

HPI Hydro Power Industries

COMMERCIAL VEHICLE HYDRAULICS



HPI CATALOGUE Edition 7

**HYDRAULIC
POWER²**



***FOR RELIABLE
COMMERCIAL VEHICLE
HYDRAULICS***

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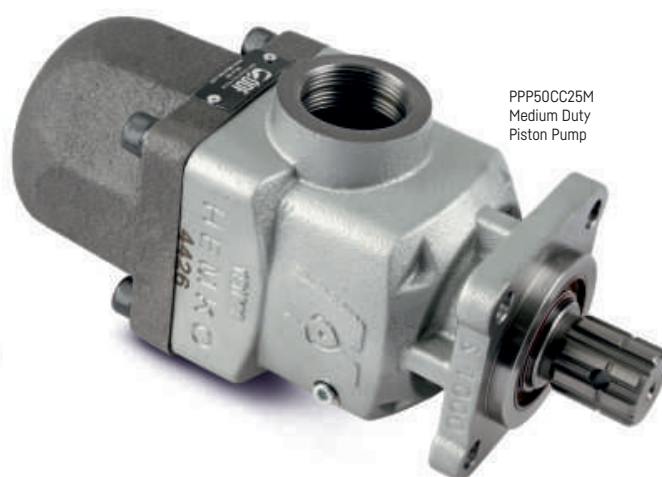
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PISTON PUMPS



3 BOLT PISTON PUMPS (6 SPLINE)

Part Number	Displacement CM3/RPM	Max. Continuous Speed (min -1)	Min. Intermittent Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
PPP20CC35M3	20CC	1100	500	350	1 1/2"	3/4"
PPP34CC35M3	32CC	1100	500	350	1 1/2"	3/4"
PPP60CC35M3	55CC	1100	500	350	1 1/2"	3/4"



4 BOLT PISTON PUMPS (8 SPLINE)

Part Number	Displacement CM3/RPM	Max. Continuous Speed (min -1)	Min. Intermittent Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
PPP16CC25M	16CC	1100	500	350	1 1/2"	3/4"
PPP20CC35M	20CC	1100	500	350	1 1/2"	3/4"
PPP32CC35M	32CC	1100	500	350	1 1/2"	3/4"
PPP50CC25M	55CC	1100	500	300	1 1/2"	3/4"
PPP60CC35M	55CC	1100	500	350	1 1/2"	3/4"

BENT AXIS PISTON PUMPS



BENT AXIS PISTON PUMPS BI-DIRECTIONAL

Part Number	Displacement CM3/RPM	Max. Continuous Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
KFA2-12	12CC	2300	380	3/4"	3/4"
KFA2-18	18CC	2300	380	3/4"	3/4"
KFA2-25	25CC	2300	380	3/4"	3/4"
KFA2-40	40CC	1900	380	3/4"	3/4"
KFA2-55	55CC	1900	380	3/4"	3/4"
KFA2-63	63CC	1900	380	3/4"	3/4"
KFA2-80	80CC	1500	350	1"	1"
KFA2-108	108CC	1500	350	1"	1"
KFA2-130	130CC	1200	350	1"	1"



BENT AXIS MOTORS

Part Number	Displacement CM3/RPM	Max. Continuous Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
KFA2-12	12CC	8000	380	3/4"	3/4"
KFA2-18	18CC	8000	380	3/4"	3/4"
KFA2-25	25CC	6300	380	3/4"	3/4"
KFA2-40	40CC	5500	380	3/4"	3/4"
KFA2-55	55CC	5000	380	3/4"	3/4"
KFA2-63	63CC	5000	380	3/4"	3/4"
KFA2-80	80CC	4500	350	1"	1"
KFA2-108	108CC	4000	350	1"	1"
KFA2-130	130CC	3200	350	1"	1"

BASF-20 Suction fitting 1 1/4 inch



BASF-24 Suction fitting 1 1/2 inch

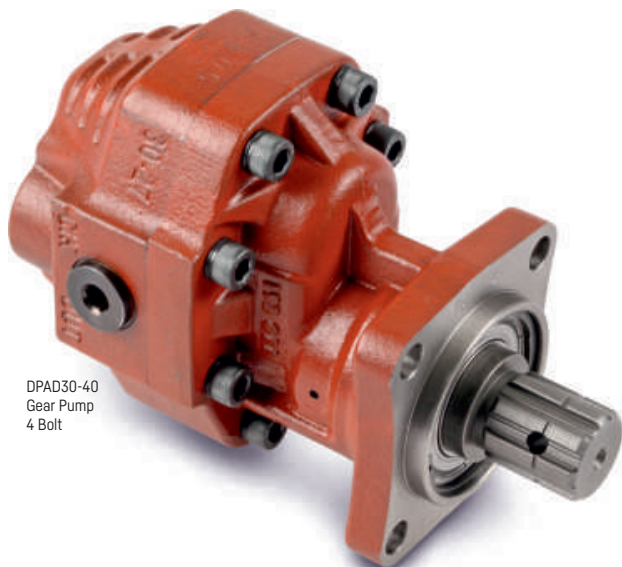


Split Flange Kit Bent Axis





DP30-35
Bi-directional
Gear Pump
3 Bolt



DPAD30-40
Gear Pump
4 Bolt

BI-DIRECTIONAL GEAR PUMPS - 3 BOLT

Part Number	Displacement CM ³ /RPM	Max. Continuous Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
DP20-06BR	6CC	2500	260	1/2"	1/2"
DP20-10BR	10CC	2500	260	1/2"	1/2"
DP20-16BR	16CC	2500	240	1/2"	1/2"
DP20-25BR	25CC	2200	200	3/4"	3/4"
DP30-43BR	43CC	2100	260	1"	3/4"
DP30-51BR	51CC	2100	220	1"	3/4"
DP30-61BR	61CC	1900	220	1"	3/4"
DP30-82BR	82CC	1700	180	1 1/4"	1"
DP35-70BR	70CC	2000	210	1 1/4"	1 1/4"
DP35-90BR	90CC	1800	210	1 1/4"	1 1/4"

BI-DIRECTIONAL GEAR PUMPS - 4 BOLT

Part Number	Displacement CM ³ /RPM	Max. Continuous Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
DPAD20-06BR	6CC	2500	260	1/2"	1/2"
DPAD20-10BR	10CC	2500	260	1/2"	1/2"
DPAD20-16BR	16CC	2500	240	1/2"	1/2"
DPAD20-25BR	25CC	2200	200	3/4"	3/4"
DPAD30-43BR	43CC	2100	260	1"	3/4"
DPAD30-51BR	51CC	2100	220	1"	3/4"
DPAD30-61BR	61CC	1900	220	1"	3/4"
DPAD30-82BR	82CC	1700	180	1 1/4"	1"
DPAD35-70BR	70CC	2000	210	1 1/4"	1 1/4"
DPAD35-90BR	90CC	1800	210	1 1/4"	1 1/4"

