

# techhose

## QUALITY CONNECTIONS

Hydraulics

Pneumatics  
& Vacuum

Industrial

Compressed Air  
& Ring Main

Process &  
Instrumentation

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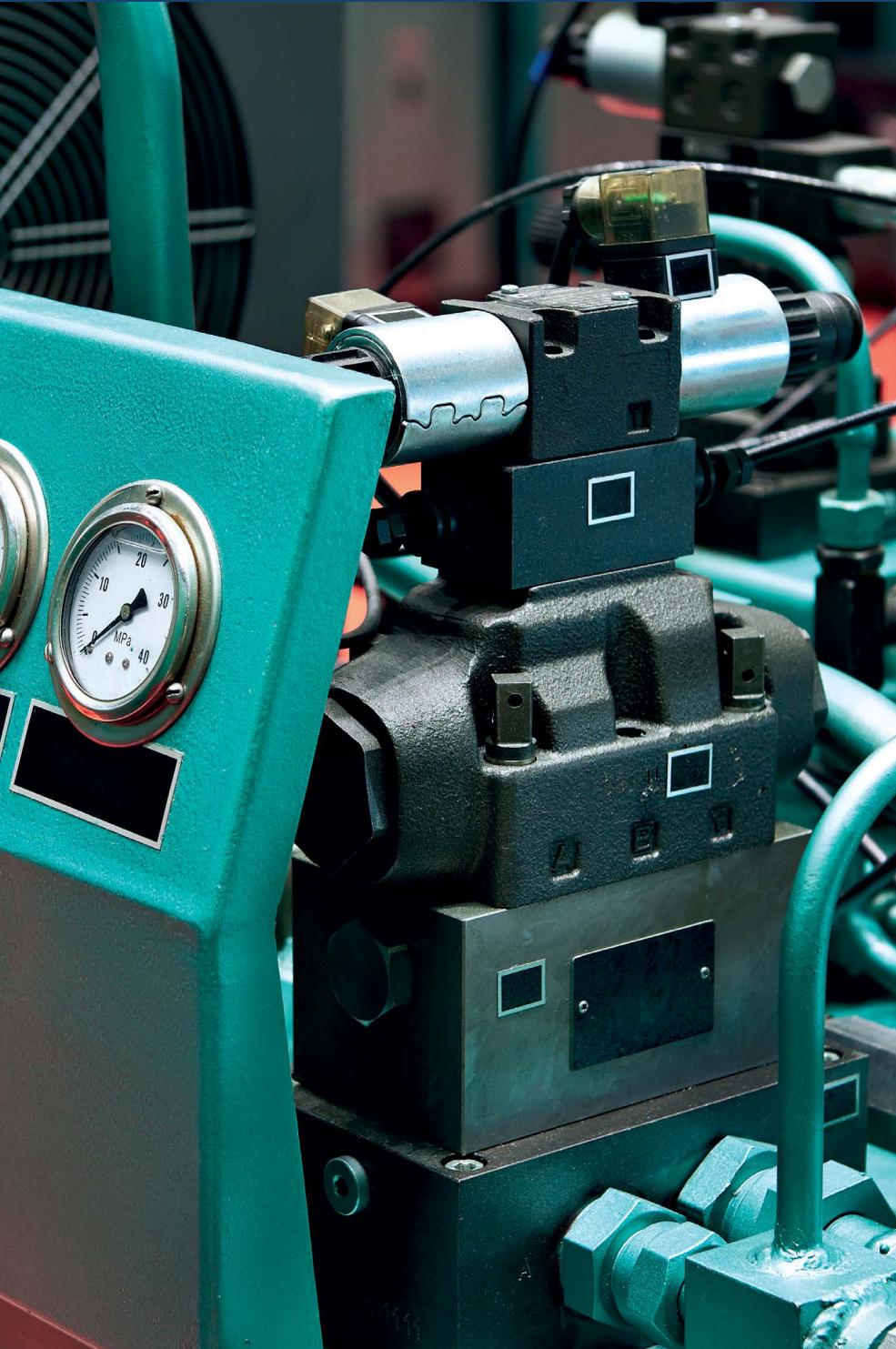
## Hydraulics

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Valves & Pumps

# SECTION 3

## Valves & Pumps



- Hydraulic Piston Pumps
- Hydraulic Vane Pumps
- Solenoid Operated Directional Valves
- Hydraulic Hand Pumps
- Hydraulic Gear Pumps
- Hydraulic Ball Valves
- Hydraulic Control Valves
- Stainless Steel Hydraulic Ball Valves
- Actuation Hydraulic Valves
- Monoblock Hydraulic Valves
- Hydraulic Accumulators & Accessories
- Hydraulic Cooling Equipment
- Anti-vibration Mounts

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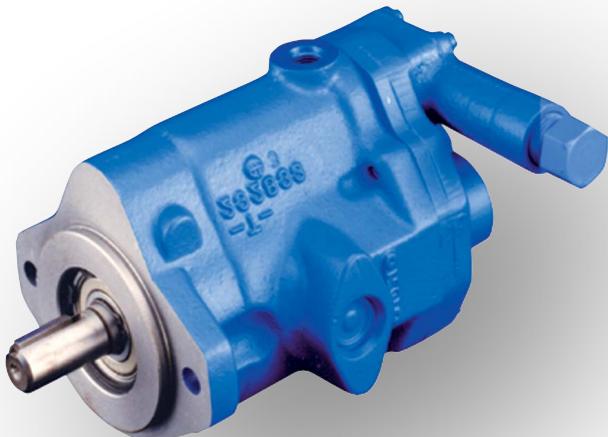
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# V10 and PVQ Piston Pumps



**EATON**



## Attributes that Go On and On: Reliable, Quiet, Compact, Long Life, Serviceable...

### 1. Vane Motors

The cartridge kit design makes for uptime and easy serviceability. Additionally, a low break out force smooths out the start-up speed allowing for vane motors to be more forgiving to system pressure spikes. Vane motors offer an efficient and economical means of applying variable speed, rotary hydraulic power and offer variable horsepower (constant torque). They can be stalled under load without damage when protected by a relief valve.

**Applications:** Plastic injection molding and conveyors.

### 2. VMQ Pumps

The Vickers VMQ is the world leader in pressure capacity and noise levels and is available in a complete range of singles, doubles, triples and thru-drives. The unique wafer plate design of the VMQ allows for the increase in viscosity and pressure rise during cold start-up-something that competitors do not have.

**Applications:** Winches, oil field and drilling equipment, earth moving and construction equipment, die casting, molding machines, press machines, trash compactors, balers and primary metals.



## Q Series Piston Pump

### 210 bar, SAE A Flange, Keyed Shaft

3017	Displacement cc/rev	Manufacturer's Code
02-341576	10.5	PVQ10 A2R SE1S 20 C21 12
Tech Sheet 10045		

### 140 bar, SAE A 2 Bolt Flange, Keyed Shaft

3017	Displacement cc/rev	Manufacturer's Code
02-341644	13.8	PVQ13 A2R SE1S 20 C14 12
Tech Sheet 10045		

### 210 bar, SAE B 2 Bolt Flange, Keyed Shaft

3017	Displacement cc/rev	Manufacturer's Code
02-341552	21.1	PVQ20 B2R SE1S 21 C21 12
Tech Sheet 10045		

## Q Series Piston Pump Compensator

### Standard Compensator

3017	To Suit
9900224-003	PVQ10, 13, 20, 32
02-348260	PVQ40
Tech Sheet 10045	

### CM Low Pressure Compensator

3017	To Suit
9900224-002	PVQ10,13,20,32
02-348259	PVQ40
Tech Sheet 10045	

### CG Hydraulic Remote Compensator

3017	To Suit
02-348243	PVQ10,13,20,32,40
Tech Sheet 10045	

### \*\*V\*\*B Load Sensing Compensator

3017	To Suit
02-466861	PVQ10,13,20,32
Tech Sheet 10045	

### 140 bar, SAE B 2 Bolt Flange, Keyed Shaft

3017	Displacement cc/rev	Manufacturer's Code
02-341685	32.9	PVQ32 B2R SE1S 21 C14 12
Tech Sheet 10045		

### 210 bar, SAE B 2 Bolt Flange, Keyed Shaft

3017	Displacement cc/rev	Manufacturer's Code
02-341949	41.0	PVQ40AR01AB01AB10G2100000100100CD0A
Tech Sheet 10045		

## Q Series Piston Pump Stroke Adjustment Kit

### Maximum Stop/Stroke Limiter

3017	To Suit
5986572-001	PVQ10,13
5986574-001	PVQ20,32
5986576-001	PVQ40
Tech Sheet 10045	

## Q Series Piston Pump Seal Kits

### Standard Buna Material

3017	To Suit
919191	PVQ10,13
919682	PVQ20,32
920227	PVQ40
Tech Sheet 10045	

Other options available, contact us with your requirements



## V10 Series

### SAE A 2 Bolt Mounting, Keyed Shaft, BSPP Ports

3017	Displacement cc/rev	Max Pressure Bar	Manufacturer's Code
708371-C	6.60	172	V10 1B2B 1C 20
708784-C	9.80	172	V10 1B3B 1C 20
708785-C	13.10	172	V10 1B4B 1C 20
708219-C	16.40	172	V10 1B5B 1C 20
708786-C	19.50	152	V10 1B6B 1C 20
708787-C	22.80	138	V10 1B7B 1C 20

Tech Sheet 10095

## V20 Series

### SAE A 2 Bolt Mounting, Keyed Shaft, BSPP Ports

3017	Displacement cc/rev	Max Pressure Bar	Manufacturer's Code
707277-C	19.5	172	V20 1B6B 1C 11 EN1000
708397-C	22.80	172	V20 1B7B 1C 11 EN1000
706996-C	26.5	172	V20 1B8B 1C 11 EN1000
707278-C	29.7	172	V20 1B9B 1C 11 EN1000
706997-C	36.40	172	V20 1B11B 1C 11 EN1000
708398-C	39.0	152	V20 1B12B 1C 11 EN1000
706998-C	42.4	152	V20 1B13B 1C 11 EN1000

Tech Sheet 10095

## 25V Series

### SAE B 2 Bolt Mounting, Keyed Shaft, SAE Flanged Ports

3017	Displacement cc/rev	Max Pressure Bar	Manufacturer's Code
02-137109-CR	39	172	25V 12A 1C 22R
02-137110-CR	45	172	25V 14A 1C 22R
02-137113-CR	55	172	25V 17A 1C 22R
02-137117-CR	67	172	25V 21A 1C 22R

Tech Sheet 10097

## 35V Series

### SAE C 2 Bolt Mounting, Keyed Shaft, SAE Flanged Ports

3017	Displacement cc/rev	Max Pressure Bar	Manufacturer's Code
02-137124-CR	81	172	35V 25A 1C 22R
02-137126-CR	97	172	35V 30A 1C 22R
02-137129-CR	112	172	35V 35A 1C 22R
02-137132-CR	121	172	35V 38A 1C 22R

Tech Sheet 10097

## 45V Series

### SAE C 2 Bolt Mounting, Keyed Shaft, SAE Flanged Ports

3017	Displacement cc/rev	Max Pressure Bar	Manufacturer's Code
02-137140-CR	138	172	45V 42A 1C 22R
02-137144-CR	162	172	45V 50A 1C 22R
02-137146-CR	193	172	45V 60A 1C 22R

Tech Sheet 10097

Other options available, contact us with your requirements

**Replacement Parts****V10 Cartridge Kits**

3017	Displacement cc/rev	To Suit
923471	3.3	V10 1G Cartridge Kit
923470	6.6	V10 2G Cartridge Kit
923496	9.8	V10 3G Cartridge Kit
923469	13.10	V10 4G Cartridge Kit
923468	16.40	V10 5G Cartridge Kit
923497	19.5	V10 6G Cartridge Kit
923498	22.80	V10 7G Cartridge Kit

**Shafts**

3017	To Suit
238929	25V No. 11 Splined Shaft
242287	35V No. 11 Splined Shaft
242885	45V No. 11 Splined Shaft
392669	35V No. 86 HD Keyed Shaft
361760	45V No. 86 HD Keyed Shaft
393536	Key to suit 392669
239751	Key to suit 361760

**V20 Cartridge Kits**

3017	Displacement cc/rev	To Suit
02-137560	19.5	V20 6G Cartridge Kit
02-137561	22.80	V20 7G Cartridge Kit
02-137562	26.5	V20 8G Cartridge Kit
02-137563	29.7	V20 9G Cartridge Kit
02-137565	36.40	V20 11G Cartridge Kit
02-137566	39.0	V20 12G Cartridge Kit
02-137567	42.4	V20 13G Cartridge Kit

**25V Cartridge Kits**

3017	Displacement cc/rev	To Suit
02-102532	39	25V 12G Cartridge Kit
02-102533	45	25V 14G Cartridge Kit
02-102534	55	25V 17G Cartridge Kit
02-102535	67	25V 21G Cartridge Kit

**35V Cartridge Kits**

3017	Displacement cc/rev	To Suit
02-102552	81	35V 25G Cartridge Kit
02-102553	97	35V 30G Cartridge Kit
02-102554	112	35V 35G Cartridge Kit
02-102555	121	35V 38G Cartridge Kit

**45V Cartridge Kits**

3017	Displacement cc/rev	To Suit
02-102572	138	45V 42G Cartridge Kit
02-102574	162	45V 50G Cartridge Kit
02-102575	193	45V 60G Cartridge Kit

**Seal Kits**

3017	To Suit
923548	V10 Standard Seal Kit
919772	V10 F3 Seal Kit
922733	V20 Standard Seal Kit
919805	V20 F3 Seal Kit
922850	25V Standard Seal Kit
919656	25V F3 Seal Kit
922851	35V Standard Seal Kit
919262	35V F3 Seal Kit
919850	45V Standard Seal Kit
919632	45V F3 Seal Kit

Other options available, contact us with your requirements

# Cetop 3 Valves



**EATON**

## Solenoid Operated Directional Valve DG4V-3-60 Design

### General Description

Solenoid operated directional control valves are for directing and stopping flow at any point in a hydraulic system.

- Efficient control of greater hydraulic powers without increasing solenoid power consumption.
- Installed cost and space savings from higher power/weight-and-size ratios.
- Installation flexibility resulting from choice of numerous combinations of solenoid connectors and locations.

- Viton seals as standard for multi-fluid capability. Nitrile seals available as a model code option.
- Higher sustained machine productivity and higher uptime because of proven fatigue life and endurance, tested over 20 million cycles.
- Solenoid coils can be changed quickly and easily without leakage from hydraulic system.
- Compact, cost effective system design when used with Eaton® SystemStak™ valves and subplates.

### DG4V3-S/R- High Performance and Standard Performance Valves

- Minimum pressure drop 2.5 bar at 30 l/min
- Range of coil connectors including DIN, Deutsch, AMP and terminal box
- Range of coil voltages and power options
- Up to 80 l/min (21 USgpm) and up to 40 l/min (10.5 USgpm) respectively at 350 bar (5000 psi).
- Offers designers the opportunity to select the optimum value package for each application.
- International standard interface. The valve mounting face conforms to ISO 4401, size 03 and is compatible with related international standards.



# HYDRAULIC DIRECTIONAL CONTROL VALVES

**EATON**

**Vickers**

## CETOP 3 Single Solenoid Directional Control Valves

Max flow rates up to 80 L/min.

Mounting interface.

ISO 4401 Size 3.

ANSI/B93.7M Size 3.

CETOP RP6SH Size 3.

DIN 24340 (N66).

**Temperature Limits:**

Min -20°C (-4°F)

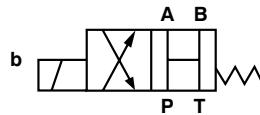
Max +70°C (+150°F)

**Working Temperature:**

-20°C (-4°F) to +70°C (+150°F)

**Maximum Working Pressure:**

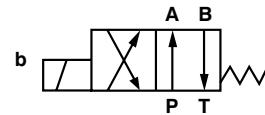
350 bar (5075 psi)



**2 Position, All Ports Open, Spring Offset End to Centre**

3019	Voltage	Manufacturer's Code
859160	24V DC	DG4V 3 0B M U H7 60
859195	110V AC	DG4V 3 0B M U A6 60

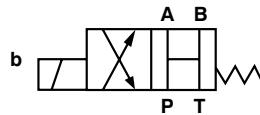
Tech Sheet 3111



**2 Position, Spring Offset End to End**

3019	Voltage	Manufacturer's Code
529762	24V DC	DG4V 3 2A M U H7 60
529763	110V AC	DG4V 3 2A M U A6 60

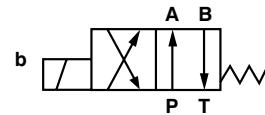
Tech Sheet 3111



**2 Position, All Ports Open, Spring Offset End to Centre, Water Resistant Override**

3019	Voltage	Manufacturer's Code
869951	12V DC	DG4V 3 0B H M U G7 60
870804	24V DC	DG4V 3 0B H M U H7 60

Tech Sheet 3111



**2 Position, Spring Offset End to End, Water Resistant Override**

3019	Voltage	Manufacturer's Code
869959	12V DC	DG4V 3 2A H M U G7 60
870221	24V DC	DG4V 3 2A H M U H7 60
871358	110/120V 50/60Hz	DG4V 3 2A H M U B6 60
871505	220/240V 50/60Hz	DG4V 3 2A H M U D6 60

Tech Sheet 3111

Other voltages are available. Please contact our Business Development Team for more details.

