

Hydraulics Network



CETOP VALVES, SUBPLATES & MANIFOLDS 2023



OIL SOLUTIONS

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"For All Your Hydraulic Needs"

Sandwich Valves (HDF Series)

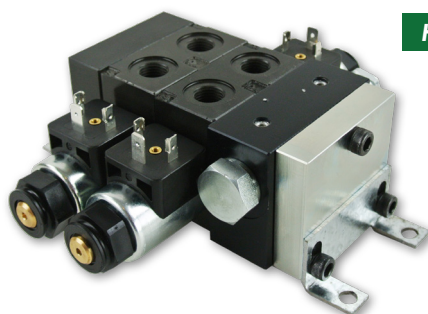
Part #	List Price \$	Max Pressure	Max Flow	Ports	Transition	Diagram
HDF-ES-1C		250 bar	20 lpm	1/4" BSPP	Closed	
HDF-ES-1LL		250 bar	20 lpm	1/4" BSPP	Closed	
HDF-ES-4C		250 bar	20 lpm	1/4" BSPP	Open	
HDF-ES-3C		250 bar	20 lpm	1/4" BSPP	A + B to T	
HDF-ES-0C		250 bar	20 lpm	1/4" BSPP	Open	
HDF-ES-0ML		250 bar	20 lpm	1/4" BSPP	Open	
AMF-MOP-25		250 bar	Pressure relief valve 100-250 bar			
AMF-HP2		200 bar	2cc hand pump			
AMF-RO-P/6.3/10		320 bar	16-63 bar direct acting pressure reducing valve			
AMF-RO-P/16/10		320 bar	40-160 bar direct acting pressure reducing valve			
AMF-RO-P/20/10		320 bar	50-210 bar direct acting pressure reducing valve			

Sandwich Valve (CS Series)

Part #	List Price \$	Transition	Voltage	Max Flow	Max Pressure	Ports	Diagram
CS-3C2-03-D12		Closed	12v	15 lpm	200 bar	1/4" BSPP	
CS-3C2-03-D24		Closed	24v	15 lpm	200 bar	1/4" BSPP	
CS-3C4-03-D12		A + B open to T	12v	15 lpm	200 bar	1/4" BSPP	
CS-3C4-03-D24		A + B open to T	24v	15 lpm	200 bar	1/4" BSPP	
CS-C3B-03-D12		Open	12v	15 lpm	200 bar	1/4" BSPP	
CS-C3B-03-D24		Open	24v	15 lpm	200 bar	1/4" BSPP	

HDF Series - coils not included in price

CS Series - coils are included in price



HDF-ES



CS-3C2

Sandwich Valve Endplates & Manifolds

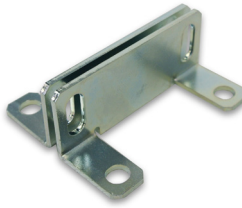
Part #	List Price \$	Material	Port	Description	
PD1-03/32-0		Steel	-	End plate	
T0407		Aluminium	-	End plate	
PD1-03/32-5		Steel	3/8" BSPP	Remote mount plate port	
T0407-PT		Aluminium	9/16" UNO	Remote Mount plate port	
MAF-KIT-2		Aluminium	-	Remote mount mounting bracket	
CS-03-M		Aluminium	-	Manual override knob for CS valves	
GE-01		Aluminium	-	Manual override knob for HDF valves	



PD1-03



T0407



MAF-KIT-2



CS-03-M



GE-01

Coils (to suit HDF Series)

Part #	List Price \$	Voltage	Amp Draw	Core Size	Length	Connector	
BO1-012C		12v DC	2.8 amp	13.8mm	41.2mm	DP-LED-DC	
BO1-024C		24v DC	1.4 amp	13.8mm	41.2mm	DP-LED-DC	
BO1-220R		220v AC	0.17 amp	13.8mm	41.2mm	DP-LED-AC	



Coils (to suit CS Series)

Part #	List Price \$	Voltage	Amp Draw	Core Size	Length	Connector	
CS-12V		12v DC	2.8 amp	13.2mm	37mm	DP-LED-DC	
CS-24V		24v DC	1.4 amp	13.2mm	37mm	DP-LED-DC	
CS-A22		220v AC	0.17 amp	13.2mm	37mm	DP-REC-AC	



Sandwich Valve Bolt Kits

Part #	List Price \$	Description	
VIT-HDF-M6X55		Bolt Kit - 1 Section HDF/CS Valve	
VIT-HDF-M6X100		Bolt Kit - 2 Section HDF/CS Valve	
VIT-HDF-M6X133		Bolt Kit - 3 Section HDF/CS Valve	
VIT-HDF-M6X163		Bolt Kit - 4 Section HDF/CS Valve	
VIT-HDF-M6X194		Bolt Kit - 5 Section HDF/CS Valve	
VIT-HDF-M6X224		Bolt Kit - 6 Section HDF/CS Valve	
VIT-HDF-M6X256		Bolt Kit - 7 Section HDF/CS Valve	
VIT-HDF-M6X287		Bolt Kit - 8 Section HDF/CS Valve	



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Aidro Cetop 3 Solenoid & Manual Valves

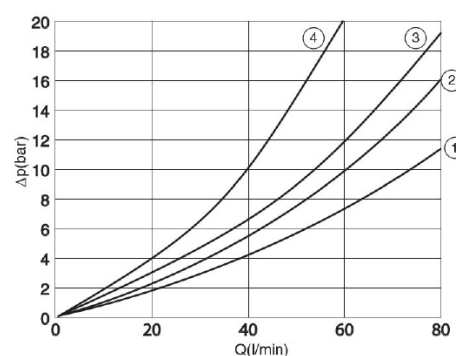
	SOLENOID	MANUAL
Nominal Flow Rate	60 lpm	60 lpm
Maximum Recommended Flow	80 lpm	80 lpm
Maximum Nominal Pressure P _{A,B}	350 bar	320 bar
Maximum Pressure on T Port	210 bar	100 bar
Duty Cycle	100%	n/a
Bolts (single valve)	M5x45mm (tighten to 8Nm)	



Typical Diagrams

Typical Δp -Q curves for valves HD3-ES-* in standard configuration. Measured with mineral oil at 32mm²/s and T=40°C.

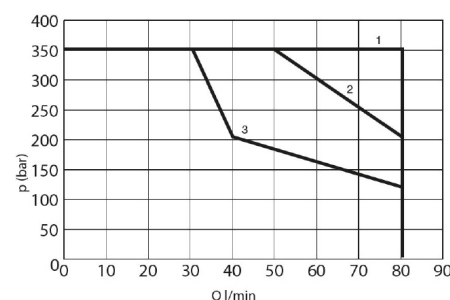
Spool	P-A	P-B	A-T	B-T	P-T
1C	1	1	2	2	-
4C	3	3	4	4	1
0C	1	1	2	2	1
3C	1	1	2	2	-
1LL	1	1	2	2	-
1LLb	1	1	2	2	-
1ML	-	1	2	-	-
4ML	4	-	4	-	2
0ML	-	1	2	-	1
3ML	1	-	2	-	-



Hydraulic Limit of Use

Δp -Q characteristics limits for safe use of HD3-ES-* solenoid operated valves. Measured with mineral oil at 32mm²/s and T=40°C.

Spool	Limit	Spool	Limit
1C	1	1ML	1
4C	3	0ML	2
0C	2	1MLb	1
3C	2	1LLb	1
1LL	1	4MLb	3
3ML	2	0MLb	2
4ML	3	3MLb	2



HYDRAULIC FLUID

Seals and materials used on standard HD3-* valves are fully compatible with hydraulic fluids of mineral base, upgrading with antifoaming and antioxidising agents.

The hydraulic fluid must be kept clear and filtered to ISO4406 class 19/17/14, or better, and used in a recommended viscosity range from 10cSt to 60cSt.



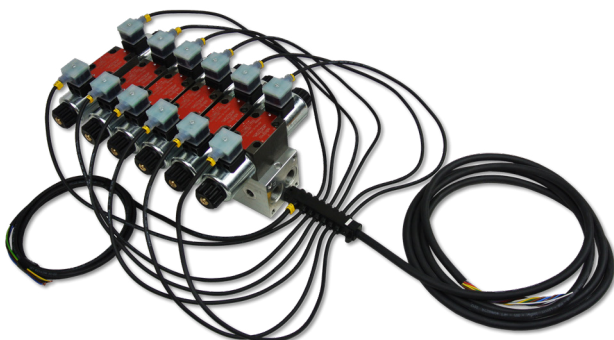
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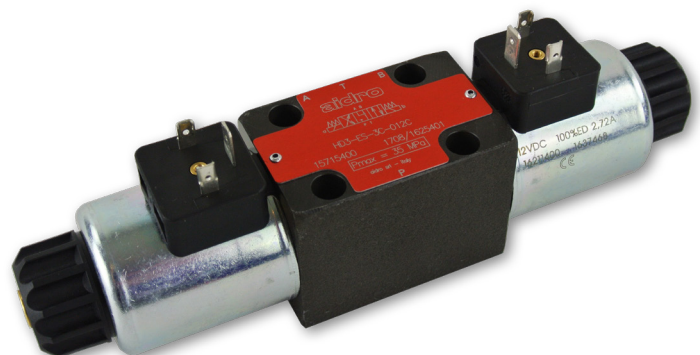
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Cetop 3 Solenoid Valves (AIDRO)

Part #	List Price \$	Coil Voltage	Diagram
HD3-ES-0C-012C/10		12v DC	
HD3-ES-0C-024C/10		24v DC	
HD3-ES-0C-230A/10		230v AC	
HD3-ES-0C-115A/10		115v AC	
HD3-ES-1C-012C/10		12v DC	
HD3-ES-1C-024C/10		24v DC	
HD3-ES-1C-230A/10		230v AC	
HD3-ES-1C-115A/10		115v AC	
HD3-ES-3C-012C/10		12v DC	
HD3-ES-3C-024C/10		24v DC	
HD3-ES-3C-230A/10		230v AC	
HD3-ES-3C-115A/10		115v AC	
HD3-ES-4C-012C/10		12v DC	
HD3-ES-4C-024C/10		24v DC	
HD3-ES-4C-230A/10		230v AC	
HD3-ES-4C-115A/10		115v AC	
HD3-ES-1N-012C/10		12v DC	
HD3-ES-1N-024C/10		24v DC	
HD3-ES-1N-230A/10		230v AC	
HD3-ES-1N-115A/10		115v AC	



Wiring harnesses - see page 59



DIN plugs/accessories
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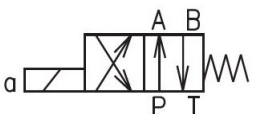
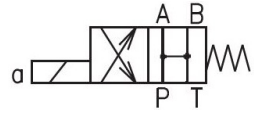
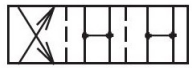
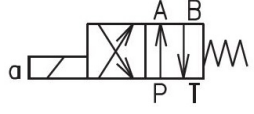
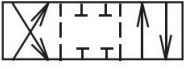
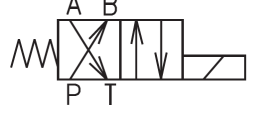
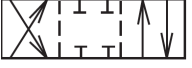
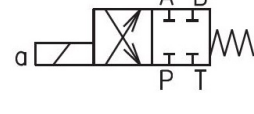
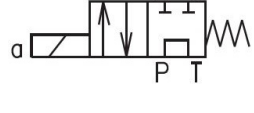
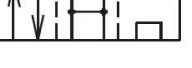


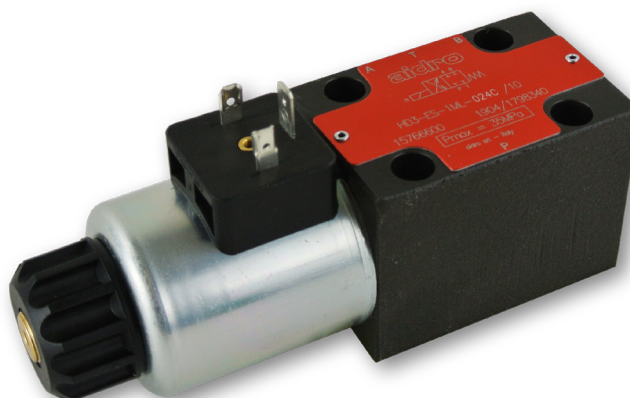
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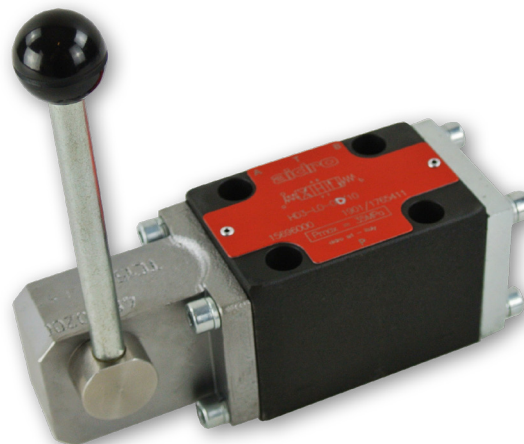
Cetop 3 Solenoid Valves (AIDRO)

