FIRG SERIES

PREMIER RANGE

INTRODUCTION

Holmbury FIRG Series couplings were first introduced in 1982. Their early success was due to good performance, long life and competitive prices. As a result of their ongoing development programme, the couplings have over the years maintained a superb track record.

In 1992 a major upgrade was introduced and the name Premier Range added to reflect the dominant position of the FIRG Series couplings in the market. In terms of flow rate and pressure drop characteristics, the FIRG Series has now been eclipsed by the Holmbury A Series Premier Plus Range. However, for many applications the FIRG Series still offers the optimum balance between price and performance.

The ISO/DIS 16028 Standard is based on the FIRG Series, since it s the most widely used type of flat face coupling with a proven track record.

For connection under pressure please refer to either the APM Series of Quick Release Male Couplings on page 12 or the VEP Series Screwed Coupling on page 10.

APPLICATIONS

Where clean connections are required despite dusty or dirty conditions. The anti-brinelling features enable them to operate successfully in the applications involving high pressure pulses.

User industries include: agriculture, construction plant, mobile equipment, general industrial, nuclear and mining.

OPERATION

To couple, wipe the mating faces clean and push the two halves together until they click shut. Twist the sleeve and the coupling is locked. To release, align the notched sleeve with the ball, pull back the sleeve and the coupling springs apart.

ANTI-BRINELLING FEATURES

- ★ 12 ball locking mechanism in the 1/4″, 3/8″, 1/2″, 1/2″A, 1″ and $1^{1}/_{4}$″ couplings.
- ★ 15 ball locking mechanism in 3/4″ and 3/4″ B couplings.
- ★ 18 and 20 balls in the $1^{1}/_{2}$″ and 2″ couplings respectively.
- ★ Close tolerance male and female mating diameters to ensure equal ball loading.

ADVANTAGES

- ★ Flat mating faces are easily wiped clean to prevent the ingress of contaminants.
- ★ Streamlined internal flow path minimises the pressure drop.
- ★ Non-spill design avoids fluid loss during connection and disconnection.
- ★ No air intrusion during connection.
- ★ Locking sleeve prevents accidental disconnection.
- ★ Bi-directional flow.
- ★ Sizes 3/8″ and 1/2″ comply with HTMA interface requirements and are recommended by the BHTMA for use in equipment manufactured by its members.
- ★ Conforms to proposals currently included in the ISO/DIS 16028 Standard.

PREMIER FEATURES

- ★ Robust construction. High working and burst pressure ratings. Excellent fatigue life.
- ★ Female coupling seal swaged-in to prevent extrusion under pressure.
- ★ Dynamic seal geometry in male couplings allows bi-directional flow.

PRESSURE RATINGS (BAR)

COUPLING SIZE	1/4"	3/8"A	3/8"	1/2"	1/2"A	3/4"	3/4"B	1"	1¼"	1½"	2"
Maximum working pressure coupled	315	315	300	300	250	250	250	250	250	200	180
Burst pressure coupled	Over 1200	Over 1200	Over 1200	Over 1200	Over 1000	Over 1000	900	850	850	700	700
Burst pressure male	Over 1200	Over 1200	Over 1200	Over 1200	Over 1000	Over 1000	900	920	920	700	700
Burst pressure female	600	600	600	600	400	400	400	400	400	300	300