# HYDRAULIC DIRECTIONAL CONTROL VALVES

EATON

Vickers

3

## CETOP 3 Double Solenoid Directional Control Valves

Max flow rates up to 80 L/min.

Mounting interface.

ISO 4401 Size 3.

ANSI/B93.7M Size 3.

CETOP RP6SH Size 3.

DIN 24340 (N66).

Temperature Limits:

Min -20°C (-4°F)

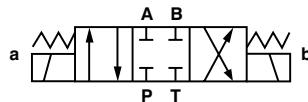
Max +70°C (+150°F)

Working Temperature:

-20°C (-4°F) to +70°C (+150°F)

Maximum Working Pressure:

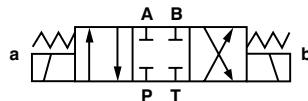
350 bar (5075 psi)



### 3 Position, All Ports Closed, Spring Centred

3019	Voltage	Manufacturer's Code
529761	110V AC	DG4V 3 2C M U A6 60

Tech Sheet 3111



### 3 Position, All Ports Closed, Spring Centred, Water Resistant Override

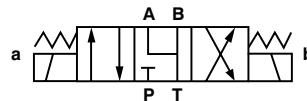
3019	Voltage	Manufacturer's Code
859172	220/240V	DG4V 3 2C H M U D6 60
870177	24V DC	DG4V 3 2C H M U H7 60
870378	12V DC	DG4V 3 2C H M U G7 60

Tech Sheet 3111

### 3 Position, A, B & T Connected, Spring Centred

3019	Voltage	Manufacturer's Code
565465	24V DC	DG4V 3 6C M U H7 60
859177	110V AC	DG4V 3 6C M U A6 60

Tech Sheet 3111



### 3 Position, A, B & T Connected, Spring Centred, Water Resistant Override

3019	Voltage	Manufacturer's Code
869952	12V DC	DG4V 3 6C H M U G7 60
869953	24V DC	DG4V 3 6C H M U H7 60
02-146111	110/120V 50/60Hz	DG4V 3 6C H M U B6 60

Tech Sheet 3111

Other voltages are available. Please contact our Business Development Team for more details.



# HYDRAULIC DIRECTIONAL CONTROL VALVES

**EATON**

**Vickers**

## CETOP 3 Double Solenoid Directional Control Valves

Max flow rates up to 80 L/min.

Mounting interface.

ISO 4401 Size 3.

ANSI/B93.7M Size 3.

CETOP RP6SH Size 3.

DIN 24340 (N66).

**Temperature Limits:**

Min -20°C (-4°F)

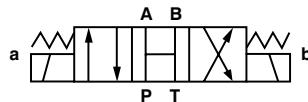
Max +70°C (+150°F)

**Working Temperature:**

-20°C (-4°F) to +70°C (+150°F)

**Maximum Working Pressure:**

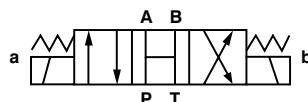
350 bar (5075 psi)



### 3 Position, All Ports Open, Spring Centred

3019	Voltage	Manufacturer's Code
859197	110V AC	DG4V 3 0C M U A6 60

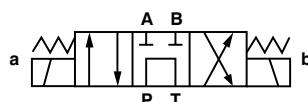
Tech Sheet 3111



### 3 Position, All Ports Open, Spring Centred, Water Resistant Override

3019	Voltage	Manufacturer's Code
869960	24V DC	DG4V 3 0C H M U H7 60
870518	12V DC	DG4V 3 0C H M U G7 60

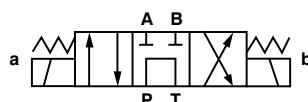
Tech Sheet 3111



### P & T Connected, A & B Blocked, Spring Centred

3019	Voltage	Manufacturer's Code
02-144961	110V AC	DG4V 3 8C VM U A6 61
02-145162	24V DC	DG4V 3 8C VM U H7 61

Tech Sheet 3111



### P & T Connected, A & B Blocked, Spring Centred, Water Resistant Override

3019	Voltage	Manufacturer's Code
02-353298	110/120V 50/60Hz	DG4V 3 8C H VM U B6 61

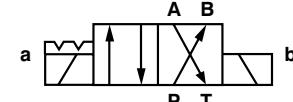
Tech Sheet 3111



### 2 Position, Detented

3019	Voltage	Manufacturer's Code
529764	24V DC	DG4V 3 2N M U H7 60
529765	110V AC	DG4V 3 2N M U A6 60

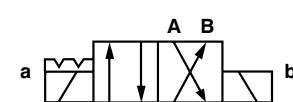
Tech Sheet 3111



### 2 Position, Detented, Water Resistant Override

3019	Voltage	Manufacturer's Code
02-139074	24V DC	DG4V 3 2N H M U H7 60

Tech Sheet 3111



Other voltages are available. Please contact our Business Development Team for more details.

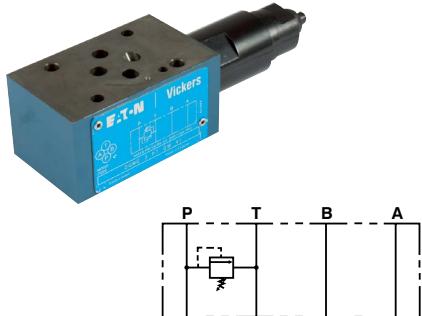
# SYSTEM STACK VALVES

**EATON**

**Vickers**

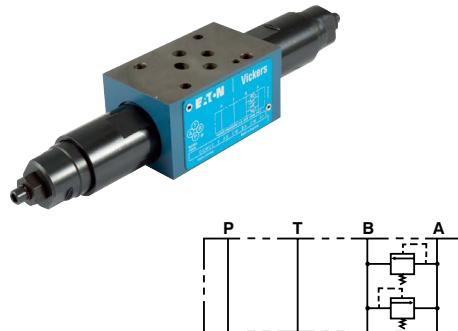
3

## CETOP 3 Modules



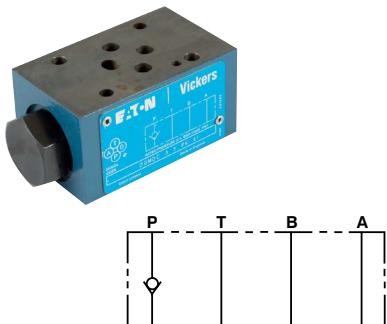
### Single Line Relief Valves

3019	Pressure Range Bar	Manufacturer's Code
694419	10-200	DGMC 3 PT CW 41
869641	50-315	DGMC 3 PT GW 41
Tech Sheet 3111		



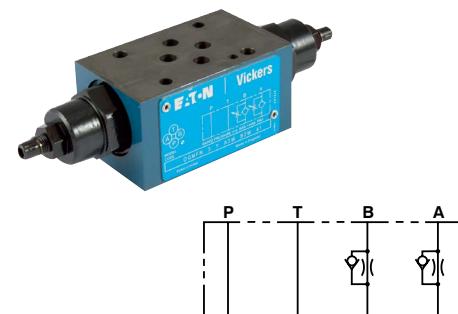
### Dual Line Relief Valve

3019	Pressure Range Bar	Manufacturer's Code
869628	10-200	DGMC2 3 AB CW BA CW 41
Tech Sheet 3111		



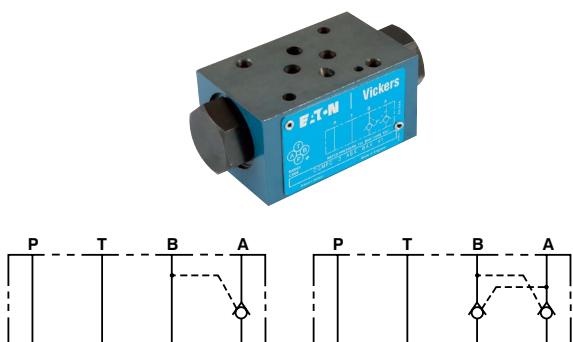
### Direct Operated Check Valve

3019	Manufacturer's Code
694415	DGMDC 3 Y PK 41
Tech Sheet 3111	



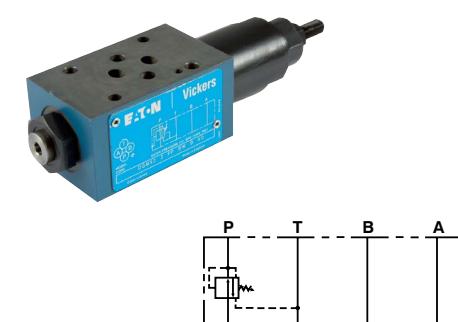
### Flow Restrictors

3019	Description	Manufacturer's Code
694414	A & B Meter In	DGMFN 3 X A2W B2W 41
694412	A & B Meter Out	DGMFN 3 Y A2W B2W 41
870043	P Line	DGMFN 3 Z P2W 41
Tech Sheet 3111		



### Pilot Operated Check Valves

3019	Description	Manufacturer's Code
870024	Single	DGMPC 3 ABK 41
694400	Double	DGMPC 3 ABK BAK 41
Tech Sheet 3111		

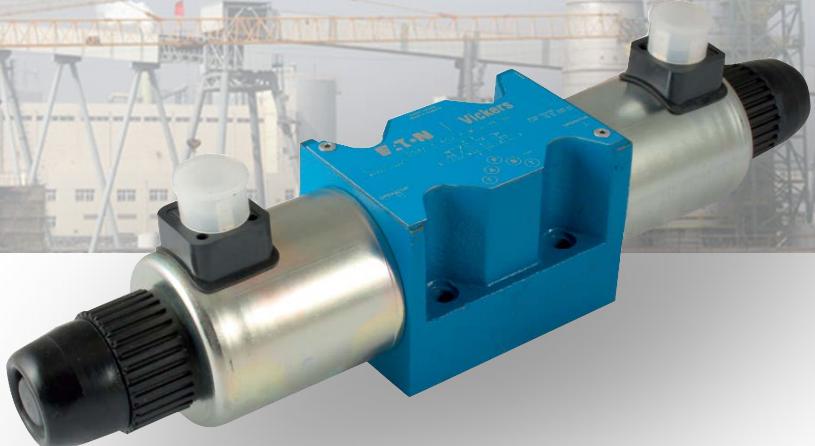


### Pressure Reducing Valves

3019	Pressure Range Bar	Manufacturer's Code
870036	3.5-70	DGMX2 3 PP BW B 40
870038	20-250	DGMX2 3 PP FW B 40
Tech Sheet 3111		



# Cetop 5 Valves



**EATON**

## Solenoid Operated Directional Valve DG4V-5-20 Design

### General Description

A range of four-port solenoid operated directional control valves with four-land spool design to facilitate provision of smooth, variable valve response speeds.

The range includes:

- AC and DC wet-armature solenoid options with ISO 4400 (DIN 43650) electrical connections and manual overrides.
- Variable speed changeover potential in all DC models; see “Response Times” section.
- Many spool types; in spring-offset, spring centred and detented arrangements.
- Compact, cost effective system design when used with Eaton® SystemStak™ valves and subplates.

# HYDRAULIC DIRECTIONAL CONTROL VALVES

**EATON**

**Vickers**

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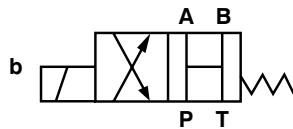
## CETOP 5 Single Solenoid Directional Control Valves

Max flow rates up to 120 L/min.  
Mounting interface.  
ISO 4401 Size 5.  
NFPA D02  
DIN 24340 (NG10).

**Temperature Limits:**  
Min -20°C (-4°F)  
Max +70°C (+150°F)

**Working Temperature:**  
-20°C (-4°F) to +70°C (+150°F)

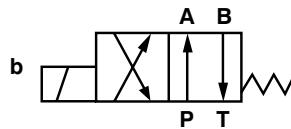
**Maximum Working Pressure:**  
350 bar (5075 psi)



**2 Position, All Ports Open, Spring Offset End to Centre**

3019	Voltage	Manufacturer's Code
459215	110V AC	DG4V 5 0B M U A6 20

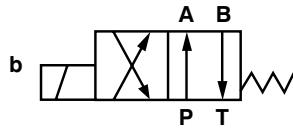
Tech Sheet 3112



**2 Position, Spring Offset End to End, Water Resistant Override**

3019	Voltage	Manufacturer's Code
529678	24V DC	DG4V 5 2AJ H M U H6 20

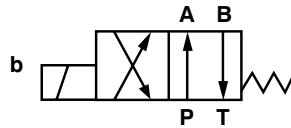
Tech Sheet 3112



**2 Position, Spring Offset End to End, Notched Spool**

3019	Voltage	Manufacturer's Code
616768	24V DC	DG4V 5 2AJ M U H6 20

Tech Sheet 3112



**2 Position, Spring Offset End to End**

3019	Voltage	Manufacturer's Code
616769	110V AC	DG4V 5 2A M U A6 20

Tech Sheet 3112

Other voltages are available. Please contact our Business Development Team for more details.

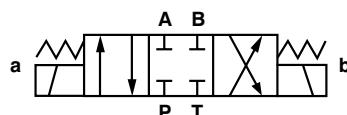
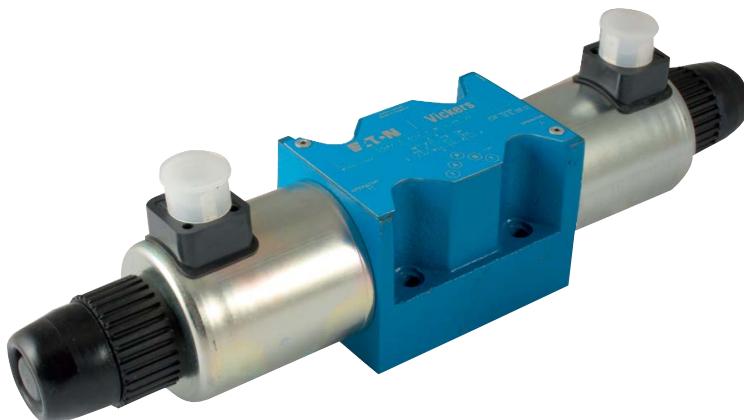


# HYDRAULIC DIRECTIONAL CONTROL VALVES

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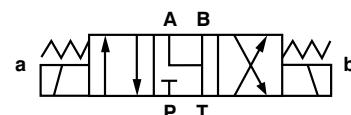
## CETOP 5 Double Solenoid Directional Control Valves



All Ports Closed, Spring Centred

3019	Voltage	Manufacturer's Code
616776	24V DC	DG4V 5 2CJ M U H6 20
616777	110V AC	DG4V 5 2C M U A6 20

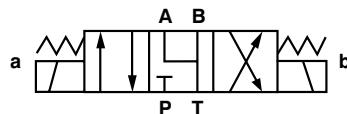
Tech Sheet 3112



A & B to T, P Blocked, Spring Centred,  
Water Resistant Override

3019	Voltage	Manufacturer's Code
529677	24V DC	DG4V 5 6CJ H M U H6 20

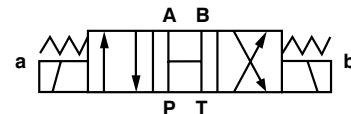
Tech Sheet 3112



A & B to T, P Blocked, Spring Centred

3019	Voltage	Manufacturer's Code
616780	24V DC	DG4V 5 6CJ M U H6 20
616781	110V AC	DG4V 5 6C M U A6 20

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All Ports Open, Spring Centred

3019	Voltage	Manufacturer's Code
616788	24V DC	DG4V 5 0CJ M U H6 20
616789	110V DC	DG4V 5 0C M U A6 20

Tech Sheet 3112

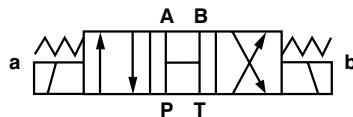
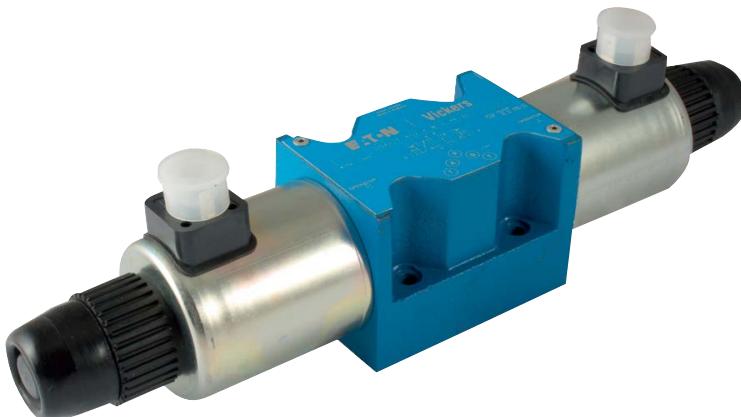
# HYDRAULIC DIRECTIONAL CONTROL VALVES

**EATON**

**Vickers**

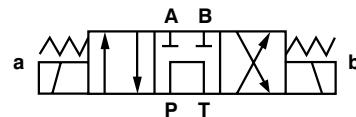
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## CETOP 5 Double Solenoid Directional Control Valves



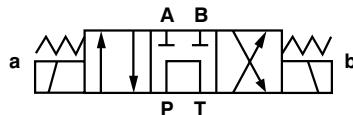
All Ports Open, Spring Centred, Water Resistant Override

3019	Voltage	Manufacturer's Code
02-146793	24V DC	DG4V 5 0CJ H M U H6 20
Tech Sheet 3112		



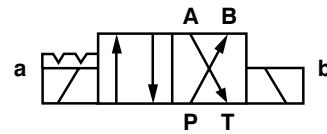
P & T Connected, A & B Blocked, Spring Centred, Water Resistant Override

3019	Voltage	Manufacturer's Code
859108	24V DC	DG4V 5 8CJ H VM U H6 20
Tech Sheet 3112		



P & T Connected, A & B Blocked, Spring Centred

3019	Voltage	Manufacturer's Code
616784	24V DC	DG4V 5 8CJ VM U H6 20
616785	110V AC	DG4V 5 8CJ VM U A6 20
Tech Sheet 3112		



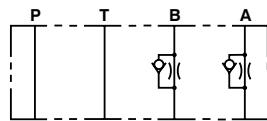
2 Position, Detented

3019	Voltage	Manufacturer's Code
616772	24V DC	DG4V 5 2NJ M U H6 20
616773	110V AC	DG4V 5 2N M U A6 20
Tech Sheet 3112		

Other voltages are available. Please contact our Business Development Team for more details.