Part #	List Price \$	Coil Voltage	Diagram
HD3-ES-0LL-012C/10		12v DC	 
HD3-ES-0LL-024C/10		24v DC	
HD3-ES-0LL-230A/10		230v AC	
HD3-ES-0LL-115A/10		115v AC	
HD3-ES-0ML-012C/10		12v DC	 
HD3-ES-0ML-024C/10		24v DC	
HD3-ES-0ML-230A/10		230v AC	
HD3-ES-0ML-115A/10		115v AC	
HD3-ES-1LL-012C/10		12v DC	 
HD3-ES-1LL-024C/10		24v DC	
HD3-ES-1LL-230A/10		230v AC	
HD3-ES-1LL-115A/10		115v AC	
HD3-ES-1LLb-012C/10		12v DC	 
HD3-ES-1LLb-024C/10		24v DC	
HD3-ES-1LLb-230A/10		230v AC	
HD3-ES-1LLb-115A/10		115v AC	
HD3-ES-1ML-012C/10		12v DC	 
HD3-ES-1ML-024C/10		24v DC	
HD3-ES-1ML-230A/10		230v AC	
HD3-ES-1ML-115A/10		115v AC	
HD3-ES-3ML-012C/10		12v DC	 
HD3-ES-3ML-024C/10		24v DC	
HD3-ES-3ML-230A/10		230v AC	
HD3-ES-3ML-115A/10		115v AC	
HD3-ES-4ML-012C/10		12v DC	 
HD3-ES-4ML-024C/10		24v DC	
HD3-ES-4ML-230A/10		230v AC	
HD3-ES-4ML-115A/10		115v AC	



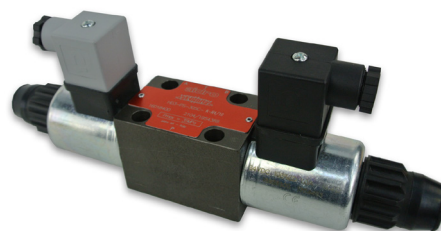
DIN plugs/accessories
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Cetop 3 Manual Valves (AIDRO)					
Part #	List Price \$	Coil Voltage		Diagram	
HD3-LO-0C/10		Manual	H		
HD3-LO-0D/10		Manual w/ detent		Detent	
HD3-LO-1C/10		Manual	E		
HD3-LO-1D/10		Manual w/ detent		Detent	
HD3-LO-3C/10		Manual	J		
HD3-LO-3D/10		Manual w/ detent		Detent	
HD3-LO-4C/10		Manual	G		
HD3-LO-4D/10		Manual w/ detent		Detent	
HD3-LO-0LL/10		Manual	D		
HD3-LO-0N/10		Manual w/ detent		Detent	
HD3-LO-1LL/10		Manual	C		
HD3-LO-1N/10		Manual w/ detent		Detent	



Aidro Cetop 3 Proportional Valve

	SOLENOID
Nominal Flow Rate	5, 16, 32 lpm
Maximum Nominal Pressure P _{A,B}	320 bar
Maximum Pressure on T Port	160 bar
Duty Cycle	100%
Bolts (single valve)	M5x45mm (tighten to 8Nm)



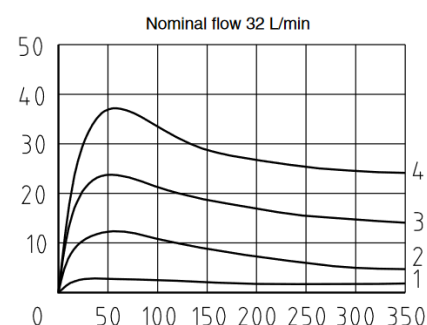
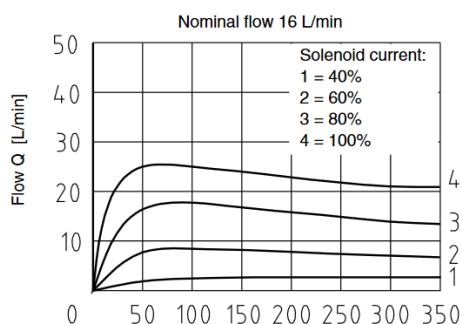
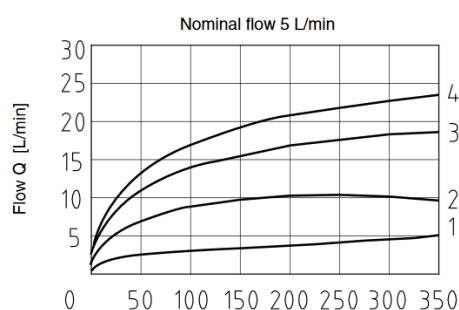
Valves type HD3-PS are operated by proportional solenoids that are rated for an average maximum power of 13.5 watt.

The values of nominal maximum current are for coils type:

- R2 (2.3): $I_{max} = 2.4amp$
- R3 (4.5): $I_{max} = 1.7amp$
- R4 (13.4): $I_{max} = 1.0amp$
- R5 (18.6): $I_{max} = 0.85amp$

Currents to hydraulic proportional valves are normally supplied by an electronic driver based on PWM mode of operation, and capable of full control of minimum and maximum values of current for drivers type UED.

(See following page for UEDs)



HYDRAULIC FLUID

Seals and materials used on standard HD3-* valves are fully compatible with hydraulic fluids of mineral base, upgrading with antifoaming and antioxidising agents.

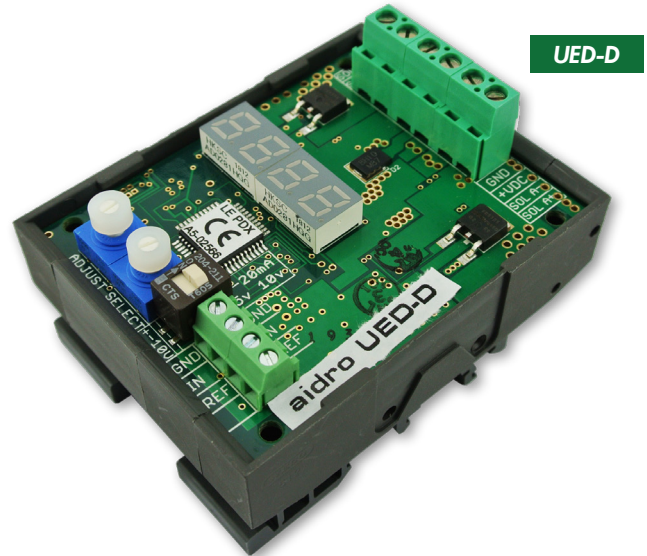
The hydraulic fluid must be kept clear and filtered to ISO4406 class 19/17/14, or better, and used in a recommended viscosity range from 10cSt to 60cSt.

Universal Electronic Driver

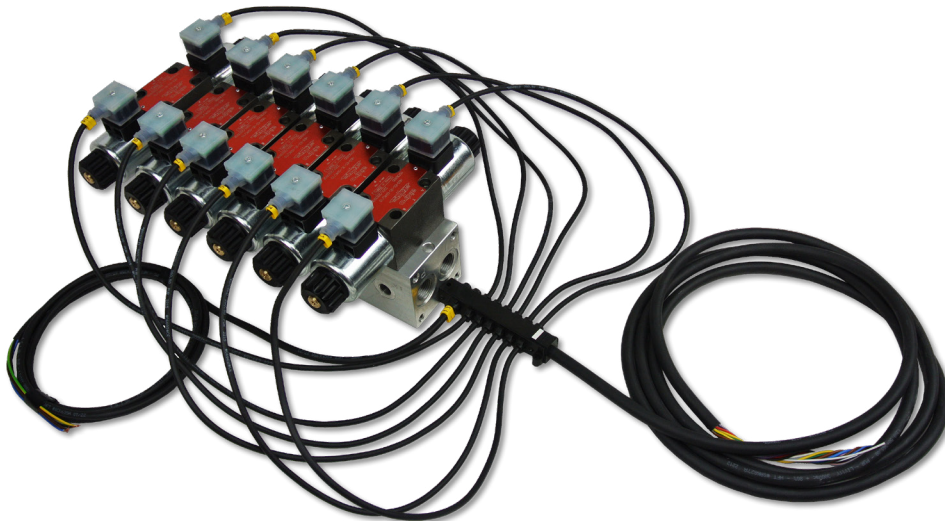
Part #	List Price \$	Voltage	Input Signal	Output Current	Mounting	Controls
UED-KA		9-36v DC	0-5v, 0-10v, 4-20mA	0-3 amp	DIN 43650-A	1 solenoid
UED-D		9-36v DC	0-5v, 0-10v, 4-20mA	0-3 amp	DIN rail (open)	1 or 2 solenoid



UED-KA



UED-D



Wiring harnesses - see page 59

Independent adjustments
(ramp up/down)

Wide ramp time range

PVM output

Display/adjust current
& voltage

Cetop 3 Proportional Valve - AIDRO (P,T,A,B blocked)

Part #	List Price \$	Flow	Coil Voltage	Nominal Max. Current	Diagram
HD3-PS-105C-K-R2/10		5 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-105C-K-R4/10		5 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-1RC-K-R2/10		16 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-1RC-K-R4/10		16 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-1PC-K-R2/10		32 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-1PC-K-R4/10		32 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-105MLb-K-R2/10		5 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-105MLb-K-R4/10		5 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-1RMLb-K-R2/10		16 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-1RMLb-K-R4/10		16 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-1PMLb-K-R2/10		32 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-1PMLb-K-R4/10		32 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-105ML-K-R2/10		5 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-105ML-K-R4/10		5 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-1RML-K-R2/10		16 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-1RML-K-R4/10		16 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-1PML-K-R2/10		32 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-1PML-K-R4/10		32 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	

Optional Coils

Part #	List Price \$	Coil Voltage	Nominal Max. Current	Connection
BO3-12R2		12v DC	2.5a / 2.3Ω	DIN 43650A
BO3-12C		12v DC	2.7a / 4.4Ω	DIN 43650A
BO3-24R4		24v DC	1a / 13.4Ω	DIN 43650A
BO3-24C		24v DC	1.29a / 18.6Ω	DIN 43650A
BO3-12R2-D		12v DC	2.5a / 2.3Ω	DEUTSCH
BO3-12C-D		12v DC	2.7a / 4.4Ω	DEUTSCH
BO3-24R4-D		24v DC	1a / 13.4Ω	DEUTSCH
BO3-24C-D		24v DC	1.29a / 18.6Ω	DEUTSCH



BO3 (DIN)



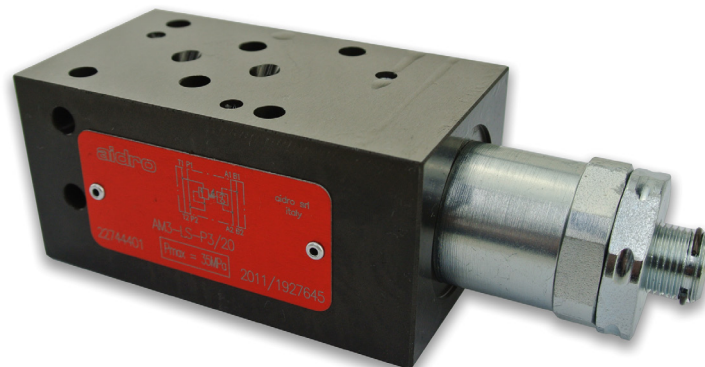
BO3 (DEUTSCH)

Cetop 3 Proportional Valve - AIDRO (P blocked, A,B,T connected)