GEAR PUMPS



DP30-40
Gear Pump

UNI-DIRECTIONAL GEAR PUMPS - 3 BOLT

Part Number	Displacement CM3/RPM	Max. Continuous Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
DP30-17	17CC	2500	260	3/4"	1/2"
DP30-27	27CC	2500	260	3/4"	1/2"
DP30-34	34CC	2400	260	3/4"	1/2"
DP30-43	43CC	2100	260	1"	3/4"
DP30-51	51CC	2100	220	1"	3/4"
DP30-61	61CC	1900	220	1"	3/4"
DP30-82	82CC	1700	180	1 1/4"	1"
DP30-100	100CC	1500	160	1 1/4"	1"
DP40-63	63CC	2400	250	1"	3/4"
DP40-87	87CC	2200	240	1"	3/4"
DP40-109	109CC	2200	210	1 1/4"	1"
DP40-133	133CC	2200	200	1 1/4"	1"
DP40-151	151CC	1800	160	1 1/4"	1"

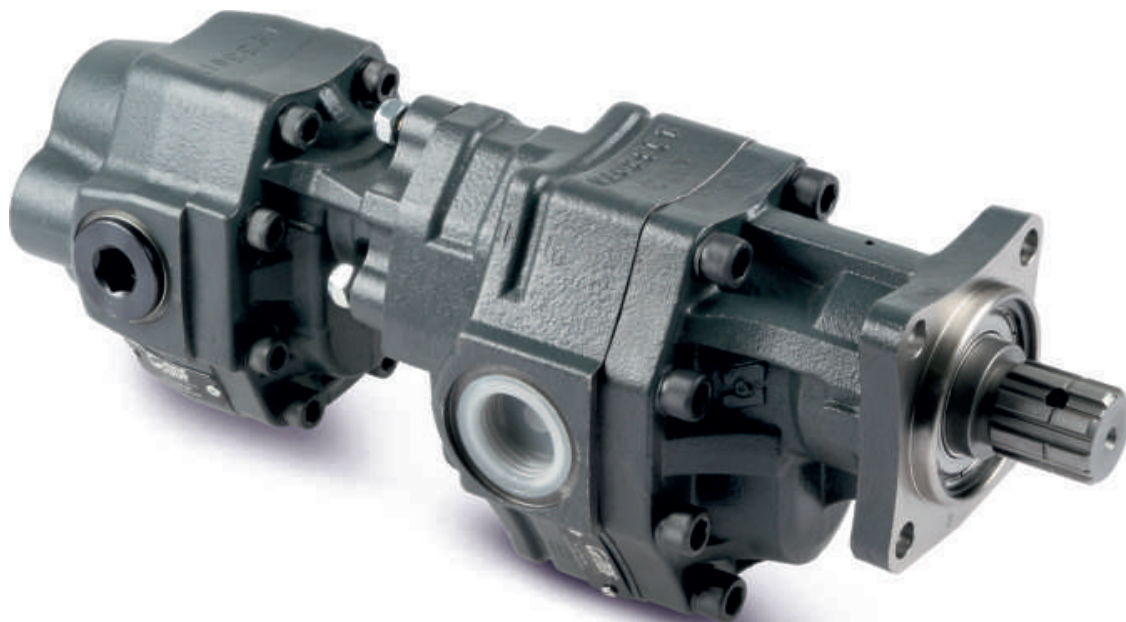
UNI-DIRECTIONAL GEAR PUMPS - 4 BOLT

Part Number	Displacement CM3/RPM	Max. Continuous Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
DPAD30-17	17CC	2500	260	3/4"	1/2"
DPAD30-27	27CC	2500	260	3/4"	1/2"
DPAD30-34	34CC	2400	260	3/4"	1/2"
DPAD30-43	43CC	2100	260	1"	3/4"
DPAD30-51	51CC	2100	220	1"	3/4"
DPAD30-61	61CC	1900	220	1"	3/4"
DPAD30-82	82CC	1700	180	1 1/4"	1"
DPAD30-100	100CC	1500	160	1 1/4"	1"
DPAD40-63	63CC	2400	250	1"	3/4"
DPAD40-87	87CC	2200	240	1"	3/4"
DPAD40-109	109CC	2200	210	1 1/4"	1"
DPAD40-133	133CC	2200	200	1 1/4"	1"
DPAD40-151	151CC	1800	160	1 1/4"	1"



DP20
Bi-directional
Gear Pump
3 Bolt

TANDEM GEAR PUMPS



BI-DIRECTIONAL FRONT PUMPS

Part Number	Displacement CM3/RPM	Max. Continuous Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
DPAD43CC/BR	43CC	2100	260	1"	1"
DPAD61CC/BR	61CC	1900	220	1"	1"
DPAD70CC/BR	70CC	2000	210	1 1/4"	1 1/4"
DPAD82CC/BR	82CC	1700	180	1 1/4"	1 1/4"
DPAD90CC/BR	90CC	1800	210	1 1/4"	1 1/4"

CLOCKWISE FRONT PUMPS

Part Number	Displacement CM3/RPM	Max. Continuous Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
DPAD73CC/AC	73CC	1500	240	1 1/4"	1"
DPAD87CC/AC	87CC	1300	210	1 1/4"	1"

BI-DIRECTIONAL BACK PUMPS

Part Number	Displacement CM3/RPM	Max. Continuous Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
DP20-06BD	6CC	2500	260	1/2"	1/2"
DP20-10BD	10CC	2500	260	1/2"	1/2"
DP20-16	16CC	2500	240	1/2"	1/2"
DP20-25	25CC	2200	200	3/4"	3/4"
DP30-43UNI	43CC	2100	260	1"	3/4"
DP30-51UNI	51CC	2100	220	1"	3/4"
DP30-61UNI	61CC	1900	220	1"	3/4"
DP30-82UNI	82CC	1700	180	1 1/4"	1"
DP35-70	70CC	2000	210	1 1/4"	1 1/4"
DP35-90	90CC	1800	210	1 1/4"	1 1/4"

