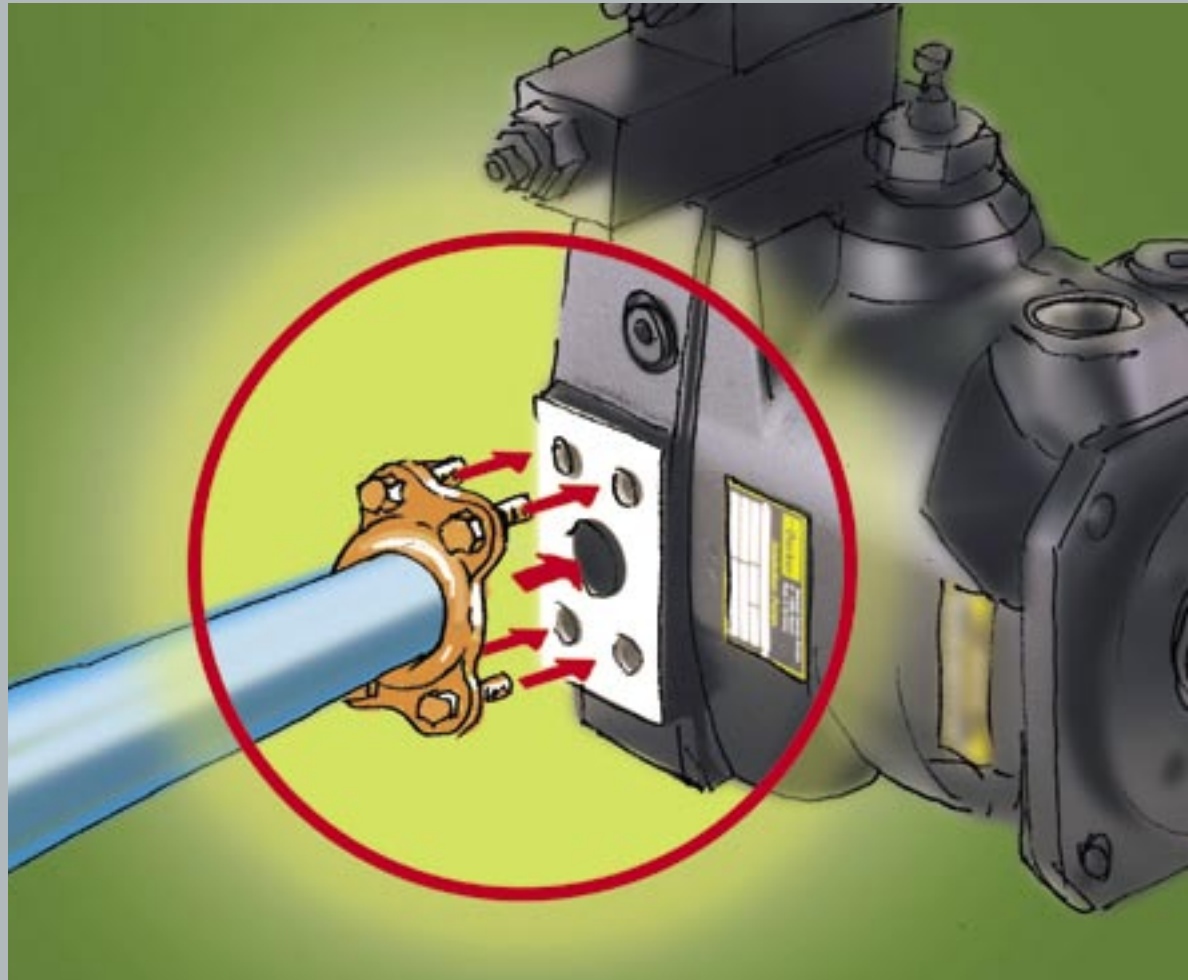