Part #	List Price \$	Flow	Coil Voltage	Nominal Max. Current	Diagram
HD3-PS-305C-K-R2/10		5 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-305C-K-R4/10		5 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-3RC-K-R2/10		16 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-3RC-K-R4/10		16 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-3PC-K-R2/10		32 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-3PC-K-R4/10		32 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-305MLb-K-R2/10		5 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-305MLb-K-R4/10		5 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-3RMLb-K-R2/10		16 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-3RMLb-K-R4/10		16 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-3PMLb-K-R2/10		32 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-3PMLb-K-R4/10		32 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-305ML-K-R2/10		5 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-305ML-K-R4/10		5 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-3RML-K-R2/10		16 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-3RML-K-R4/10		16 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	
HD3-PS-3PML-K-R2/10		32 lpm, ΔP 10 bar	12v DC	2.5a / 2.3Ω	
HD3-PS-3PML-K-R4/10		32 lpm, ΔP 10 bar	24v DC	1.0a / 13.4Ω	

Pressure Compensator Valve

Part #	List Price \$	Description
AM3-LS-P3/20		3-way pressure compensator valve with load-sensing (more details on page 202)



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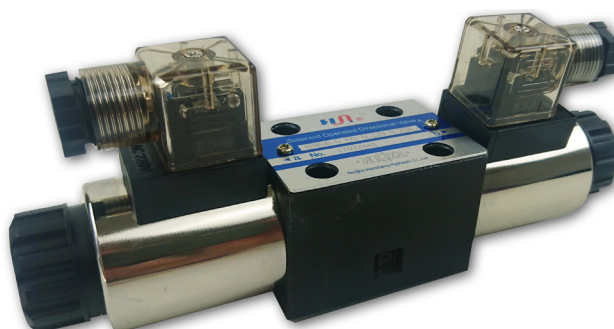
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Cetop 3 Valves w/ dual coils & LED DIN plugs

Recommended maximum flow 40 lpm @ 210 bar

Part #	List Price \$	Coil Voltage	Max Press Tank	Transition	Diagram
4DWG6-E-60-DC12-N-Z5L		12v DC	210 bar	Closed	
4DWG6-E-60-DC24-N-Z5L		24v DC	210 bar	Closed	
4DWG6-E-60-AC220-N-Z5L		240v AC	160 bar	Closed	
4DWG6-H-60-DC12-N-Z5L		12v DC	210 bar	Open	
4DWG6-H-60-DC24-N-Z5L		24v DC	210 bar	Open	
4DWG6-H-60-AC220-N-Z5L		240v AC	160 bar	Open	
4DWG6-J-60-DC12-N-Z5L		12v DC	210 bar	A+B to tank	
4DWG6-J-60-DC24-N-Z5L		24v DC	210 bar	A+B to tank	
4DWG6-J-60-AC220-N-Z5L		240v AC	160 bar	A+B to tank	
4DWG6-G-60-DC12-N-Z5L		12v DC	210 bar	Open	
4DWG6-G-60-DC24-N-Z5L		24v DC	210 bar	Open	
4DWG6-G-60-AC220-N-Z5L		240v AC	160 bar	Open	



Cetop 3 Valves w/ single coils & LED DIN plugs

Recommended maximum flow 40 lpm @ 210 bar

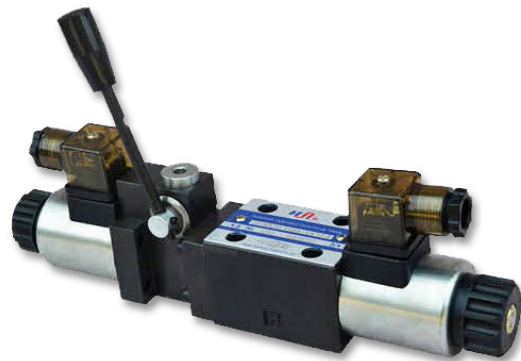
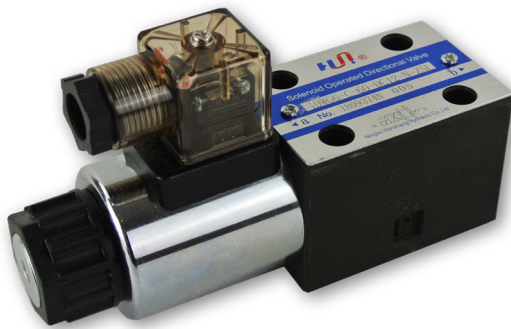
Part #	List Price \$	Coil Voltage	Max Press Tank	Transition	Diagram
4DWG6-C-60-DC12-N-Z5L		12v DC	210 bar	Open	
4DWG6-C-60-DC24-N-Z5L		24v DC	210 bar	Open	
4DWG6-C-60-AC220-N-Z5L		240v AC	160 bar	Open	
4DWG6-D-60-DC12-N-Z5L		12v DC	210 bar	Closed	
4DWG6-D-60-DC24-N-Z5L		24v DC	210 bar	Closed	
4DWG6-D-60-AC220-N-Z5L		240v AC	160 bar	Closed	
4DWG6-HA-60-DC12-N-Z5L		12v DC	210 bar	Open	
4DWG6-HA-60-DC24-N-Z5L		24v DC	210 bar	Open	
4DWG6-HA-60-AC220-N-		240v AC	160 bar	Open	

More options on following page...

Cetop 3 Valves w/ single coils & LED DIN plugs (...continued)

Recommended maximum flow 40 lpm @ 210 bar

Part #	List Price \$	Coil Voltage	Max Press Tank	Transition	Diagram
4DWG6-EB-60-DC12-N-Z5L		12v DC	210 bar	Closed	
4DWG6-EB-60-DC24-N-Z5L		24v DC	210 bar	Closed	
4DWG6-EB-60-AC220-N-Z5L		240v AC	160 bar	Closed	
4DWG6-EA-60-DC12-N-Z5L		12v DC	210 bar	Closed	
4DWG6-EA-60-DC24-N-Z5L		24v DC	210 bar	Closed	
4DWG6-EA-60-AC220-N-Z5L		240v AC	160 bar	Closed	



Cetop 3 Valves w/ dual coils, LED DIN plugs & manual lever

Part #	List Price \$	Coil Voltage	Max Press Tank	Transition	Diagram
4DWG6C-EL-E/DC12Z5L		12v DC	160 bar	Closed	
4DWG6C-EL-E/DC24Z5L		24v DC	160 bar	Closed	
4DWG6C-EL-E/DC220Z5L		240v AC	160 bar	Closed	
4DWG6E-EL-E/DC12Z5L		12v DC	160 bar	Closed	
4DWG6E-EL-E/DC24Z5L		24v DC	160 bar	Closed	
4DWG6E-EL-E/DC220Z5L		240v AC	160 bar	Closed	
4DWG6J-EL-E/DC12Z5L		12v DC	160 bar	A+B to tank	
4DWG6J-EL-E/DC24Z5L		24v DC	160 bar	A+B to tank	
4DWG6J-EL-E/DC220Z5L		240v AC	160 bar	A+B to tank	
4DWG6G-EL-E/DC12Z5L		12v DC	160 bar	Open	
4DWG6G-EL-E/DC24Z5L		24v DC	160 bar	Open	
4DWG6G-EL-E/DC220Z5L		240v AC	160 bar	Open	
4DWG6H-EL-E/DC12Z5L		12v DC	160 bar	Open	
4DWG6H-EL-E/DC24Z5L		24v DC	160 bar	Open	
4DWG6H-EL-E/DC220Z5L		240v AC	160 bar	Open	



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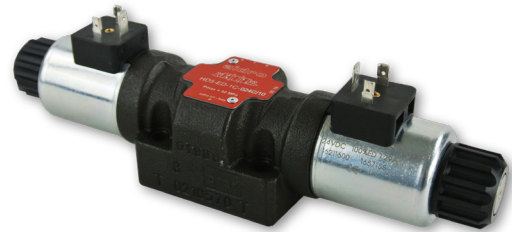
Cetop 3 Manual Valves						Diagram
Part #	List Price \$	Coil Voltage	Max Press Tank	Transition		
4DWMG6-E-50		Manual	210 bar	Closed	E	
4DWMG6-H-50		Manual	210 bar	Open	H	
4DWMG6-J-50		Manual	210 bar	A+B to tank	J	
4DWMG6-G-50		Manual	210 bar	Open	G	
4DWMG6-G-50-F		Manual Spring Return Detent	210 bar	Open	G	
4DWMG6-C-50		Manual	210 bar	Open	C	
4DWMG6-C-50-F		Manual Spring Return Detent	210 bar	Open	C	



Aidro Cetop 5 Solenoid Valves

ED Series (Cetop 5 flow rate with Cetop 3 coils)

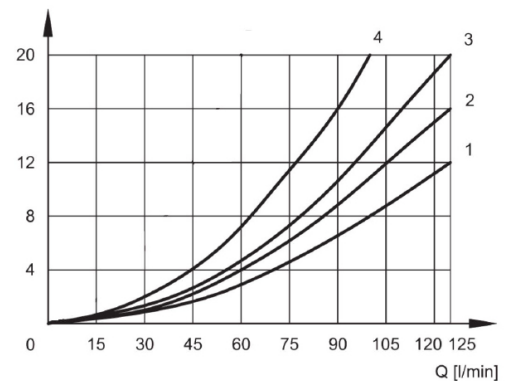
	SOLENOID
Nominal Flow Rate	100 lpm
Maximum Recommended Flow	125 lpm
Maximum Nominal Pressure P _{A,B}	320 bar
Maximum Pressure on T Port	210 bar
Duty Cycle	100%
Bolts (single valve)	M6x35mm (tighten to 12Nm)



Typical Diagrams

Typical Δp -Q curves for valves HD5-ED-* in standard configuration. Measured with mineral oil at 32mm²/s and T=40°C.

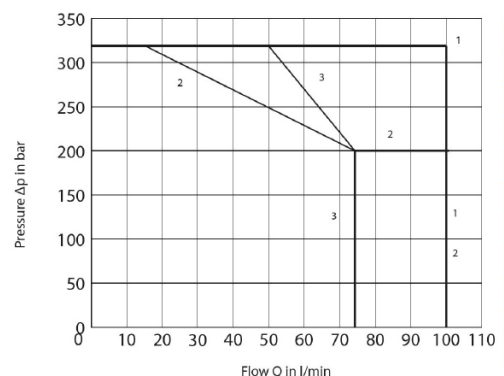
Spool	P-A	P-B	A-T	B-T	P-T
0C	1	1	1	1	1
1C	1	1	2	2	-
3C	1	1	1	1	-
4C	4	4	4	4	1
1LL	2	2	3	3	-
1LLb	2	2	3	3	-



Hydraulic Limit of Use

Δp -Q characteristics limits for safe use of HD5-ED-* solenoid operated valves. Measured with mineral oil at 32mm²/s and T=40°C.

Spool	Limit	Spool	Limit
1C	1	4ML	3
4C	3	1ML	1
0C	1	1MLb	1
3C	2	1LLb	1
1LL	1	4MLb	3
3ML	2		



HYDRAULIC FLUID

Seals and materials used on standard HD5-* valves are fully compatible with hydraulic fluids of mineral base, upgrading with antifoaming and antioxidising agents.

The hydraulic fluid must be kept clear and filtered to ISO4406 class 19/17/14, or better, and used in a recommended viscosity range from 10cSt to 60cSt.