COUPLING ORDER CODE

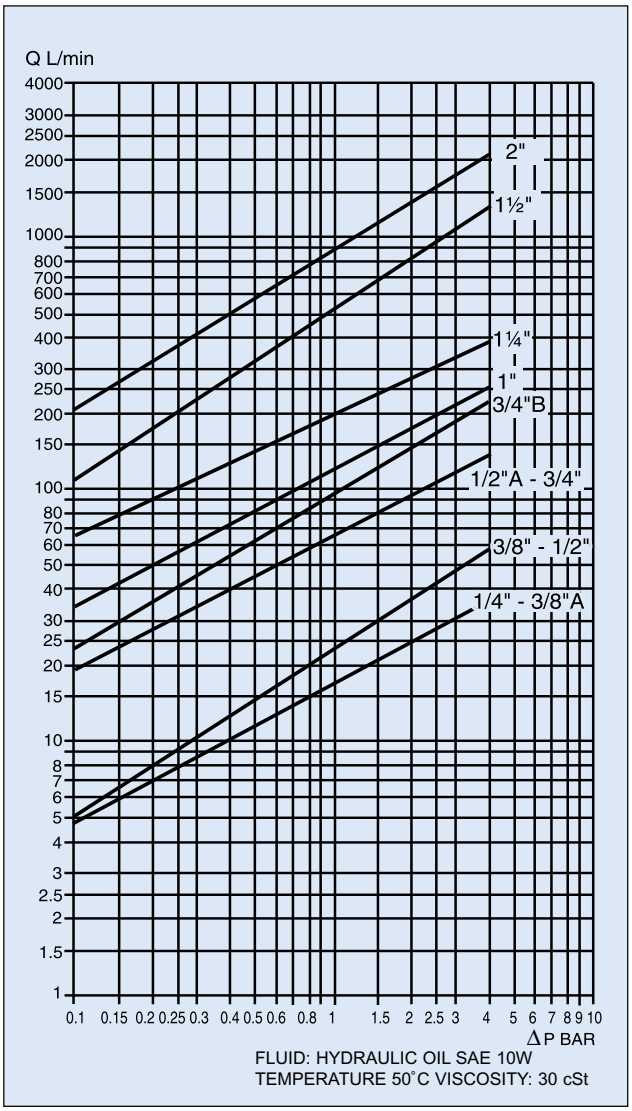
* M= Male Coupling F= Female Coupling

FIRG ** Coupling Size

* Seal Material *See table below*

* Thread BSP or NPT

PRESSURE DROP CHARACTERISTICS

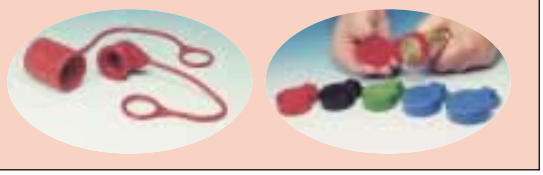


FLUID: HYDRAULIC OIL SAE 10W
TEMPERATURE 50˚C VISCOSITY: 30 cSt

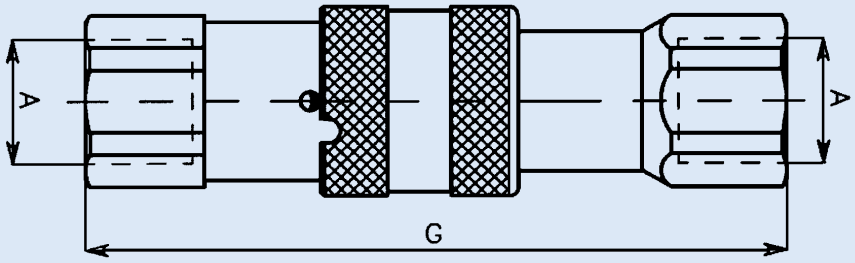
SEAL MATERIALS AND OPERATING TEMPERATURES

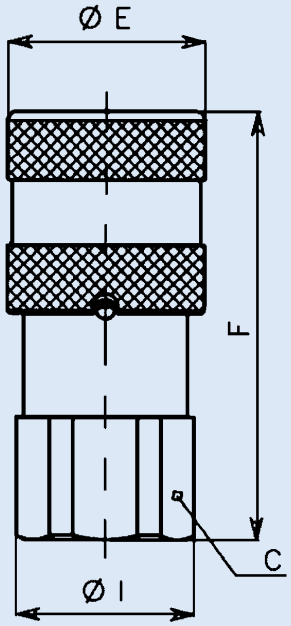
Seal Material Code	Seal Material	Maximum Temperature	Minimum Temperature
N	Nitrile	100˚C	-20˚C
NEO	Neoprene	90˚C	-40˚C
EP	EPDM	150˚C	-40˚C
V	Viton	180˚C	-15˚C
FS	Fluorosilicone	150˚C	-50˚C
K	Kalrez	300˚C	-25˚C

