT4	nr	B	nr
QUAKER Quintolubric 822-220	A	B	A
QUAKER Quintolubric 888-68	A	C	A
Rapeseed oil	B	nr	B
ROLOIL Conqord	A	B	A
ROYAL PURPLE BIOMAX Hydraulic Oil 46	A	A	A
SELENIA AKROS turbo 10W-30	A	C	A
SHELL AeroShell Fluid 31	A	nr	A
SHELL AeroShell Fluid 41	A	nr	A

// LISTA COMPATIBILITÀ OLI

// OIL COMPATIBILITY LIST

Oli / Oil	standard braided hoses	standard spiralled hoses	Powerflex bio hoses
SHELL Cassida HF46	A	A	A
SHELL Helix Ultra 5W-40	A	A	A
SHELL Helix Ultra Extra 5W-30	A	A	A
SHELL IruS DU 46	A	C	A
SHELL Naturelle HF-E46	A	C	A
SHELL Omala HD320	A	A	A
SHELL Tellus Arctic 32	A	nr	A
SHELL Rimula R4L	A	A	A
SHELL Rimula R6 LM 10W-40	A	A	A
SHELL Turbo T32	A	B	A
STATOIL Hydraulic Oil 131	A	nr	A
STATOIL HYDRAWAY BIO PA 32	A	-	A
STATOIL HYDRAWAY BIO SE 32-68	A	-	A
STATOIL Turbway SE	A	C	A
TOTAL Azolla AF46	A	B	A
TOTAL FINA ELF Azolla ZS 46	A	B	A
TOTAL FINA ELF Biohydran SE46	A	C	A
TOTAL FINA ELF Hydransafe HFDU 46	A	A	A
TOTAL Preslia GT 32-46	A	A	A
UNIL Opal Matic DX III	A	B	A
VICKERS BIOGEAR XP 100	A	C	A
VICKERS BIOGEAR XP 150	A	C	A
VICKERS BIOGEAR XP 68	A	C	A
VICKERS Ecosure HSE 46	A	C	A
VICKERS HYDROX BIO 100	A	C	A
VICKERS HYDROX BIO 220	A	C	A
VICKERS HYDROX BIO 68	A	C	A
YORK 977 BIO	A	nr	A
YORK 777 BIO	A	nr	A

Legenda / Legend

A	excellent compatibility
B	good compatibility
C	conditional service
nr	not recommended
-	no data

// TUBI OLEODINAMICI *HYDRAULIC HOSE*

// TERMOPLASTICO *THERMOPLASTIC*

// 610 - POWERWIRE	10
// 520 - TWO WIRE BRAIDS	10
// 630 - TEST HOSE	11
// 570 - SAE 100 R7	12
// 575 - SAE 100 R7 TWIN	12
// 580 - SAE 100 R8	13
// 585 - SAE 100 R8 TWIN	13
// 550 - ONE WIRE BRAID	14
// 555 - ONE WIRE BRAID TWIN	14
// 700A - POWERWIRE 700	15
// 705A - POWERWIRE 700 TWIN	15

// TRECCIA TESSILE *TEXTILE BRAID*

// ARGUS 1TE/R6 PLUS	17
// ARGUS 2TE PLUS	17
// ARGUS 3TE/R3 PLUS	18
// 2TE RAILWAY	18

// TRECCIA D'ACCIAIO *WIRE BRAID*

// PLT - PILOT	19
// 121 (T/G/X) SLIMLINE PLUS - 1SC	19
// 141 (T/G/X) SUPERSLIMLINE HI-TUFF	20
// 122 (T/GP/X) PLUS - 1SN/R1AT	21
// 221 (T/G/X) SLIMLINE PLUS	23
// 241 (T/G/X) SUPERSLIMLINE HI-TUFF	24
// 241 (T/G/X) HP SUPERSLIMLINE HI-TUFF	24
// 222 (T/GP/X) PLUS - 2SN/R2AT	25
// 3SPT -SUPERFOREST	26
// 2SC RAILWAY	26

// SPIRALATO *WIRE SPIRAL*

// 490 POWERTRAK-AT7K HI-TUFF	28
// 560 POWERTRAK-AT8K HI-TUFF	28
// 500R FIRESAFE 5000	29

// POWERFLEXBIO *POWERFLEXBIO*

// PF3K - POWERFLEXBIO 3000 HI-TUFF	31
// PF4K - POWERFLEXBIO 4000 HI-TUFF	31
// PF5K - POWERFLEXBIO 5000 HI-TUFF	32
// PF5KP - POWERFLEXBIO 5000 PLUS HI-TUFF	32
// PF6K - POWERFLEXBIO 6000 HI-TUFF	33