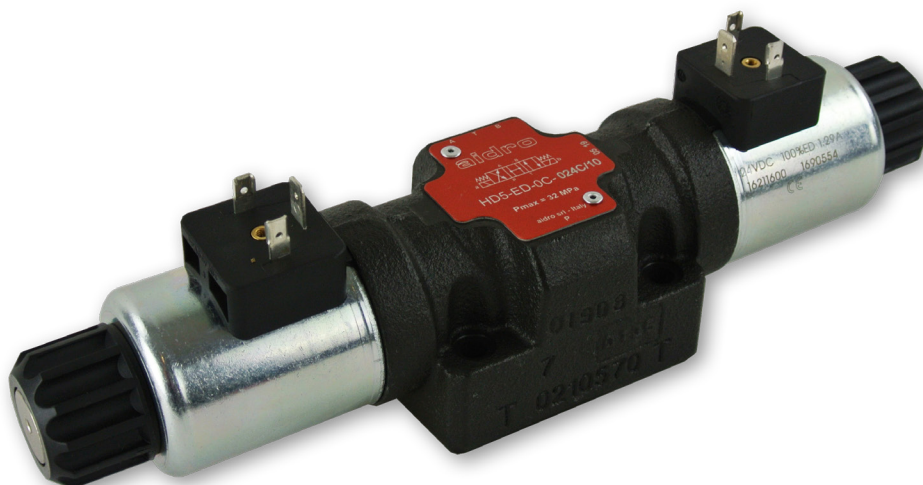
Cetop 5 Solenoid Valves (AIDRO)

ED Series (Cetop 5 flow rate with Cetop 3 coils)

Part #	List Price \$	Coil Voltage	Diagram
HD5-ED-0C-012C/10		12v DC	
HD5-ED-0C-024C/10		24v DC	
HD5-ED-0C-230A/10		230v AC	
HD5-ED-0C-115A/10		115v AC	
HD5-ED-1C-012C/10		12v DC	
HD5-ED-1C-024C/10		24v DC	
HD5-ED-1C-230A/10		230v AC	
HD5-ED-1C-115A/10		115v AC	
HD5-ED-3C-012C/10		12v DC	
HD5-ED-3C-024C/10		24v DC	
HD5-ED-3C-230A/10		230v AC	
HD5-ED-3C-115A/10		115v AC	
HD5-ED-4C-012C/10		12v DC	
HD5-ED-4C-024C/10		24v DC	
HD5-ED-4C-230A/10		230v AC	
HD5-ED-4C-115A/10		115v AC	

DIN plugs/accessories
page 197

Uses low power coils
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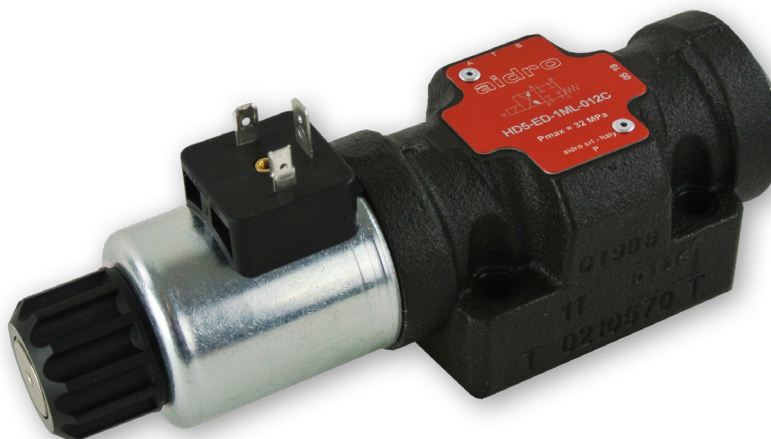
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Cetop 5 Solenoid Valves (AIDRO)

ED Series (Cetop 5 flow rate with Cetop 3 coils)

Part #	List Price \$	Coil Voltage	Diagram
HD5-ED-0LL-012C/10		12v DC	
HD5-ED-0LL-024C/10		24v DC	
HD5-ED-0LL-230A/10		230v AC	
HD5-ED-0LL-115A/10		115v AC	
HD5-ED-0ML-012C/10		12v DC	
HD5-ED-0ML-024C/10		24v DC	
HD5-ED-0ML-230A/10		230v AC	
HD5-ED-0ML-115A/10		115v AC	
HD5-ED-1LL-012C/10		12v DC	
HD5-ED-1LL-024C/10		24v DC	
HD5-ED-1LL-230A/10		230v AC	
HD5-ED-1LL-115A/10		115v AC	
HD5-ED-1ML-012C/10		12v DC	
HD5-ED-1ML-024C/10		24v DC	
HD5-ED-1ML-230A/10		230v AC	
HD5-ED-1ML-115A/10		115v AC	
HD5-ED-3ML-012C/10		12v DC	
HD5-ED-3ML-024C/10		24v DC	
HD5-ED-3ML-230A/10		230v AC	
HD5-ED-3ML-115A/10		115v AC	
HD5-ED-4ML-012C/10		12v DC	
HD5-ED-4ML-024C/10		24v DC	
HD5-ED-4ML-230A/10		230v AC	
HD5-ED-4ML-115A/10		115v AC	



DIN plugs/accessories
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Uses low power coils
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Aidro Cetop 5 Solenoid Valves

ES Series (high power BO5 coils)

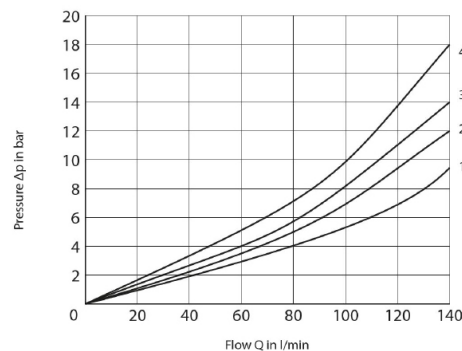
	SOLENOID
Nominal Flow Rate	120 lpm
Maximum Recommended Flow	See graphs
Maximum Nominal Pressure P _{A,B}	320 bar
Maximum Pressure on T Port	210 bar
Duty Cycle	100%
Bolts (single valve)	M6x35mm (tighten to 12Nm)



Typical Diagrams

Typical Δp -Q curves for valves HD5-ES-* in standard configuration. Measured with mineral oil at 32mm²/s and T=40°C.

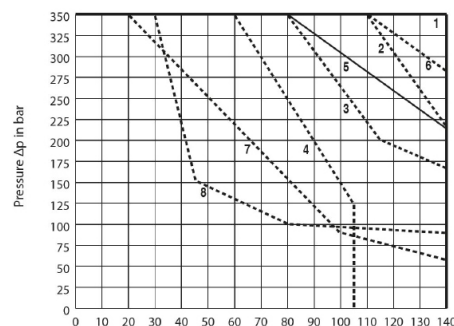
Spool	P-A	P-B	A-T	B-T	P-T
0C	1	1	2	2	1
1C	1	1	2	2	-
3C	1	1	2	2	-
4C	3	3	4	4	1
OLL	1	1	1	3	-
1LL	1	1	2	2	-
0ML	-	1	2	-	1
1ML	-	1	2	-	-
3ML	-	1	2	-	-
4ML	3	-	-	4	1



Hydraulic Limit of Use

Δp -Q characteristics limits for safe use of HD5-ES-* solenoid operated valves. Measured with mineral oil at 32mm²/s and T=40°C.

Spool	Limit	Spool	Limit
0C	1	4C	3
1C	1	OLL	2
0ML	1	1LL	2
1ML	1	1LLb	2
3C	5	4MLb	3
3ML	5		



HYDRAULIC FLUID

Seals and materials used on standard HD5-* valves are fully compatible with hydraulic fluids of mineral base, upgrading with antifoaming and antioxidising agents.

The hydraulic fluid must be kept clear and filtered to ISO4406 class 19/17/14, or better, and used in a recommended viscosity range from 10cSt to 60cSt.

Cetop 5 Solenoid Valves (AIDRO) High Power

ES Series (high power BO5 coils)

Part #	List Price \$	Coil Voltage	Diagram
HD5-ES-0C-012C/20		12v DC	
HD5-ES-0C-024C/20		24v DC	
HD5-ES-0C-230A/20		230v AC	
HD5-ES-0C-115A/20		115v AC	
HD5-ES-1C-012C/20		12v DC	
HD5-ES-1C-024C/20		24v DC	
HD5-ES-1C-230A/20		230v AC	
HD5-ES-1C-115A/20		115v AC	
HD5-ES-3C-012C/20		12v DC	
HD5-ES-3C-024C/20		24v DC	
HD5-ES-3C-230A/20		230v AC	
HD5-ES-3C-115A/20		115v AC	
HD5-ES-4C-012C/20		12v DC	
HD5-ES-4C-024C/20		24v DC	
HD5-ES-4C-230A/20		230v AC	
HD5-ES-4C-115A/20		115v AC	



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Cetop 5 Solenoid Valves (AIDRO) High Power

ES Series (high power BO5 coils)

Part #	List Price \$	Coil Voltage	Diagram
HD5-ES-0LL-012C/20		12v DC	
HD5-ES-0LL-024C/20		24v DC	
HD5-ES-0LL-230A/20		230v AC	
HD5-ES-0LL-115A/20		115v AC	
HD5-ES-0ML-012C/20		12v DC	
HD5-ES-0ML-024C/20		24v DC	
HD5-ES-0ML-230A/20		230v AC	
HD5-ES-0ML-115A/20		115v AC	
HD5-ES-1LL-012C/20		12v DC	
HD5-ES-1LL-024C/20		24v DC	
HD5-ES-1LL-230A/20		230v AC	
HD5-ES-1LL-115A/20		115v AC	
HD5-ES-1ML-012C/20		12v DC	
HD5-ES-1ML-024C/20		24v DC	
HD5-ES-1ML-230A/20		230v AC	
HD5-ES-1ML-115A/20		115v AC	
HD5-ES-3ML-012C/20		12v DC	
HD5-ES-3ML-024C/20		24v DC	
HD5-ES-3ML-230A/20		230v AC	
HD5-ES-3ML-115A/20		115v AC	
HD5-ES-4ML-012C/20		12v DC	
HD5-ES-4ML-024C/20		24v DC	
HD5-ES-4ML-230A/20		230v AC	
HD5-ES-4ML-115A/20		115v AC	



DIN plugs/accessories
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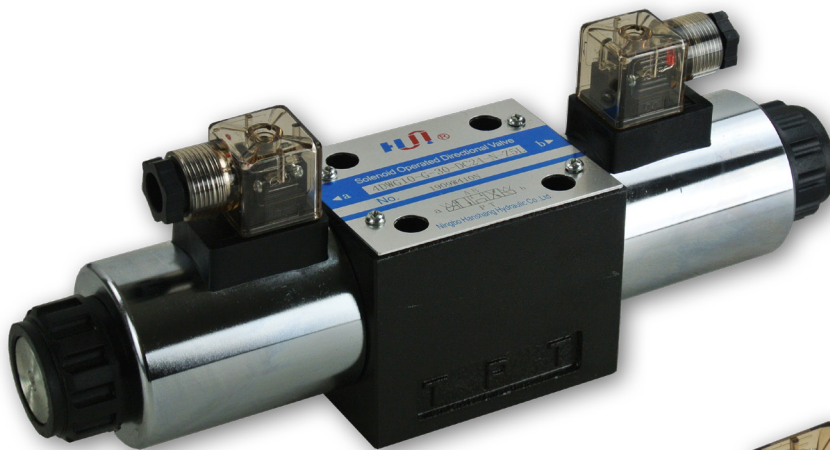
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Cetop 5 Valves w/ dual coils & LED DIN plugs

Recommended maximum flow 80 lpm @ 210 bar

Part #	List Price \$	Coil Voltage	Max Press Tank	Transition	Diagram
4DWG10-E-30-DC12-N-Z5L		12v DC	210 bar	Closed	E
4DWG10-E-30-DC24-N-Z5L		24v DC	210 bar	Closed	
4DWG10-E-30-AC220-N-Z5L		240v AC	160 bar	Closed	
4DWG10-H-30-DC12-N-Z5L		12v DC	210 bar	Open	H
4DWG10-H-30-DC24-N-Z5L		24v DC	210 bar	Open	
4DWG10-H-30-AC220-N-Z5L		240v AC	160 bar	Open	
4DWG10-J-30-DC12-N-Z5L		12v DC	210 bar	A+B to tank	J
4DWG10-J-30-DC24-N-Z5L		24v DC	210 bar	A+B to tank	
4DWG10-J-30-AC220-N-Z5L		240v AC	160 bar	A+B to tank	
4DWG10-G-30-DC12-N-Z5L		12v DC	210 bar	Open	G
4DWG10-G-30-DC24-N-Z5L		24v DC	210 bar	Open	
4DWG10-G-30-AC220-N-Z5L		240v AC	160 bar	Open	



Single Coil table on following page

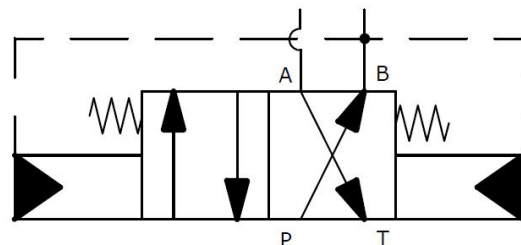
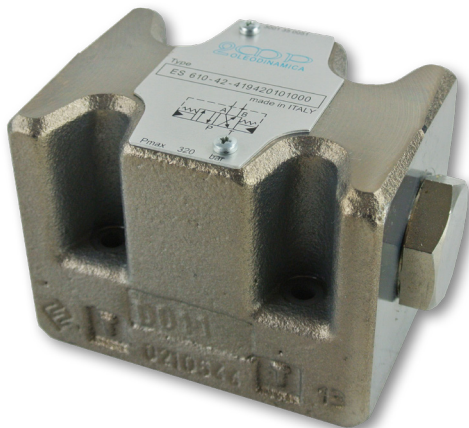
Cetop 5 Valves w/ single coils & LED DIN plugs