DUST CAPS - SEE PAGE 48

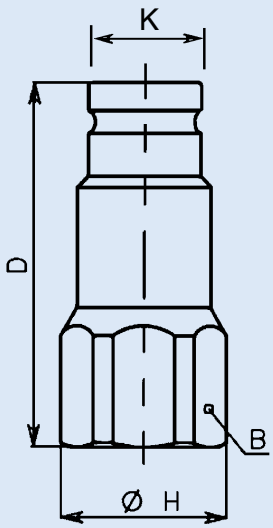


HOLMBURY PREMIER RANGE, FIRG SERIES





Female



Male

Dimensions in mm

DIMENSIONS

Type and Size	Nominal diameter	A	B	C	D	E	F	G	H	I	K nominal	Weight (kg)
FIRG14	7	1/4"	22	22	48	28	48	85.5	25.5	24	16.2	0.25
FIRG38A	7	3/8"	22	22	48	28	48	85.5	25.5	24	16.2	0.25
FIRG38	9	3/8"	24	27	60	32	64.5	108.5	26	29	19.8	0.4
FIRG12	9	1/2"	27	27	62.5	32	69.5	116	29	29	19.8	0.4
FIRG12A	13	1/2"	32	32	68	38	73.5	125	34	34	24.5	0.65
FIRG34	13	3/4"	36	36	70.5	38	80.5	134.5	38.5	38.5	24.5	0.68
FIRG34B	15	3/4"	36	36	70.5	42	80.5	134.5	38.5	38.5	27	0.8
FIRG100	17	1"	45	45	82.5	48	82.5	154	48	48	30	1.22
FIRG114	21	1¼"	55	55	90	55	105.5	173	60	60	36	1.92
FIRG112	30	1½"	70	65	111	80	132	215	76	72	57	4.5
FIRG200	45	2"	75	80	125	100	165	250	83.5	88.5	73	7

FL SERIES

STAINLESS STEEL
FLAT FACE COUPLINGS

INTRODUCTION

FL Series couplings have been designed for applications involving the transmission of corrosive fluids and/or operation in corrosive environments. One of the most important benefits of these couplings is no fluid spillage on disconnection. Holmbury flat face couplings have been produced since 1984. Over the years, extensive experience has been gained in the design, manufacture and application of these products. Consequently, Holmbury couplings have won design innovation awards and are widely regarded as the World's leading brand of flat face coupling.

APPLICATIONS

Holmbury FL Series Stainless Steel Couplings have a high resistance to corrosion and are suitable for use with many fluids which include: acids, gas, and demineralized water. They are the ideal choice for many industries such as marine, food, gas, chemical and pharmaceutical.

ADVANTAGES

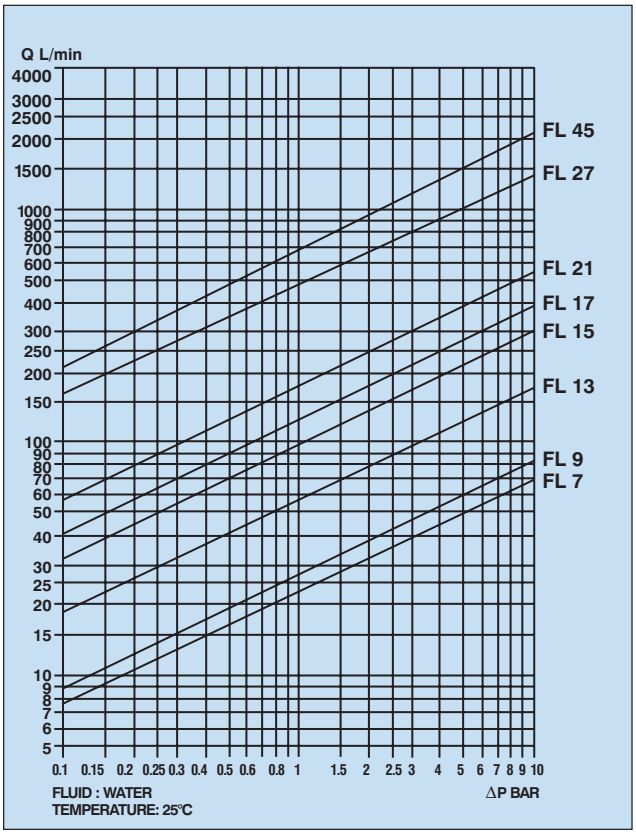
- ★ Flat faces can easily be wiped clean before connection to prevent the ingress of contaminants into the circuit.
- ★ Clean disconnection - non-spill design.
- ★ No air intrusion during connection.
- ★ Streamlined flow path minimizes pressure drop.
- ★ Locking sleeve prevents accidental disconnection.
- ★ Bi-directional flow