// ALTA TEMPERATURA *HIGH TEMPERATURE*

// CMD1 135 - COMMANDER 1SN	34
// CMD1 - COMMANDER 1SN	35
// CMD2 - COMMANDER 2 SN	36
// DH 644 HT	37

// BASSA TEMPERATURA *LOW TEMPERATURE*

// 261E - HYPERCOLD SUPERSLIMLINE	38
// 3SPE - HYPERCOLD SUPERFOREST	39
// 735E - HYPERCOLD 4SP	39
// 795E - HYPERCOLD 4SH	40

// RITORNO OLIO *OIL RETURN*

// DH 605T	41
// DH 634	42

// LAVAGGIO ALTA PRESSIONE *PRESSURE WASH*

// IDRO 138 P	43
// IDRO 238 P	43

// WATERBLAST *WATERBLAST*

// WATERBLAST - WB10L	45
// WATERBLAST - WB15L	45
// WATERBLAST - WB20L	46

// TUBO TEFLON *PTFE HOSE*

// 1000M - METRIC RANGE	47
// 1000M 2WB - METRIC RANGE	48
// 2000	49
// 8000 - EASYFLEX®	50
// 9800 - TAPE WRAPPED	51
// 1600 - PRESSUREFLEX®	52

// **TABELLA SELEZIONE GHIERE** *FERRULES SELECTION CHART*

// GHIERE SENZA SPELLATURA PER RACCORDI SUPERTRAK - SERIE 55	54
// NO-SKIVE FERRULES FOR SUPERTRAK FITTINGS – 55 SERIES	
// GHIERE CON SPELLATURA PER RACCORDI SUPERTRAK - SERIE 55	55
// SKIVE FERRULES FOR SUPERTRAK FITTINGS – 55 SERIES	
// GHIERE DOPPIA SPELLATURA PER RACCORDI INTERLOCK - SERIE 17 E 18	56
// DUAL FERRULES FOR INTERLOCK FITTINGS – 17 AND 18 SERIES	
// GHIERE DOPPIA SPELLATURA PER RACCORDI WATERBLAST - SERIE 98 E 99	56
// DUAL SKIVE FERRULES FOR WATERBLAST FITTINGS – 98 AND 99 SERIES	
// GHIERE SENZA SPELLATURA PER RACCORDI NEW POWERTRAK - SERIE 29	56
// NO-SKIVE FERRULES FOR NEW POWERTRAK FITTINGS – 29 SERIES	
// GHIERE CON SPELLATURA PER RACCORDI NEW POWERTRAK - SERIE 29	56
// SKIVE FERRULES FOR NEW POWERTRAK FITTINGS – 29 SERIES	

// **RACCORDI SUPERTRAK SERIE 55** *SUPERTRAK FITTINGS 55 SERIES*

// **SUPERTRAK GHIERE** *FERRULES*

// SK1000 - GHIERA SUPERTRAK CON SPELLATURA PER TUBI CON 1 TRECCIA D'ACCIAIO E COMPATTI CON 2 TRECCIE D'ACCIAIO	59
// SKIVE FERRULE FOR 1 WIRE BRAID AND 2 WIRE BRAID COMPACT HOSES	
// 340000 - GHIERA SUPERTRAK CON SPELLATURA PER 1SN - CMD1 - 241	59
// SKIVE FERRULE FOR 1SN - CMD1 - 241	
// 440000 - GHIERA SUPERTRAK CON SPELLATURA PER 2SN E POWERFLEX BIO	59
// SKIVE FERRULE FOR 2SN AND POWERFLEX BIO	
// 430000 - GHIERA SUPERTRAK SENZA SPELLATURA PER POWERFLEX BIO	59
// NO-SKIVE FERRULE FOR POWERFLEXBIO HOSES	
// AD1 - GHIERA SUPERTRAK SENZA SPELLATURA PER TUBI CON 1 TRECCIA D'ACCIAIO E COMPATTI CON 2 TRECCIE D'ACCIAIO	59
// NO-SKIVE FERRULE FOR 1 WIRE BRAID AND 2 WIRE BRAIDS COMPACT HOSES	
// AD2 - GHIERA SUPERTRAK SENZA SPELLATURA PER 2SN	59
// NO-SKIVE FERRULE FOR 2SN	
// 5700TP - GHIERA SUPERTRAK SENZA SPELLATURA PER TUBO TERMOPLASTICO E PILOT	60
// NO-SKIVE FERRULE FOR THERMOPLASTIC HOSE AND PILOT	
// TX2 - GHIERA SUPERTRAK SENZA SPELLATURA PER 3TE, R4, R5 E 241-40	60
// NO-SKIVE FERRULE FOR 3TE, R4, R5 AND 241 -40	
// 55000H - GHIERA SUPERTRAK PER TUBO TEFLON LISCIO E CONVOLUTO SENZA SPELLATURA	60
// NO-SKIVE FERRULE FOR SMOOTH AND CONVOLUTED TEFLON	
// LEGENDA DADI	61
// NUT LEGEND	