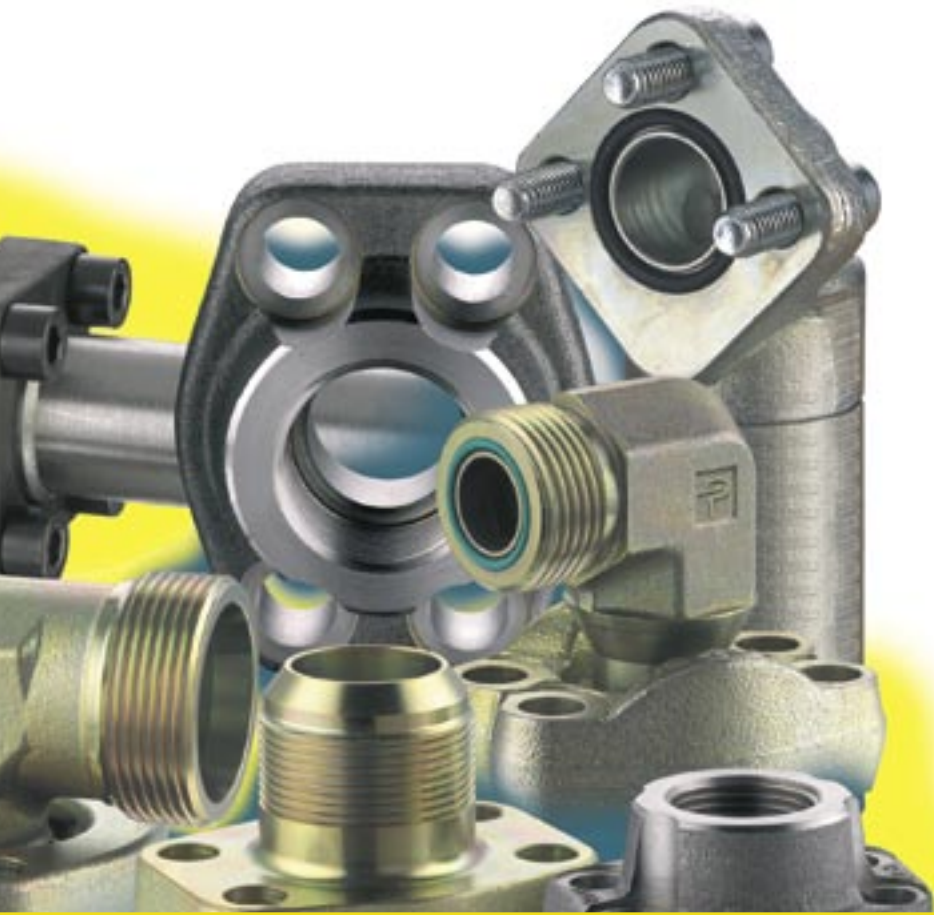