MATERIALS

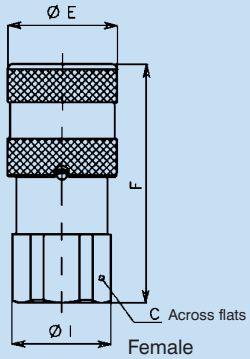
Body and structural components - AISI 316*
Spring guide in male coupling - brass
Springs - AISI 302
Locking balls - AISI 316
Seals - Viton and PTFE as standard, see Operating Temperature table for full listing.

** AISI 303 is available as a special option for large quantities, e.g. 100 or more units.*

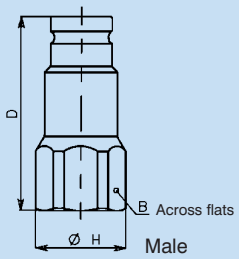
PRESSURE DROP CHARACTERISTICS



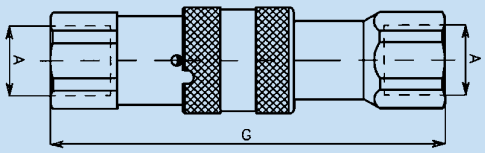
FL SERIES, FLAT FACE COUPLINGS



Female



Male



Dimensions in mm

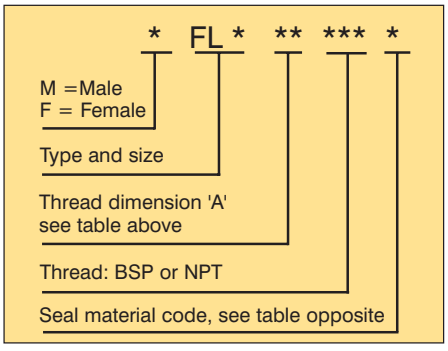
DIMENSIONS AND PRESSURE RATINGS

Type and size	Nominal diameter of hose in mm	Maximum working pressure (bar)	Burst pressure coupled (bar)	Burst pressure male (bar)	Burst pressure female (bar)	A	B	C	D	E	F	G	H	I	Connection force (N)	Weight (kg)
FL 7	7 (1/4")	200	800	1300	600	1/4"	22	22	48	28	48	85.5	24	24	179	0.20
FL 9	9 (3/8")	200	800	1250	800	3/8"	24	27	60	32	64.5	109	26	29	173	0.35
FL 9	9 (1/2")	200	800	1250	800	1/2"	27	27	62.5	32	69.5	116.5	29	29	173	0.35
FL13	13 (1/2")	170	700	1000	700	1/2"	32	32	68	38	73.5	125	34	34	181	0.48
FL13	13 (3/4")	170	700	1000	700	3/4"	36	36	70.5	38	80.5	134.5	38.5	38.5	181	0.48
FL15	15 (3/4")	140	600	850	500	3/4"	36	36	70.5	42	78	132	38.5	38.5	195	0.5
FL17	17 (1")	140	600	900	600	1"	45	45	82.5	48	92.5	154	48	48	244	1.0
FL 21	21 (1¼")	110	450	750	500	1¼"	55	55	90	55	105	173	60	60	304	1.5
FL 27	30 (1½")	90	400	750	400	1½"	70	65	111	80	132.5	215	76	72	427	4.5
FL 45	45 (2")	90	400	750	400	2"	75	80	125	100	165	250	83.5	88.5	450	7.0