// **SUPERTRAK - DOPPIO INSERTO** *HOSE MENDER*

// 550550 - DOPPIO INSERTO	61
// HOSE MENDER	

// SUPERTRAK INSERTI BSP *BSP INSERTS*

// 550120 - MASCHIO BSPP CILINDRICO SV. 60° - AGR	62
// BSPP MALE 60° FLARE - AGR	
// 550130 - MASCHIO BSPP CILINDRICO SEDE PIANA - AGR FD	62
// BSPP MALE FLAT SEAT - AGR FD	
// 550150 - MASCHIO BSPT CONICO - AGR K	63
// BSPT MALE - AGR K	
// A55001 - FEMMINA BSPP SV. 60° CON O'RING - DKOR	64
// BSPP FEMALE 60° CONE WITH O'RING - DKOR	
// A55002 - FEMMINA BSPP SV. 60° SENZA O'RING	64
// BSPP FEMALE 60° CONE WITHOUT O'RING	
// A55061 - FEMMINA 45° BSPP SV. 60° CON O'RING - DKOR 45	65
// 45° BSPP FEMALE 60° CONE WITH O'RING - DKOR 45	
// A55062 - FEMMINA 45° BSPP SV. 60° SENZA O'RING	65
// 45° BSPP FEMALE 60° CONE WITHOUT O'RING	
// A55051 - FEMMINA 90° BSPP SV. 60° CON O'RING - DKOR 90	66
// 90° BSPP FEMALE 60° CONE WITH O'RING - DKOR 90	
// A55052 - FEMMINA 90° BSPP SV. 60° SENZA O'RING	66
// 90° BSPP FEMALE 60° CONE WITHOUT O'RING	
// A55180 - FEMMINA 90° COMPATTA BSPP SV. 60° - DKR 90	67
// 90° COMPACT BSPP FEMALE 60° CONE - DKR 90	
// A55003 - FEMMINA SEDE PIANA BSPP - DKR FD	67
// BSPP FEMALE FLAT SEAT - DKR FD	
// 552910 - OCCHIO BSPP - RNR	68
// BSPP BANJO - RNR	
// 002920 - VITE FORATA BSPP	68
// BSPP BOLT	
// DD2920 - VITE FORATA BSPP DOPPIA	68
// BSPP DUAL BOLT	

// SUPERTRAK - INSERTI METRICI DIN *DIN METRIC INSERTS*

// 551690 - MASCHIO METRICO SV. 24° DIN 3853 SERIE LEGGERA - CEL	69
// METRIC MALE 24° SEAT - LIGHT - DIN 3853 - CEL	
// A55146 - FEMMINA METRICA SV. 24° CON O'RING DIN 3865 SERIE LEGGERA - DKOL	70
// METRIC FEMALE 24° CONE WITH O'RING - LIGHT - DIN 3865 - DKOL	
// A55A51 - FEMM. 45° METRICA SV. 24° CON O'RING DIN 3865 SERIE LEGGERA - DKOL 45	71
// 45° METRIC FEMALE 24° CONE WITH O'RING - LIGHT - DIN 3865 - DKOL 45	
// A55A50 - FEMM. 90° METRICA SV. 24° CON O'RING DIN 3865 SERIE LEGGERA - DKOL 90	72
// 90° METRIC FEMALE 24° CONE WITH O'RING - LIGHT - DIN 3865 - DKOL 90	
// 551700 - MASCHIO METRICO SV. 24° DIN 3853 SERIE PESANTE - CES	73
// METRIC MALE 24° SEAT - HEAVY - DIN 3853 - CES	
// A55179 - FEMMINA METRICA SV. 24° CON O'RING DIN 3865 SERIE PESANTE - DKOS	74
// METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS	