# SYSTEM STACK VALVES

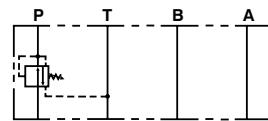
## CETOP 5 Modules



### Flow Restrictors

3019	Description	Manufacturer's Code
867332	Meter Out	DGMFN 5 Y A2W B2W 30
867335	Meter In	DGMFN 5 X A2W B2W 30

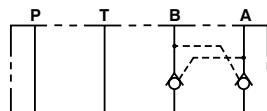
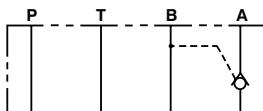
Tech Sheet 3112



### Pressure Reducing Valves

3019	Pressure Range Bar	Manufacturer's Code
868314	8.5-100	DGMX2 5 PP BW B 30
880553	8.5-200	DGMX2 5 PP FW B 30
879046	8.5-315	DGMX2 5 PP GH B 30

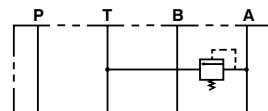
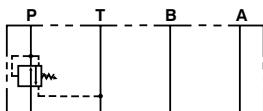
Tech Sheet 3112



### Pilot Operated Check Valve, 1 bar Cracking Pressure

3019	Description	Manufacturer's Code
867339	Single A Port	DGMPC 5 ABK 30
867340	Single B Port	DGMPC 5 BAK 30
867364	Double A & B Port	DGMPC 5 ABK BAK 30

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### Single Line Relief Valves

3019	Pressure Range Bar	Manufacturer's Code
868651	4-100	DGMC 5 AT BW B 30
879342	4-200	DGMC 5 PT FW B 30
868300	4-315	DGMC 5 PT GW B 30

Tech Sheet 3112

# CETOP VALVE COILS

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## CETOP 3 Coils, 60 Design



### DC Coils

Part Number	Voltage
3019	12V
507847	24V
507848	12V 18W
507855	24V 18W
865882	48V
865637	98V
865884	110V
865638	196V

### AC Coils

Part Number	Voltage
3019	110V 50Hz
507825	220V 50Hz
507826	110V 50Hz / 120V 60Hz
507833	220V 50Hz / 240V 60Hz
507834	

## CETOP 5 Coils, 20 Design



### DC Coils

Part Number	Voltage
3019	12V
617470	24V
617471	48V
457942	98V
457977	110V
457911	196V
698523	

### AC Coils

Part Number	Voltage
3019	110V 50Hz
617475	220V 50Hz
617476	240V 50Hz
617477	115V 60Hz
617499	230V 60Hz
617500	

# ELECTRICAL CONNECTORS

## EN175301-803, DIN43650

### PG11

Part Number	Voltage	Description
GDM2011-G	250V AC/DC	No LED, Grey
GDML2011-GB1-B	250V AC/DC	Bridge-type Rectifier No LED
GDML2011LED-24-B	24V AC/DC	LED No Protection
GDML2011LED-120B	120V AC/DC	LED No Protection
GDML2011LED-230B	230V AC/DC	LED No Protection
GDML2011LED-24HH	24V DC	LED With Diode Protection
GDML2011LED-48HH	48V DC	LED With Diode Protection

Tech Sheet 10132



**AMERA**

# CETOP Directional Control Valves



# CETOP DIRECTIONAL CONTROL VALVES

**AMERA**

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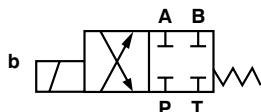


## CETOP 3, Single Solenoid

**Max Flow Rate:** 80 L/min  
**Viscosity:** 2.8-100 mm<sup>2</sup>/s  
**ISO 4401 Size 3:**  
**DIN 24340 Size 6:**  
**IP65:**

**Working Temperature:**  
 -20°C to +70°C

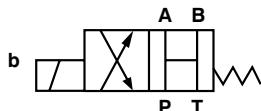
**Maximum Working Pressure:**  
 350 bar



### 2 Position, All Ports Closed, Spring Offset to Centre

0451	Model	Voltage
1010-1047	ADC 3 2EY/RX14/AC110N9K	110V AC
1010-1046	ADC 3 2EY/RX14/DC24N9K	24V DC

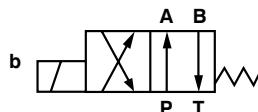
Tech Sheet 10682



### 2 Position, All Ports Open, Spring Offset to Centre

0451	Model	Voltage
1010-1000	ADC 3 2HY/RX14/AC110N9K	110V AC
1010-1001	ADC 3 2HY/RX14/DC24N9K	24V DC
1010-1059	ADC 3 2HY/RX14/DC12N9K	12V DC

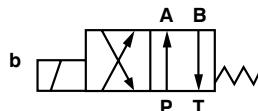
Tech Sheet 10682



### 2 Position, Spring Offset, Open Transient

0451	Model	Voltage
1010-1045	ADC 3 2CY/RX14/AC110N9K	110V AC
1010-1044	ADC 3 2CY/RX14/DC24N9K	24V DC

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### 2 Position, Spring Offset End to End

0451	Model	Voltage
1010-1002	ADC 3 2DY/RX14/AC110N9K	110V AC
1010-1003	ADC 3 2DY/RX14/DC24N9K	24V DC
1010-1058	ADC 3 2DY/RX14/DC12N9K	12V DC

Tech Sheet 10682

**AMERA**

You might also need  
**CETOP 3 Manifold**  
 see page 862



# CETOP DIRECTIONAL CONTROL VALVES



## CETOP 3, Double Solenoid

**Max Flow Rate:** 80 L/min

Viscosity 2.8-100 mm<sup>2</sup>/s

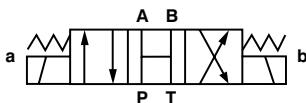
ISO 4401 Size 3

DIN 24340 Size 6

IP65

**Working Temperature:**  
-20°C to +70°C

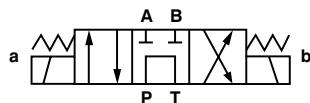
**Maximum Working Pressure:**  
350 bar



### 3 Position, All Ports Open, Spring Centred

0451	Model	Voltage
1010-1004	ADC 3 3HY/RX14/AC110N9K	110V AC
1010-1006	ADC 3 3HY/RX14/DC24N9K	24V DC
1010-1005	ADC 3 3HY/RX14/DC12N9K	12V DC

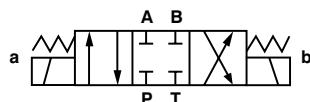
Tech Sheet 10682



### 3 Position, P & T Connected A & B Blocked, Spring Centred

0451	Model	Voltage
1010-1011	ADC 3 3GY/RX14/AC110N9K	110V AC
1010-1012	ADC 3 3GY/RX14/DC24N9K	24V DC
1010-1061	ADC 3 3GY/RX14/DC12N9K	12V DC

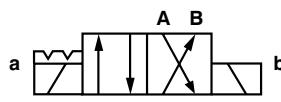
Tech Sheet 10682



### 3 Position, All Ports Closed, Spring Centred

0451	Model	Voltage
1010-1007	ADC 3 3EY/RX14/AC110N9K	110V AC
1010-1008	ADC 3 3EY/RX14/DC24N9K	24V DC
1010-1060	ADC 3 3EY/RX14/DC12N9K	12V DC

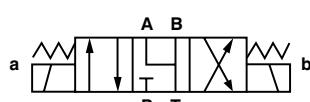
Tech Sheet 10682



### 2 Position, Detent

0451	Model	Voltage
1010-1013	ADC 3 2DD/RX14/AC110N9K	110V AC
1010-1014	ADC 3 2DD/RX14/DC24N9K	24V DC

Tech Sheet 10682



### 3 Position, A, B & T Connected, Spring Centred

0451	Model	Voltage
1010-1009	ADC 3 3JY/RX14/AC110N9K	110V AC
1010-1010	ADC 3 3JY/RX14/DC24N9K	24V DC
1010-1062	ADC 3 3JY/RX14/DC12N9K	12V DC

Tech Sheet 10682

# CETOP DIRECTIONAL CONTROL VALVES

**AMERA**

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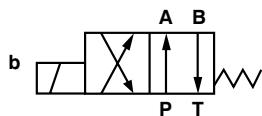


## CETOP 5, Single Solenoid

**Max Flow Rate:** 120 L/min  
**Viscosity:** 2.8-100 mm<sup>2</sup>/s  
**ISO 4401 Size 5**  
**DIN 24340 Size 10**  
**IP65**

**Working Temperature:**  
 -20°C to +70°C

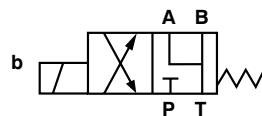
**Maximum Working Pressure:**  
 315 bar



### 2 Position, Spring Offset End to End

0451	Model	Voltage
1010-1015	ADC 5 2DY/RX14/AC110N9K	110V AC
1010-1016	ADC 5 2DY/RX14/DC24N9K	24V DC
1010-1063	ADC 5 2DY/RX14/DC12N9K	12V DC

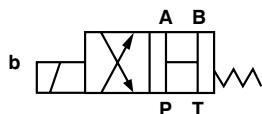
Tech Sheet 10683



### 2 Position, A, B & T Connected, Spring Return

0451	Model	Voltage
1010-1071	ADC 5 2JY/RX14/DC12N9K	12V DC
1010-1072	ADC 5 2JY/RX14/DC24N9K	24V DC

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### 2 Position, All Ports Open, Spring Offset to Centre

0451	Model	Voltage
1010-1069	ADC 5 2HY/RX14/DC24N9K	24V DC
1010-1064	ADC 5 2HY/RX14/DC12N9K	12V DC

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## Replacement Coils



### CETOP 3

0451	Voltage
1010-1036	110V AC
1010-1037	220V AC
1010-1038	12V DC
1010-1039	24V DC

Tech Sheet 10683



### CETOP 5

0451	Voltage
1010-1040	110V AC
1010-1041	220V AC
1010-1042	12V DC
1010-1043	24V DC

Tech Sheet 10683

# CETOP DIRECTIONAL CONTROL VALVES

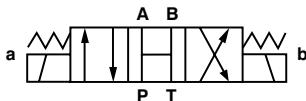


## CETOP 5, Double Solenoid

Max Flow Rate: 120 L/min  
 Viscosity 2.8-100 mm<sup>2</sup>/s  
 ISO 4401 Size 5  
 DIN 24340 Size 10  
 IP65

Working Temperature:  
 -20°C to +70°C

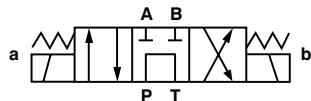
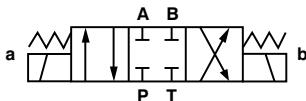
Maximum Working Pressure:  
 315 bar



### 3 Position, All Ports Open, Spring Centred

0451	Model	Voltage
1010-1070	ADC 5 3HY/RX14/DC24N9K	24V DC
1010-1067	ADC 5 3HY/RX14/DC12N9K	12V DC

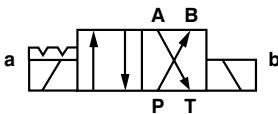
Tech Sheet 10683



### 3 Position, P & T Connected A & B Blocked, Spring Centred

0451	Model	Voltage
1010-1056	ADC 5 3GY/RX14/AC110N9K	110V AC
1010-1021	ADC 5 3GY/RX14/DC24N9K	24V DC
1010-1066	ADC 5 3GY/RX14/DC12N9K	12V DC

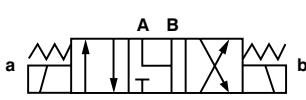
Tech Sheet 10683



### 2 Position, Detented

0451	Model	Voltage
1010-1055	ADC 5 2DD/RX14/AC110N9K	110V AC
1010-1054	ADC 5 2DD/RX14/DC24N9K	24V DC

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### 3 Position, A, B & T Connected, Spring Centred

0451	Model	Voltage
1010-1019	ADC 5 3JY/RX14/AC110N9K	110V AC
1010-1020	ADC 5 3JY/RX14/DC24N9K	24V DC
1010-1068	ADC 5 3JY/RX14/DC12N9K	12V DC

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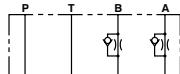
# CETOP DIRECTIONAL CONTROL VALVES

Working Temperature:  
-20°C to +70°C

Maximum Working Pressure:  
350 bar

Max Flow Rate: 80 L/min  
Viscosity 2.8-100 mm<sup>2</sup>/s  
ISO 4401 Size 3  
DIN 24340 Size 6

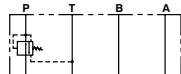
## CETOP 3 Sandwich Valves



**Flow Restrictor**

0451	Model	Type
1010-1022	AFR 3 X2/RX14/2Q	A & B Meter In
1010-1023	AFR 3 Y2/RX14/2Q	A & B Meter Out
1010-1053	AFR 3 Z P2/RX14/2Q	P Line

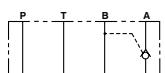
Tech Sheet 10682



**Pressure Reducing**

0451	Model	Pressure Range Bar
1010-1026	ARD 3 PP 2/RX14/75	3.5 - 75
1010-1027	ARD 3 PP 2/RX14/150	10 - 150
1010-1028	ARD 3 PP 2/RX14/210	20 - 210

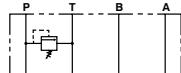
Tech Sheet 10682



**Pilot Operated Check**

0451	Model	Type
1010-1024	APOC 3 A1/RX14/N	Single
1010-1025	APOC 3 AB1/RX14/	Double

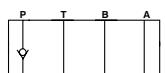
Tech Sheet 10682



**Single Line Pressure Relief**

0451	Model	Pressure Range Bar
1010-1050	ASPR 3 PT1/RX14/100	3 - 100
1010-1029	ASPR 3 PT1/RX14/200	10 - 200
1010-1030	ASPR 3 PT1/RX14/315	50 - 315

Tech Sheet 10682



**Direct Operated Check**

0451	Model	Cracking Pressure Bar
1010-1052	ADOC 3 PA/RX14/	0.5

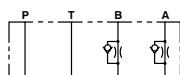
Tech Sheet 10682

Working Temperature:  
-20°C to +70°C

Maximum Working Pressure:  
315 bar

Max Flow Rate: 80 L/min  
Viscosity 2.8-100 mm<sup>2</sup>/s  
ISO 4401 Size 5  
DIN 24340 Size 10

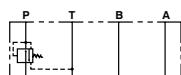
## CETOP 5 Sandwich Valves



**Flow Restrictor**

0451	Model	Type
1010-1031	AFR 5 Y2/RX14/2Q	A & B Meter Out
1010-1057	AFR 5 X2/RX14/2Q	A & B Meter In

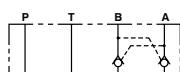
Tech Sheet 10683



**Pressure Reducing**

0451	Model	Pressure Range Bar
1010-1033	ARD 5 PP 2/RX14/200	8.5 - 200
1010-1034	ARD 5 PP 2/RX14/315	8.5 - 315

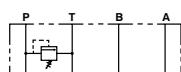
Tech Sheet 10683



**Pilot Operated Check**

0451	Model	Type
1010-1032	APOC 5 AB1/RX14	Double

Tech Sheet 10683



**Single Line Pressure Relief**

0451	Model	Pressure Range Bar
1010-1035	ASPR 5 PT1/RX14/315	8.5 - 315

Tech Sheet 10683





# CETOP MANIFOLD & AUXILIARY PLATES

## CETOP 3, Steel Manifold

Maximum Working Pressure:  
345 bar



Ports: P & T 1/2", A & B 3/8" BSPP

0345	No of Stations
CM3-1G	1
CM3-2G	2
CM3-3G	3
CM3-4G	4
CM3-5G	5
CM3-6G	6

Tech Sheet 10041

## CETOP 3, Steel Manifold With Pressure Relief Valve

Maximum Working Pressure:  
345 bar



Ports: P & T 1/2", A & B 3/8" BSPP,  
60-250 bar

0345	No of Stations
CM3-1G-ADJ	1
CM3-2G-ADJ	2
CM3-3G-ADJ	3
CM3-4G-ADJ	4
CM3-5G-ADJ	5
CM3-6G-ADJ	6

Tech Sheet 10041

## CETOP 3, Aluminium Manifold

Maximum Working Pressure:  
207 bar



Ports: P & T 1/2", A & B 3/8" BSPP

0345	No of Stations
CM3-1G/ALU	1
CM3-2G/ALU	2
CM3-3G/ALU	3
CM3-4G/ALU	4
CM3-5G/ALU	5
CM3-6G/ALU	6

Tech Sheet 10041

## CETOP 5, Steel Manifold

Maximum Working Pressure:  
345 bar



Ports: P 3/4" & T 1", A & B 1/2" BSPP

0345	No of Stations
CM5-1G	1
CM5-2G	2
CM5-3G	3
CM5-4G	4
CM5-5G	5
CM5-6G	6

Tech Sheet 10130

## CETOP 5, Side Entry Subplate



BSPP

0345	Thread
CSP-05	1/2"

Tech Sheet 10130

## Auxiliary Plates



## CETOP 3

0345	Type
CBP-03	Blanking Plate
CCOP-PA-03	Cross Over Plate P-A
CCOP-PB-03	Cross Over Plate P-B
CTP-AB-03	Tapping Plate A & B
CTP-PT-03	Tapping Plate P & T