OPERATING TEMPERATURE TABLE

Seal Material Code	Seal Material	Maximum temperature	Minimum temperature	Maximum pressure at max temperature
N	Nitrile	100°C	-20°C	140 bar
NEO	Neoprene	90°C	-40°C	80 bar
EP	EPDM	150°C	-40°C	140 bar
V	Viton	180°C	-15°C	140 bar
FS	Fluorosilicone	150°C	-50°C	140 bar
K	Kalrez	300°C	-25°C	80 bar

ORDER CODES



DUST CAPS - SEE PAGE 52

FIRG QPQ SERIES
FLAT FACE COUPLINGS

INTRODUCTION

QPQ treatment provides a corrosion resistant finish that is superior to passivated zinc plating and of lower cost than couplings produced entirely from stainless steel.

In DIN 50021 salt water spray tests, Tuffrider® QPQ surface hardening treatment has proved to have superior corrosion resistance properties than either electrostatic zinc or hard chrome plating. (The term QPQ is derived from Quench-Polish-Quench).

Holmbury flat face couplings have been produced since 1984. Over the years, extensive experience has been gained in the design, manufacture and application of these products. Consequently, Holmbury couplings have won design innovation awards and are widely regarded as the World's leading brand of flat face coupling.

Tuffrider ®is a registered trademark of Degussa AG

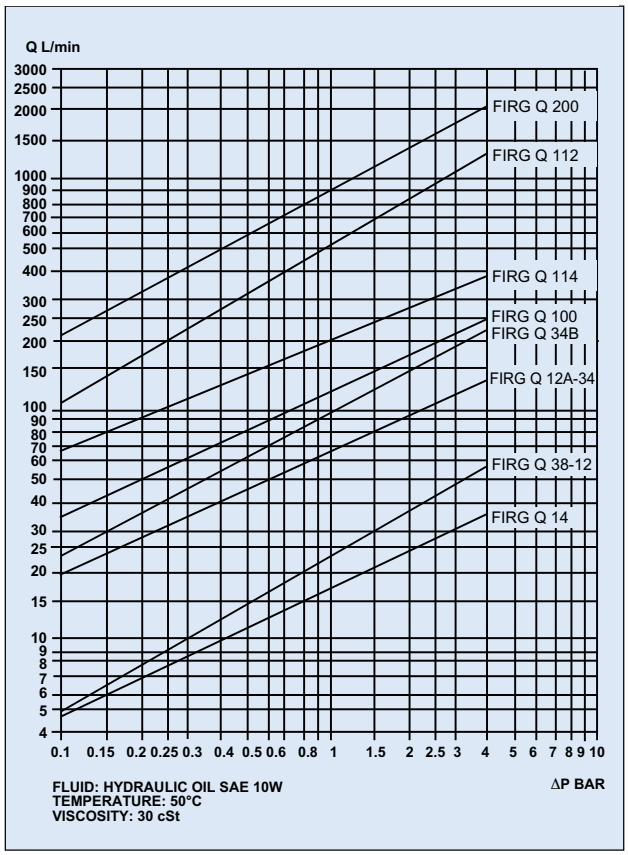
APPLICATIONS

Holmbury FIRG QPQ Series Couplings are suitable for use in systems operating on mineral oil, water and other mildly corrosive fluids. They are ideal for applications involving corrosive environments where the cost of stainless steel couplings is prohibitive.