// A55A56 - FEMMINA 45° METRICA SV. 24° CON O'RING DIN 3865 SERIE PESANTE - DKOS 45	75
// 45° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 45	
// A55A57 - FEMMINA 90° METRICA SV. 24° CON O'RING DIN 3865 SERIE PESANTE - DKOS 90	76
// 90° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 90	
// A55145 - FEMMINA UNIVERSALE METRICA - DKL	77
// UNIVERSAL METRIC FEMALE - DKL	
// A55985 - FEMMINA 45° UNIVERSALE - DKL	77
// 45° UNIVERSAL METRIC FEMALE - DKL	
// A55975 - FEMMINA 90° UNIVERSALE - DKL	78
// 90° UNIVERSAL METRIC FEMALE - DKL	
// 551800 - MASCHIO METRICO SV. 60° - CEM	78
// METRIC MALE 60° CONE - CEM	
// A55140 - FEMMINA METRICA SV. 60° DIN 3863 - DKM	79
// METRIC FEMALE 60° CONE - DIN 3863 - DKM	
// A55A41 - FEMMINA 45° METRICA SV. 60° DIN 3863 - DKM	79
// METRIC FEMALE 45° CONE- DIN 3863 - DKM	
// A55A40 - FEMMINA 90° METRICA SV. 60° DIN 3863 - DKM	80
// 90° METRIC FEMALE 60° CONE - DIN 3863 - DKM	
// 550930 - 550940 - ESTREMITÀ TUBOLARE METRICA DIN 2353 - RSL/RSS	80
// METRIC STRAIGHT STANDPIPE - DIN 2353 - RSL/RSS	
// 559490 - 559500- ESTREMITÀ TUBOLARE METRICA 45° RSL/RSS DIN 2353	81
// 45° METRIC STANDPIPE - DIN 2353 RSL 45/RSS 45	
// 559390- 559400 ESTREMITÀ TUBOLARE METRICA 90° DIN 2353 - RLS 90/RSS	82
// 90° METRIC STANDPIPE - DIN 2353 - RLS 90/RSS	
// 55A170 - OCCHIO METRICO - RNM	83
// METRIC BANJO - RNM	
// 003020 - VITE FORATA METRICA	84
// METRIC BOLT	
// DD3020 - VITE FORATA METRICA DOPPIA	84
// DUAL METRIC BOLT	
 // SUPERTRAK- INSERTI PER IDROPULTRICE PRESSURE WASHER	
// A55100 - FEMMINA UNIVERSALE PER IDROPULTRICE	85
// UNIVERSAL FEMALE FOR PRESSURE WASHER	
 // SUPERTRAK - INSERTI SAE SAE INSERTS	
// A55004 - FEMMINA SAE SV. 45°	86
// SAE FEMALE SWIVEL 45° SEAT	
// 550180 - MASCHIO SAE CON O'RING	86
// SAE MALE SOLID - O'RING BOSS	
// 550480 - MASCHIO SAE GIREVOLE CON O'RING	87
// SAE MALE SWIVEL - O'RING BOSS	
// 550485 - MASCHIO 90° SAE GIREVOLE COMPATTO CON O'RING	87
// 90° COMPACT SAE MALE SWIVEL - O'RING BOSS	

// SUPERTRAK - INSERTI JIC 37° JIC 37° INSERTS

// 550200 - MASCHIO JIC SV. 37° - AGJ	88
// JIC MALE 37° CONE - AGJ	
// A55005 - FEMMINA JIC SV. 37° - DKJ	89
// JIC FEMALE 37° SEAT - DKJ	
// A55H05 - FEMMINA JIC SV. 37° CON CONTRO-ESAGONO - DKJ	90
// JIC FEMALE 37° SEAT WITH STEM HEXAGON - DKJ	
// A55064 - FEMMINA 45° JIC SV. 37° - DKJ 45M	91
// 45° JIC FEMALE 37° SEAT - MEDIUM DROP - DKJ 45M	
// A55053 - FEMMINA 90° JIC SV. 37° SHORT DROP - DKJ 90S	92
// 90° JIC FEMALE 37° SEAT - SHORT DROP - DKJ 90S	
// A55054 - FEMMINA 90° JIC SV. 37° MEDIUM DROP - DKJ 90M	93
// 90° JIC FEMALE 37° SEAT - MEDIUM DROP - DKJ 90M	
// A55055 - FEMMINA 90° JIC SV. 37° LONG DROP - DKJ 90L	93
// 90° JIC FEMALE 37° SEAT - LONG DROP - DKJ 90L	

// SUPERTRAK - INSERTI NPTF NPTF INSERTS

// 550170 - MASCHIO NPTF SV. 60° - AGN	94
// NPTF MALE 60° SEAT - AGN	
// 550470 - MASCHIO NPTF SV. 60° - AGN	95
// NPTF MALE 60° SEAT - AGN	
// 550990 - MASCHIO NPTF SV. 60° GIREVOLE	95
// NPTF MALE SWIVEL 60° SEAT	
// 550270 - MASCHIO 90° NPTF SV. 60° GIREVOLE COMPATTO	95
// 90° COMPACT NPTF MALE SWIVEL 60° SEAT	