Tech Sheet 10041



## CETOP 5

0345	Type
CBP-05	Blanking Plate
CCOP-PA-05	Cross Over Plate P-A
CCOP-PB-05	Cross Over Plate P-B
CTP-AB-05	Tapping Plate A & B
CTP-PT-05	Tapping Plate P & T

Tech Sheet 10130

## Parker Cetop 3 & 5 Valves



**Cetop 3 - 4 port 3 & 2 Position Solenoid Directional Control Valve  
- 24-110v**

0484	Coil Voltage	Ctr Spool	Description
D1VW001CNJW	24vdc	All Blocked	4 port 3 Pos



**Cetop 5 - 4 Port 3 & 2 Pos Solenoid Directional Control Valve  
- 24-110 v**

0484	Coil Voltage	Ctr Spool	Description
D3W008CNJW	24vdc	PT Con	4 port 3 Pos



**Cetop 3 Modular Flow Control Valve**

0484	Metering
FM2DDSV	A & B



**Cetop 5 Modular Flow Control Valve**

0484	Metering
FM3DDSV	A & B



**Cetop 3 Modular Pilot Operated Check Valve,  
1 Bar Cracking Pressure**

0484	Cracking Pressure Bar
CPOM2DDV	1.0



**Cetop 5 Modular Pilot Operated Check Valve,  
1 Bar Cracking Pressure**

0484	Cracking Pressure Bar
CPOM3DDV	1.0



# HYDRAULIC HAND PUMPS

## Pumps

**Specification:**

- Cast iron body
- White zinc-plated support lever
- Lever connection OD: 27mm
- White zinc-plated external parts

 **Maximum Working Pressure:**  
350 bar



**Double Acting Pump with Release Knob, Side Mount**

0462	Displacement cm³	Thread	Max Pressure Bar	Model	To Suit
HHP-01	20	1/2"	350	Wall Mount	Single Acting Cylinder

Tech Sheet 60145

**Specification:**

- Cast iron body
- Piston treated with Niploy
- White zinc-plated support lever
- Lever connection OD: 27mm
- White zinc-plated external parts

 **Maximum Working Pressure:**  
280 bar



**Double Acting Pump with Release Knob, Bottom Mount**

0462	Displacement cm³	Thread	Max Pressure Bar	Model	To Suit
HHP-02	50	1/2"	280	Wall Mount	Single Acting Cylinder

Tech Sheet 60146

Double acting hand pump for single acting cylinder.

**Specification:**

- Cast iron body
- Piston treated with Niploy
- White zinc-plated support lever
- Lever connection OD: 27mm
- White zinc-plated external parts
- Oil tank mounting kit included
- Pressure relief valve (standard setting): 100 bar

 **Maximum Working Pressure:**  
350 bar



**Double Acting Pump with Release Knob & Pressure Relief Valve**

0462	Displacement cm³	Thread	Max Pressure Bar	Model	To Suit
HHP-03	25	3/8"	350	Tank Mount	Single Acting Cylinder

Tech Sheet 60147

Double acting hand pump for double acting cylinder.

**Specification:**

- Cast iron body
- Piston treated with Niploy
- White zinc-plated support lever
- Lever connection OD: 27mm
- White zinc-plated external parts

 **Maximum Working Pressure:**  
350 bar



**Double Acting Pump with 4/3 Diverter Valve & Pressure Relief Valve**

0462	Displacement cm³	Thread	Max Pressure Bar	Model	To Suit
HHP-04	25	3/8"	350	Tank Mount	Double Acting Cylinder

Tech Sheet 60148



# HYDRAULIC HAND PUMPS

## Pumps

Double acting pump for double acting cylinder.

### Specification:

- Cast iron body
- Piston treated with Niploy
- White zinc-plated support lever
- Lever connection OD: 27mm
- White zinc-plated external parts
- Oil tank mounting kit included
- Hydraulic brake to operate under 50 bar
- Pressure relief valve (standard setting): 100 bar

**Maximum Working Pressure:**  
350 bar



### Double Acting Pump with 4/3 Diverter Valve, PRV & Dual PO Check Valve

0462	Displacement cm <sup>3</sup>	Thread	Max Pressure Bar	Model	To Suit
HHP-05	25	3/8"	350	Tank Mount	Double Acting Cylinder

Tech Sheet 60149

Single acting pump for single acting cylinder.

### Specification:

- White zinc-plated steel body
- Piston treated with Niploy
- White zinc-plated external parts
- Release lever

**Maximum Working Pressure:**  
220 bar



### Single Acting Foot Pump with 1.5 Litre Reservoir

0462	Displacement cm <sup>3</sup>	Thread	Max Pressure Bar	To Suit
HFP-01	15	1/4"	220	Single Acting Cylinder

Tech Sheet 60150

## Accessories

### Specification:

- Black hand grip
- White zinc-plated steel lever



### Operating Lever

0462	To Suit	Length mm
HHP-OL	HHP Series	900

Tech Sheet 60152

Closed centre option available.



### 3 Way Flow Diverter Valves

0462	Thread	Description	Max Pressure Bar	LPM
HHPDV-06	3/8"	Open Centre	350	60
HHPDV-08	1/2"	Open Centre	350	90
HHPDV-12	3/4"	Open Centre	350	120

Tech Sheet 60153

Normally open, two position with mechanical control for tipping trucks.

### Specification:

- Cast iron body
- Piston treated with Niploy
- White zinc plated external parts

**Maximum Working Pressure:**  
250 bar



### End Stroke Valves

0462	Thread	LPM
HESV-06	3/8"	60
HESV-08	1/2"	80

## Steel Tanks

### Specification:

- Suction pipe included
- Breather Cap 1/4" BSPP
- Release Cap 1/4" BSPP
- Standard colour black



### Steel Oil Tanks for Hand Pumps

0462	Volume Litres	Thread
HHPT-01	1	1/4"
HHPT-02	2	1/4"
HHPT-03	3	1/4"
HHPT-05	5	1/4"
HHPT-07	7	1/4"

Tech Sheet 60151

# HYDRAULIC GEAR PUMPS



## Group 1, Aluminium Gear Pumps

**Clockwise Rotation, 1.8 Taper Shaft, BSPP Ported**

0345	Displacement cc/rev	Max Pressure Bar	Inlet Thread	Outlet Thread
<b>AGP1-C-1.0</b>	1.00	250	3/8"	3/8"
<b>AGP1-C-1.25</b>	1.25	250	3/8"	3/8"
<b>AGP1-C-1.6</b>	1.60	250	3/8"	3/8"
<b>AGP1-C-2.0</b>	2.00	250	3/8"	3/8"
<b>AGP1-C-2.5</b>	2.50	250	3/8"	3/8"
<b>AGP1-C-3.15</b>	3.15	250	1/2"	3/8"
<b>AGP1-C-3.65</b>	3.65	250	1/2"	3/8"
<b>AGP1-C-4.2</b>	4.20	250	1/2"	3/8"
<b>AGP1-C-5.0</b>	5.00	250	1/2"	3/8"
<b>AGP1-C-6.1</b>	6.10	200	1/2"	3/8"
<b>AGP1-C-7.4</b>	7.40	180	1/2"	3/8"
<b>AGP1-C-8.5</b>	8.50	150	1/2"	3/8"
<b>AGP1-C-9.8</b>	9.80	120	1/2"	3/8"

Tech Sheet 10048



## Group 2, Aluminium Gear Pumps

**Clockwise Rotation, 1.8 Taper Shaft, BSPP Ported**

0345	Displacement cc/rev	Max Pressure Bar	Inlet Thread	Outlet Thread
<b>AGP2-C-4.5</b>	4.5	250	1/2"	1/2"
<b>AGP2-C-6.3</b>	6.30	250	1/2"	1/2"
<b>AGP2-C-8.2</b>	8.20	250	1/2"	1/2"
<b>AGP2-C-10</b>	10	250	3/4"	1/2"
<b>AGP2-C-11</b>	11	250	3/4"	1/2"
<b>AGP2-C-12</b>	12	250	3/4"	1/2"
<b>AGP2-C-14</b>	14	250	3/4"	1/2"
<b>AGP2-C-15</b>	15	250	3/4"	1/2"
<b>AGP2-C-16</b>	16	250	3/4"	1/2"
<b>AGP2-C-19</b>	19	200	3/4"	1/2"
<b>AGP2-C-22</b>	22	180	3/4"	1/2"
<b>AGP2-C-25</b>	25	160	3/4"	1/2"

Tech Sheet 10049



Customers who bought from this page also purchased  
**Spill Mats** see pages **970-974**

# HYDRAULIC GEAR PUMP ACCESSORIES



3

## Accessories



### Bell Housings

0347	Frame Size	Group
<b>BH80/90-1</b>	80/90	1
<b>BH80/90-2</b>	80/90	2
<b>BH100/112-1</b>	100/112	1
<b>BH100/112-2</b>	100/112	2
<b>BH132-2</b>	132	2
<b>BH132-3</b>	132	3
<b>BH160/180-2</b>	160/180	2
<b>BH160/180-3</b>	160/180	3

Tech Sheet 10089



### Coupling Motor Half

0347	Frame Size
<b>MC-80-45</b>	80
<b>MC-80-55</b>	80
<b>MC-90-45</b>	90
<b>MC-90-55</b>	90
<b>MC-100/112-55</b>	100
<b>MC-132-74</b>	132
<b>MC-160-104</b>	160
<b>MC-180-104</b>	180

Tech Sheet 10127



### Coupling Pump Half

0347	Group
<b>PC-1-45</b>	1
<b>PC-1-55</b>	1
<b>PC-2-45</b>	2
<b>PC-2-55</b>	2
<b>PC-2-74</b>	2
<b>PC-2-104</b>	2
<b>PC-3-74</b>	3
<b>PC-3-104</b>	3

Tech Sheet 10127



### Coupling Spider

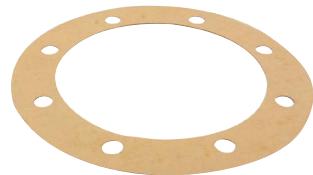
0347	To Suit mm
<b>S-45</b>	45
<b>S-55</b>	55
<b>S-74</b>	74
<b>S-104</b>	104

Tech Sheet 10127



### Gear Pump Mounting Gasket

0347	Group
<b>PG-1</b>	1
<b>PG-2</b>	2
<b>PG-3</b>	3



### Motor Mounting Gasket

0347	Frame Size
<b>MG-80/90</b>	80/90
<b>MG-100/112</b>	100/112
<b>MG-132</b>	132
<b>MG-160</b>	160



### Gear Pump Elbows, BSPP

0347	Group	Thread
<b>GPE1-12</b>	1	1/2"
<b>GPE1-38</b>	1	3/8"
<b>GPE2-12</b>	2	1/2"
<b>GPE2-34</b>	2	3/4"

Tech Sheet 10129

3



Valves & Pumps



HYDRAULICS

# HYDRAULIC BALL VALVES



## Hydraulic Ball Valves

**Working Temperature:**  
-20°C to +120°C

- Carbon steel body
- Excellent sealing properties
- Zinc-plated C6F
- High pressure
- Steel ball
- Full flow



**2 Way, BSPP, NBR Seals**

0177	Thread	DN Size	Length mm	Max Pressure Bar
<b>KHB-G1/4</b>	1/4"	6	69	500
<b>KHB-G3/8</b>	3/8"	10	72	500
<b>KHB-G1/2</b>	1/2"	13	83	500
<b>KHB-G3/4</b>	3/4"	20	95	315
<b>KHB-G1</b>	1"	25	113	315
<b>KHB-G11/4</b>	1.1/4"	25	110	315
<b>KHB-G11/2</b>	1.1/2"	25	130	315

Tech Sheet 10171



**2 Way, Top Mountable for Actuation, BSPP, Nitrile Seals**

0177	Thread	DN Size	Length mm	Max Pressure Bar
<b>KHBTM-G1/4</b>	1/4"	6	69	500
<b>KHBTM-G3/8</b>	3/8"	10	72	500
<b>KHBTM-G1/2</b>	1/2"	13	83	500
<b>KHBTM-G3/4</b>	3/4"	20	95	315
<b>KHBTM-G1</b>	1"	25	113	315
<b>KHBTM-G11/4</b>	1.1/4"	25	110	315
<b>KHBTM-G11/2</b>	1.1/2"	25	130	315

Tech Sheet 10171



**2 Way, Side Hole Fixing, BSPP, Nitrile Seals**

0177	Thread	DN Size	Length mm	Max Pressure Bar
<b>KHBSTM-G1/4</b>	1/4"	6	69	500
<b>KHBSTM-G3/8</b>	3/8"	10	72	500
<b>KHBSTM-G1/2</b>	1/2"	13	83	500
<b>KHBSTM-G3/4</b>	3/4"	20	95	315
<b>KHBSTM-G1</b>	1"	25	113	315
<b>KHBSTM-G11/4</b>	1.1/4"	25	110	315
<b>KHBSTM-G11/2</b>	1.1/2"	25	130	315

Tech Sheet 10171

# HYDRAULIC BALL VALVES



3



## Hydraulic Ball Valves

Working Temperature:  
-20°C to +120°C



2 Way, 3000lb, Flanged

0177	ND	DN Size	Length mm	Max Pressure Bar
<b>KHBF3-1/2</b>	1/2"	13	151	210
<b>KHBF3-3/4</b>	3/4"	20	162	210
<b>KHBF3-1</b>	1"	25	178	210
<b>KHBF3-1.1/4</b>	1.1/4"	32	191	210
<b>KHBF3-1.1/2</b>	1.1/2"	40	231	210
<b>KHBF3-2</b>	2"	50	232	210

Tech Sheet 10044



2 Way, 6000lb, Flanged

0177	ND	DN Size	Length mm	Max Pressure Bar
<b>KHBF6-1/2</b>	1/2"	13	151	420
<b>KHBF6-3/4</b>	3/4"	20	174	420
<b>KHBF6-1</b>	1"	25	198	420
<b>KHBF6-1.1/4</b>	1.1/4"	32	223	420
<b>KHBF6-1.1/2</b>	1.1/2"	40	281	420
<b>KHBF6-2</b>	2"	50	316	420

Tech Sheet 10044



2 Way, Light-duty, DIN 2353

0177	Thread	DN Size	Description	Length mm	Max Pressure Bar
<b>KHB-8L</b>	M14 x 1.5	6	8L	69	500
<b>KHB-10L</b>	M16 x 1.5	10	10L	77	500
<b>KHB-12L</b>	M18 x 1.5	10	12L	77	500
<b>KHB-15L</b>	M22 x 1.5	13	15L	83	500
<b>KHB-22L</b>	M30 x 2	20	22L	101	315
<b>KHB-28L</b>	M36 x 2	25	28L	108	315

Tech Sheet 10171



2 Way, Heavy-duty, DIN 2353

0177	Thread	DN Size	Description	Length mm	Max Pressure Bar
<b>KHB-10S</b>	M18 x 1.5	6	10S	73	500
<b>KHB-12S</b>	M20 x 1.5	8	12S	77	500
<b>KHB-16S</b>	M24 x 1.5	13	16S	87	500
<b>KHB-20S</b>	M30 x 2	13	20S	91	500
<b>KHB-25S</b>	M36 x 2	20	25S	111	315
<b>KHB-30S</b>	M42 x 2	25	30S	120	315

Tech Sheet 10171



For Bonded Seals  
see Section 2 pages 832-836

# HYDRAULIC BALL VALVES



## Lockable Hydraulic Ball Valves

Working Temperature:  
-20°C to +120°C



### 2 Way, BSPP

0177	Thread	DN Size	Length mm	Max Pressure Bar
KHB-G1/4-LK	1/4"	6	69	500
KHB-G3/8-LK	3/8"	10	72	500
KHB-G1/2-LK	1/2"	13	83	500
KHB-G3/4-LK	3/4"	20	95	315
KHB-G1-LK	1"	25	113	315
KHB-G11/4-LK	1.1/4"	25	110	315
KHB-G11/2-LK	1.1/2"	25	130	315

Tech Sheet 10171



### 2 Way, Light-duty, DIN 2353

0177	Thread	DN Size	Description	Length mm	Max Pressure Bar
KHB-8L-LK	M14 x 1.5	6	8L	69	500
KHB-10L-LK	M16 x 1.5	8	10L	77	500
KHB-12L-LK	M18 x 1.5	13	12L	77	500
KHB-15L-LK	M22 x 1.5	13	15L	83	500
KHB-22L-LK	M30 x 2	20	22L	101	315
KHB-28L-LK	M36 x 2	25	28L	108	315