Pumps and Flanges

Bulletin 4040/UK



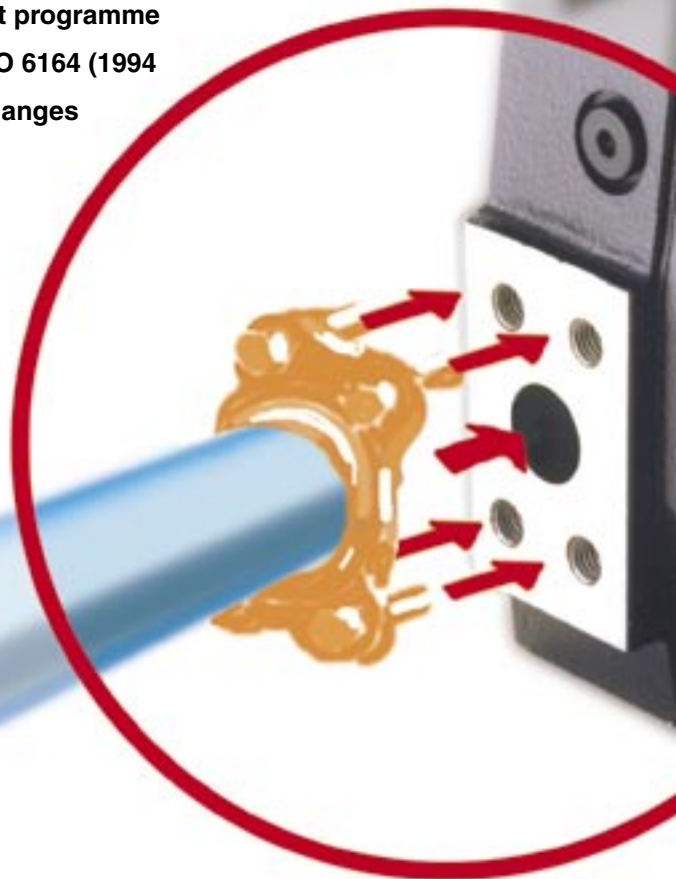


Flange pump and from a single sou

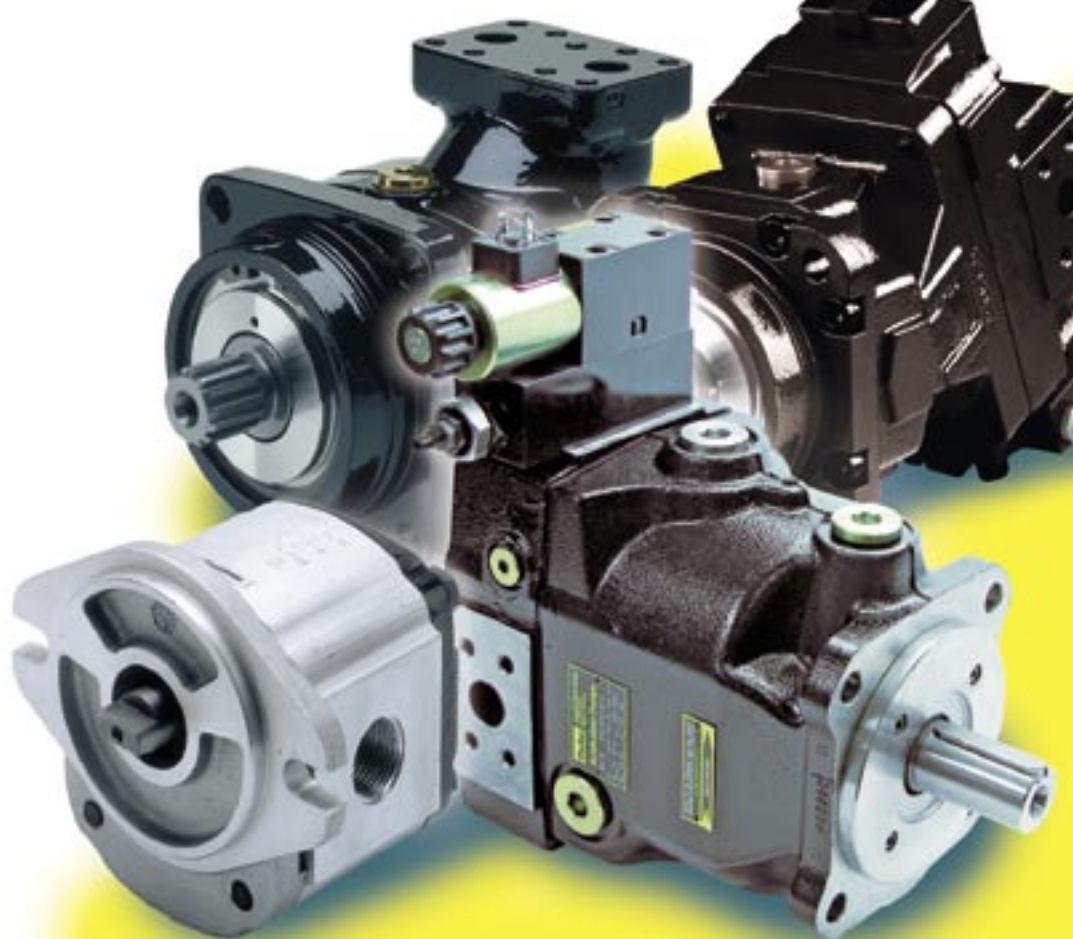
The importance of flanges is frequently underestimated; through these structural components it is possible to join tubes and hoses, as well as fittings, to a standard SAE 4 - bolt pattern within a hydraulic system, with a highly reliable connection. When it comes to attaching hydraulic components to additional units such as, pumps, motors or valve blocks, nothing replaces flanges as the best connecting system. If even higher pressures and diameters above 42mm O.D. have to be accommodated in the design of the unit, flanges become an indispensable design element.

Parker Hannifin GmbH & Co. KG offers a broad flange programme. Beginning with SAE flanges made in accordance with ISO 6162-1 and ISO 6162-2 (compatible with SAE J518), the product programme spans square flanges to ISO 6164 (1994 status) through to square flanges conforming to CETOP.