// SUPERTRAK - INSERTI NPSM NPSM INSERTS

// 550490 - FEMMINA NPSM	96
// NPSM FEMALE	

// SUPERTRAK - INSERTI ORFS ORFS INSERTS

// 55A290 - MASCHIO ORFS	97
// ORFS MALE	
// A55H26 - FEMMINA ORFS CON CONTRO-ESAGONO	98
// ORFS FEMALE WITH STEM HEXAGON	
// A55A27 - FEMMINA 45° ORFS MEDIUM DROP - DK ORFS 45M	99
// 45° ORFS FEMALE MEDIUM DROP - DK ORFS 45M	
// A55A29 - FEMMINA 90° ORFS SHORT DROP - DK ORFS 90S	99
// 90° ORFS FEMALE SHORT DROP - DK ORFS 90S	
// A55A28 - FEMMINA 90° ORFS MEDIUM DROP - DK ORFS 90M	100
// 90° ORFS FEMALE MEDIUM DROP - DK ORFS 90M	
// A55A30 - FEMMINA 90° ORFS LONG DROP - DK ORFS 90L	100
// 90° ORFS FEMALE LONG DROP - DK ORFS 90L	

// SUPERTRAK - INSERTI FRANCESI FRENCH INSERTS

// 561680 - MASCHIO METRICO FRANCESE	101
// METRIC MALE FRENCH TYPE	
// A55155 - FEMMINA METRICA FRANCESE	101
// METRIC FEMALE FRENCH TYPE	
// A55157 - FEMMINA 90° METRICA FRANCESE	101
// 90° METRIC FEMALE FRENCH TYPE	

// SUPERTRAK - INSERTI JIS JIS INSERTS

// A55C04 - FEMMINA JIS CILINDRICA SV. 60° (TIPO C)	102
// JIS FEMALE 60° CONE - B 8363 (TYPE C)	
// A55C07 - FEMMINA 45° JIS CILINDRICA SV.60° (TIPO C)	102
// 45° JIS FEMALE 60° CONE - B 8363 (TYPE C)	
// A55C08 - FEMMINA 90° JIS CILINDRICA SV. 60° (TIPO C)	102
// 90° JIS FEMALE 60° CONE - B 8363 (TYPE C)	
// A55C02 - FEMMINA JIS SV. 60° B 8363 (TIPO F)	103
// JIS FEMALE 60° SEAT FLARE - B 8363 (TYPE F)	
// A55C05 - FEMMINA 45° JIS SV. 60° B 8363 (TIPO F)	103
// 45° JIS FEMALE 60° SEAT FLARE - B 8363 (TYPE F)	
// A55C06 - FEMMINA 90° JIS SV. 60° B 8363 (TIPO F)	103
// 90° JIS FEMALE 60° SEAT FLARE - B 8363 (TYPE F)	

// SUPERTRAK - INSERTI KOMATSU KOMATSU INSERTS

// A55C03 - FEMMINA KOMATSU	104
// KOMATSU FEMALE	
// 664143 - FLANGIA KOMATSU	104
// KOMATSU FLANGE	
// 664144 - FLANGIA KOMATSU 45°	104
// 45° KOMATSU FLANGE	
// 664145 - FLANGIA KOMATSU 90°	104
// 90° KOMATSU FLANGE	

// SUPERTRAK - INSERTI FLANGE SAE SAE FLANGES

// 550250 - FLANGIA SAE 3000 PSI J 518 CODE 61 - SFL	105
// FLANGE SAE 3000 PSI J518 CODE 61 - SFL	
// 550740 - FLANGIA 22° SAE 3000 PSI J518 CODE 61 - SFL 22	105
// 22° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 22	
// 550770 - FLANGIA 30° SAE 3000 PSI J518 CODE 61 - SFL 30	106
// 30° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 30	
// 550680 - FLANGIA 45° SAE 3000 PSI J518 CODE 61 - SFL 45	106
// 45° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 45	
// 55A120 - FLANGIA 60° SAE 3000 PSI J518 CODE 61 - SFL 60	107
// 60° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 60	