UNI-DIRECTIONAL BACK PUMPS

Part Number	Displacement CM3/RPM	Max. Continuous Speed (min -1)	Max. Continuous Pressure (BAR)	Inlet Port BSP	Outlet Port BSP
DP30-17	17CC	2500	260	3/4"	1/2"
DP30-27	27CC	2500	260	3/4"	1/2"
DP30-34	34CC	2400	260	3/4"	1/2"
DP30-43	43CC	2100	260	1"	3/4"
DP30-51	51CC	2100	220	1"	3/4"
DP30-61	61CC	1900	220	1"	3/4"
DP30-82	82CC	1700	180	1 1/4"	1"
DP30-100	100CC	1500	160	1 1/4"	1"
DP40-63	63CC	2400	250	1"	3/4"
DP40-87	87CC	2200	240	1"	3/4"
DP40-109	109CC	2200	210	1 1/4"	1"
DP40-133	133CC	2200	200	1 1/2"	1"
DP40-151	151CC	1800	160	1 1/2"	1"

AVAILABLE IN 3 BOLT ON REQUEST

ODF VANE PUMPS

The design of the ODF vane pumps makes them particularly suitable for applications on trucks, especially vehicles operating with hydraulic motors, like feed bulkers, fuel tankers etc. All the components subject to wear, are contained in a cartridge unit that can easily be removed for inspection and/or replacement without disconnecting the pump from the circuit. This drastically reduces expensive downtime. The vanes ensure a more lamina flow instead of the more turbulent (pulsating) flow from a piston pump, which is perfect for hydraulic motors, resulting in extending the life and increasing efficiency.

The special design of the double-lip vanes renders the ODF vane pumps ideally suitable for applications that require high pressure levels and very low noise emissions. Furthermore, the two opposed pumping chambers formed by the elliptical profile of the cam, cancel out radial loads which dramatically reduces

vibrations and increases the pump's lifespan considerably. In addition to reliability, the ODF pump guarantees continuous high volumetric efficiency during its whole service time. This diminishes the requirement to compensate for the typical efficiency loss of other kinds of pumps, that increases the truck engine RPM, which in turn causes increased fuel consumption, air pollution, fuel cost and engine wear etc. Such characteristics, along with an extremely low noise-level, make ODF pumps environmentally friendly in line with the latest ecological trend. The pumps are extremely compact and are supplied with different types of either ISO or UNI norm mountings, for direct coupling with PTO and SAE norm hydraulic fittings. This, together with the ability to orientate the inlet and outlet ports, make ODF pumps very easy to install and guarantees their interchangeability with other types of pumps.



DOUBLE & SINGLE VANE PUMPS

Part Number	Displacement CM3/RPM	Max. Continuous Speed (min -1)	Min. Continuous Speed (min -1)	Max. Continuous Pressure [BAR]	Inlet Port Flange 3000 PSI	Outlet Port BSP
VP70-34R/L	70+34CC Double Vane Pump	2500	400	240	2 1/2"	1"
VP70-70R/L	70+70CC Double Vane Pump	2500	400	240	2 1/2"	1"
VP80R/L	80CC Single Vane Pump	2500	400	230	1 1/2"	1"

OTHER SIZES (CC) AVAILABLE ON REQUEST.
AVAILABLE IN EITHER CLOCKWISE OR ANTI CLOCKWISE
STANDARD ISO 4 BOLT MOUNT 8 SPLINE SHAFT

ADAPTORS / COUPLINGS / FLANGES

ISO ADAPTOR 4x3

Part Number: ADP3H4



UNI ADAPTOR 3x4

Part Number: ADP4H3



EXT ADAPTOR

Part Number: UNADP



ISO ADAPTOR WITH FLANGE

Part Number: ADP3H4F



TRACTOR SHAFT ADAPTOR

Part Number: TSA-ADP



ADPSAE ADAPTOR

Part Number: ADPSAE



ADAPTORS / COUPLINGS / FLANGES

FAW ADAPTOR WITH COUPLING

Part Number: ADPFAW



6-8" & 8-8" COUPLINGS

Part Number: COU6*8
COU8*8



SLEEVE KIT

Part Number: K16S



FLANGES

6 Spline & 8 Spline
Part Number: PSAF



MALE PROPSHAFT FLANGE

Part Number: PSAF-M



CYLINDERS

EYE TO EYE CYLINDER

Part Number: LWHC

Eye-eye mounting available in various strokes and stages.



TRUNION TO EYE CYLINDER

Part Number: LWHC

Trunion-eye mounting available in various strokes and stages.



UNDER BODY CYLINDER WITH CRADLE AND BRACKETS

Part Number: LUCB

Available in various strokes and stages.



CYLINDER BRACKETS

Part Number: LWHC

Bracket is used for cylinders with an eye mounting.



PNEUMATIC CONTROLS



JOY STICKS

Part Number	Pneumatic Inlet	Pneumatic Outlet	Max. Pressure (BAR)	Min. Pressure (BAR)	Work Environment
CSP2J*	G 1/8"	M5	12	5	Pneumatic
CSP3J*	G 1/8"	M5	12	5	Pneumatic
CSPVA	G 1/8"	M5	12	5	Pneumatic
CSPVM	G 1/8"	M5	12	5	Pneumatic
CSPB	Bracket				

* Without PTO

AIR SWITCHES

Part Number	Pneumatic Outlet	Max. Pressure (BAR)	Port Size	Operations
CAC1	Single Air Switch	10	1/8" BSP	Single
CAC2	Double Air Switch	10	1/8" BSP	Double
CAC1LED	Single Air Switch With LED	10	1/8" BSP	Single
CAC2LED	Double Air Switch With LED	10	1/8" BSP	Double



P.T.O FAIL SAFE SWITCH

Part Number	Pneumatic Inlet	Pneumatic Outlet	Max. Working Pressure (BAR)
PTOFSW	G 1/8"	G 1/8"	12



INSIDE CAB CONTROL VALVE

Part Number	Pneumatic Inlet	Pneumatic Outlet	Max. Working Pressure (BAR)
5/3WPV (spring Return)	G 1/8"	G 1/8"	12
5/3WPVD (detent)	G 1/8"	G 1/8"	12