ADVANTAGES

★ Flat faces can easily be wiped clean before connection to prevent the ingress of contaminants into the circuit.
★ Clean disconnection - non-spill design.
★ No air intrusion during connection.
★ Streamlined flow path minimizes pressure drop.
★ Locking sleeve prevents accidental disconnection.
★ Bi-directional flow

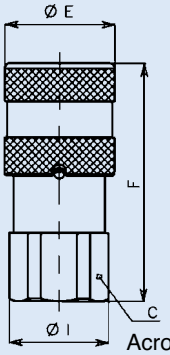
PRESSURE DROP CHARACTERISTICS



Tel: 01732 357333 Fax: 01732 357666

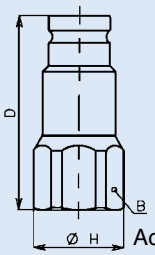
FIRG QPQ SERIES, FLAT FACE COUPLINGS

Female

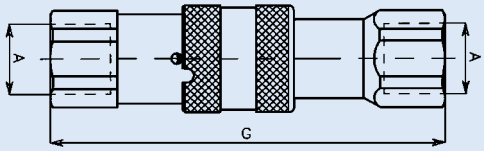


Across flats

Male



Across flats



Dimensions in mm

DIMENSIONS AND PRESSURE RATINGS

Type and Size	Nominal diameter	Maximum working pressure (bar)	Burst pressure coupled (bar)	Burst pressure male (bar)	Burst pressure female (bar)	A	B	C	D	E	F	G	H	I	Connection force (N)	Weight (kg)
FIRG14 Q	7	300	1200	1600	500	1/4	22	22	48	28	48	85.5	24	24	179	0.20
FIRG38 Q	9	300	1200	1650	750	3/8	24	27	60	32	64.5	109	26	29	173	0.35
FIRG12 Q	9	300	1200	1650	750	1/2	27	27	62.5	32	69.5	116.5	29	29	173	0.35
FIRG12A Q	13	250	1200	1600	600	1/2	32	32	68	38	73.5	125	34	34	181	0.475
FIRG34 Q	13	250	1200	1600	600	3/4	36	36	70.5	38	80.5	134.5	38.5	38.5	181	0.475
FIRG34B Q	15	250	1000	1400	550	3/4	36	36	70.5	42	78	132	38.5	38.5	195	0.5
FIRG100 Q	17	250	850	1100	450	1	45	45	82.5	48	92.5	154	48	48	244	1.00
FIRG114 Q	21	250	850	1100	600	1¼	55	55	90	55	105	173	60	60	304	1.5
FIRG112 Q	30	200	700	850	400	1½	70	65	111	80	132.5	215	76	72	427	4.5
FIRG200 Q	45	180	700	700	400	2	75	80	125	100	165	250	83.5	88.2	488	8.5

MATERIALS

FIRG QPQ Series Couplings have QPQ treated carbon steel bodies with stainless steel and brass internal components. Seal materials are Viton and PTFE.

DUST CAPS - SEE PAGE 48

ORDER CODES

FIRG ** Q * *** *

- FIRG ** Q: Type and Size see table above
- *: Thread dimension `A' see table above
- ***: Thread: NPT or BSP
- *: No symbol for whole coupling. M = Male F = Female

DUST CAPS & PLUGS

FLIP TOP PLASTIC CAPS FOR FIRG, 'A' SERIES & PP SERIES FEMALE COUPLINGS

FIRG Size	'A' Series Size	PP Series	Colours available	Order Number
3/8" & 1/2"	A9	–	Red & black	F T9 CAP + colour
1/2"A & 3/4"	A13	All sizes	Red, black, green, brown and orange	F T13 CAP + colour
3/4"B	A15	–	Blue	F T15 CAP + colour
1"	A17	–	Blue	F T17 CAP + colour

Material: Nylon 6 **Temperature Range:** –30°C to +100°C

PLASTIC CAPS FOR FIRG & 'A' SERIES COUPLINGS

FIRG Size	'A' Series Size	Order Number CAP for male	Order Number CAP for female
1/4" & 3/8"A	A7	M D7B CAP	F P7B CAP
3/8"	A9	M D9C CAP	F P9D CAP
1/2"	A9	M D90 CAP	F P9D CAP
1/2"A	A13	M D13D CAP	F P13D CAP
3/4"	A13(1/2")	M D13F CAP	F P13F CAP
3/4"B	A15 (3/4")	M D15F CAP	F P15F CAP
1"	A17	M D17G CAP	F P17G CAP
1¼"	A21	M D21H CAP	F P21H CAP
1½"	A30	M D27I CAP	F P27I CAP
2"	–	M D30J CAP	F P30J CAP