// 550580 - FLANGIA 90° SAE 3000 PSI J518 CODE 61 - SFL 90	107
// 90° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 90	
// 551590 - FLANGIA SAE 6000 PSI J518 CODE 62	108
// FLANGE SAE 6000 PSI J518 CODE 62	
// 551610 - FLANGIA 45° SAE 6000 PSI J518 CODE 62 - SFS 45	108
// 45° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 45	
// 551600 - FLANGIA 90° SAE 6000 PSI J518 CODE 62 - SFS 90	109
// 90° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 90	
// 0V2860 - SEMIFLANGIA SAE 3000 PSI J518 CODE 61 FHL	110
// SPLIT FLANGE CLAMP 3000 PSI J518 CODE 61 FHL	
// 0V5910 - SEMIFLANGIA SAE 6000 PSI J518 CODE 62	110
// SPLIT FLANGE CLAMP 6000 PSI J518 CODE 62	
// 0V3860 - SEMIFLANGIA INTERA SAE 3000 PSI 4 FORI J518 CODE 61 - VHL	111
// 4 HOLE FLANGE CLAMP 3000 PSI J518 CODE 61 - VHL	
// 0V6910 - SEMIFLANGIA INTERA SAE 6000 PSI 4 FORI J518 CODE 62 - VHS	111
// 4 HOLE FLANGE CLAMP 6000 PSI J518 CODE 62 - VHS	

// RACCORDI NEW POWERTRAK SERIE 29 NEW POWERTRAK FITTINGS 29 SERIES

// NEW POWERTRAK - GHIERE FERRULES

// 290000 - GHIERA NEW POWERTRAK SENZA SPELLATURA PER TUBI 4 SPIRALI	113
// NO-SKIVE MULTISPIRAL FERRULE FOR 4 SPIRAL HOSES	
// 280000 - GHIERA NEW POWERTRAK SENZA SPELLATURA PER TUBI 6 SPIRALI	113
// NO-SKIVE MULTISPIRAL FERRULE FOR 6 SPIRAL HOSES	
// SK4000 - GHIERA NEW POWERTRAK CON SPELLATURA PER TUBI 4 SPIRALI	113
// SKIVE MULTISPIRAL FERRULE FOR 4 SPIRAL HOSES	

// NEW POWERTRAK - INSERTI BSP BSP INSERTS

// 290120 - MASCHIO BSPP CILINDRICO SV. 60° - AGR	114
// BSPP MALE 60° FLARE - AGR	
// A29001 - FEMMINA BSPP CILINDRICA SV. 60° CON O'RING - DKOR	114
// BSPP FEMALE 60° CONE WITH O'RING - DKOR	
// A29061 - FEMMINA 45° BSPP CILINDRICA SV. 60° CON O'RING - DKOR 45	115
// 45° BSPP FEMALE 60° CONE WITH O'RING - DKOR 45	
// A29051 - FEMMINA 90° BSPP CILINDRICA SV. 60° CON O'RING - DKOR 90	115
// 90° BSPP FEMALE 60° CONE WITH O'RING - DKOR 90	

// NEW POWERTRAK - INSERTI METRICI DIN DIN METRIC INSERTS

// 291700 - MASCHIO METRICO SV. 24° DIN 3853 - SERIE PESANTE - CES	116
// METRIC MALE 24° SEAT - HEAVY - DIN 3853 - CES	
// A29179 - FEMMINA METRICA SV. 24° CON O'RING DIN 3865 - SERIE PESANTE - DKOS	116
// METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS	



// A29987 - FEMMINA 45° METRICA SV. 24° CON O'RING DIN 3865 - SERIE PESANTE - DKOS 45	117
// 45° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 45	
// A29977 - FEMMINA 90° METRICA SV. 24° CON O'RING DIN 3865 - SERIE PESANTE - DKOS 90	117
// 90° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 90	

// NEW POWERTRAK - INSERTI JIC 37° JIC 37° INSERTS

// 290200 - MASCHIO JIC SV. 37° - AGJ	118
// JIC MALE 37° CONE - AGJ	
// A29005 - FEMMINA JIC SV. 37° - DKJ	118
// JIC FEMALE 37° SEAT - DKJ	
// A29064 - FEMMINA 45° JIC SV. 37° - DKJ 45M	119
// 45° JIC FEMALE 37° SEAT - MEDIUM DROP - DKJ 45M	
// A29054 - FEMMINA 90° JIC SV. 37° - DKJ 90M	119
// 90° JIC FEMALE 37° SEAT - MEDIUM DROP - DKJ 90M	