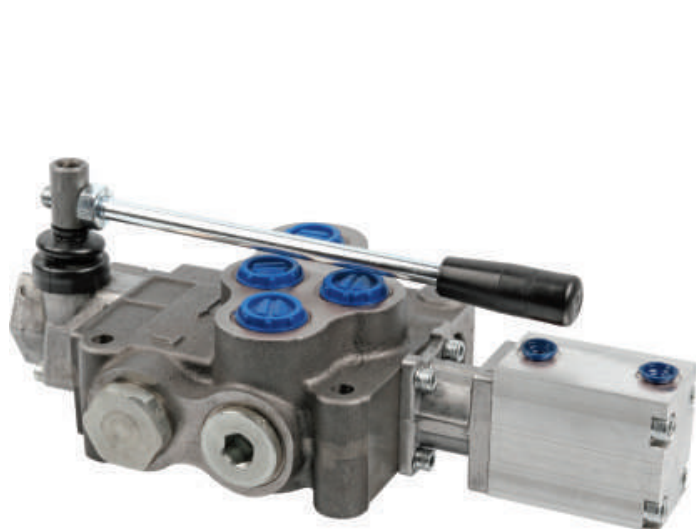
PNEUMATIC CONTROLS



INSIDE CAB CONTROL KIT

Part Number	Description
Single Inside Cab Control Kit	Single inside cab control valve complete with pneumatic adaptors and bracket in kit form
Double Inside Cab Control Kit	Double inside cab control valves complete with pneumatic adaptors and bracket in kit form

COMPACTOR VALVES



SINGLE SIDE TIPPER VALVE

Flow Rate [L/Min]	Continuous Working Pressure [BAR]	Max. Continuous Pressure [BAR]	Weight Kg
80	300	260	6.25



TWIN SIDE TIPPER VALVE

Flow Rate [L/Min]	Continuous Working Pressure [BAR]	Max. Continuous Pressure [BAR]	Weight Kg
80	300	260	8.95

TIPPING VALVES



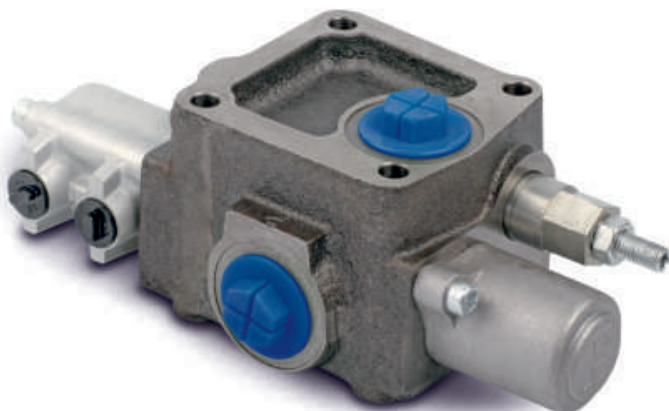
SINGLE ACTING TIPPING VALVE - SLOW DESCENT

Part Number	Flow Rate (L/Min)	Continuous Working Pressure (BAR)	Max. Continuous Pressure (BAR)	Weight Kg
SATV-12POLM	110	170	190	6.00



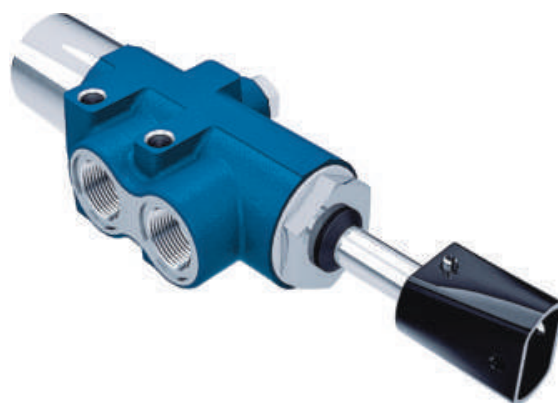
SINGLE ACTING TIPPING VALVES - DOP19 HIGH PRESSURE

Part Number	Flow Rate (L/Min)	Continuous Working Pressure (BAR)	Max. Continuous Pressure (BAR)	Weight Kg
DOP19	140	170	190	5.00
DOP19H	140	250	260	5.00



SINGLE ACTING TIPPING VALVES - WITH HOLD POSITION

Part Number	Flow Rate (L/Min)	Continuous Working Pressure (BAR)	Max. Continuous Pressure (BAR)	Weight Kg
TP10	100	300	350	3.80



SINGLE ACTING TIPPING VALVES - MANUAL (MEILLER TYPE)

Part Number	Flow Rate (L/Min)	Continuous Working Pressure (BAR)	Max. Continuous Pressure (BAR)	Weight Kg
HYDV.MK	110	220	160	2.20

ACCESSORY VALVES



FLOW CONTROL VALVES WITH CHECK

Part Number	Thread Size	Working Pressure (BAR)
FCCG14N	1/4" BSP	550
FCCG38N	3/8" BSP	530
FCCG12N	1/2" BSP	500
FCCG34N	3/4" BSP	480
FCCG1N	1" BSP	450
FCCG114N	1 1/4" BSP	400
FCCG112N	1 1/2" BSP	380
FCCG2N	2" BSP	350



FLOW CONTROL NEEDLE VALVES

Part Number	Thread Size	Working Pressure (BAR)
FCG14N	1/4" BSP	550
FCG38N	3/8" BSP	530
FCG12N	1/2" BSP	500
FCG34N	3/4" BSP	480
FCG1N	1" BSP	450
FCG114N	1 1/4" BSP	400
FCG112N	1 1/2" BSP	380
FCG2N	2" BSP	350



RELIEF VALVES

Part Number	Description	Thread Size	Working Pressure (BAR)
PRV-06FB	3/8" Flow Rate 40 L/pm	3/8"	380
PRV-08FB	1/2" Flow Rate 50 L/pm	1/2"	380
PRV-12FB	3/4" Flow Rate 80 L/pm	3/4"	380
PRV-16FB	1" Flow Rate 100 L/pm	1"	380



50-50 FLOW DIVIDER

Part Number	Thread Size	Working Pressure (BAR)
FLDG38	3/8"	250
FLDG12	1/2"	250

ACCESSORY VALVES



SINGLE OVER CENTRE VALVE

Part Number	Thread Size	Working Pressure (BAR)
SOCV38G	3/8"	350
SOCV12G	1/2"	350
SOCV38G	3/4"	350



DOUBLE OVER CENTRE VALVE

Part Number	Thread Size	Working Pressure (BAR)
DOCV38G	3/8"	350
DOCV12G	1/2"	350
DOCV34G	3/4"	350



FERRO DOUBLE PILOT OPERATED CHECK VALVE

Part Number	Thread Size	Working Pressure (BAR)
DCG14N	1/4"	380
DCG38N	3/8"	380
DCG12N	1/2"	360
DCG34N	3/4"	320



HYDRAULIC CHECK VALVE (0.5 BAR CRACKING PRESSURE)

Part Number	Thread Size	Working Pressure (BAR)
CVG14N	1/4"	450
CVG38N	3/8"	450
CVG12N	1/2"	400
CVG34N	3/4"	380
CVG1N	1"	350
CVG114N	1 1/4"	350
CVG112N	1 1/2"	280
CVG2N	2"	260

ACCESSORY VALVES



PLATFORM LIFT VALVE

Part Number	Thread Size	Working Pressure (BAR)
PLVG	1/2"	350
PLVG	3/4"	350

PLVG Electronic Tip Valve complete with N/C Cartridge. Built in Relief Valve Load Holding Check and Manual Override available in 12VDC, 24VDC, 220VAC.