Tech Sheet 10171



### 2 Way, 3000lb, Flanged

0177	ND	DN Size	Length mm	Max Pressure Bar
KHBF3-1/2-LK	1/2"	13	151	210
KHBF3-3/4-LK	3/4"	20	162	210
KHBF3-1-LK	1"	25	178	210
KHBF3-1.1/4-LK	1.1/4"	32	191	210
KHBF3-1.1/2-LK	1.1/2"	40	231	210
KHBF3-2-LK	2"	50	232	210

Tech Sheet 10171



### 2 Way, Side Hole Fixing, BSPP

0177	Thread	DN Size	Length mm	Max Pressure Bar
KHBSM-G1/4-LK	1/4"	6	69	500
KHBSM-G3/8-LK	3/8"	10	72	500
KHBSM-G1/2-LK	1/2"	13	83	500
KHBSM-G3/4-LK	3/4"	20	95	315
KHBSM-G1-LK	1"	25	113	315
KHBSM-G11/4-LK	1.1/4"	25	110	315
KHBSM-G11/2-LK	1.1/2"	25	130	315

Tech Sheet 10171



### 2 Way, Heavy-duty, DIN 2353

0177	Thread	DN Size	Description	Length mm	Max Pressure Bar
KHB-10S-LK	M18 x 1.5	8	10S	73	500
KHB-12S-LK	M20 x 1.5	13	12S	77	500
KHB-16S-LK	M24 x 1.5	13	16S	87	500
KHB-20S-LK	M30 x 2	20	20S	91	500
KHB-25S-LK	M36 x 2	25	25S	111	315
KHB-30S-LK	M42 x 2	25	30S	120	315

Tech Sheet 10171



### 2 Way, 6000lb, Flanged

0177	ND	DN Size	Length mm	Max Pressure Bar
KHBF6-1/2-LK	1/2"	13	151	420
KHBF6-3/4-LK	3/4"	20	174	420
KHBF6-1-LK	1"	25	198	420
KHBF6-1.1/4-LK	1.1/4"	32	223	420
KHBF6-1.1/2-LK	1.1/2"	40	281	420
KHBF6-2-LK	2"	50	316	420

Tech Sheet 10171

# HYDRAULIC BALL VALVES



3

## Hydraulic Ball Valves

### Working Temperature:

-20°C to +120°C

- Carbon steel body
- Excellent sealing properties
- Zinc-plated C6F
- High pressure
- Steel ball
- Full flow



### 3 Way, L-Ported, BSPP, Nitrile Seals

0177	Thread	Length mm	Max Pressure Bar
KHB3K-G1/4	1/4"	69	500
KHB3K-G3/8	3/8"	72	500
KHB3K-G1/2	1/2"	83	500
KHB3K-G3/4	3/4"	95	315
KHB3K-G1	1"	113	315
KHB3K-G11/4	1.1/4"	110	315
KHB3K-G11/2	1.1/2"	130	315

Tech Sheet 2129

### Working Temperature:

-20°C to +120°C

- Carbon steel body
- Excellent sealing properties
- Zinc-plated C6F
- High pressure
- Steel ball
- Full flow



### 3 Way, T-Ported, BSPP, Nitrile Seals

0177	Thread	Length mm	Max Pressure Bar
KHB3T-G1/4	1/4"	69	500
KHB3T-G3/8	3/8"	72	500
KHB3T-G1/2	1/2"	83	500
KHB3T-G3/4	3/4"	95	315
KHB3T-G1	1"	113	315
KHB3T-G11/4	1.1/4"	110	315
KHB3T-G11/2	1.1/2"	130	315

Tech Sheet 2129

## Spare Handles



### KHB Series Cranked Handles

0177	To Suit
KHBHANDLE-14-12	1/4" to 1/2"
KHBHANDLE-34-1	3/4" to 1"
KHBHANDLE-114-2	1.1/4" to 2"

Tech Sheet 2129

## Lockable Hydraulic Ball Valves



### 3 Way, L-Ported, BSPP, Nitrile Seals

0177	Thread	DN Size	Length mm	Max Pressure Bar
KHB3K-G1/4-LK	1/4"	6	69	500
KHB3K-G3/8-LK	3/8"	10	72	500
KHB3K-G1/2-LK	1/2"	13	83	500
KHB3K-G3/4-LK	3/4"	20	95	315
KHB3K-G1-LK	1"	25	113	315
KHB3K-G11/4-LK	1.1/4"	25	110	315
KHB3K-G11/2-LK	1.1/2"	25	130	315

Tech Sheet 2129



### 3 Way, T-Ported, BSPP, Nitrile Seals

0177	Thread	DN Size	Length mm	Max Pressure Bar
KHB3T-G1/4-LK	1/4"	6	69	500
KHB3T-G3/8-LK	3/8"	10	72	500
KHB3T-G1/2-LK	1/2"	13	83	500
KHB3T-G3/4-LK	3/4"	20	95	315
KHB3T-G1-LK	1"	25	113	315
KHB3T-G11/4-LK	1.1/4"	25	110	315
KHB3T-G11/2-LK	1.1/2"	25	130	315

Tech Sheet 2129

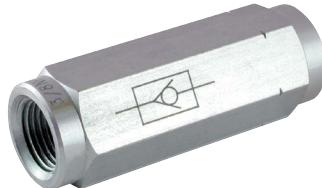
Lock not included

# HYDRAULIC CONTROL VALVES



## Non-return Valves

**Material:** Carbon steel  
**Plating:** Zinc-plated chrome free  
**Interchangeability:** Stucchi VU, Holmbury ATR, VPC series  
**Cracking Pressure:** 0.35 bar



### High Pressure 0.35 to 0.5 bar Cracking Pressure, BSPP

0177	Thread	Length mm	Hex Size mm	Max Pressure Bar
EHRVG-14	1/4"	60	19	700
EHRVG-38	3/8"	70	24	700
EHRVG-12	1/2"	77	30	500
EHRVG-34	3/4"	90	36	500
EHRVG-1	1"	106	45	500
EHRVG-114	1.1/4"	125	55	400
EHRVG-112	1.1/2"	140	65	320
EHRVG-2	2"	160	75	320

Tech Sheet 10170

**Material:** Carbon steel  
**Plating:** Zinc-plated chrome free  
**Interchangeability:** Stucchi VU, Holmbury ATR, VPC series  
**Cracking Pressure:** 3 bar

### 3 Bar Cracking Pressure, BSPP

0177	Thread	Length mm	Hex Size mm	Max Pressure Bar
EHRVG-14-3CP	1/4"	62	19	350
EHRVG-38-3CP	3/8"	68	24	350
EHRVG-12-3CP	1/2"	77	30	350
EHRVG-34-3CP	3/4"	88	36	350
EHRVG-1-3CP	1"	105	41	350
EHRVG-114-3CP	1.1/4"	135	55	300
EHRVG-112-3CP	1.1/2"	145	60	300

Tech Sheet 10170

**Material:** Carbon steel  
**Plating:** Zinc-plated chrome free  
**Interchangeability:** Stucchi VU, Holmbury ATR, VPC series  
**Cracking Pressure:** 5 bar

### 5 Bar Cracking Pressure, BSPP

0177	Thread	Length mm	Hex Size mm	Max Pressure Bar
EHRVG-14-5CP	1/4"	62	19	350
EHRVG-38-5CP	3/8"	68	24	350
EHRVG-12-5CP	1/2"	77	30	350
EHRVG-34-5CP	3/4"	88	36	350
EHRVG-1-5CP	1"	105	41	350
EHRVG-114-5CP	1.1/4"	135	55	300
EHRVG-112-5CP	1.1/2"	145	60	300

Tech Sheet 10170

## Flow Control Valves

**Body:** Carbon steel  
**Handle:** Aluminium  
**Spring:** SS302 or C72  
**Standard O-Rings:** Nitrile  
**Ring Stem:** PTFE

0° Working Temperature:  
-20°C to +100°C

Maximum Working Pressure:  
350 bar



### Uni-directional (Controlled flow one direction, free flow reverse), BSPP

0177	Thread	Mounting Thread
EHCVG1/4	1/4"	M20 x 1
EHCVG3/8	3/8"	M25 x 1
EHCVG1/2	1/2"	M30 x 1.5
EHCVG3/4	3/4"	M35 x 1.5
EHCVG1	1"	M35 x 1.5

Tech Sheet 2130



### Bi-directional (Controlled flow both directions), BSPP

0177	Thread	Mounting Thread
EHTVG1/4	1/4"	M20 x 1
EHTVG3/8	3/8"	M25 x 1
EHTVG1/2	1/2"	M30 x 1.5
EHTVG3/4	3/4"	M35 x 1.5
EHTVG1	1"	M35 x 1.5

Tech Sheet 2131

# STAINLESS STEEL HYDRAULIC VALVES

stainless  
steel



3

## High Pressure Stainless Steel Ball Valves

Working Temperature:  
-20°C to +120°C

- Viton seals



### 2 Way, BSPP

0098	Thread	Max Pressure Bar
HBVSS-14	1/4"	500
HBVSS-38	3/8"	500
HBVSS-12	1/2"	500
HBVSS-34	3/4"	315
HBVSS-1	1"	315

Tech Sheet 20888

## High Pressure Stainless Steel Block Style Ball Valves



### 2 Way, BSPP

0098	Thread	DN Size	Length mm	Max Pressure Bar
HBBVSS-14	1/4"	6	69	500
HBBVSS-38	3/8"	10	72	500
HBBVSS-12	1/2"	13	83	500
HBBVSS-34	3/4"	20	95	315
HBBVSS-1	1"	25	113	315

Tech Sheet 10224

Due to the change of finishes used by our supplier, the product you receive may look slightly different to that illustrated.

## Lockable High Pressure Stainless Steel Block Style Ball Valves

Lock not included



### 2 Way, BSPP

0098	Thread	DN Size	Length mm	Max Pressure Bar
HBBVSS-14-LK	1/4"	6	69	500
HBBVSS-38-LK	3/8"	10	72	500
HBBVSS-12-LK	1/2"	13	83	500
HBBVSS-34-LK	3/4"	20	95	315
HBBVSS-1-LK	1"	25	113	315

Tech Sheet 10224

## High Pressure Check Valves

Maximum Working Pressure: 350 bar



### BSPP, 0.5 bar Cracking Pressure

0098	Thread
HCVSS-3/8	3/8"
HCVSS-1/2	1/2"
HCVSS-3/4	3/4"
HCVSS-1	1"

Tech Sheet 10043

## Locking Device



### Stainless Steel

0177	To Suit
HPBVL-1	DN6, DN8, DN10, DN13
HPBVL-2	DN20, DN25
HPBVL-3	DN32, DN38, DN50

Tech Sheet 10171

# HYDRAULIC VALVES



## 316 Stainless Steel Hydraulic Ball Valves, DIN 2353

**° Working Temperature:**

-30°C to +100°C

- ANSI 316 - Body, ball and seat
- POM - Ball seats
- Nitrile - O-Rings



stainless steel

### Light-duty

0098	OD mm	Max Pressure Bar
KHV06L-SS	6	500
KHV08L-SS	8	500
KHV12L-SS	12	500
KHV15L-SS	15	500
KHV18L-SS	18	500
KHV22L-SS	22	315
KHV28L-SS	28	315
KHV35L-SS	35	315
KHV42L-SS	42	315

### Heavy-duty

0098	OD mm	Max Pressure Bar
KHV08S-SS	8	500
KHV10S-SS	10	500
KHV12S-SS	12	500
KHV14S-SS	14	500
KHV16S-SS	16	500
KHV20S-SS	20	400
KHV25S-SS	25	315
KHV30S-SS	30	315
KHV38S-SS	38	315

## High Pressure 2 Way Ball Valves

**N.B.** From 1.1/4" - 1.1/2" are supplied with flat handles.



## High Pressure, Carbon Steel Valves, BSPP

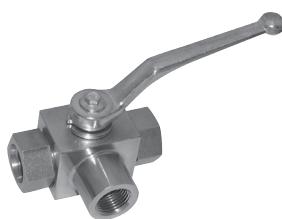
0098	Thread	Max Pressure Bar
BKH-14	1/4"	500
BKH-38	3/8"	500
BKH-12	1/2"	500
BKH-34	3/4"	420
BKH-1	1"	315
BKH-114	1.1/4"	315
BKH-112	1.1/2"	315

Tech Sheet 817

## 3 Way Hydraulic Ball Valves, DIN/ISO 228

All below are reduced bore.

**N.B.** From 1.1/4" - 1.1/2" are supplied with flat handles.



### L Porting, BSPP

0098	Thread	Max Pressure Bar
HBVL-14	1/4"	500
HBVL-38	3/8"	500
HBVL-12	1/2"	315
HBVL-34	3/4"	315
HBVL-1	1"	315
HBVL-114	1.1/4"	350
HBVL-112	1.1/2"	350

Tech Sheet 816

### T Porting, BSPP

0098	Thread	Max Pressure Bar
HBVT-14	1/4"	500
HBVT-38	3/8"	500
HBVT-12	1/2"	315
HBVT-34	3/4"	315
HBVT-1	1"	315
HBVT-114	1.1/4"	350
HBVT-112	1.1/2"	350

Tech Sheet 816

## Needle Flow Control Valves



### Bi-directional (Controlled Flow Both Ways) Flow Control & Shut Off (DIN/ISO 228), BSPP

0098	Thread	Max Pressure Bar
NDV-18	1/8"	350
NDV-14	1/4"	350
NDV-38	3/8"	350
NDV-12	1/2"	350
NDV-34	3/4"	350
NDV-1	1"	350
NDV-112	1.1/2"	350

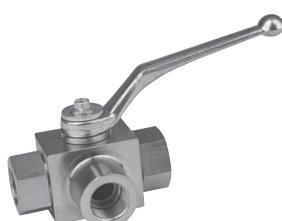
Tech Sheet 10299

### Uni-directional (Controlled Flow One Way Free Reverse Flow (DIN/ISO 228), BSPP)

0098	Thread	Max Pressure Bar
NDRV-18	1/8"	350
NDRV-14	1/4"	350
NDRV-38	3/8"	350
NDRV-12	1/2"	350
NDRV-34	3/4"	350

Tech Sheet 10299

## 4 Way Hydraulic Ball Valves, DIN/ISO 228



### X Porting, BSPP

0098	Thread	Max Pressure Bar
H4BVX-14	1/4"	500

# HYDRAULIC VALVES



3

## Needle Valves

Working Temperature:  
-20°C to +100°C

Maximum Working Pressure:  
210 bar

Body: Brass, nickel plated  
Seal: Nitrile  
Stem: 304 Stainless steel



### In-line, Bi-directional (Controlled Flow Both Ways) Flow Control & Shut Off, BSPP

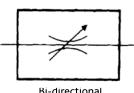
0098	Thread
1251-1010	1/8"
1251-1313	1/4"
1251-1717	3/8"
1251-2121	1/2"

Tech Sheet 10514

Working Temperature:  
-20°C to +100°C

Maximum Working Pressure:  
210 bar

Body: Brass, nickel plated  
Seal: Nitrile  
Stem: 304 Stainless steel



### Angled, In-line, Bi-directional (Controlled Flow Both Ways) Flow Control & Shut Off, BSPP

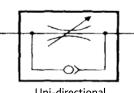
0098	Thread
1252-2010	1/8"
1252-2013	1/4"
1252-2017	3/8"
1252-2021	1/2"

Tech Sheet 10515

Working Temperature:  
-20°C to +100°C

Maximum Working Pressure:  
210 bar

Body: Brass, nickel plated  
Seal: Nitrile  
Stem: 304 Stainless steel



### In-line, Uni-directional (Controlled Flow One Way) with Free Reverse Flow, BSPP

0098	Thread
1253-3013	1/4"
1253-3017	3/8"
1253-3021	1/2"

Tech Sheet 10516

## Needle Valves - Speed Control

Working Temperature:  
-20°C to +100°C

Maximum Working Pressure:  
400 bar: 1/4" to 3/4"  
320 bar: 1"

Seal: Nitrile



### Female x Female, BSPP

0098	Thread	Length mm	LPM	Return LPM
NCV-14	1/4"	55	50	70
NCV-38	3/8"	65	75	110
NCV-12	1/2"	73	140	150
NCV-34	3/4"	88	175	200
NCV-1	1"	127	350	275

Tech Sheet 10517

## Needle Valves - Flow Control

Working Temperature:  
-20°C to +100°C

Maximum Working Pressure:  
400 bar: 1/4" to 3/4"  
320 bar: 1"

Seal: Nitrile

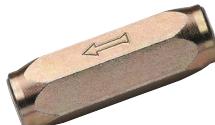


### Female x Female, BSPP

0098	Thread	Length mm	LPM
INV-14	1/4"	48	50
INV-38	3/8"	58	75
INV-12	1/2"	68	140
INV-34	3/4"	78	175
INV-1	1"	108	350

Tech Sheet 10518

## Hydraulic Non-return Valves



### High Pressure, Carbon Steel, BSPP

0098	Thread	Length mm	Max Pressure Bar	Cracking Pressure Bar
HNRV-14	1/4"	62	350	0.5
HNRV-38	3/8"	68	350	0.5
HNRV-12	1/2"	78	350	0.5
HNRV-34	3/4"	88	300	0.5
HNRV-1	1"	112	250	0.5

Tech Sheet 10519

## Panel Mounting Nuts



### For Series INV & NCV

0098	To Suit
2570-13	1/4"
2570-17	3/8"
2570-21	1/2"
2570-26	3/4"

### For Series 1251, 1252 & 1253

0098	To Suit
1203-1010	1/8"
1203-1313	1/4"
1203-1717	3/8"
1203-2121	1/2"

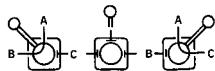
# HYDRAULIC VALVES & GAUGE ISOLATOR VALVES



## Diverter Valves

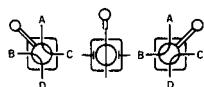


Manufactured from machined steel body with a hardened and ground spool, and a chemically blackened finish.