// NEW POWERTRAK - INSERTI NPTF PTF INSERTS

// 290170 - MASCHIO NPTF SV. 60° - AGN	120
// NPTF MALE 60° SEAT - AGN	

// NEW POWERTRAK - INSERTI ORFS ORFS INSERTS

// 29A290 - MASCHIO ORFS	121
// ORFS MALE	
// A29A26 - FEMMINA ORFS CON CONTRO-ESAGONO	121
// ORFS FEMALE WITH STEM HEXAGON	
// A29A27 - FEMMINA 45° ORFS MEDIUM DROP - DK ORFS 45M	122
// 45° ORFS FEMALE MEDIUM DROP - DK ORFS 45M	
// A29A28 - FEMMINA 90° ORFS MEDIUM DROP - DK ORFS 90M	122
// 90° ORFS FEMALE MEDIUM DROP - DK ORFS 90M	
// A29A42 - FEMMINA 90° ORFS LONG DROP - DK ORFS 90L	122
// 90° ORFS FEMALE LONG DROP - DK ORFS 90L	

// NEW POWERTRAK - INSERTI FLANGE SAE SAE FLANGES

// 290250 - FLANGIA SAE 3000 PSI J518 CODE 61 - SFL	123
// FLANGE SAE 3000 PSI J518 CODE 61 - SFL	
// 29B370 - FLANGIA 45° SAE 3000 PSI J518 CODE 61 - SFL 45	123
// 45° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 45	
// 29B380 - FLANGIA 90° SAE 3000 PSI J518 CODE 61 - SFL 90	124
// 90° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 90	
// 29B810 - FLANGIA SAE 6000 PSI J518 CODE 62 - SFS	124
// FLANGE SAE 6000 PSI J518 CODE 62 - SFS	

// 29B470 - FLANGIA 45° SAE 6000 PSI J518 CODE 62 - SFS 45	125
// 45° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 45	
// 29B480 - FLANGIA 90° SAE 6000 PSI J518 CODE 62 - SFS 90	125
// 90° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 90	

// NEW POWERTRAK - INSERTI FLANGE SUPERCAT SUPERCAT FLANGES

// 29B830 - FLANGIA SUPERCAT	126
// 29B830 - FLANGE SUPERCAT	
// 29B550 - FLANGIA 30° SUPERCAT	126
// 29B550 - 30° FLANGE SUPERCAT	
// 29B510 - FLANGIA 45° SUPERCAT	127
// 29B510 - 45° FLANGE SUPERCAT	
// 29B560 - FLANGIA 60° SUPERCAT	127
// 29B560 - 60° FLANGE SUPERCAT	
// 29B520 - FLANGIA 90° SUPERCAT	128
// 29B520 - 90° FLANGE SUPERCAT	

// RACCORDI WATERBLAST SERIE 99 WATERBLAST FITTINGS 99 SERIES

// WATERBLAST - GHIERE FERRULES

// 990000 - GHIERA WATERBLAST CON DOPPIA SPELLATURA PER WB10L - WB15L - WB20L	130
// WATERBLAST DUAL SKIVE FERRULE FOR WB10L - WB15L - WB20L	
// 980000 - GHIERA WATERBLAST CON DOPPIA SPELLATURA PER WB20L	130
// WATERBLAST DUAL SKIVE FERRULE FOR WB20L	

// WATERBLAST - INSERTI INSERTS

// A99001 - FEMMINA BSPP SV. 60° CON O'RING	131
// BSPP FEMALE 60° WITH O'RING	
// A99002 - FEMMINA BSPP SV. 60° SENZA O'RING	131
// BSPP FEMALE 60° WITHOUT O'RING	
// A99179 - FEMM. MET. SV. 24° CON O'RING DIN 3865 SERIE PESANTE - DKOS- DADO A BATTUTA CON FORO DI SCARICO	132
// MET. FEM. 24° CONE WITH O'RING HEAVY DIN 3865 - DKOS SLIP ON NUT WITH RELIEF BORE	
// 990170 - MASCHIO NPTF SV. 60° - AGN	
// NPTF MALE 60° SEAT - AGN	133

// RACCORDI INTERLOCK SERIE 17 INTERLOCK FITTINGS 17 SERIES

// INTERLOCK - GHIERE FERRULES

// 170000 - GHIERA INTERLOCK DOPPIA SPELLATURA PER TUBI 4 SPIRALI	134
// INTERLOCK DUAL SKIVE FERRULE FOR 4 SPIRAL HOSES	
// 180000 - GHIERA INTERLOCK DOPPIA SPELLATURA PER TUBI 6 SPIRALI	134
// INTERLOCK DUAL SKIVE FERRULE FOR 6 SPIRAL HOSES	
// 180022 - GHIERA INTERLOCK DOPPIA SPELLATURA PER TUBI 6 SPIRALI	134
// INTERLOCK SPECIAL DUAL SKIVE FERRULE FOR 6 SPIRAL HOSES	