The range is rounded off with a large gear pump flange programme in both steel and aluminium. Additionally, Parker offers a complete



ges, mps motors rce...



adaptor range which can be combined with five different flange halves. The ISO 6162-1 and ISO 6162-2 flange spectrum is


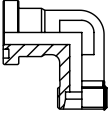
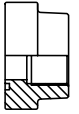
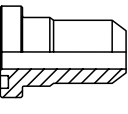
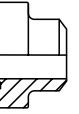
offered also in forged full flange versions. Furthermore, all flange elements required for industrial hydraulic plant can be supplied in all common thread and welding versions in sizes ½" - 5", for pressure ranges up to 420 bar (6.000 psi). The complete SAE flange collection is available in steel and stainless steel. Individual product solutions are offered for special requirements not covered by the standard flange programme. On the following pages there is a review of the flanges which give optimal connections to the Parker pump / motor programme.

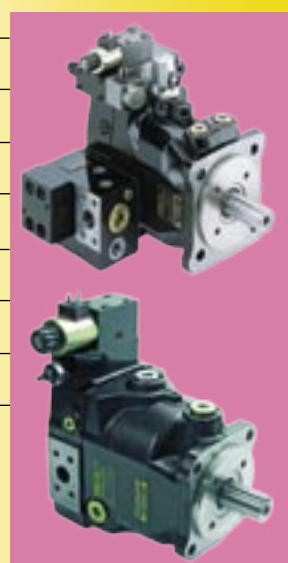
...an important way to reduce costs.



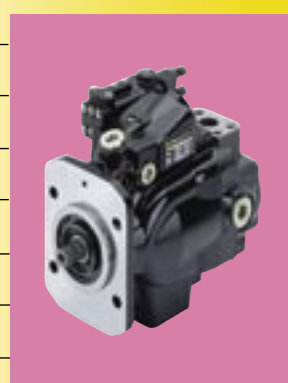
Axial and pump pro

Commonest flange system examples

Suction side					
3000 PSI	FHS*1 2 Stk.	GFS/WFS/PFF-...S/L *2 *3	PFF-G	AS*2	PAFS-B
3000psi 1 1/4" (M10)	FHS35/10CFX	WFS35/30S/10OMDCF GFS35/30S/10OMDCF	PFF35GSM	AS35/35X2SM	PAFS104BSM
3000psi 1 1/2" (M12)	FHS36CFX	WFS36/35LOMDCF GFS36/35LOMDCF	PFF36GSM	AS36/42X3SM	PAFS106BSM
3000psi 1 1/2" (M12)	FHS36CFX	WFS36/35LOMDCF GFS36/35LOMDCF	PFF36GSM	AS36/42X3SM	PAFS106BSM
3000psi 2" (M12)	FHS38/12CFX	PFF38/38SOMDCF	PFF38GSM	AS38/50X6SM	PAFS108BSM
3000psi 2" (M12)	FHS38/12CFX	PFF38/38SOMDCF	PFF38GSM	AS38/50X6SM	PAFS108BSM
3000psi 2 1/2" (M12)	FHS310CFX	X	PFF310GSM	AS310/74X5.5SM	PAFS110BSM
3000psi 2 1/2" (M12)	FHS310CFX	X	PFF310GSM	AS310/74X5.5SM	PAFS110BSM
3000psi 3 1/2" (M16)	FHS314CFX	X	PFF314GSM	AS314/102X7SM	PAFS114BSM



3000 PSI					
3000psi 2" (M12)	FHS38/12CFX	PFF38/38SOMDCF	PFF38GSM	AS38/50X6SM	PAFS108BSM
3000psi 2" (M12)	FHS38/12CFX	PFF38/38SOMDCF	PFF38GSM	AS38/50X6SM	PAFS108BSM
3000psi 2 1/2" (M12)	FHS310CFX	X	PFF312GSM	AS310/74X5.5SM	PAFS110BSM
3000psi 2 1/2" (M12)	FHS310CFX	X	PFF312GSM	AS310/74X5.5SM	PAFS110BSM
3000psi 2" (M12)	FHS38/12CFX	PFF38/38SOMDCF	PFF38GSM	AS38/50X6SM	PAFS108BSM
3000psi 2 1/2" (M12)	FHS310CFX	X	PFF312GSM	AS310/74X5.5SM	PAFS110BSM
3000psi 2 1/2" (M12)	FHS310CFX	X	PFF312GSM	AS310/74X5.5SM	PAFS110BSM



6000 PSI					
6000psi 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
6000psi 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
6000psi 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
6000psi 1" (M12)	FHS64CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM
6000psi 1 1/4" (M12)	FHS65/12CFX	WFS65/25S/12OMDCF GFS65/25S/12OMDCF	PFF65/12GSM	AS65/12/30X4SM	PAFS404/12BSM



6000 PSI					
6000psi 1 1/2" (M16)	FHS66/12CFX	WFS66/30SOMDCF GFS66/30SOMDCF	PFF66GSM	AS66/38X5SM	PAFS405BSM
6000psi 1 1/2" (M16)	FHS66/12CFX	WFS66/30SOMDCF GFS66/30SOMDCF	PFF66GSM	AS66/38X5SM	PAFS405BSM



*1 Single flange half, without bolts: for flange adaptor - see catalogue 4100, chapter M.