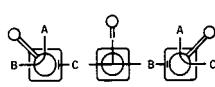
### Three Port 2 Way, BSPP

0098	Thread	LPM	Max Pressure Bar
38-3DVL	3/8"	27	207
12-3DVL	1/2"	36	210
34-3DVL	3/4"	100	207
1-3DVL	1"	160	207



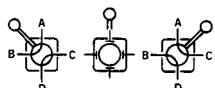
### Four Port Open Centre, BSPP

0098	Thread	LPM	Max Pressure Bar
38-4DVOC	3/8"	27	207
12-4DVOC	1/2"	36	210



### Three Port T, BSPP

0098	Thread	LPM	Max Pressure Bar
38-3DVT	3/8"	27	207
12-3DVT	1/2"	36	210



### Four Port Closed Centre, BSPP

0098	Thread	LPM	Max Pressure Bar
38-DVCC	3/8"	27	207
12-DVCC	1/2"	36	210

## In-line Isolator Needle Valves

° Working Temperature:

-20°C to +100°C

Maximum Working Pressure:

400 bar

Body: Carbon steel

Seal: Nitrile



### Male Thread Fixed BSPT x Female Thread Swivel BSPP

0098	Male Thread	Female Thread	Thread
FT290-14	1/4"	1/4"	M15 x 1

Tech Sheet 10520

° Working Temperature:

-20°C to +100°C

Maximum Working Pressure:

400 bar

Body: Carbon steel

Seal: Nitrile



### Female Thread Fixed BSPP x Female Thread Swivel BSPP

0098	Thread	Thread
FT290-01	1/4"	M15 x 1

Tech Sheet 10520

° Working Temperature:

-20°C to +100°C

Maximum Working Pressure:

400 bar

Body: Carbon steel

Seal: Nitrile



### Female Thread Swivel BSPP x Female Thread Swivel BSPP

0098	Thread	Thread
FT290-05	1/4"	M15 x 1

Tech Sheet 10520



### Female Thread Swivel BSPP x Female Thread Compression BSPP

0098	Thread	OD mm	Thread
FT290-04	1/4"	6	M15 x 1

Tech Sheet 10520

## Angled Isolator Needle Valves

° Working Temperature:

-20°C to +100°C

Maximum Working Pressure:

400 bar

Body: Carbon steel

Seal: Nitrile



### Male Thread Fixed BSPT x Female Thread Swivel BSPP

0098	Male Thread	Female Thread	Thread
FT291-14	1/4"	1/4"	M15 x 1

Tech Sheet 10520

° Working Temperature:

-20°C to +100°C

Maximum Working Pressure:

400 bar

Body: Carbon steel

Seal: Nitrile



### Female Thread Fixed BSPP x Female Thread Swivel BSPP

0098	Thread	Thread
FT291-01	1/4"	M15 x 1

Tech Sheet 10520

° Working Temperature:

-20°C to +100°C

Maximum Working Pressure:

400 bar

Body: Carbon steel

Seal: Nitrile



### Female Thread Swivel BSPP x Female Thread Swivel BSPP

0098	Thread	Thread
FT291-05	1/4"	M15 x 1

Tech Sheet 10520

## Panel Mounting Nut



### For Isolator Needle Valves

0098	Thread
FT205	M15 x 1

# THREADED HYDRAULIC VALVES

**hyfitt**

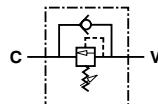
3

## Direct Acting Sequence Valves

Pre-set and other spring ratings available on request.

 **Maximum Working Pressure:**

350 bar



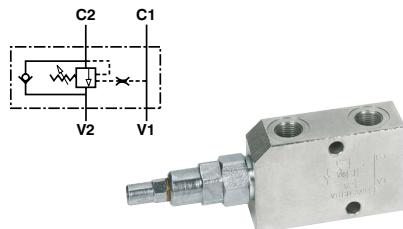
**BSPP**

0347	Thread	Pressure Range Bar
DASV06	3/8"	10-180
DASV08	1/2"	10-180
DASV12	3/4"	50-350

Tech Sheet 10098

## Single Overcentre Valves

1:8 pilot ratio available on request.

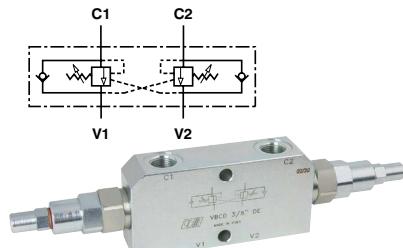


**BSPP**

0347	Thread	Ratio
SOCV06	3/8"	1:3.1
SOCV08	1/2"	1:3.1
SOCV12	3/4"	1:5.5

Tech Sheet 10099

## Double Overcentre Valves



**BSPP**

0347	Thread	Ratio
DOCV06	3/8"	1:3.1
DOCV08	1/2"	1:3.1
DOCV12	3/4"	1:5.5

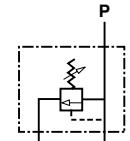
Tech Sheet 10100

## Pressure Relief Valves

Pre-set and other spring ratings available on request.

 **Maximum Working Pressure:**

300 bar

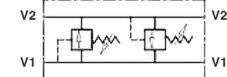


**BSPP**

0347	Thread	Pressure Range Bar
RV06/180	3/8"	10-180
RV08/180	1/2"	10-180
RV12/180	3/4"	10-180

Tech Sheet 10101

## Dual Cross Relief Valve



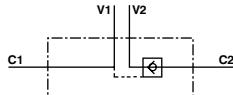
**BSPP**

0347	Thread	Pressure Range Bar
DCRV04/180	1/4"	10-180
DCRV06/180	3/8"	10-180
DCRV08/180	1/2"	10-180
DCRV12/180	3/4"	10-180

Tech Sheet 10534

## Single Pilot Operated Check Valves

Other cracking pressures available on request.



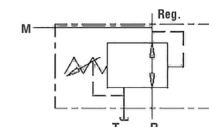
**BSPP**

0347	Thread	Cracking Pressure Bar	Ratio
POCV04	1/4"	4	1:5.5
POCV06	3/8"	3	1:5.5
POCV08	1/2"	6	1:5

Tech Sheet 10102

## Pressure Reducing Valve, Direct Acting

15-55 bar range available on request.

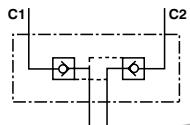


**BSPP**

0347	Thread	Pressure Range Bar
PREDV06	3/8"	30-165
PREDV08	1/2"	30-165

Tech Sheet 10535

## Double Pilot Operated Check Valves



**BSPP**

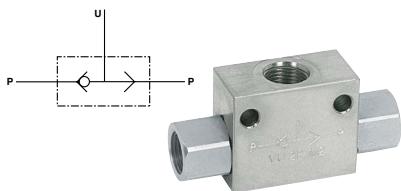
0347	Thread	Cracking Pressure Bar	Ratio
DPOCV04	1/4"	4.5	1:5.5
DPOCV06	3/8"	4.5	1:5.5
DPOCV08	1/2"	3	1:4.5

Tech Sheet 10103

# THREADED HYDRAULIC VALVES



## Shuttle Valves



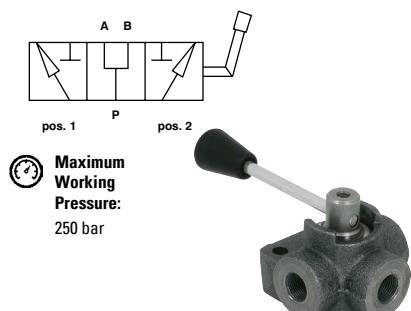
### BSPP

0347	Thread	Max Pressure Bar	LPM
SV04	1/4"	450	30
SV06	3/8"	450	45
SV08	1/2"	450	70
SV12	3/4"	350	110

Tech Sheet 10104

## 3 Way Diverter Valves

Closed centre configuration available on request.



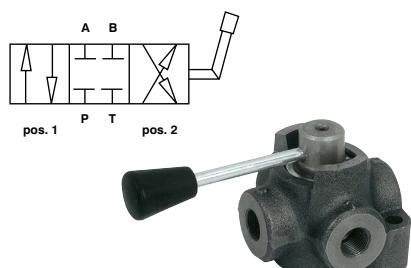
### Open Centre, BSPP

0347	Thread	LPM
DV306	3/8"	35
DV308	1/2"	60
DV312	3/4"	100

Tech Sheet 10105

## 4 Way Diverter Valves

P to T, A and B closed, available on request.



### All Ports Closed, BSPP

0347	Thread	LPM
DV406	3/8"	35
DV408	1/2"	60
DV412	3/4"	100

Tech Sheet 10106

## Hose Burst Valves



**Maximum Working Pressure:**  
350 bar

### Female/Female, BSPP

0347	Thread	LPM
HBVF04	1/4"	25
HBVF06	3/8"	50
HBVF08	1/2"	80
HBVF12	3/4"	140
HBVF16	1"	180

Tech Sheet 10107

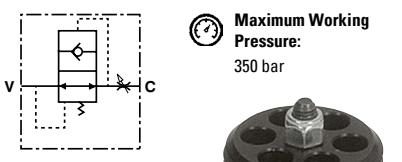
**Maximum Working Pressure:**  
350 bar



### Male/Female, BSPP

0347	Thread	LPM
HBVMF04	1/4"	25
HBVMF06	3/8"	50
HBVMF08	1/2"	80
HBVMF12	3/4"	140
HBVMF16	1"	180

Tech Sheet 10107



**Maximum Working Pressure:**  
350 bar

### Cartridge

0347	To Suit
HBVC04	1/4"
HBVC06	3/8"
HBVC08	1/2"
HBVC12	3/4"

Tech Sheet 10107

## Hydraulic Swivel Joints

• Seal Nitrile

- Mounted between a hose assembly and rigid component in order to allow and compensate occasional rotations, preventing hose damage.



### 90° Swivel, BSPP

0507	Thread	Max Static Pressure Bar	Max Dynamic Pressure Bar
2019-3660	1/4"	400	200
2019-3678	3/8"	400	200
2019-3686	1/2"	300	150
2019-3694	3/4"	300	150
2019-3702	1"	300	100
2019-3703	1.1/4"	300	100
2019-3704	1.1/2"	300	80
2019-3705	2"	250	50

Tech Sheet 849



### Straight Swivel, BSPP

0507	Thread	Max Rotating Pressure Bar	Max Dynamic Pressure Bar
2019-2639	1/4"	400	200
2019-3629	3/8"	400	200
2019-3637	1/2"	300	150
2019-3645	3/4"	300	150
2019-3652	1"	300	100
2019-3653	1.1/4"	300	100
2019-3654	1.1/2"	300	80
2019-3655	2"	250	50

Tech Sheet 848

# THREADED HYDRAULIC VALVES



3

## Barrel Flow Control Valve

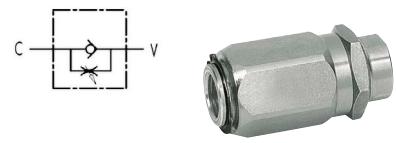


**BSPP**

0347	Thread	LPM	Max Pressure Bar
BFCV04	1/4"	20	300
BFCV06	3/8"	45	300
BFCV08	1/2"	70	300
BFCV12	3/4"	110	250
BFCV16	1"	160	250

Tech Sheet 10536

## Barrel Flow Control Valve, with Check

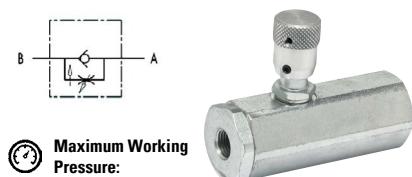


**BSPP**

0347	Thread	LPM	Max Pressure Bar
BFCVC04	1/4"	20	300
BFCVC06	3/8"	45	300
BFCVC08	1/2"	70	300
BFCVC12	3/4"	110	250
BFCVC16	1"	160	250

Tech Sheet 10537

## Compensated Flow Control Valve



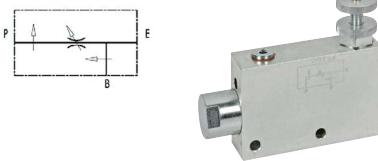
**Maximum Working Pressure:**  
250 bar

**BSPP**

0347	Thread	LPM
CFVC04	1/4"	25
CFVC06	3/8"	30
CFVC08	1/2"	45

Tech Sheet 10538

## 3 Port Flow Control Valve, Ongoing to Pressure

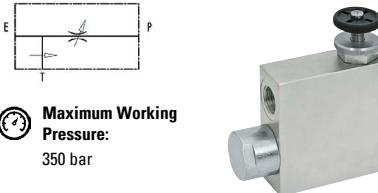


**BSPP**

0347	Thread	LPM
3FCVP06	3/8"	60
3FCVP08	1/2"	80
3FCVP12	3/4"	120
3FCVP16	1"	200

Tech Sheet 10539

## 3 Port Flow Control Valve, Excess to Tank



**Maximum Working Pressure:**  
350 bar

**BSPP**

0347	Thread	LPM
3FCVT06	3/8"	60
3FCVT08	1/2"	80
3FCVT12	3/4"	120

Tech Sheet 10540

## 2 Way Flow Divider, Cast Iron



**Maximum Working Pressure:**  
250 bar

**BSPP**

0347	Inlet Thread	Outlet Thread	LPM
CFD063	3/8"	3/8"	3
CFD066	3/8"	3/8"	6
CFD0610	3/8"	3/8"	10
CFD0620	3/8"	3/8"	20
CFD0632	3/8"	3/8"	32
CFD0840	1/2"	3/8"	40
CFD0860	1/2"	3/8"	60
CFD0880	1/2"	3/8"	80

Tech Sheet 10541

## 2 Way Flow Divider, Steel



**Maximum Working Pressure:**

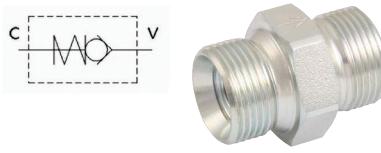
250 bar

**BSPP**

0347	Inlet Thread	Outlet Thread	LPM
SFD0610	3/8"	3/8"	10
SFD0620	3/8"	3/8"	20
SFD0840	1/2"	3/8"	40
SFD0860	1/2"	3/8"	60

Tech Sheet 10542

## Male Check Valve



### BSPP, 1 bar Cracking Pressure

0347	Thread	Max Pressure Bar
MVC04	1/4"	350
MVC06	3/8"	350
MVC08	1/2"	350
MVC12	3/4"	350
MVC16	1"	320
MVC20	1.1/4"	320
MVC24	1.1/2"	320
MVC32	2"	320

Tech Sheet 10543

# HYDRAULIC CONTROL VALVES

## Monoblock Valves



### Description

Manually or mechanically controlled hydraulic directional control valves. Designed for distribution and control of work flow between generator (pump) and executive mechanisms (cylinder, hydromotor, etc). Manufactured with up to seven plungers, with parallel or serial action, with common or individual back valve for each plunger, with or without safety valve.

### Construction

Body is cast iron (EN-GJL300). Plungers are carburised steel with hard chrome plating.

### Mounting

Distributor is fixed with two bolts, M8.

### Port Thread Sizes:

P, T, N: 1/2" BSPP

A, B: 3/8" BSPP

Interchangeable with Walvoil SD5.

All valves come as standard with adjustable main relief valve set at 250 bar, adjustable from 20 to 250 bar.

Includes standard lever.

### Description

Hydraulic distributors used for switching on/off and directing the working fluid between head flow generators (hydraulic pumps), head flow consumers (hydraulic cylinders, motors, etc) and the tank. Manufactured with up to six plungers with parallel or serial distribution.

### Construction

Body is cast iron (EN-GJL300). Plungers are carburised steel with hard chrome plating.

### Mounting

Distributor is fixed with two bolts, M8.

### Port Thread Sizes:

T, N: 3/4" BSPP

P, A, B: 1/2" BSPP

Interchangeable with Walvoil SD11.

All valves come as standard with adjustable main relief valve set at 250 bar, adjustable from 20 to 250 bar.

Includes standard lever.