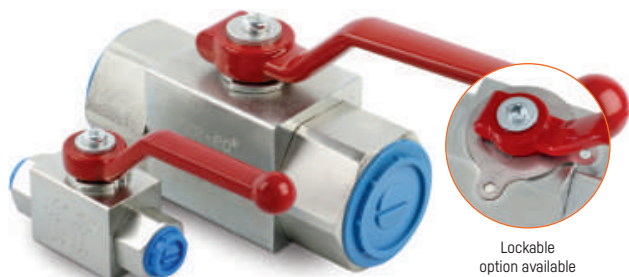
SWIVEL JOINTS



INLINE SWIVEL JOINTS

Part Number	Thread Size	Working Pressure (BAR)
Swivel Joint Inline BSP		
SJ-04B	1/4"	450
SJ-06B	3/8"	430
SJ-08B	1/2"	400
SJ-12B	3/4"	380
SJ-16B	1"	340
Swivel Joint 90° BSP		
SJ90-04B	1/4"	450
SJ90-06B	3/8"	430
SJ90-08B	1/2"	400
SJ90-12B	3/4"	380
SJ90-16B	1"	340

BALL VALVES

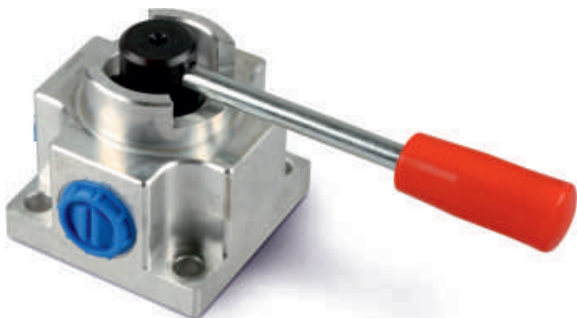


BALL VALVES 2 WAY

Part Number	Description	Thread Size	Working Pressure [BAR]
BV2-04FB	1/4" BSP Female HP Ball Valve	1/4"	500
BV2-06FB	3/8" BSP Female HP Ball Valve	3/8"	500
BV2-08FB	1/2" BSP Female HP Ball Valve	1/2"	500
BV2-12FB	3/4" BSP Female HP Ball Valve	3/4"	500
BV2-16FB	1" BSP Female HP Ball Valve	1"	500
BV2-20FB	1 1/4" BSP Female HP Ball Valve	1 1/4"	500
BV2-24FB	1 1/2" BSP Female HP Ball Valve	1 1/2"	500
BV2-32FB	2" BSP Female HP Ball Valve	2"	500

BALL VALVES 3 WAY STEEL

Part Number	Description	Thread Size	Working Pressure [BAR]
BV3FB-06	3/8" BSP Female Ball Valve Steel	3/8"	500
BV3FB-08	1/2" BSP Female Ball Valve Steel	1/2"	500
BV3FB-12	3/4" BSP Female Ball Valve Steel	3/4"	400
BV3FB-16	1" BSP Female Ball Valve Steel	1"	400



BALL VALVES 3 WAY ALUMINIUM

Part Number	Description	Thread Size	Working Pressure [BAR]
BV3AL-06	3/8" BSP Female Ball Valve Alu	3/8"	370
BV3AL-08	1/2" BSP Female Ball Valve Alu	1/2"	340
BV3AL-12	3/4" BSP Female Ball Valve Alu	3/4"	270
BV3AL-16	1" BSP Female Ball Valve Alu	1"	250

FILTERS & ACCESSORIES



TANK MOUNTED FILTERS

Part Number	Size
TTF-34	3/4" BSP
TTF-100	1" BSP
TTF-114	1 1/4" BSP



SPIN ON FILTERS

Part Number	Size
SOF-34	3/4" BSP
SOF-114	1 1/4" BSP



AIR & FILLER BREATHERS

Part Number	Size
AB-12	1/2" BSP
AB-34	3/4" BSP
FB-2	52 mm



OIL LEVEL INDICATORS

Part Number	Size
OLG76	76 mm
OLG127	127 mm



BEHIND CAB TANKS

Tank Volume	Working Volume
65 LT	55 LT
95 LT	75 LT
105 LT	90 LT
120 LT	100 LT
155 LT	135 LT
175 LT	150 LT
200 LT	180 LT
220 LT	190 LT
225 LT	190 LT
264 LT	230 LT
285 LT	250 LT

Dimensions on request
 All tanks are supplied with air breather,
 Tank mounted return filter and oil level indicator



SIDE MOUNTED TANKS

Tank Volume	Working Volume
80 LT	65 LT
100 LT	80 LT
120 LT	100 LT
160 LT	140 LT
190 LT	160 LT
210 LT	180 LT
256 LT	230LT

Dimensions on request
 All tanks are supplied with air breather,
 Tank mounted return filter and oil level indicator

QUICK COUPLERS



PIN TYPE QUICK COUPLERS

Part Number	Description	Thread Size	Working Pressure (BAR)
QCPT-04-FC/MC	1/4" BSP Pin Type M/F	1/4"	350
QCPT-06-FC/MC	3/8" BSP Pin Type M/F	3/8"	330
QCPT-08-FC/MC	1/2" BSP Pin Type M/F	1/2"	320
QCPT-12-FC/MC	3/4" BSP Pin Type M/F	3/4"	280
QCPT-16-FC/MC	1" BSP Pin Type M/F	1"	250
QCPT-20-FC/MC	1 1/4" BSP Pin Type M/F	1 1/4"	230
QCPT-24-FC/MC	1 1/2" BSP Pin Type M/F	1 1/2"	220
QCPT-32-FC/MC	2" BSP Pin Type M/F	2"	200