*2 Tube connection shown as example only. For different tube connection options - see catalogue 4100, chapter M.

*3 WFS = angle flange, GFS and PFF = straight flange.

X Design not possible.

Commonest flange system examples

	Pressure side					
		FHS *1 2 Stk	GFS/WFS/PFF-...S/L *2 *3	PFF-G	AS *2	PAFS-B
6000 PSI						
PV016-028 (M10)	6000psi 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
PV032-046 (M12)	6000psi 1" (M12)	FHS64CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM
PV076 (M12)	6000psi 1" (M12)	FHS64CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM
PV063-100 (M12)	6000psi 1 1/4" (M12)	FHS65/12CFX	WFS65/25S/12OMDCF GFS65/25S/12OMDCF	PFF65/12GSM	AS65/30X4/12SM	PAFS404/12BSM
PV063-100 (M14)	6000psi 1 1/4" (M14)	FHS65CFX	WFS65/25SOMDCF GFS65/25SOMDCF	PFF65GSM	AS65/30X4SM	PAFS404BSM
PV140-180 (M12)	6000psi 1 1/4" (M12)	FHS65/12CFX	WFS65/25S/12OMDCF GFS65/25S/12OMDCF	PFF65/12GSM	AS65/30X4/12SM	PAFS404/12BSM
PV140-180 (M14)	6000psi 1 1/4" (M14)	FHS65CFX	WFS65/25SOMDCF GFS65/25SOMDCF	PFF65GSM	AS65/30X4SM	PAFS404BSM
PV270 (M16)	6000psi 1 1/2" (M16)	FHS66CFX	WFS66/30SOMDCF GFS66/30SOMDCF	PFF66GSM	AS66/38X5SM	PAFS405BSM
6000 PSI						
P2060 (M12)	6000psi 1" (M12)	FHS65CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM
P2075 (M12)	6000psi 1" (M12)	FHS65CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM
P2105 (M12)	6000psi 1 1/4" (M12)	FHS65/12CFX	WFS65/25S/12OMDCF GFS65/25S/12OMDCF	PFF65/12GSM	AS65/30X4SM	PAFS404BSM
P2145 (M12)	6000psi 1 1/4" (M12)	FHS65/12CFX	WFS65/25S/12OMDCF GFS65/25S/12OMDCF	PFF65/12GSM	AS65/30X4SM	PAFS404BSM
P3075 (M12)	6000psi 1" (M12)	FHS64CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM
P3105 (M12)	6000psi 1 1/4" (M12)	FHS65/12CFX	WFS65/25S/12OMDCF GFS65/25S/12OMDCF	PFF65/12GSM	AS65/30X4/12SM	PAFS404/12BSM
P3145 (M12)	6000psi 1 1/4" (M12)	FHS65/12CFX	WFS65/25S/12OMDCF GFS65/25S/12OMDCF	PFF65/12GSM	AS65/30X4/12SM	PAFS404/12BSM
6000 PSI						
F12-030	6000psi 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
F12-040	6000psi 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
F12-060	6000psi 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
F12-080	6000psi 1" (M12)	FHS64CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM
F12-110	6000psi 1 1/4" (M12)	FHS65/12CFX	WFS65/25S/12OMDCF GFS65/25S/12OMDCF	PFF65/12GSM	AS65/30X4/12SM	PAFS404/12BSM
6000 PSI						
F11-150	6000psi 1 1/2" (M16)	FHS66CFX	WFS66/30SOMDCF GFS66/30SOMDCF	PFF66GSM	AS66/38X5SM	PAFS405BSM
F11-250	6000psi 1 1/2" (M16)	FHS66CFX	WFS66/30SOMDCF GFS66/30SOMDCF	PFF66GSM	AS66/38X5SM	PAFS405BSM

*1 Single flange half, without bolts: for flange adaptor - see catalogue 4100, chapter M.