Material: PVC **Colour:** Red only **Temperature Range:** –30°C to +100°C

ALUMINIUM CAPS & PLUGS FOR VEP SERIES COUPLINGS

Coupling	Order Number CAP for male Natural aluminium	Order Number PLUG for female Natural aluminium	Order Number CAP for male Red	Order Number PLUG for female Red
VEP 7	M VEP 7NA CAP	F VEP 7NA PLUG	M VEP 7R CAP	F VEP 7R PLUG
VEP 9	M VEP 9NA CAP	F VEP 9NA PLUG	M VEP 9R CAP	F VEP 9R PLUG
VEP 13	M VEP 13NA CAP	F VEP 13NA PLUG	M VEP 13R CAP	F VEP 13R PLUG
VEP 15	M VEP 15NA CAP	F VEP 15NA PLUG	M VEP 15R CAP	F VEP 15R PLUG
VEP 17	M VEP 17NA CAP	F VEP 17NA PLUG	M VEP 17R CAP	F VEP 17R PLUG
VEP 21	M VEP 21NA CAP	F VEP 21NA PLUG	M VEP 21R CAP	F VEP 21R PLUG
VEP 30	M VEP 30NA CAP	F VEP 30NA PLUG	M VEP 30R CAP	F VEP 30R PLUG

STEEL CAPS & PLUGS FOR HPA SERIES COUPLINGS

Coupling	Order Number CAP for male	Order Number PLUG for female
HPA 14	M HPA 14 CAP	F HPA 14 PLUG
HPA 38	M HPA 38 CAP	F HPA 38 PLUG

DUST CAPS & PLUGS

STEEL CAPS & PLUGS FOR TGW SERIES COUPLINGS

Coupling	Order Number CAP for male	Order Number PLUG for female
TGW 14	M TGW 14 CAP	F TGW 14 PLUG
TGW 38	M TGW 38 CAP	F TGW 38 PLUG
TGW 12	M TGW 12 CAP	F TGW 12 PLUG
TGW34	M TGW 34 CAP	F TGW 34 PLUG
TGW 100	M TGW 100 CAP	F TGW 100 PLUG
TGW 114	M TGW 114 CAP	F TGW 114 PLUG
TGW 112	M TGW 112 CAP	F TGW 112 PLUG
TGW 200	M TGW 200 CAP	F TGW 200 PLUG

PLASTIC CAPS & PLUGS FOR ISO.A COUPLINGS

Coupling	Order Number CAP for male	Order Number PLUG for female
ISO.A 14	TFB 14	TMB 14
ISO.A 38	TFB 38	TMB 38
ISO.A 12	TF 12	TM 12
ISO.A 34	TFB 34	TMB 34
ISO.A 100	TFB 100	TMB 100

Material: PVC **Colour:** Red only **Temperature Range:** –30°C to +100°C

PLASTIC CAPS & PLUGS FOR DIN SERIES COUPLINGS

Coupling	Order Number CAP for male	Order Number PLUG for female
DIN 14	TF 14	TM 14
DIN 38	TF 38	TM 38
DIN 12	TF 12	TM 12
DIN 34	TF 34	TM 34
DIN 100	TF 100	TM 100

Material: PVC **Colour:** Red only **Temperature Range:** –30°C to +100°C

STEEL CAPS & PLUGS FOR VCR SERIES TIPPER COUPLINGS

Coupling	OrderNumber CAP for male	Order Number PLUG for female
VCR 34 (3/4")	M VCR 34 CAP	F VCR 34 PLUG
VCR 100 (1")	M VCR 100 CAP	F VCR 100 PLUG