FLAT FACE QUICK COUPLERS

Part Number	Description	Thread Size	Working Pressure (BAR)
QCFF-04-FC/MC	1/4" BSP Flat Face M/F	1/4"	400
QCFF-06-FC/MC	3/8" BSP Flat Face M/F	3/8"	370
QCFF-08-FC/MC	1/2" BSP Flat Face M/F	1/2"	370
QCFF-12-FC/MC	3/4" BSP Flat Face M/F	3/4"	350
QCFF-16-FC/MC	1" BSP Flat Face M/F	1"	330



BALL TYPE QUICK COUPLERS

Part Number	Description	Thread Size	Working Pressure (BAR)
QCBT-04-FC/MC	1/4" BSP Ball Type M/F	1/4"	350
QCBT-06-FC/MC	3/8" BSP Ball Type M/F	3/8"	330
QCBT-08-FC/MC	1/2" BSP Ball Type M/F	1/2"	320
QCBT-12-FC/MC	3/4" BSP Ball Type M/F	3/4"	280
QCBT-16-FC/MC	1" BSP Ball Type M/F	1"	250



PIN TYPE QUICK COUPLERS WITH DUST CAPS

Part Number	Description	Thread Size	Working Pressure (BAR)
QCPTR-04SET	1/4" BSP Pin Type M/F	1/4"	350
QCPTR-06SET	3/8" BSP Pin Type M/F	3/8"	330
QCPTR-08SET	1/2" BSP Pin Type M/F	1/2"	320
QCPTR-12SET	3/4" BSP Pin Type M/F	3/4"	280
QCPTR-16SET	1" BSP Pin Type M/F	1"	250

QUICK COUPLERS



ENERPACK QUICK COUPLERS

Part Number	Description	Thread Size	Working Pressure (BAR)
QCHP-06-FC/MC	3/8" NPT Enerpac M/F	3/8"	700



4 PORT MULTI COUPLERS

Part Number	Description	Thread Size	Working Pressure (BAR)
MCFFDPG38SN4P	4 Port Multi-Coupling 3/8"	3/8"	350
MCFFDPG12SN4P	4 Port Multi-Coupling 1/2"	1/2"	350



2 PORT MULTI COUPLERS

Part Number	Description	Thread Size	Working Pressure (BAR)
MCFFDPG38SN2P	2 Port Multi-Coupling 3/8"	3/8"	350
MCFFDPG12SN2P	2 Port Multi-Coupling 1/2"	1/2"	350



5 PORT MULTI COUPLERS

Part Number	Description	Thread Size	Working Pressure (BAR)
MCFFDPG38SN5P	5 Port Multi-Coupling 3/8"	3/8"	350
MCFFDPG12SN5P	5 Port Multi-Coupling 1/2"	1/2"	350

FERRO COUPLERS



PNEUMATIC FEMALE COUPLERS (COMPATIBLE WITH RECTUS TYPE 26)

Part Number	Description
PCF25-04MB	Pneumatic Female Coupler 1/4" BSP Male
PCF25-06MB	Pneumatic Female Coupler 3/8" BSP Male
PCF25-08MB	Pneumatic Female Coupler 1/2" BSP Male
PCF25-04FB	Pneumatic Female Coupler 1/4" BSP Female
PCF25-06FB	Pneumatic Female Coupler 3/8" BSP Female
PCF25-08FB	Pneumatic Female Coupler 1/2" BSP Female
PCF25/6M	Pneumatic Female Coupler 6mm Hose Tail
PCF25/8M	Pneumatic Female Coupler 8mm Hose Tail
PCF25/10M	Pneumatic Female Coupler 10mm Hose Tail
PCF25/13M	Pneumatic Female Coupler 13mm Hose Tail

Note: All couplers can be sold as a set or separately as male or female



PNEUMATIC FEMALE COUPLERS (COMPATIBLE WITH RECTUS TYPE 26)

Part Number	Description
PCM25-04MB	Pneumatic Male Coupler 1/4" BSP Male
PCM25-06MB	Pneumatic Male Coupler 3/8" BSP Male
PCM25-08MB	Pneumatic Male Coupler 1/2" BSP Male
PCM25-04FB	Pneumatic Male Coupler 1/4" BSP Female
PCM25-06FB	Pneumatic Male Coupler 3/8" BSP Female
PCM25-08FB	Pneumatic Male Coupler 1/2" BSP Female
PCM25/6M	Pneumatic Male Coupler 6mm Hose Tail
PCM25/8M	Pneumatic Male Coupler 8mm Hose Tail
PCM25/10M	Pneumatic Male Coupler 10mm Hose Tail
PCM25/13M	Pneumatic Male Coupler 13mm Hose Tail

ISOLATOR VALVES



MV90G14N
90° Valve



MVTG14N
T-Type
Valve

GAUGE ISOLATOR VALVES

Part Number	Description	Thread Size	BAR
MV90G14N	1/4" BSP Manometer Isolator Valve 90°	1/4"	420
MVTG14N	1/4" BSP Manometer Isolator Valve T-Type	1/4"	420

POWER TAKE OFFS

VARIOUS BEZARES AND ODF PTO'S AVAILABLE



FULLER BOTTOM MOUNT

EATON PTO **EATON 6109-8209**

**FULLER PTO
UNI 3 BOLT**

EATON SIDEMOUNT PTO

FULLER BOTTOM MOUNT 4 BOLT PTO HEAVY DUTY
SCANIA PTO SCANIA PTO GRS900 3 BOLT (GRS900R)

EATON PTO FS828209 DOUBLE GEAR ISO

FULLER PTO
ISO 4 BOLT

EATON OFFSET 4 bolt

ISUZU PTO ISUZU MLD6A

ISUZU MJB6T UNI PTO

ISUZU MYY5T UNI - PTO MACHANICL CONTROL

ISUZU MYY5T UNI PTO MITSUBISHI PTO M3S5

MITSUBISHI PTO

MERCEDES PTO

MERCEDES

G85 OFFSET

MERCEDES G85 SQUARE

MERCEDES PTO G131/
210/240/240/260/221

MERCEDES G3

PTO (SINGLE GEAR)

MERCEDES G100 PTO

MERCEDES ACTROS 270MM INTR

MERCEDES G4 PTO

MERCEDES PTO G125

VOLVO SR62 COVER

NISSAN
PTO

/210/240//255/260

NISSAN MLS62B ZF PTO

ZF OFF-SET PTO DBL GEAR (HEM)