Recommended maximum flow 80 lpm @ 210 bar

Part #	List Price \$	Coil Voltage	Max Press Tank	Transition	Diagram
4DWG10-C-30-DC12-N-Z5L		12v DC	210 bar	Open	
4DWG10-C-30-DC24-N-Z5L		24v DC	210 bar	Open	
4DWG10-C-30-AC220-N-Z5L		240v AC	160 bar	Open	
4DWG10-D-30-DC12-N-Z5L		12v DC	210 bar	Closed	
4DWG10-D-30-DC24-N-Z5L		24v DC	210 bar	Closed	
4DWG10-D-30-AC220-N-Z5L		240v AC	160 bar	Closed	
4DWG10-HA-30-DC12-N-Z5L		12v DC	210 bar	Open	
4DWG10-HA-30-DC24-N-Z5L		24v DC	210 bar	Open	
4DWG10-HA-30-AC220-N-		240v AC	160 bar	Open	
4DWG10-EB-30-DC12-N-Z5L		12v DC	210 bar	Closed	
4DWG10-EB-30-DC24-N-Z5L		24v DC	210 bar	Closed	
4DWG10-EB-30-AC220-N-		240v AC	160 bar	Closed	
4DWG10-EA-30-DC12-N-Z5L		12v DC	210 bar	Closed	
4DWG10-EA-30-DC24-N-Z5L		24v DC	210 bar	Closed	
4DWG10-EA-30-AC220-N-		240v AC	160 bar	Closed	

Auto-Cycling Valve

Part #	List Price \$	Description
ES610-41		Cetop 3 autocycling valve
ES610-42		Cetop 5 autocycling valve



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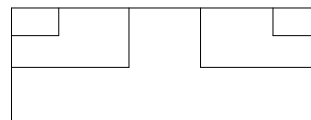
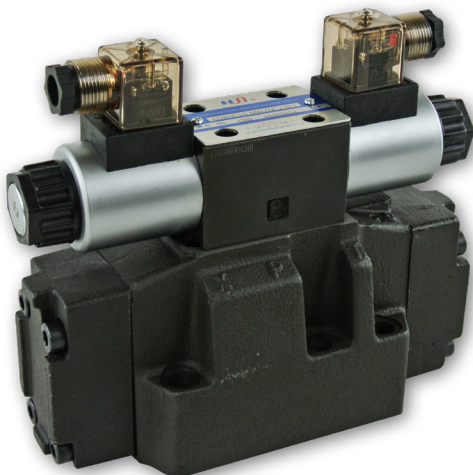
Cetop 7 Pilot-Operated Valves w/ coils & LED DIN plugs

Recommended maximum flow 200 lpm @ 210 bar

Part #	List Price \$	Coil Voltage	Max Press Tank	Transition	Diagram	
4DWHG16E60/DC12ETP		12v DC	160 bar	Closed	E	
4DWHG16E60/DC24ETP		24v DC	160 bar	Closed		
4DWHG16E60/AC220ETP		240v AC	100 bar	Closed		
4DWHG16H60/DC12ETP		12v DC	160 bar	Open	H	
4DWHG16H60/DC24ETP		24v DC	160 bar	Open		
4DWHG16H60/AC220ETP		240v AC	100 bar	Open		
4DWHG16J60/DC12ETP		12v DC	160 bar	A+B to tank	J	
4DWHG16J60/DC24ETP		24v DC	160 bar	A+B to tank		
4DWHG16J60/AC220ETP		240v AC	100 bar	A+B to tank		
4DWHG16G60/DC12ETP		12v DC	160 bar	Open	G	
4DWHG16G60/DC24ETP		24v DC	160 bar	Open		
4DWHG16G60/AC220ETP		240v AC	100 bar	Open		
4DWHG16C60/DC12ETP		12v DC	160 bar	Open	C	
4DWHG16C60/DC24ETP		24v DC	160 bar	Open		
4DWHG16C60/AC220ETP		240v AC	100 bar	Open		
4DWHG16D60/DC12ETP		12v DC	160 bar	Closed	D	
4DWHG16D60/DC24ETP		24v DC	160 bar	Closed		
4DWHG16D60/AC220ETP		240v AC	100 bar	Closed		

Cetop 7 Subplates

Part #	List Price \$	Stations	Function	Ports	Material
BS72S		1	Rear Ports	1" BSPP	Steel



Coil options - page 196

Valve Coils (4DWG6)

Part #	List Price \$	Voltage	Amp	Core Size	Length	Connector	Valve
COIL-06-12VDC		12v DC	2.66a	23.5mm	50.7mm	DIN 43650-A	4DWG6
COIL-06-24VDC		24v DC	1.45a	23.5mm	50.7mm	DIN 43650-A	4DWG6
COIL-06-48VDC		48v DC	0.7a	23.5mm	50.7mm	DIN 43650-A	4DWG6
COIL-06-110VAC		110v AC	0.35a	23.5mm	50.7mm	DIN 43650-A	4DWG6
COIL-06-220VAC		220v AC	0.17a	23.5mm	50.7mm	DIN 43650-A	4DWG6

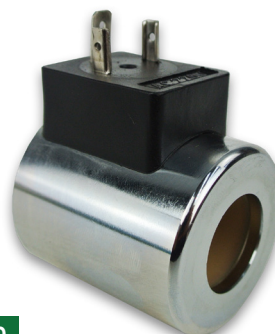
Valve Coils (4DWG10)

Part #	List Price \$	Voltage	Amp	Core Size	Length	Connector	Valve
COIL-10-12VDC		12v DC	4.0a	31.8mm	75.2mm	DIN 43650-A	4DWG10
COIL-10-24VDC		24v DC	2.0a	31.8mm	75.2mm	DIN 43650-A	4DWG10
COIL-10-110VAC		110v AC	0.5a	31.8mm	75.2mm	DIN 43650-A	4DWG10
COIL-10-220VAC		220v AC	0.25a	31.8mm	75.2mm	DIN 43650-A	4DWG10

COIL-6



COIL-10

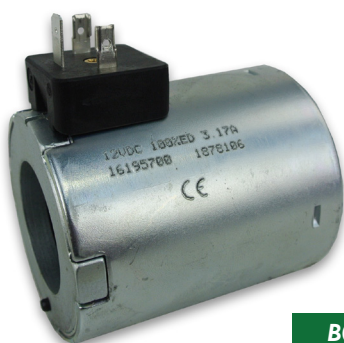


Valve Coils (HD5-ES High Power)

Part #	List Price \$	Voltage	Amp	Core Size	Length	Connector	Valve
BO5-12C		12v DC	3.17	31mm	73.5	DIN 43650-A	HD5-ES
BO5-24C		24v DC	1.73	31mm	73.5	DIN 43650-A	HD5-ES
BO5-48A		48v AC	0.865	31mm	73.5	DIN 43650-A	HD5-ES
BO5-115C		115v AC	0.40	31mm	73.5	DIN 43650-A	HD5-ES
BO5-230C		230v AC	0.20	31mm	73.5	DIN 43650-A	HD5-ES

Valve Coils (HD3-ES / HD5-ED Low Power)

Part #	List Price \$	Voltage	Amp	Core Size	Length	Connector	Valve
BO3-12C		12v DC	2.5	22 mm	52 mm	DIN 43650-A	HD3-ES / HD5-ED
BO3-24C		24v DC	1.29	22 mm	52 mm	DIN 43650-A	HD3-ES / HD5-ED
BO3-48C		48v AC	0.6	22 mm	52 mm	DIN 43650-A	HD3-ES / HD5-ED
BO3-115A		115v AC	0.26	22 mm	52 mm	DIN 43650-A	HD3-ES / HD5-ED
BO3-230A		230v AC	0.14	22 mm	52 mm	DIN 43650-A	HD3-ES / HD5-ED



BO5

B03



HD3-ES / HD5-ED Spare Parts & Bolt Kits

Part #	List Price \$	Description
KIT-03K		Manual override nut
T03-T		Soft shift kit
TAP-03-OR		Nut & spring kit
HD3-01-BK		Cetop 3 - 1 section bolt kit
HD3-02-BK		Cetop 3 - 2 section bolt kit
HD3-03-BK		Cetop 3 - 3 section bolt kit
HD5-01-BK-ED		Cetop 5 - 1 section bolt kit (ED Series)
HD5-02-BK-ED		Cetop 5 - 2 section bolt kit (ED Series)
HD5-03-BK-ED		Cetop 5 - 3 section bolt kit (ED Series)

HD5-ES Spare Parts & Bolt Kits

Part #	List Price \$	Description
WK-05		Manual override nut
TAP-05/20		Nut & spring kit
HD5-01-BK-ES		Cetop 5 - 1 section bolt kit (ES Series)
HD5-02-BK-ES		Cetop 5 - 2 section bolt kit (ES Series)
HD5-03-BK-ES		Cetop 5 - 3 section bolt kit (ES Series)

Manual Override Nut (4DWG6)

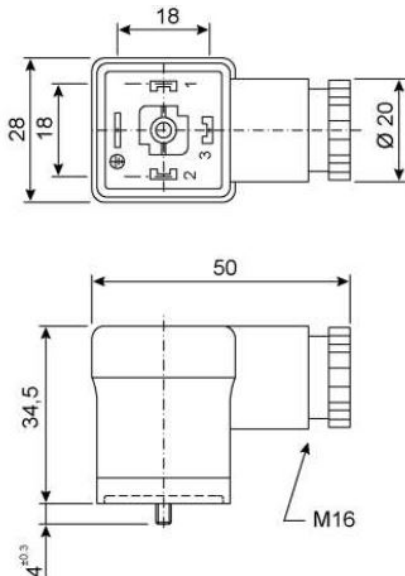
Part #	List Price \$	Description	Valve
4DWE6-DT-M-S		Fits 14mm solenoid thread	4DWG6
4DWE6-DT-M-L		Fits 22mm solenoid thread	4DWG6



DIN Plugs

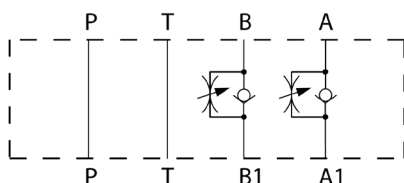
Part #	List Price \$	Description	DIN Size	Terminals	Body	LED
DP-IP67-AC/DC-250		1-250V AC+DC, IP67	DIN 43650-A	3	Clear	Yes
DP-IP67-AC/DC-38		1-38V AC+DC, IP67	DIN 43650-A	3	Clear	Yes
DP-IP67-AC/DC-3M		1-38V AC+DC, 3m Cable, IP67	DIN 43650-A	3	Clear	Yes
DP-LED-AC		AC	DIN 43650-A	3	Clear	Yes
DP-LED-DC		DC	DIN 43650-A	3	Clear	Yes
DP-REC-LV		Rectifier AC to DC (1-48v)	DIN 43650-A	3	Clear	Yes
DP-REC		Rectifier AC to DC (70-250v)	DIN 43650-A	3	Clear	No

Note: DIN 43650-A = ISO 4400

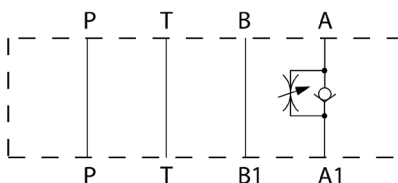


Flow Control Subplates (Meter In)

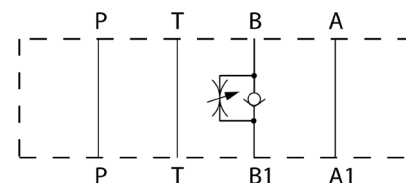
Part #	List Price \$	Function	Maximum Recommended Flow Rate	Maximum Nominal Pressure
AM3-FX-AB/10		Flow control on A & B, meter in	60 lpm	320 bar
AM3-FX-A/10		Flow control on A, meter in	60 lpm	320 bar
AM3-FX-B/10		Flow control on B, meter in	60 lpm	320 bar



FX-AB



FX-A



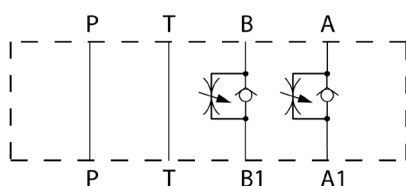
FX-B



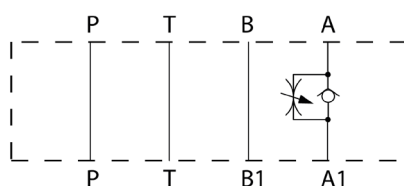
Bolt kits required
page 197

Flow Control Subplates (Meter Out)