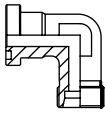
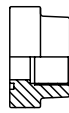
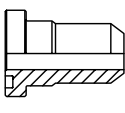
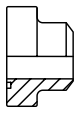
*2 Tube connection as example only. For further tube connections - see catalogue 4100, chapter M.

*3 WFS = Elbow flange, GFS and PFF = straight flange.

X = Design not possible.

Motor programme

Commonest flange system examples

					
	FHS *1	GFS/WFS/PFF...S/L *2 *3	PFF-G	AS *2	PAFS-B



F12-030	2 x 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
F12-040	2 x 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
F12-060	2 x 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
F12-080	2 x 1" (M12)	FHS64CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM
F12-110	2 x 1 1/4" (M12)	FHS65/12CFX	WFS65/25S/12OMDCF GFS65/25S/12OMDCF	PFF65GSM	AS65/30X4SM	PAFS404BSM



F11-150	2 x 1 1/2" (M16)	FHS66CFX	WFS66/30SOMDCF GFS66/30SOMDCF	PFF66GSM	AS66/38X5SM	PAFS405BSM
F11-250	2 x 1 1/2" (M16)	FHS66CFX	WFS66/30SOMDCF GFS66/30SOMDCF	PFF66GSM	AS66/38X5SM	PAFS405BSM



V12-060	2 x 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
V12-080	2 x 3/4" (M10)	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
	oder 2 x 1" (M10)	FHS64CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM



T12-060	2 x 3/4"	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
T12-080	2 x 1"	FHS64CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM



V14-110	2 x 1"	FHS64CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM
V14-160	2 x 1 1/4"	FHS65/12CFX	WFS65/25S/12OMDCF GFS65/25S/12OMDCF	PFF65GSM	AS65/30X4SM	PAFS404BSM

*1 Single flange half, without bolts: for flange adaptor - see catalogue 4100, chapter M.

*2 Tube connection as example only. For further tube connections - see catalogue 4100, chapter M.

*3 WFS = Elbow flange, GFS and PFF = straight flange.

X = Design not possible.



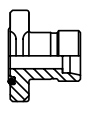
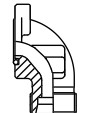
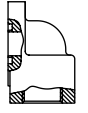
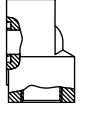
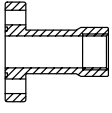
Gear pumps


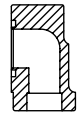
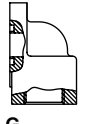
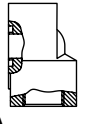
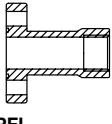
Commonest flange system examples


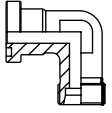
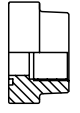
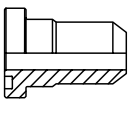
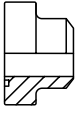
Pump and motor connection part numbers (eg PGP511A0100C A1H2NL2L1B1B1)



PGP/M 503
PGP/M 505
PGP/M 511
PGP/M 517
PGP/M 520
PGP/M 620
PGP/M 640

	 BFG *2	 BFW *2	 BFW3-G *2	 PWDS-G *2	 PFL *2
J1; squ flange, 8mm bore, pitch circle 26mm, 4xM5	X	X	BFW3-G38/LK26A3KM	X	X
J2; squ flange, 10mm bore, pitch circle 26mm, 4xM5	X	X	BFW3-G38/LK26A3KM	X	X
J3; squ flange, 8mm bore, pitch circle 30mm mit 4xM6	X	X	BFW3-G38/LK30A3KM	PWDS-G38/LK30AM	PFL1A3KM
J4; squ flange, 12mm bore, pitch circle 30mm, 4xM6	X	X	BFW3-G38/LK30A3KM	PWDS-G38/LK30AM	PFL1A3KM
J5; squ flange, 15mm bore, pitch circle 35mm, 4xM6	BFG15L/LK35OMDCF	BFW15L/LK35OMDCF	X	PWDS-G38/LK35AM	X
J6; squ flange, 15mm bore, pitch circle 40mm, 4xM8	BFG15L/LK40OMDCF	BFW15L/LK40OMDCF	BFW3-G12/LK40A3KM	PWDS-G12/LK40AM	PFL2A3KM
J7; squ flange, 20mm bore, pitch circle 40mm, 4xM6	BFG22L/LK40OMDCF	BFW20S/LK40OMDCF	X	X	X
J8; squ flange, 18mm bore, pitch circle 55mm, 4xM8	BFG20S/LK55OMDCF	BFW20S/LK55OMDCF	BFW3-G34/LK56A3KM	PWDS-G34/LK55AM	X
J9; squ flange, 26mm bore, pitch circle 55mm, 4xM8	X	BFW25S/LK55OMDCF	BFW3-G34/LK56A3KM	PWDS-G34/LK55AM	X