ZF OFF-SET PTO
HEAVY DUTY

SQUARE PTO ZF

PTO MECHANIC
CABLE CONTROL

VOLVO SR1700 COVER
CARDAN SHAFT

PTO CABLE

ZF S535 S636

ZF S535 S636 SINGLE GEAR ALUM PTO
DOUBLE GEAR 1/1.30

ZF OFF-SET P.T.O CLOSED

VOLVO PTO

TESTING EQUIPMENT



TEST POINTS - BSP MALE

Part Number	Description	Thread Size	BAR
MTC-02MB	1/8" BSP Test Point	1/8"	400
MTC-04MB	1/4" BSP Test Point	1/4"	630
MTC-06MB	3/8" BSP Test Point	3/8"	630

TEST POINTS - FEMALE

MTC/12LF	12L Female Test Point	12L	315
MTC/12SF	12S Female Test Point	12S	630
MTC/16SF	16S Female Test Point	16S	400



MINIMESS HOSES

Part Number	Description	Length	BAR
MTH500	16 x 2 1/4" Gauge 500mm	500	630
MTH1000	16 x 2 1/4" Gauge 1000mm	1000	630
MTH1500	16 x 2 1/4" Gauge 1500mm	1500	630
MTH2000	16 x 2 1/4" Gauge 2000mm	2000	630

TEST KIT



Seal Box
For Test Kit



Carry Safety
Strap For
Test Kit

MISCELLANEOUS

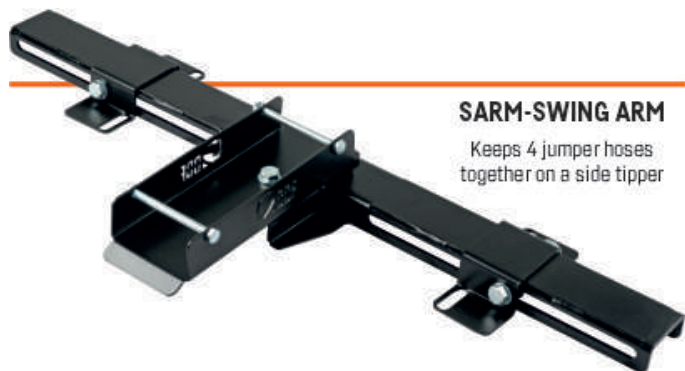
SPIRAL GUARD



HOSE KIT WITH SPIRAL GUARD



HOSE KIT

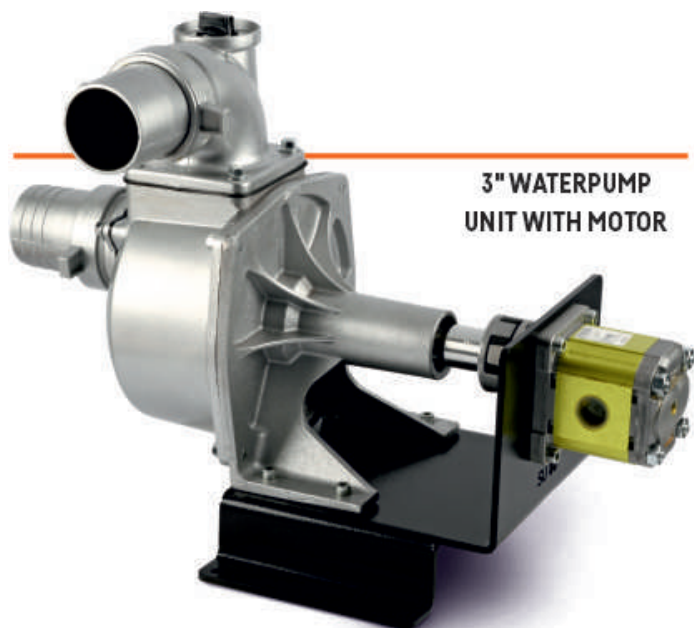


SARM-SWING ARM

Keeps 4 jumper hoses together on a side tipper



HYDRAULIC HOSES



**3" WATERPUMP
UNIT WITH MOTOR**

**LIMIT SAFETY
STOP VALVE**



HYDRAULIC INFORMATION

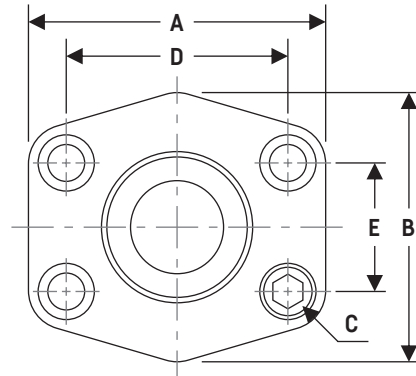
Solid One Piece Flanges: Identifying Flange Size

3000 PSI Flange

Dash	Size	oD
8	1/2"	30.2
12	3/4"	38.1
16	1"	44.4
20	1 1/4"	50.8
24	1 1/2"	60.3
32	2"	71.4
40	2 1/2"	84.1

3000 PSI Flange

Dash	Size	oD
8	1/2"	30.2
12	3/4"	41.3
16	1"	47.6
20	1 1/4"	54.0
24	1 1/2"	63.5
32	2"	79.4



SAE Flanges Standard Dimensions

Series 3000 PSI

Size	A	B	Bolts	C	D	E
1/2"	57	47	M8	5/16"	38.0	17.5
3/4"	66	49	M10	3/8"	47.6	22.2
1"	71	53	M10	3/8"	52.4	26.2
1 1/4"	80	69	M10	7/16"	58.7	30.2
1 1/2"	95	77	M12	1/2"	70.0	36.7
2"	103	89	M12	1/2"	77.8	42.9
2 1/2"	116	101	M12	1/2"	89.0	50.8
3"	136	124	M16	5/8"	106.4	62.0
3 1/2"	152	136	M16	5/8"	120.7	70.0
4"	162	146	M16	5/8"	130.0	77.8
5"	184	180	M16	5/8"	152.4	92.0

Series 6000 PSI

Size	A	B	Bolts	C	D	E
1/2"	57	47	M8	5/16"	40.0	18.3
3/4"	71	53	M10	3/8"	50.8	23.8
1"	80	66	M12	7/16"	57.1	27.8
1 1/4"	94	77	M14	1/2"	66.7	31.6
1 1/2"	103	89	M16	5/8"	79.4	36.7
2"	135	123	M20	3/4"	96.8	44.4