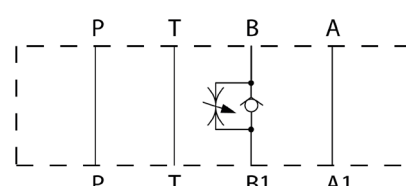
Part #	List Price \$	Function	Maximum Recommended Flow Rate	Maximum Nominal Pressure
AM3-FC-AB/10		Flow control on A & B, meter out	60 lpm	320 bar
AM3-FC-A/10		Flow control on A, meter out	60 lpm	320 bar
AM3-FC-B/10		Flow control on B, meter out	60 lpm	320 bar



FC-AB



FC-A



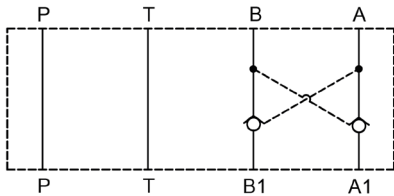
FC-B



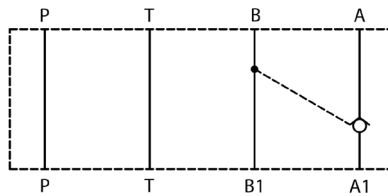
Bolt kits required
page 197

Pilot Check Subplates

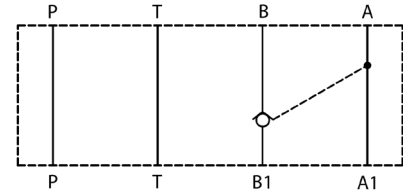
Part #	List Price \$	Function	Maximum Recommended Flow Rate	Maximum Nominal Pressure
AM3-CP-AB/10		Pilot check on A & B	60 lpm	320 bar
AM3-CP-A/10		Pilot check on A	60 lpm	320 bar
AM3-CP-B/10		Pilot check on B	60 lpm	320 bar



CP-AB



CP-A



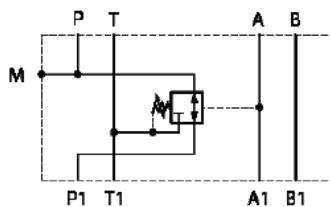
CP-B



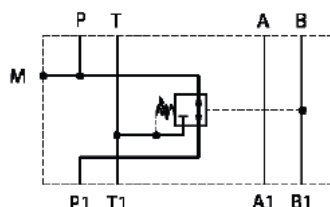
Bolt kits required
page 197

Pressure Reducing Subplates (No Check)

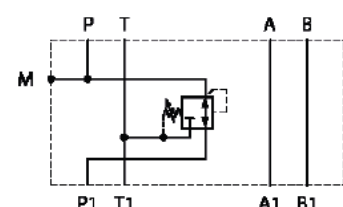
Part #	List Price \$	Function	Pressure Reducing Range	Maximum Recommended Flow Rate	Maximum Nominal Pressure
AM3-RO-P-32/10		Pressure reducing in P	3-35 bar	60 lpm	320 bar
AM3-RO-A-32/10		Pressure reducing in A	3-35 bar	60 lpm	320 bar
AM3-RO-B-32/10		Pressure reducing in B	3-35 bar	60 lpm	320 bar
AM3-RO-P-6.3/10		Pressure reducing in P	10-70 bar	60 lpm	320 bar
AM3-RO-A-6.3/10		Pressure reducing in A	10-70 bar	60 lpm	320 bar
AM3-RO-B-6.3/10		Pressure reducing in B	10-70 bar	60 lpm	320 bar
AM3-RO-P-12.5/10		Pressure reducing in P	30-140 bar	60 lpm	320 bar
AM3-RO-A-12.5/10		Pressure reducing in A	30-140 bar	60 lpm	320 bar
AM3-RO-B-12.5/10		Pressure reducing in B	30-140 bar	60 lpm	320 bar
AM3-RO-P-25/10		Pressure reducing in P	60-280 bar	60 lpm	320 bar
AM3-RO-A-25/10		Pressure reducing in A	60-280 bar	60 lpm	320 bar
AM3-RO-B-25/10		Pressure reducing in B	60-280 bar	60 lpm	320 bar



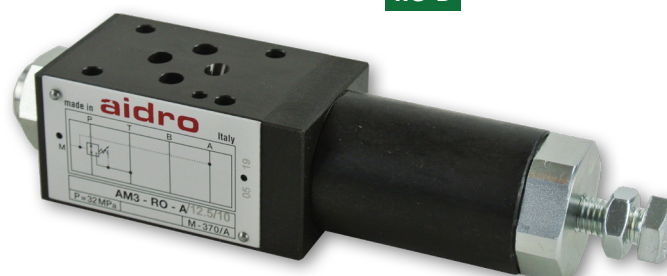
RO-A



RO-B



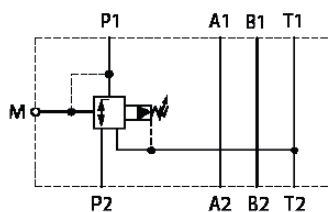
RO-P



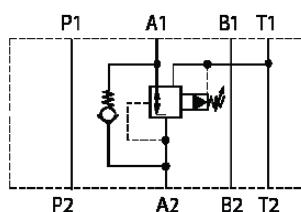
Bolt kits required
page 197

Pressure Reducing Subplates (With Check)

Part #	List Price \$	Function	Pressure Range	Maximum Recommended Flow Rate	Maximum Nominal Pressure
AM3-RP-P-20/10		Pressure reducing in P	30-140 bar	60 lpm	320 bar
AM3-RP-AC-20/10		Pressure reducing in A	30-140 bar	60 lpm	320 bar
HD3-02-RP-BK				2 section bolt kit	
HD3-03-RP-BK				3 section bolt kit	



RP-P

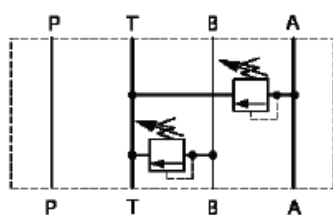


RP-AC

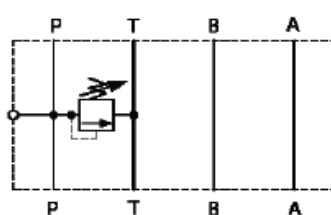


Direct Acting Pressure Relief Subplates

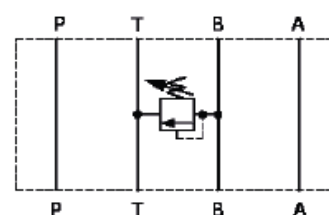
Part #	List Price \$	Function	Pressure Range	Maximum Recommended Flow Rate	Maximum Nominal Pressure
AM3-MO-P-10/10		Direct acting relief on P	25-125 bar	60 lpm	320 bar
AM3-MO-B-10/10		Direct acting relief on B	25-125 bar	60 lpm	320 bar
AM3-MO-BA-10/10		Direct acting relief on A & B	25-125 bar	60 lpm	320 bar
AM3-MO-P-20/10		Direct acting relief on P	40-250 bar	60 lpm	320 bar
AM3-MO-B-20/10		Direct acting relief on B	40-250 bar	60 lpm	320 bar
AM3-MO-BA-20-20/10		Direct acting relief on A & B	40-250 bar	60 lpm	320 bar
AM3-MO-P-32/10		Direct acting relief on P	100-320 bar	60 lpm	320 bar
AM3-MO-B-32/10		Direct acting relief on B	100-320 bar	60 lpm	320 bar
AM3-MO-BA-32-32/10		Direct acting relief on A & B	100-320 bar	60 lpm	320 bar



MO-BA



MO-P



MO-B



Bolt kits required
page 197



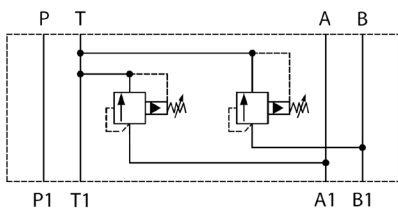
1800-OILSOL
1800-645765

<https://oilsolutions.com.au/>

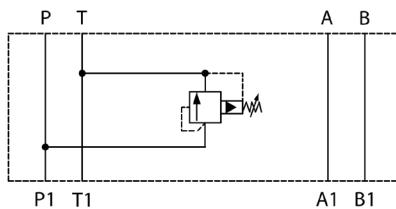
sales@oilsolutions.com.au

Pilot Operated Pressure Relief Subplates

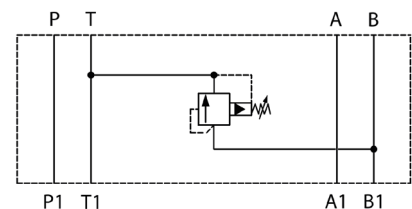
Part #	List Price \$	Function	Pressure Range	Maximum Recommended Flow Rate	Maximum Nominal Pressure
AM3-MP-P-6.3/10		Pilot operated relief on P	10-70 bar	60 lpm	320 bar
AM3-MP-B-6.3/10		Pilot operated relief on B	10-70 bar	60 lpm	320 bar
AM3-MP-BA-6.3-6.3/10		Pilot operated relief on A & B	10-70 bar	60 lpm	320 bar
AM3-MP-P-12.5/10		Pilot operated relief on P	10-140 bar	60 lpm	320 bar
AM3-MP-B-12.5/10		Pilot operated relief on B	10-140 bar	60 lpm	320 bar
AM3-MP-BA-12.5-12.5/10		Pilot operated relief on A & B	10-140 bar	60 lpm	320 bar
AM3-MP-P-20/10		Pilot operated relief on P	20-210 bar	60 lpm	320 bar
AM3-MP-B-20/10		Pilot operated relief on B	20-210 bar	60 lpm	320 bar
AM3-MP-BA-20-20/10		Pilot operated relief on A & B	20-210 bar	60 lpm	320 bar
AM3-MP-P-32/10		Pilot operated relief on P	20-320 bar	60 lpm	320 bar
AM3-MP-B-32/10		Pilot operated relief on B	20-320 bar	60 lpm	320 bar
AM3-MP-BA-32-32/10		Pilot operated relief on A & B	20-320 bar	60 lpm	320 bar



MP-BA



MP-P

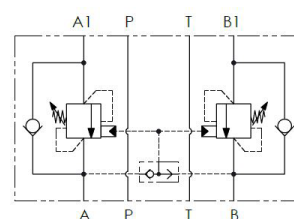
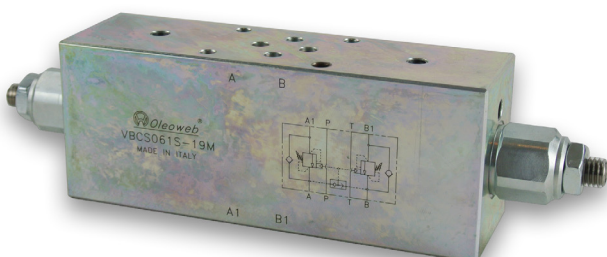


MP-B

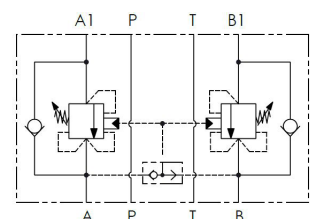


Cetop 3 Counterbalance Valves

Part #	List Price \$	Maximum Pressure	Centre	Maximum Flow	Ratio
VBCS0601S		210 bar	Open	40 lpm	1:4.25
VBCS0602S		350 bar	Open	40 lpm	1:4.25
VBCT0601S		210 bar	Closed	40 lpm	1:4.25
VBCT0602S		350 bar	Closed	40 lpm	1:4.25



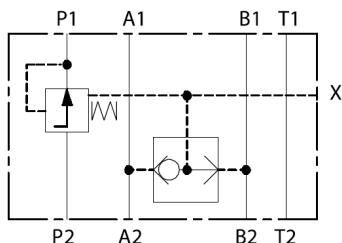
VBCS



VBCT

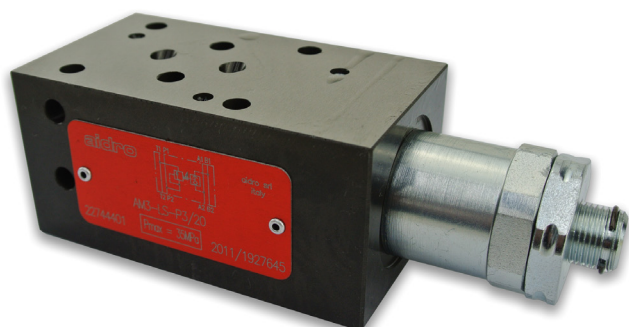
2-Way Pressure Compensator Valve (Meter In)