<b>Ambient Temperature</b>	-40°C to +60°C
<b>Media</b>	Mineral oil based hydraulic oil
<b>Viscosity</b>	12 to 800mm <sup>2</sup> /s
<b>Filtration Level</b>	10 to NAS 1638
<b>Leakage (A, B, T)</b>	15cm <sup>3</sup> /min at 120 bar
<b>Nominal Flow</b>	40 L/min
<b>Spool Stroke</b>	+/- 6mm
<b>Actuating Force</b>	< 200 N
<b>Modification/Spools</b>	With 1 to 7

° Working Temperature:  
-15°C to +80°C

° Maximum Working Pressure:  
A and B Ports: 300 bar, P Port: 250 bar,  
T Port: 50 bar



Type P40, 4 Way, 3 Position, Spring Return, 40 L/min, BSPP

0479	Thread	Thread	No of Stations	Manufacturer's Code
<b>1021-0001</b>	3/8"	1/2"	1	P40 A1 GKZ1
<b>1021-0002</b>	3/8"	1/2"	2	02P40 1A1 GKZ1
<b>1021-0003</b>	3/8"	1/2"	3	03P40 1A1 GKZ1
<b>1021-0004</b>	3/8"	1/2"	4	04P40 1A1 GKZ1
<b>1021-0005</b>	3/8"	1/2"	5	05P40 1A1 GKZ1
<b>1021-0006</b>	3/8"	1/2"	6	06P40 1A1 GKZ1
<b>1021-0007</b>	3/8"	1/2"	7	07P40 1A1 GKZ1

Tech Sheet 60381

<b>Ambient Temperature</b>	-40°C to +60°C
<b>Media</b>	Mineral oil based hydraulic oil
<b>Viscosity</b>	12 to 800mm <sup>2</sup> /s
<b>Filtration Level</b>	10 to NAS 1638
<b>Leakage (A, B, T)</b>	18cm <sup>3</sup> /min at 120 bar
<b>Nominal Flow</b>	80 L/min
<b>Spool Stroke</b>	+/- 7 mm
<b>Actuating Force</b>	< 220 N
<b>Modification/Spools</b>	With 1 to 6

° Working Temperature:  
-15°C to +80°C

° Maximum Working Pressure:  
A and B Ports: 300 bar, P Port: 250 bar,  
T Port: 50 bar



Type P80, 4 Way, 3 Position, Spring Return, 80 L/min, BSPP

0479	Thread	Thread	No of Stations	Manufacturer's Code
<b>1021-0008</b>	1/2"	3/4"	1	P80 A1GKZ1
<b>1021-0009</b>	1/2"	3/4"	2	2P80 1A1GKZ1
<b>1021-0010</b>	1/2"	3/4"	3	3P80 1A1GKZ1
<b>1021-0011</b>	1/2"	3/4"	4	4P80 1A1GKZ1
<b>1021-0012</b>	1/2"	3/4"	5	5P80 1A1GKZ1
<b>1021-0013</b>	1/2"	3/4"	6	6P80 1A1GKZ1

Tech Sheet 60382



# HYDRAULIC CONTROL VALVES

## Monoblock Valves

### Description

Hydraulic distributor used for switching on/off and control of the working fluid between head flow generators (hydraulic pumps), head flow consumers (hydraulic cylinders, motors, etc) and the tanks of hydraulic systems of mobile machines (electrical and diesel forklifts, excavators, auto-cranes, etc).

### Construction

Body is cast iron (EN-GJL300). Plungers are carburised steel with hard chrome plating.

### Mounting

Distributor is fixed with two bolts, M10.

### Port Thread Sizes:

P, T, A, B: 1" BSPP

Interchangeable with Walvoil SD18,

All valves come as standard with adjustable main relief valve set at 250 bar, adjustable from 20 to 250 bar.

Includes standard lever.

<b>Ambient Temperature</b>	-40°C to +60°C
<b>Media</b>	Mineral oil based hydraulic oil
<b>Viscosity</b>	12 to 800mm <sup>2</sup> /s
<b>Filtration Level</b>	10 to NAS 1638
<b>Leakage (A, B, T)</b>	30cm <sup>3</sup> /min at 120 bar
<b>Nominal Flow</b>	120 L/min
<b>Spool Stroke</b>	10mm, L12 +/- 10/6
<b>Actuating Force</b>	< 300 N
<b>Modification/Spools</b>	With 1 to 4

Working Temperature:  
-15°C to +80°C

Maximum Working Pressure:  
A and B Ports: 300 bar, P Port: 250 bar,  
T Port: 50 bar



Type P120, 4 Way, 3 Position, Spring Return, 120 L/min, BSPP

0479	Thread	Thread	No of Stations	Manufacturer's Code
1021-0014	1"	1"	1	P120 A1GKZ1
1021-0015	1"	1"	2	O2P120 A1GKZ1
1021-0016	1"	1"	3	O3P120 A1GKZ1
1021-0017	1"	1"	4	O4P120 A1GKZ1

Tech Sheet 60383

### Description

Valve monoblock available with up to six spool models. Valve has two built-in load check valves in the inlet section, one check for construction. Valves have parallel circuits, allowing operation of several combinations. Direct operation main relief differential valve is standard. Used with air cylinders for lorries, trucks and cranes.

### Construction

Valve housing is chrome alloy cast iron. Spools are hardened steel and chrome-plated to secure maximum protection against corrosion and wear.

### Mounting

Distributor is fixed with two bolts, M10. Built-in port relief valves and/or anti-cavitation check valves on request.

### Port Thread Sizes:

P1, P2: 3/4" BSPP

T2, A, B: 3/4" BSPP

T1, N: 1" BSPP

Interchangeable with Nimco CV300.

All valves come as standard with adjustable main relief valve set at 250 bar, adjustable from 20 to 250 bar.

Includes standard lever.

<b>Ambient Temperature</b>	-40°C to +60°C
<b>Media</b>	Mineral oil based hydraulic oil
<b>Viscosity</b>	12 to 800mm <sup>2</sup> /s
<b>Filtration Level</b>	10 to NAS 1638
<b>Leakage (A, B, T)</b>	30cm <sup>3</sup> /min at 120 bar
<b>Nominal Flow</b>	110 L/min
<b>Spool Stroke</b>	10mm, L12 +/- 10/6
<b>Actuating Force</b>	< 300 N
<b>Modification/Spools</b>	From 1-6/without 5

Working Temperature:  
-15°C to +80°C

Maximum Working Pressure:  
A and B Ports: 300 bar, P Port: 250 bar,  
T Port: 50 bar



Type S290, 4 Way, 3 Position, Spring Return, 110 L/min, BSPP

0479	Thread	Thread	No of Stations	Manufacturer's Code
1021-0018	3/4"	1"	1	S291/AS

Tech Sheet 60384

# HYDRAULIC CONTROL VALVES



## Monoblock Valves

### Description

Hydraulic distributor used for switching on/off and directing the working fluid between head flow generators (hydraulic pumps), head flow consumers (hydraulic cylinders, motors, etc) and the tank.

It has a setting from 70 to 140 bar for automatic switch-off. It is designed as a 'log splitter' valve.

### Construction

Monoblock distributor with manual control. Body is cast iron (EN-GJL300) and spool is carburised steel with hard chrome plating.

### Mounting

Distributor is fixed with three bolts, P8.

### Port Thread Sizes:

P, T, A, B: 1/2" BSPP

Comes as standard with adjustable main relief valve set at 250 bar, adjustable from 20 to 250 bar.

Includes standard lever.

### Description

Log splitter valve featuring an extremely fast 'rapid extend' high speed mode. It has been designed to reduce system costs by allowing a single-stage pump to be used in systems currently using two-stage (hi-low) pumps. When extra force is required the valve allows the user to manually shift from high speed mode to high force mode. A 'soft stop' differentiates between high force and high speed modes.

### Construction

- Hydraulically balanced, hard chrome-plated spool
- Handle can be installed in up or down position
- Pressure release detent on retract
- 16 L/min nominal flow extends the flow up to 80 L/min
- Manual shift from high speed mode to high force mode
- Spring centre four position spool with soft stop

### Mounting

Distributor is fixed with three bolts, P8. In exposed environments do NOT mount with spool in vertical position.

### Port Thread Sizes:

A, B: 1/2" BSPP

P, T: 3/4" BSPP

Comes as standard with adjustable main relief valve set at 250 bar, adjustable from 20 to 250 bar.

Includes standard lever.

<b>Ambient Temperature</b>	-40°C to +60°C
<b>Media</b>	Mineral oil based hydraulic oil
<b>Viscosity</b>	12 to 800mm <sup>2</sup> /s
<b>Filtration Level</b>	10 to NAS 1638
<b>Pressure for Auto-release of Spool</b>	70-140 bar
<b>Leakage (A, B, T)</b>	20cm <sup>3</sup> /min at 120 bar
<b>Nominal Flow</b>	80 L/min
<b>Spool Stroke</b>	+/- 7.9mm
<b>Actuating Force</b>	< 220 N

**Working Temperature:**  
-15°C to +80°C

**Maximum Working Pressure:**  
A and B Ports: 300 bar, P Port: 250 bar,  
T Port: 50 bar



Type P81 Log Splitter Valve

0479	Thread	Manufacturer's Code
1021-0023	1/2"	P81 A2 G

Tech Sheet 60387

**Working Temperature:**  
-15°C to +80°C

**Maximum Working Pressure:**  
A and B Ports: 300 bar, P Port: 250 bar,  
T Port: 10 bar



Type P81RS Rapid Log Splitter Valve

0479	Thread	Manufacturer's Code
1021-0038	1/2"	3/4"

Tech Sheet 60428

# HYDRAULIC ACCUMULATORS & ACCESSORIES



3



## Diaphragm Accumulators

- Low cost non-repairable accumulators
- High reliability gas sealing system, ensures no leakage
- Electron beam welded steel shell
- Parallel threads with bonded seal recess ensures easy connection with no leaks
- **Material:** steel shell electron beam welded. Non repairable
- Nitrile membrane for mineral oil or non aggressive fluid



### BSPP

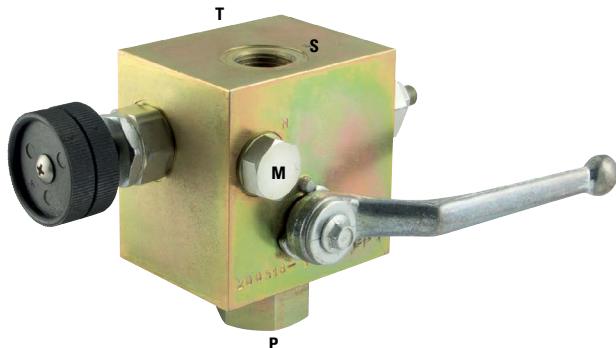
0197	Manufacturer's Code	Thread	Capacity Litres	Temp Range °C	Max Pressure Bar
E007-1515-013611	108492-01125	1/2"	0.075	-10/+80	250
E016-1515-013611	108493-01125	1/2"	0.16	-10/+80	250
E032-1515-013611	109866-01125	1/2"	0.32	-10/+80	210
E050-1515-023611	108495-01125	1/2"	0.50	-20/+80	210
E075-1515-093611	108497-01125	1/2"	0.75	-20/+80	210
E100-1515-123611	109847-01125	1/2"	1.0	-20/+80	210
E140-1515-113511	108502-01125	1/2"	1.4	-20/+80	140
E200-1515-063411	108504-01125	1/2"	2.0	-10/+80	100
E200-1515-063611	110134-01125	3/4"	2.0	-10/+80	250
E280-1515-032611	108879-01125	3/4"	2.8	-10/+80	250
E350-1515-092611	108505-01125	3/4"	3.5	-10/+80	250

Tech Sheet 10553

## Safety Blocks

- Carbon steel
- All blocks fully tested
- Nitrile seals as standard, Viton available on request
- Contact technical department
- Pressure relief valve for the protection of accumulator
- Manual dump to tank as standard

**Maximum Working Pressure:**  
360 bar



### Carbon Steel

0197	BSPP S	BSPP P	BSPP T	BSPP M	Max Pressure Bar
ECA12-01-L-N	1/2"	1/2"	1/4"	1/4"	360
ECA20-01-L-N	3/4"	3/4"	3/8"	1/4"	360
ECA32-01-L-N	1/4"	1/4"	3/8"	1/4"	360
Tech Sheet 2153					



# HYDRAULIC ACCUMULATORS & ACCESSORIES



## Hydra-Cushions

Hydracushions are a robust non repairable accumulator. They have been specifically designed for high volume, low cost applications, where it is more economical to replace a unit than to refurbish it after a long service life.

- Steel construction
- Nitrile bladder
- 1/4" gas valve

### Maximum Working Pressure:

172 bar



### BSPP

0197	Thread	Litres
HC0E00A-00-17	1/2"	0.5
HC100A-00-17	3/4"	1.0
HC200A-00-17	1"	2.0
HC400A-00-17	1.1/4"	4.0

Tech Sheet 10797

## Accumulator Bladder Kits

The kit comprises of a bladder assembly, protective cap, anti extrusion ring, O-Ring for the fluid port, back up ring and seal for the bleed plug.



### Oil Service

0197	Litres	Description
OB00A-00	0.16	-
OF00A-00	0.6	-
01100A-00	1	-
01C00A-00	1.15	-
0300A-00	3	5/8" Stem
03C00A-00	3	7/8" Stem
0400A-00	4	-
1000A-00	10	-
2000A-00	20	-
2800A-00	28	-
3700A-00	37	-
5400A-00	54	-

Tech Sheet 10797

## Thermoswitches

For use with the LAC series of air blast coolers.



### 1/2" BSPP

0197	Temp °C
598262	40
598261	50
598263	60
598264	70
598265	80

## Accumulator Charging Kits

For safe pre-charging of accumulators, Fawcett Christie Hydraulics offer a comprehensive range of equipment.



### Universal Pre-charged

0197	Description
10597-01	0-25 & 0-250 bar Gauge
10597-02	0-60 & 0-400 bar Gauge
10597-03	0-10 & 0-160 bar Gauge



## Saddle & Clamps

0197	Bore mm
10958	112-114
10959	165-168
10960	220-230



## Support Brackets

0197	To Suit
10961	4-9 Litre FCH Accumulators
10962	10-54 Litre FCH Accumulators



## Cushioning Rings

0197	To Suit
48473-A00	10-54 Litre Support Brackets



## Gas Valves

0197	Thread
10031-S03	1/4" x 1/4" BSP
10053-S03	0.32" x 32 TPI
43030	0.302 x 1/2" UNF

# HYDRAULIC OIL COOLERS



3

## AC Range Air Blast Oil Coolers

The LAC air oil cooler, with single-phase or three-phase AC motor, is optimised for use in the industrial sector. The maximum cooling capacity is 300kW at ETD +40°C.

See Tech Sheet for full specification on this model.

**Maximum Working Temperature:**  
+120°C

**Maximum Static Working Pressure:**

21 bar

**Maximum Dynamic Working Pressure:**

14 bar



### BSPP

0488	Thread	Voltage	KW/C
LAC-1	1/2"	230/1/50	0.05
LAC-2	1"	230/3/50-275/3/60	0.23
LAC-3	1"	230/3/50-275/3/60	0.36
LAC-4	1"	230/3/50-275/3/60	0.59
LAC-5	1"	230/3/50-275/3/60	0.78
LAC-6	1.1/4"	230/3/50	1.75
LAC-7	1.1/4"	230/3/50	2.1

Tech Sheet 60442

## DC Range Air Blast Oil Coolers

The LDC air oil cooler with 24V DC motor is optimised for use in the mobile industry. Together with a wide range of accessories, the LDC cooler is suitable for installation in most applications and environments.

The maximum cooling capacity is 30kW at +ETD 40°C.

Also available with a 12V DC motor.

See Tech Sheet for full specification on this model.

**Maximum Working Temperature:**  
+120°C

**Maximum Static Working Pressure:**

21 bar

**Maximum Dynamic Working Pressure:**

14 bar



### BSPP

0488	Thread	Voltage	KW/C
LDC-1	1"	24V	0.12
LDC-2	1"	24V	0.19
LDC-3	1"	24V	0.3
LDC-4	1"	24V	0.38
LDC-5	1"	24V	0.6
LDC-6	1.1/4"	24V	0.72

Tech Sheet 60443

## Offline Air Blast Oil Coolers

The LOC cooling system with three-phase AC motor is optimised for use in the industrial sector.

The system is supplied ready for installation. An integrated circulation pump makes it possible to cool and treat the oil in a separate circuit (offline cooling).

See Tech Sheet for full specification on this model.

**Maximum Working Temperature:**  
+100°C

**Maximum Static Working Pressure:**

21 bar

**Maximum Dynamic Working Pressure:**

14 bar



### BSPP

0488	Thread	Voltage	KW/C
LOC-1	1"	230/3/50-275/3/60	0.07
LOC-2	1"	230/3/50-275/3/60	0.2
LOC-3	1"	230/3/50-275/3/60	0.26
LOC-4	1"	230/3/50-275/3/60	0.45
LOC-5	1"	230/3/50-275/3/60	0.61
LOC-6	1.1/4"	230/3/50	1

Tech Sheet 60444

## Hydraulic Motor In-line Coolers

The LHC air oil cooler with hydraulic motor is optimised for use in the mobile and industrial sectors.

The maximum cooling capacity is 300kW at ETD +40°C.

See Tech Sheet for full specification on this model.

**Maximum Working Temperature:**  
+120°C

**Maximum Static Working Pressure:**

21 bar

**Maximum Dynamic Working Pressure:**

14 bar



### BSPP

0488	Thread	Motor Option	KW/C
LHC-1	1"	8.4cc	0.22
LHC-2	1"	14.4cc	0.38
LHC-3	1"	10.8cc	0.58
LHC-4	1"	10.8cc	0.76
LHC-5	1.1/4"	10.8cc	1.1
LHC-6	1.1/4"	8.4cc	1.3

Tech Sheet 60445

# HYDRAULIC OIL COOLERS



## Compact Water/Oil Coolers

The Parker PWO is a compact and lightweight water/oil cooler with a high cooling capacity for its size.