Standard Metric Steel Pipe Fittings

Light Series

Tube oD	Thread size on unit	Working Pressure (bar)
L6	M 12x1.5	500
L8	M 14x1.5	500
L10	M 16x1.5	500
L12	M 18x1.5	400
L15	M 22x1.5	400
L18	M 26x1.5	400
L22	M 30x2	250
L28	M 36x2	250
L35	M 45x2	250
L42	M 52x2	250

Heavy Series

Tube oD	Thread size on unit	Working Pressure (bar)
S6	M 12x1.5	800
S8	M 16x1.5	800
S10	M 18x1.5	800
S12	M 20x1.5	630
S14	M 22x1.5	630
S16	M 24x1.5	630
S20	M 30x2	400
S25	M 36x2	400
S30	M 42x2	400
S38	M 52x2	400

Identifying Thread Sizes

BSP threads				ORFS threads				NPT threads				JIC/SAE/UNF threads			
Dash	Size - TPI	oD	iD	Dash	Size - TPI	oD	iD	Dash	Size - TPI	oD	iD	Dash	Size - TPI	oD	iD
2	1/8" - 28	9.7	8.6	4	9/16" - 18	14.3	12.8	2	1/8" - 27	10.2	8.7	4	7/16" - 20	11.1	9.7
4	1/4" - 19	13.2	11.4	6	1 1/16" - 16	17.5	15.7	4	1/4" - 18	13.6	11.4	5	1/2" - 20	12.7	11.3
6	3/8" - 19	16.7	15	8	1 3/16" - 16	20.8	18.9	6	3/8" - 18	17.1	14.8	6	9/16" - 18	14.3	12.8
8	1/2" - 14	21	18.6	10	1" - 14	25.4	23.4	8	1/2" - 14	21.3	18.3	8	3/4" - 16	19.1	17.3
10	5/8" - 14	22.9	20.6	12	1 3/16" - 12	30.2	27.9	12	3/4" - 14	26.6	23.6	10	7/8" - 14	22.2	20.3
12	3/4" - 14	26.4	24.1	16	1 7/16" - 12	36.5	34.2	16	1" - 11.5	33.3	29.7	12	1 1/8" - 12	27	24.7
16	1" - 11	33.3	30.3	20	1 11/16" - 12	42.9	40.6	20	1 1/4" - 11.5	42	38.4	14	1 3/8" - 12	30.2	27.9
20	1 1/4" - 11	41.9	39	24	2" - 12	50.8	48.5	24	1 1/2" - 11.5	48.1	44.5	16	1 5/8" - 12	33.3	31
24	1 1/2" - 11	47.8	44.9					32	2" - 11.5	60.1	56.5	20	1 5/8" - 12	41.3	39
32	2" - 11	59.6	56.7									24	1 7/8" - 12	47.6	45.3
												32	2 1/2" - 12	63.5	61.5

Useful Formulas

1. **CYLINDER AREA** = $\frac{\text{Tons} \times 1000 \times 9.81}{\text{Mpa (Working pressure)}}$
 Area = mm²
 Mpa = Working Pressure

2. **PISTON DIAMETER** = $\sqrt{\frac{\text{Area} \times 4}{\pi}}$
 Diameter = mm
 Area = mm²
 $\pi = 3.142$

3. **PUMP FLOW RATE:** $Q = A \times V \times 10^{-6}$
 Q = Litres / min
 A = Piston area
 V = Cylinder / piston speed in mm / min
 10⁻⁶ is the same as dividing by 1000 000

4. **MOTOR KILOWATT:** $KW = \frac{\text{Mpa} \times \text{Liters} / \text{Min}}{60}$
 KW = Kilowatt
 Mpa = Relief Valve Pressure
 Litres / min = Pump Flow Rate

5. **SUCTION LINE DIAMETER:** $DIA = \sqrt{\frac{Q \times 21,22}{V}}$
 DIA = mm (D)
 Q = Pump Flow Rate
 V = 1m / sec

6. **PRESSURE LINE DIAMETER:** $DIA = \sqrt{\frac{Q \times 21,22}{V}}$
 DIA = mm
 Q = Pump Flow Rate
 V = Recommended Fluid Velocity Starting at 4,5 m/sec
 (Check Reynolds Number Refer.7)

7. **CHECK REYNOLDS NUMBER (Re):** $Re = \frac{V \times D \times 1000}{cSt}$
 V = Fluid Velocity in m / sec
 D = Pipe I.D. in mm
 cSt = Centistoke, use 46 cSt
 Reynolds number must be <2500

8. **PISTON AREA TO ANNULUS AREA RATIO:**
 $RATIO = \frac{D^2}{D^2 - d^2}$
 D = Piston DIA
 d = Rod dia

9. **RETURN LINE FLOW RATE:**
 Q = Ratio x Pump Flow Rate

10. **RETURN LINE DIAMETER:** $DIA = \sqrt{\frac{Q \times 21,22}{V}}$
 DIA = mm
 Q = Area Ratio x Pump Flow Rate
 V = Fluid Velocity (Starting at 3m / sec)

11. **DIRECTIONAL CONTROL VALVE FLOW RATE:**
 Litres / min = Cylinder Area Ratio x Pump Flow Rate

12. **RETURN LINE FILTER SIZE:**
 = Cylinder Area Ratio x Pump Flow Rate

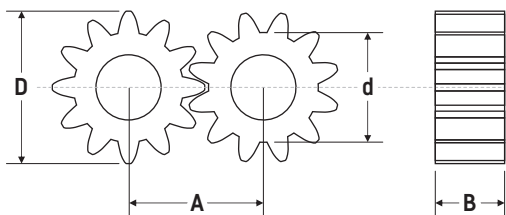
13. **CONVERT CC TO LITRES/MIN:**
 FLOW = CC/PER REV X RPM (OF DRIVE)

14. **HYDRAULIC MOTOR TORQUE**
 $Torque = \frac{P \times CC}{2 \pi}$

15. **HYDRAULIC MOTOR K.W**
 $K.W = \frac{TORQUE \times RPM}{9550}$

Flow Capacity

How to work out approximate flow capacity of a gear pump in cm³ per revolution.



FORMULA: Using two gears

Note: all dimensions in mm ÷ by 1000 to get cc/rev.

A = centre to centre of shafts

B = gear width

D = gear OD

d = gear ID

EXAMPLE:

$$1.3682 \times A \times B \times [D - d]$$

$$1.3682 \times 44.3 \times 32 \times [53.3 - 33.5]$$

$$= 38403.2 \div \text{by } 1000 \text{ to get cc/rev.}$$

$$38.4 \text{ cc/rev.}$$

NOTES



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