Part #	List Price \$	Maximum Pressure	Maximum Flow	Fixed Differential Setting
AM3-PC-P/10		320 bar	32 lpm	10 bar

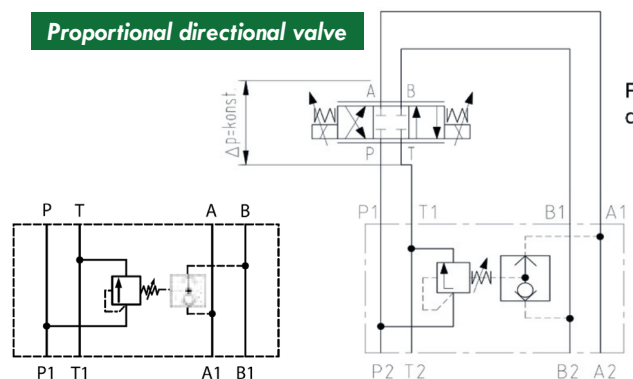


3-Way Pressure Compensator Valve with Load

Part #	List Price \$	Maximum Pressure	Maximum Flow	Adj. Differential Setting
AM3-LS-P3/20		320 bar	40 lpm	5-40 bar



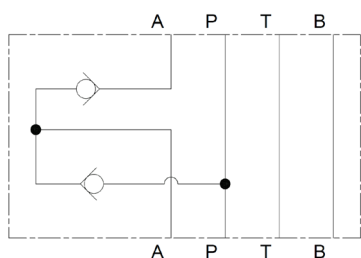
Proportional directional valve



Pressure compensator

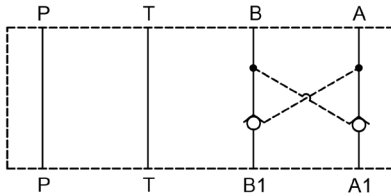
Regenerative Valve

Part #	List Price \$	Maximum Pressure	Maximum Flow	Function
AM3-RGT		350 bar	30 lpm	Flow from A-P

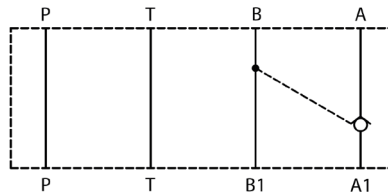


Pilot Check Subplates

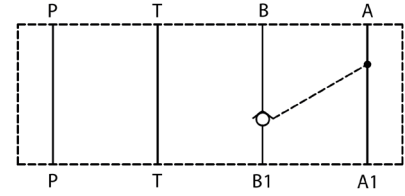
Part #	List Price \$	Maximum Pressure	Function
Z2DS6-50		250 bar	Pilot check on A & B
Z2DS6A-50		250 bar	Pilot check on A
Z2DS6B-50		250 bar	Pilot check on B



DS6



DS6A

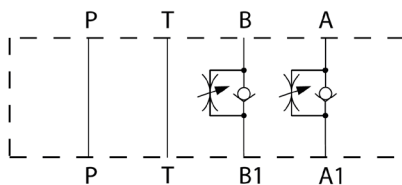


DS6B

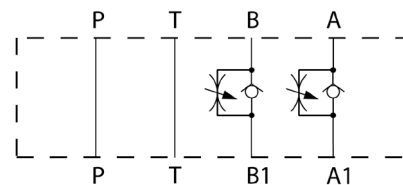


Flow Control Subplates (Steel Body)

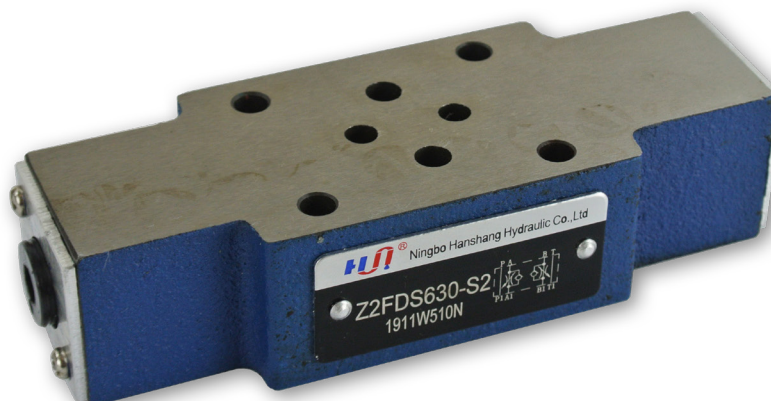
Part #	List Price \$	Maximum Pressure	Function
Z2FDS630-S		250 bar	Flow control on A & B, meter in
Z2FDS630-S2		250 bar	Flow control on A & B, meter out



S

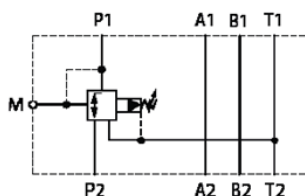


S2

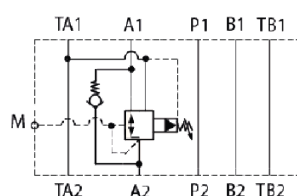


Pressure Reducing Subplates (Steel Body)

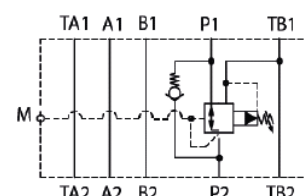
Part #	List Price \$	Maximum Pressure	Function
ZPR6DP2-30-210-Y-M		250 bar	Pressure reducing in P, 70-210 bar
ZPR6DA2-30-210-Y-M		250 bar	Pressure reducing in A, 70-210 bar
ZPR6DB2-30-210-Y-M		250 bar	Pressure reducing in B, 70-210 bar



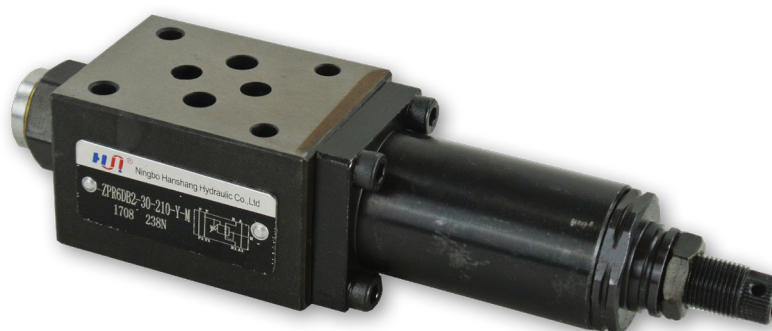
DP



DA

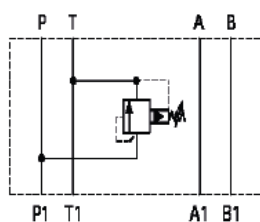


DB

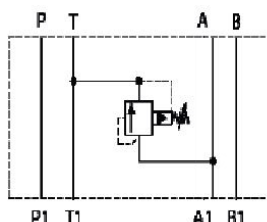


Relief Subplates (Steel Body)

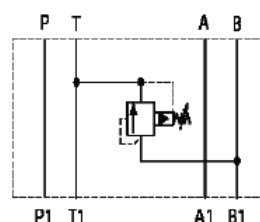
Part #	List Price \$	Maximum Pressure	Function
ZPB6VP-1-315		250 bar	Relief on P, 70-250 bar
ZPB6VA-1-315		250 bar	Relief on A, 70-250 bar
ZPB6VB-1-315		250 bar	Relief on B, 70-250 bar
ZPB6VC-1-315		250 bar	Relief on A & B, 70-250 bar



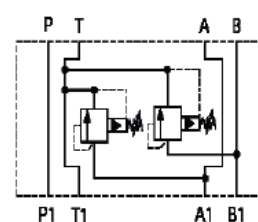
P



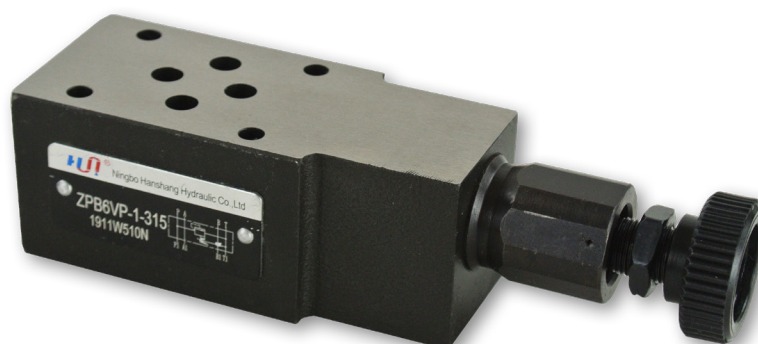
A



B

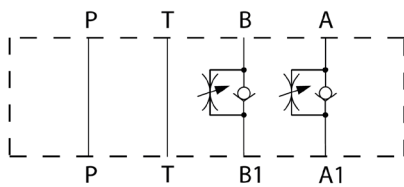


A & B

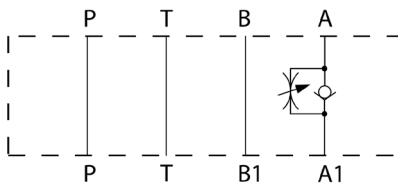


Flow Control Subplates (Meter In)

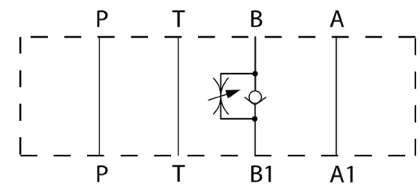
Part #	List Price \$	Function	Maximum Recommended Flow Rate	Maximum Nominal Pressure
AM5-FX-AB/10		Flow control on A & B, meter in	100 lpm	320 bar
AM5-FX-A/10		Flow control on A, meter in	100 lpm	320 bar
AM5-FX-B/10		Flow control on B, meter in	100 lpm	320 bar



FX-AB



FX-A



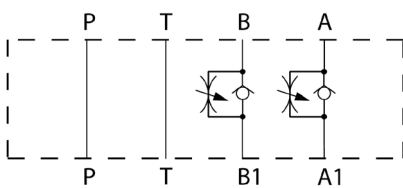
FX-B



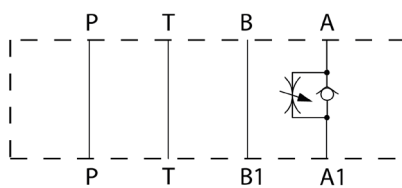
Bolt kits required
page 197

Flow Control Subplates (Meter Out)

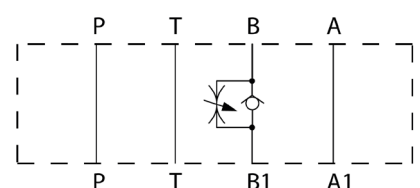
Part #	List Price \$	Function	Maximum Recommended Flow Rate	Maximum Nominal Pressure
AM5-FC-AB/10		Flow control on A & B, meter out	100 lpm	320 bar
AM5-FC-A/10		Flow control on A, meter out	100 lpm	320 bar
AM5-FC-B/10		Flow control on B, meter out	100 lpm	320 bar



FC-AB



FC-A



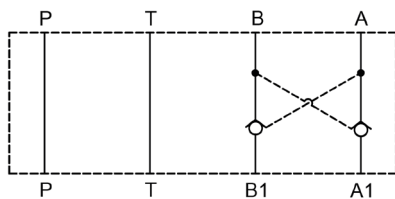
FC-B



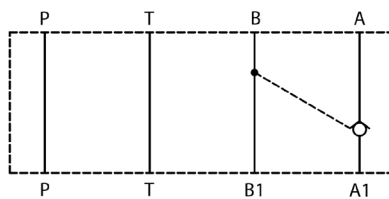
Bolt kits required
page 197

Pilot Check Subplates

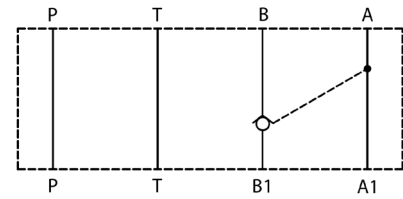
Part #	List Price \$	Function	Maximum Recommended Flow Rate	Maximum Nominal Pressure
AM5-CP-AB/20		Pilot check on A & B	100 lpm	320 bar
AM5-CP-A/20		Pilot check on A	100 lpm	320 bar
AM5-CP-B/20		Pilot check on B	100 lpm	320 bar
AM5-CP-AB/20		Pilot check on A & B	140 lpm	350 bar
AM5-CP-A/20		Pilot check on A	140 lpm	350 bar
AM5-CP-B/20		Pilot check on B	140 lpm	350 bar