	 BFW3	 BFW-S	 BFW3-G	 PWDA	 PFL
L1; squ flange (At top), 13mm bore, pitch circle 30mm, 4xM6	BFW3-12L/LK30OMDCF	BFW-S12/LK30/M6SM	BFW3-G38/LK30A3KM	PWDA-1/38AM	PFL1A3KM
L2; squ flange (At top), 19mm bore, pitch circle 40mm, 4xM8	BFW3-22L/LK40OMDCF	BFW-S18/LK40/M6SM	BFW3-G12/LK40A3KM	PWDA-2/12AM	PFL2A3KM
L3; squ flange (At top), 27mm bore, pitch circle 51mm, 4xM10	X	X	BFW3-G34/LK51A3KM	PWDA-3/34AM	PFL3A3KM

P* relative to T* rotated by 90° on pump, motor respectively.	 FHS *1	 WFS/PFF-..S/L *2 *3	 PFF-G	 AS *2	 PAFS-B
P1, T1 ; Metr. SAE-flange, M8 1/2" 3.000 PSI	FHS32CFX	WFS32/12SOMDCF GFS32/12SOMDCF	PFF32GSM	AS32/15X2SM	PAFS080BSM
P2, T2; Metr. SAE-flange, M10 3/4" 3.000 PSI	FHS33CFX	WFS33/16SOMDCF GFS33/16SOMDCF	PFF33GSM	AS33/22X2SM	PAFS100BSM
P3, T3; Metr. SAE-flange, M10 1" 3.000 PSI	FHS34CFX	WFS34/20SOMDCF GFS34/20SOMDCF	PFF34GSM	AS34/28X2SM	PAFS102BSM
P4, T4; Metr. SAE-flange, M10 1 1/4" 3.000 PSI	FHS35/10CFX	WFS35/30S/10OMDCF GFS35/30S/10OMDCF	PFF35GSM	AS35/35X2SM	PAFS104BSM
P5, T5; Metr. SAE-flange, M12 1 1/2" 3.000 PSI	FHS36CFX	WFS36/35LOMDCF GFS36/35LOMDCF	PFF36GSM	AS36/42X3SM	PAFS106BSM
P6, T6; Metr. SAE-flange, M12 2" 3.000 PSI	FHS38/12CFX	PFF38/38SOMDCF GFS38/38SOMDCF	PFF38GSM	AS38/50X6SM	PAFS108BSM

P* relative to T* rotated by 90° on pump, motor respectively.	FHS *1	WFS/PFF-..S/L *2 *3	PFF-G	AS *2	PAFS-B
P1, T1 ; Metr. SAE-flange, M8 1/2" 6.000 PSI	FHS62CFX	WFS62/12SOMDCF GFS62/12SOMDCF	PFF62GSM	AS62/16X3SM	PAFS401BSM
P2, T2; Metr. SAE-flange, M10 3/4" 6.000 PSI	FHS63CFX	WFS63/16SOMDCF GFS63/16SOMDCF	PFF63GSM	AS63/16X3SM	PAFS402BSM
P3, T3; Metr. SAE-flange, M12 1" 6.000 PSI	FHS64CFX	WFS64/20SOMDCF GFS64/20SOMDCF	PFF64GSM	AS64/25X5SM	PAFS403BSM
P4, T4; Metr. SAE-flange, M14 1 1/4" 6.000 PSI	FHS65CFX	WFS65/25SOMDCF GFS65/25SOMDCF	PFF65GSM	AS65/30X4SM	PAFS404BSM
P5, T5; Metr. SAE-flange, M16 1 1/2" 6.000 PSI	FHS66CFX	WFS66/30SOMDCF GFS66/30SOMDCF	PFF66GSM	AS66/38X5SM	PAFS405BSM
P6, T6; Metr. SAE-flange, M16 2" 6.000 PSI	FHS68CFX	X	PFF68GSM	AS68/50X9SM	PAFS406BSM

*1 Single flange half, without bolts: for flange adaptor - see catalogue 4100, chapter M.
*2 Tube connection as example only. For further tube connections - see catalogue 4100, chapter M.
*3 WFS = Elbow flange, GFS and PFF = straight flange.
X = Design not possible.