**Features:**

- Light and compact
- Suitable for many applications
- Easy installation
- Cost-efficient and environmentally friendly

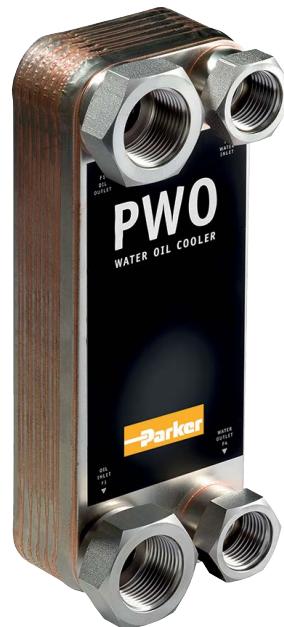
**Working Temperature:** -196°C to +225°C

**Maximum Working Pressure:** 31 bar at 155°C

**Material:**

- Plates: EN 10028/7-1.4401 (AISI 316)
- Brazing: pure copper
- Connections: EN 10272-1.4401 (AISI 316)

For full specification on this item see Tech Sheet.


**BSPP**

0488	Thread	Thread	KW/C	Type
PWO-1	3/4"	1/2"	1.5-5	B5TH
PWO-2	3/4"	1/2"	4-7	B8TH
PWO-3	3/4"	1/2"	5-17	B8TH
PWO-4	3/4"	1/2"	7-27	B8TH
PWO-5	1"	3/4"	5-27	B10TH
PWO-6	1"	3/4"	10-50	B10TH
PWO-7	1"	3/4"	10-65	B10TH
PWO-8	1.1/4"	1"	10-60	B25TH
PWO-9	1.1/4"	1"	10-80	B25TH
PWO-10	1.1/4"	1"	20-95	B25TH
PWO-11	1.1/4"	1"	20-105	B25TH

Tech Sheet 60460



# HYDRAULIC OIL COOLERS

**BOWMAN®**

3



## Complete Water Cooler

Hydraulic oil coolers are suitable for heat transfer fluids, lubricating and quenching oils. They are high quality products incorporating the best materials and latest technical features.

The tube stack is fully floating so the thermal stresses are minimised and it can be easily removed should cleaning be necessary.

Dissipation shown in kW based on an oil outlet temperature of 50°C and a water inlet temperature 25°C at maximum oil flow rate

Maximum Working Oil Temperature:  
120°C  
Maximum Working Water Temperature:  
110°C

Maximum Working Oil Pressure:  
20 bar  
Maximum Working Water Pressure:  
20 bar

Higher temperature versions are available up to 200°C on request.



### EC-14 Series, Fresh Water, BSPP

0379	Thread	LPM	KW
<b>EC080-1425-1</b>	1/2"	80	4
<b>EC100-1425-2</b>	3/4"	92	9
<b>EC120-1425-3</b>	3/4"	77	13
<b>EC140-1425-4</b>	3/4"	68	17
<b>EC160-1425-5</b>	3/4"	64	22

Tech Sheet 10199

### FC-14 Series, Fresh Water, BSPP

0379	Thread	LPM	KW
<b>FC080-1426-1</b>	1"	140	13
<b>FC100-1426-2</b>	1"	145	19
<b>FC120-1426-3</b>	1"	116	26
<b>FC140-1426-4</b>	1"	105	35
<b>FC160-1426-5</b>	1"	96	45

Tech Sheet 10199

### FG-14 Series, Fresh Water, BSPP

0379	Thread	LPM	KW
<b>FG080-1427-1</b>	1.1/4"	192	28
<b>FG100-1427-2</b>	1.1/4"	190	37
<b>FG120-1427-3</b>	1.1/4"	160	50
<b>FG140-1427-4</b>	1.1/4"	160	62
<b>FG160-1427-5</b>	1.1/4"	145	79
<b>FG200-1427-7</b>	1.1/4"	130	123

Tech Sheet 10199

### EC-38 Series, Sea Water, BSPP

0379	Thread	LPM	KW
<b>EC080-3875-1</b>	1/2"	80	4
<b>EC100-3875-2</b>	3/4"	92	9
<b>EC120-3875-3</b>	3/4"	77	13
<b>EC140-3875-4</b>	3/4"	68	17
<b>EC160-3875-5</b>	3/4"	64	22

Tech Sheet 10199

### FC-38 Series, Sea Water, BSPP

0379	Thread	LPM	KW
<b>FC080-3876-1</b>	1"	140	13
<b>FC100-3876-2</b>	1"	145	19
<b>FC120-3876-3</b>	1"	116	26
<b>FC140-3876-4</b>	1"	105	35
<b>FC160-3876-5</b>	1"	96	45

Tech Sheet 10199

### FG-38 Series, Sea Water, BSPP

0379	Thread	LPM	KW
<b>FG080-3877-1</b>	1.1/4"	192	28
<b>FG100-3877-2</b>	1.1/4"	190	37
<b>FG120-3877-3</b>	1.1/4"	160	50
<b>FG140-3877-4</b>	1.1/4"	160	62
<b>FG160-3877-5</b>	1.1/4"	145	79
<b>FG200-3877-7</b>	1.1/4"	130	123

Tech Sheet 10199



# HYDRAULIC OIL COOLERS

**BOWMAN®**



## Replacement Parts

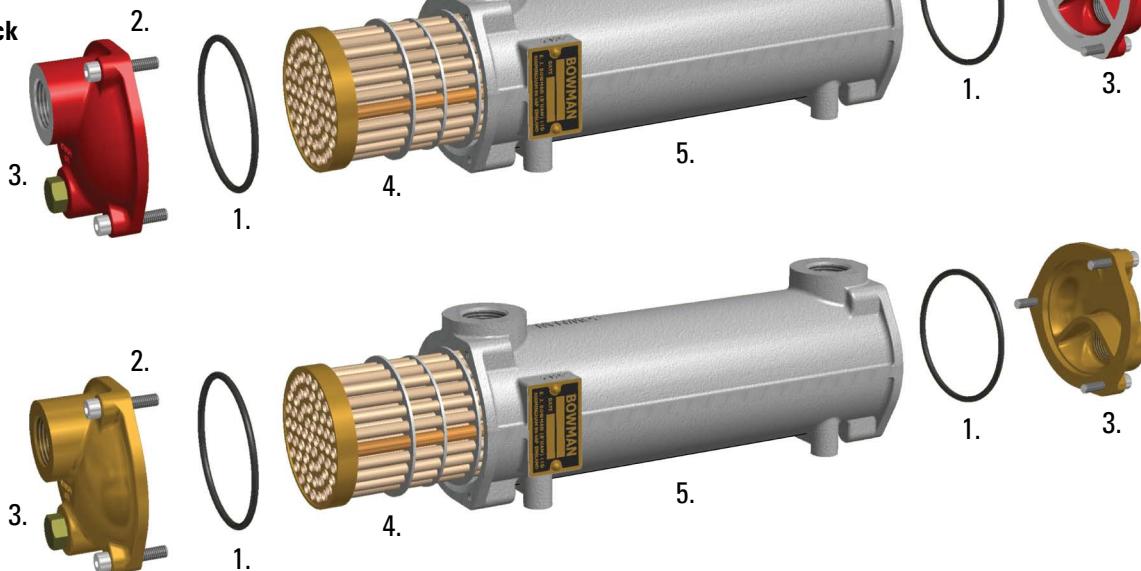
1. O-Ring

2. Screws

3. End Cap

4. Tube Stack

5. Body



### EC Series, Spares

0379	Description
AN12NT	O-Ring
HS06X30	Screw
EC003-1040CI	End Cover Fresh Water
EC003-1040NB	End Cap Sea Water
785-1TN1B	EC080 Tube Stack
EC021-978AL	EC080 Body
785-2TN1B	EC100 Tube Stack
EC010-783-2AL	EC100 Body
785-3TN1B	EC120 Tube Stack
EC012-783-3AL	EC120 Body
785-4TN1B	EC140 Tube Stack
EC014-783-4AL	EC140 Body
785-5TN1B	EC160 Tube Stack
EC016-783-5AL	EC160 Body

### FC Series, Spares

0379	Description
OS46NT	O-Ring
HS08X35	Screw
FC003-1281CI	End Cover Fresh Water
FC003-1281NB	End Cap Sea Water
1530-1TN1B	FC080 Tube Stack
FC008-1200-1AL	FC080 Body
1530-2TN1B	FC100 Tube Stack
FC010-1200-2AL	FC100 Body
1530-3TN1B	FC120 Tube Stack
FC012-1200-3AL	FC120 Body
1530-4TN1B	FC140 Tube Stack
FC014-1200-4AL	FC140 Body
1530-5TN1B	FC160 Tube Stack
FC016-1200-5AL	FC160 Body

### FG Series, Spares

0379	Description
OS52NT	O-Ring
HS08X35-FG	Screw
FG003-1583CI	End Cover Fresh Water
FG003-1583NB	End Cap Sea Water
1959-1TN1B	FG080 Tube Stack
FG008-1650-1AL	FG080 Body
1959-2TN1B	FG100 Tube Stack
FG010-1650-2AL	FG100 Body
1959-3TN1B	FG120 Tube Stack
FG012-1650-3AL	FG120 Body
1959-4TN1B	FG140 Tube Stack
FG014-1650-4AL	FG140 Body
1959-5TN1B	FG160 Tube Stack
FG016-1650-5AL	FG160 Body
1959-7TN1B	FG200 Tube Stack
FG020-1650-7AL	FG200 Body

### GL Series, Spares

0379	Description
OS63NT	O-Ring
HS10X40	Screw
GL003-3141CI	End Cover Fresh Water
GL003-3141NB	End Cap Sea Water

### GK Series, Spares

0379	Description
OS69NT	O-Ring
HS12X50	Screw

### JK Series, Spares

0379	Description
OS74NT	O-Ring
HS16X70	Screw

### PK Series, Spares

0379	Description
OS81NT	O-Ring
HS16X70-PK	Screw



### Drain Plugs

0379	To Suit
915	EC, GL & GK Series
916	JK, PK & GK Series



# ANTI-VIBRATION MOUNTS

## Anti-vibration Mounts

Easy-to-install design with an integral fail-safe device to provide shock and failure protection for mobile, marine or seismic stationary applications. These mounts can accommodate loads between 9kg and 826kg per mount.

- Bell and flange: DD13 or DC04 steel (UNI EN10111 ALT UNI EN10130)
- Natural rubber, zinc plated in accordance with CE standards, chrome VI free, white
- Stiffness tolerance: +/- 15%

**Applications:** genset, marine power engines, diesel engines, pumps and HVAC.



### Engine Mounts

0500	Thread	Hardness (IRHD)	Diameter mm	Height mm	Max Working Load Kg
<b>AVM80-45</b>	M12	45	100	38	36.7
<b>AVM80-60</b>	M12	60	100	38	65.3
<b>AVM80-70</b>	M12	70	100	38	97.9
<b>AVM104-45</b>	M16	45	140	49	122.4
<b>AVM104-60</b>	M16	60	140	49	193.7
<b>AVM104-70</b>	M16	70	140	49	305.9
<b>AVM130-45</b>	M20	45	182	71	336.5
<b>AVM130-60</b>	M20	60	182	71	550.6
<b>AVM130-70</b>	M20	70	182	71	826.0

Tech Sheet 67984

## Bobbins

Mounts can be fixed in numerous ways with either internal, external or combination threads. These can be used in compression or shear. This range can accommodate loads from 8kg to 650kg, although we can offer from 2kg to 1,020kg on request.

- Natural rubber, zinc plated in accordance with CE standards, chrome VI free, white
- Stiffness tolerance: +/- 20%

**Applications:** measurement equipment, instruments, small machinery, engines, pumps and radiators.



### Male x Male Bobbins

0500	Thread	Hardness (IRHD)	Diameter mm	Height mm	Max Working Load Kg
<b>MMB-161510</b>	M4 x 10	60	16	15	25.1
<b>MMB-202018</b>	M6 x 18	60	20	20	33.0
<b>MMB-302020</b>	M8 x 20	60	30	20	97.1
<b>MMB-303020</b>	M8 x 20	60	30	30	66.1
<b>MMB-404025</b>	M10 x 25	60	40	40	122.4
<b>MMB-504025</b>	M10 x 25	60	50	40	212.1
<b>MMB-505025</b>	M10 x 25	60	50	50	137.9
<b>MMB-755037</b>	M12 x 37	60	75	50	621.0

Tech Sheet 67985



### Male x Female Bobbins

0500	Thread	Hardness (IRHD)	Diameter mm	Height mm	Max Working Load Kg
<b>FMB-161510</b>	M4 x 10	60	16	15	26.0
<b>FMB-202018</b>	M6 x 18	60	20	20	34.3
<b>FMB-252518</b>	M6 x 18	60	25	25	58.1
<b>FMB-302020</b>	M8 x 20	60	30	20	91.4
<b>FMB-303020</b>	M8 x 20	60	30	30	68.5
<b>FMB-403023</b>	M8 x 23	60	40	30	150.5
<b>FMB-404025</b>	M10 x 25	60	40	40	124.8
<b>FMB-504025</b>	M10 x 25	60	50	40	219.4
<b>FMB-505025</b>	M10 x 25	60	50	50	141.1

Tech Sheet 67986



### Female x Female Bobbins

0500	Thread	Hardness (IRHD)	Diameter mm	Height mm	Max Working Load Kg
<b>FFB-1615</b>	M4	60	16	15	26.3
<b>FFB-2020</b>	M6	60	20	20	35.1
<b>FFB-2525</b>	M6	60	25	25	60.7
<b>FFB-3020</b>	M8	60	30	20	97.9
<b>FFB-3030</b>	M8	60	30	30	70.4
<b>FFB-4030</b>	M8	60	40	30	153.0
<b>FFB-4040</b>	M10	60	40	40	128.9
<b>FFB-5040</b>	M10	60	50	40	221.1
<b>FFB-5050</b>	M10	60	50	50	145.2
<b>FFB-7550</b>	M12	60	75	50	648.5

Tech Sheet 67987

# ANTI-VIBRATION MOUNTS



## Levelling Feet

These mounts are utilised as supports for various plant and machinery applications. Sizes range from 80mm up to 200mm, with loads applied from 510kg up to 4,079kg.

**Plates:** steel DC04 (UNI EN 10130)

**Washers:** steel DD12 (UNI EN 10111)

**Nuts:** resistance class 4

**Bolts:** resistance class 4.8

**Other metal components:** 11SMnPb 37 (UNI EN 10087)

- Natural rubber
- Zinc plated in accordance with CE standards, chrome VI free
- Stiffness tolerance: +/- 20%

**Application:** engines, tooling machinery, pumps, HVAC and genset.



### Heavy-duty

0500	Thread	Hardness (IRHD)	Diameter mm	Min Height mm	Max Height mm	Max Working Load Kg
LFEET-8035	M12 x 1.25	80	80	122	144	510
LFEET-12040	M16 x 1.5	80	120	133	155	1020
LFEET-16050	M20 x 1.5	80	160	175	201	2039
LFEET-20060	M20 x 1.5	80	200	185	211	4079

Tech Sheet 68220

## Buffers

These mounts are designed to prevent shocks and overloading thanks to their progressive absorption. This range can accommodate weights from 2kg up to 1,400kg.

- Natural rubber, zinc plated in accordance with CE standards, chrome VI free, white

- Stiffness tolerance: +/- 20%

**Applications:** engines, tooling machinery, pumps, special equipment, HVAC and genset.



### Male Conical Buffers

0500	Thread	Hardness (IRHD)	Diameter mm	Height mm	Max Working Load Kg
<b>MCONBUF-2425</b>	M6 x 18	60	24	25	41.8
<b>MCONBUF-5050</b>	M10 x 25	60	50	50	72.4

Tech Sheet 67988



### Male Cylindrical Buffers

0500	Thread	Hardness (IRHD)	Diameter mm	Height mm	Max Working Load Kg
<b>MCB-100810</b>	M4 x 10	45	10	8	5.9
<b>MCB-161010</b>	M4 x 12	45	16	10	16.7
<b>MCB-251218</b>	M6 x 18	60	20	12	46.3
<b>MCB-251518</b>	M6 x 18	60	25	15	80.8
<b>MCB-302020</b>	M8 x 20	60	30	20	88.1
<b>MCB-403023</b>	M8 x 23	45	40	30	72.2
<b>MCB-503025</b>	M10 x 25	60	50	30	282.7
<b>MCB-755037</b>	M12 x 37	60	75	50	573.1

Tech Sheet 67989



### Female Cylindrical Buffers

0500	Thread	Hardness (IRHD)	Diameter mm	Height mm	Max Working Load Kg
<b>FCB-161004</b>	M4	45	16	10	16.5
<b>FBC-162005</b>	M5	45	16	20	17.9
<b>FBC-201506</b>	M6	60	20	15	40.7
<b>FBC-202506</b>	M6	60	20	25	28.0
<b>FBC-301708</b>	M8	60	30	17	100.5
<b>FBC-302008</b>	M8	60	30	20	80.8
<b>FBC-303008</b>	M8	60	30	30	61.2
<b>FBC-502110</b>	M10	60	50	21	428.3
<b>FBC-754012</b>	M12	60	75	40	761.1

Tech Sheet 67990