// INTERLOCK - DOPPIO INSERTO HOSE MENDER

// 170550 - DOPPIO INSERTO	135
// HOSE MENDER	

// INTERLOCK - INSERTI BSP BSP INSERTS

// 170120 - MASCHIO BSPP CILINDRICO SV. 60° - AGR	136
// BSPP MALE 60° FLARE - AGR	
// 170130 - MASCHIO BSPT - AGR K	136
// BSPT MALE - AGR K	
// A17001 - FEMMINA BSPP CILINDRICA SV. 60° CON O'RING - DKOR	136
// BSPP FEMALE 60° CONE WITH O'RING - DKOR	
// A17061 - FEMMINA 45° BSPP CILINDRICA SV. 60° CON O'RING - DKOR 45°	137
// 45° BSPP FEMALE 60° CONE WITH O'RING - DKOR 45	
// A17051 - FEMMINA 90° BSPP CILINDRICA SV. 60° CON O'RING - DKOR 90°	137
// 90° BSPP FEMALE 60° CONE WITH O'RING - DKOR 90	

// INTERLOCK - INSERTI METRICI DIN DIN METRIC INSERTS

// 171700 - MASCHIO METRICO SV. 24° DIN 3853 - SERIE PESANTE - CES	138
// METRIC MALE 24° SEAT - HEAVY - DIN 3853 - CES	
// A17179 - FEMMINA METRICA SV. 24° CON O'RING DIN 3865 - SERIE PESANTE - DKOS	138
// METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS	
// A17987 - FEMMINA 45° METRICA SV. 24° CON O'RING DIN 3865 - SERIE PESANTE - DKOS 45	139
// 45° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 45	
// A17977 - FEMMINA 90° METRICA SV. 24° CON O'RING DIN 3865 - SERIE PESANTE - DKOS 90	139
// 90° METRIC FEMALE 24° CONE WITH O'RING - HEAVY - DIN 3865 - DKOS 90	

// INTERLOCK - INSERTI JIC 37° JIC INSERTS 37°

// 170200 - MASCHIO JIC SV. 37° - AGJ	140
// JIC MALE 37° CONE - AGJ	
// A17005 - FEMMINA JIC SV. 37° - DKJ	140
// JIC FEMALE 37° SEAT - DKJ	
// A17064 - FEMMINA 45° JIC SV. 37° - DKJ 45	141
// 45° JIC FEMALE 37° SEAT - DKJ 45	
// A17054 - FEMMINA 90° JIC SV. 37° - DKJ 90	141
// 90° JIC FEMALE 37° SEAT - DKJ 90	

// INTERLOCK - INSERTI NPTF NPTF INSERTS

// 170170 - MASCHIO NPTF SV. 60° - AGN	142
// NPTF MALE 60° SEAT - AGN	

// INTERLOCK - INSERTI ORFS ORFS INSERTS

// 17A290 - MASCHIO ORFS	143
// ORFS MALE	
// A17A26 - FEMMINA ORFS CON CONTRO-ESAGONO	143
// ORFS FEMALE WITH STEM HEXAGON	
// A17A27 - FEMMINA 45° ORFS MEDIUM DROP - DK ORFS 45M	144
// 45° ORFS FEMALE - DK ORFS 45M	
// A17A28 - FEMMINA 90° ORFS MEDIUM DROP - DK ORFS 90M	144
// 90° ORFS FEMALE - DK ORFS 90M	

// INTERLOCK - INSERTI FLANGE SAE SAE FLANGES

// 170250 - FLANGIA SAE 3000 PSI J518 CODE 61 - SFL	145
// FLANGE SAE 3000 PSI J518 CODE 61 - SFL	
// 17B370 - FLANGIA 45° SAE 3000 PSI J518 CODE 61 - SFL 45	145
// 45° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 45	
// 17B380 - FLANGIA 90° SAE 3000 PSI J518 CODE 61 - SFL 90	145
// 90° FLANGE SAE 3000 PSI J518 CODE 61 - SFL 90	
// 17B810 - FLANGIA SAE 6000 PSI J518 CODE 62 - SFS	146
// FLANGE SAE 6000 PSI J518 CODE 62 - SFS	
// 17B470 - FLANGIA 45° SAE 6000 PSI J518 CODE 62 - SFS 45	146
// 45° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 45	
// 17B480 - FLANGIA 90° SAE 6000 PSI J518 CODE 62 - SFS 90	147
// 90° FLANGE SAE 6000 PSI J518 CODE 62 - SFS 90	
// 18B810 - FLANGIA SAE 6000 PSI J518 CODE 62 - SFS - VERSIONE SPECIALE	148
// FLANGE SAE 6000 PSI J518 CODE 62 - SFS - SPECIAL VERSION	

// NOTE NOTES

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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