Parker Europa Sales Offices

Parker Hannifin Ges.mbH
A-2700 Wiener Neustadt
Tel: +43 2622 23501
Fax: +43 2622 66212

Parker Hannifin Corporation
AE-Abu Dhabi
Tel: +971 2 6788587
Fax: +971 2 6793812

Parker Hannifin Corporation
AZPAR
AZ-370 000 Baku
Tel: +994 12983966
Fax: +994 12983966

Parker Hannifin S.A.-N.V.
B-1400 Nivelles
Tel: +32 67280900
Fax: +32 67280999

Parker Hannifin s.r.o.
CZ-184 00 Prague 8
Tel: +420 2 83085224
Fax: +420 2 83085360

Parker Hannifin GmbH & Co. KG
D-41564 Kaarst
Tel: +49 2131 513-0
Fax: +49 2131 513-230

Parker Hannifin Danmark A/S
DK-2750 Ballerup
Tel: +45 43560400
Fax: +45 43733107

Parker Hannifin España S.A
E-28850 Torrejón de Ardoz (Madrid)
Tel: +34 91 6757300
Fax: +34 91 6757711

Parker Hannifin Corporation
EG-Cairo
Tel: +20 2 5194018
Fax: +20 2 5190605

Parker Hannifin France SAS
F-74130 Contamine-sur-Arve
Tel: +33 450258025
Fax: +33 450978660

Parker Hannifin Oy
FIN-01510 Vantaa
Tel: +358 9 476731
Fax: +358 9 47673200

Parker Hannifin plc
GB-Warwick CV34 6TU
Tel: +44 1926 833700
Fax: +44 1926 889172

Parker Hannifin Corporation
GR-171 21 Athens
Tel: +30 21 0933-6450
Fax: +30 21 0933-6451

Parker Hannifin Corporation
HU-1149 Budapest
Tel: +36 1 220-4155
Fax: +36 1 422-1525

Parker Hannifin S.p.A.
I-20094 Corsico (MI)
Tel: +39 02 451921
Fax: +39 02 4479340

Parker Sales Ireland Ltd
IE-Blackrock, Co. Dublin
Tel: +353 1 293 9999
Fax: +353 1 293 9900

Parker Hannifin Corporation
Gateway Ventures Ca Ltd.
KZ-480100 Almaty
Tel: +7 327 2 543 081
Fax: +7 327 2 541 100

Parker Hannifin A/S
N-1402 Ski
Tel: +47 64 91 10 00
Fax: +47 64 91 10 90

Parker Hannifin B.V.
NL-7570 AT Oldenzaal
Tel: +31 541 585000
Fax: +31 541 585459

Parker Hannifin Sp.z.o.o.
PL-02-235 Warszawa
Tel: +48 22 8634942
Fax: +48 22 8634944

Parker Hannifin Portugal Lda
PT-4450-625 Leça da Palmeira
Tel: +351 22 9997360
Fax: +351 22 9961527

Parker Hannifin Corporation
Hidro Consulting Impex Srl
RO-00001 Bucharest
Tel: +40 21 252-1382
Fax: +40 21 252-3381

Parker Hannifin Corporation
RU-123001 Moscow
Tel: +7 095 2340054
Fax: +7 095 2340528

Parker Hannifin Corporation
RU-693000 Yuzhno-Sakhalinsk
Tel: +7 4242 727242
Fax: +7 4242 727242

Parker Hannifin AB
S-16308 Spånga
Tel: +46 8 59795000
Fax: +46 8 59795110

Parker Hannifin Corporation
SI-8000 Novo Mesto
Tel: +386 7 337-6650
Fax: +386 7 337-6651

Parker Hannifin Corporation
TR-34067 Merter/Istanbul
Tel: +90 212 48291-06/07
Fax: +90 212 48291-10

Parker Hannifin Corporation
UA-01004 Kiev
Tel: +380 44 2207432
Fax: +380 44 2206534

Parker Hannifin Africa
ZA-Kempton Park
Tel: +27 11 961-0700
Fax: +27 11 392-7213

Internet: http://www.parker.com/euro_tfd

**For further information on other Parker Products, call the European Product Information Centre
free of charge 00800 2727 5374.**



BUL/4040/UK
© 2005 Parker Hannifin/505
PlantijnCasparie 0705