CP-AB



CP-A



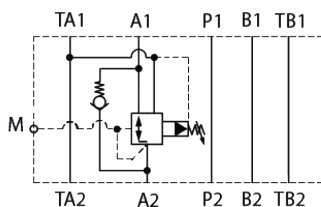
CP-B



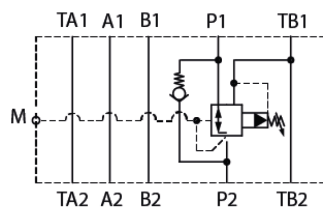
Bolt kits required
page 197

Pressure Reducing Subplates (With Check)

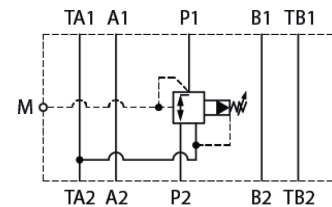
Part #	List Price \$	Function	Pressure Range	Max Recommended Flow Rate	Regulated Line Flow Rate	Max Nominal Pressure
AM5-RP-A-6.3/20		Pressure reducing in A	5-70 bar	100 lpm	80 lpm	320 bar
AM5-RP-B-6.3/20		Pressure reducing in B	5-70 bar	100 lpm	80 lpm	320 bar
AM5-RP-P-6.3/20		Pressure reducing in P	5-70 bar	100 lpm	80 lpm	320 bar
AM5-RP-A-16/20		Pressure reducing in A	10-160 bar	100 lpm	80 lpm	320 bar
AM5-RP-B-16/20		Pressure reducing in B	10-160 bar	100 lpm	80 lpm	320 bar
AM5-RP-P-16/20		Pressure reducing in P	10-160 bar	100 lpm	80 lpm	320 bar
AM5-RP-A-20/20		Pressure reducing in A	16-210 bar	100 lpm	80 lpm	320 bar
AM5-RP-B-20/20		Pressure reducing in B	16-210 bar	100 lpm	80 lpm	320 bar
AM5-RP-P-20/20		Pressure reducing in P	16-210 bar	100 lpm	80 lpm	320 bar



RP-A



RP-B



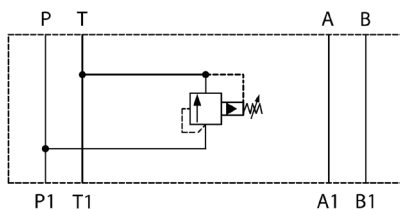
RP-P



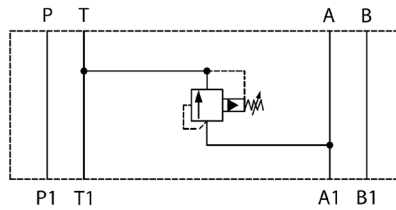
Bolt kits required
page 197

Pilot Operated Pressure Relief Subplates

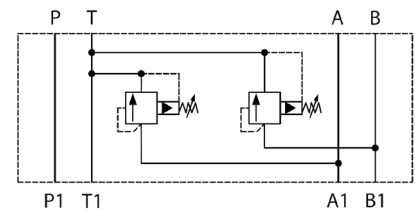
Part #	List Price \$	Function	Pressure Range	Maximum Recommended Flow Rate	Maximum Nominal Pressure
AM5-MP-P-6.3/10		Pilot operated relief on P	10-70 bar	100 lpm	320 bar
AM5-MP-A-6.3/10		Pilot operated relief on A	10-70 bar	100 lpm	320 bar
AM5-MP-BA-6.3-6.3/10		Pilot operated relief on A & B	10-70 bar	100 lpm	320 bar
AM5-MP-P-12.5/10		Pilot operated relief on P	10-140 bar	100 lpm	320 bar
AM5-MP-A-12.5/10		Pilot operated relief on A	10-140 bar	100 lpm	320 bar
AM5-MP-BA-12.5-12.5/10		Pilot operated relief on A & B	10-140 bar	100 lpm	320 bar
AM5-MP-P-20/10		Pilot operated relief on P	20-210 bar	100 lpm	320 bar
AM5-MP-A-20/10		Pilot operated relief on A	20-210 bar	100 lpm	320 bar
AM5-MP-BA-20-20/10		Pilot operated relief on A & B	20-210 bar	100 lpm	320 bar
AM5-MP-P-32/10		Pilot operated relief on P	20-320 bar	100 lpm	320 bar
AM5-MP-A-32/10		Pilot operated relief on A	20-320 bar	100 lpm	320 bar
AM5-MP-BA-32-32/10		Pilot operated relief on A & B	20-320 bar	100 lpm	320 bar



MP-P



MP-A



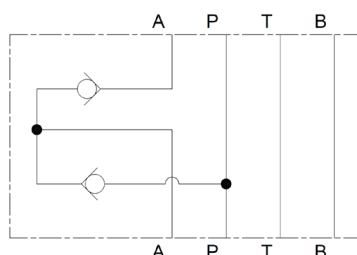
MP-BA



**Bolt kits required
page 197**

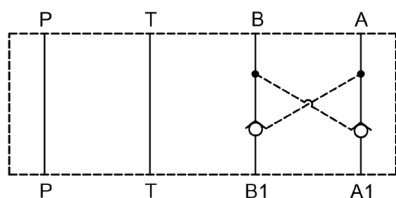
Regenerative Valve

Part #	List Price \$	Maximum Pressure	Maximum Flow	Function
AM5-RGT		350 bar	80 lpm	Flow from B-P

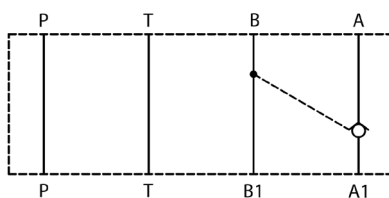


Pilot Check Subplates (Steel Body)

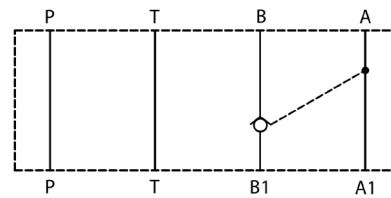
Part #	List Price \$	Maximum Pressure	Function
Z2DS10-10		250 bar	Pilot check on A & B
Z2DS10A-10		250 bar	Pilot check on A
Z2DS10B-10		250 bar	Pilot check on B



DS10



DS10A

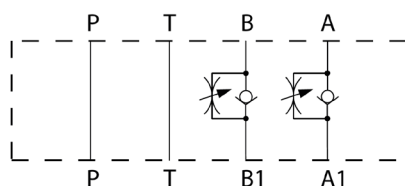


DS10B

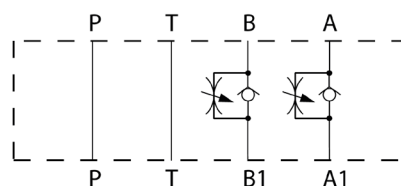


Flow Control Subplates (Steel Body)

Part #	List Price \$	Maximum Pressure	Function
Z2FDS1030-S		250 bar	Flow control on A & B, meter in
Z2FDS1030-S2		250 bar	Flow control on A & B, meter out



S

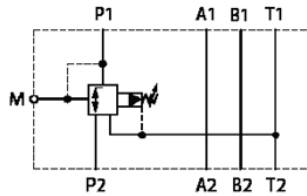


S2

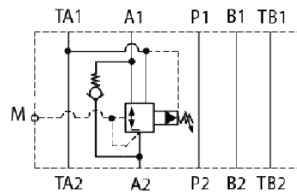


Pressure Reducing Subplates (Steel Body)

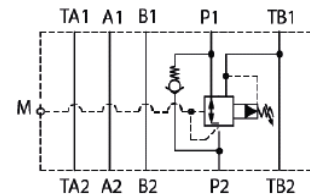
Part #	List Price \$	Maximum Pressure	Function
ZPR10DP2-30-210-Y-M		250 bar	Pressure reducing in P, 70-210 bar
ZPR10DA2-30-210-Y-M		250 bar	Pressure reducing in A, 70-210 bar
ZPR10DB2-30-210-Y-M		250 bar	Pressure reducing in B, 70-210 bar



P



A

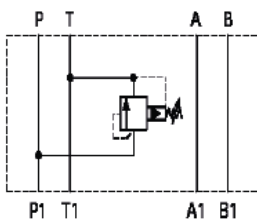


B

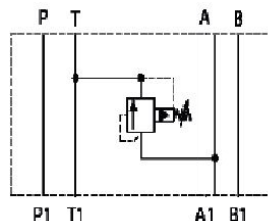


Relief Subplates (Steel Body)

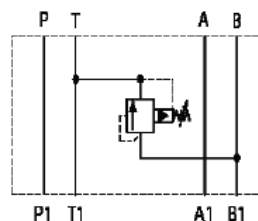
Part #	List Price \$	Maximum Pressure	Function
Z2PB10VP-1-315		250 bar	Relief on P, 70-250 bar
Z2PB10VA-1-315		250 bar	Relief on A, 70-250 bar
Z2PB10VB-1-315		250 bar	Relief on B, 70-250 bar
Z2PB10VC-1-315		250 bar	Relief on A & B, 70-250 bar



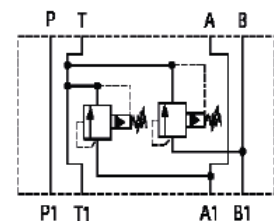
P



A



B



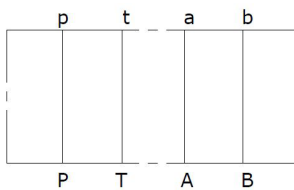
C



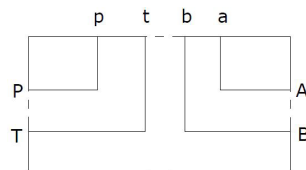
Cetop 3 Manifold Subplate

Part #	List Price \$	Port Position A/B/P/T	Port Size	Nominal Flow	Maximum Flow	Material
EA06-07-38		Rear	3/8" BSPP	30 lpm	70 lpm	Aluminium
ES06-07-38		Rear	3/8" BSPP	30 lpm	70 lpm	Steel
ES06-08-38		Side	3/8" BSPP	30 lpm	70 lpm	Steel
ES06-09-38		Side	3/8" BSPP	30 lpm	70 lpm	Steel
PJ21286		Side	3/8" BSPP	30 lpm	70 lpm	Aluminium
EA06-09-38		Side	3/8" BSPP	30 lpm	70 lpm	Aluminium
EA06-08-38		Side Parallel	3/8" BSPP	30 lpm	70 lpm	Aluminium

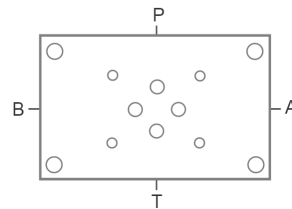
Note: 1 Station Subplates have no relief bar, gauge port or unloader cavity.



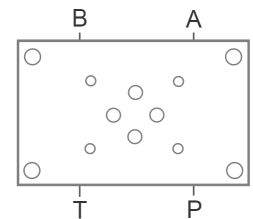
07-38



08-38, 09-38



EA06-09-38



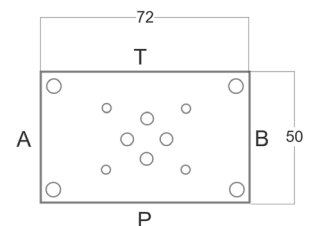
EA06-08-38



EA06-08-38



PJ21286

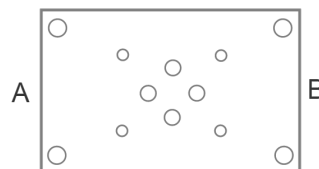


Cetop 3 Manifold Subplates

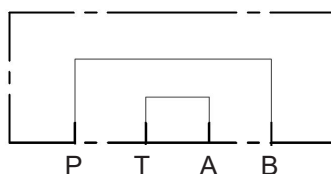
Part #	List Price \$	Description	Material
ES06-00-10		Cetop 3 blanking plate	Steel
ES06-00-20-3		Cetop 3 crossover plate P-B T-A	Steel
ES06-01-14-1		Cetop 3 subplate A + B ports 1/4" BSPP	Steel
ES06-01-14-4		Cetop 3 subplate P + T ports 1/4" BSPP	Steel



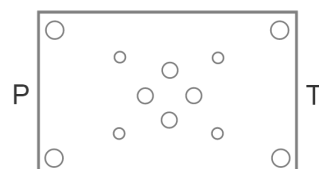
00-10



14-1



20-3



14-4

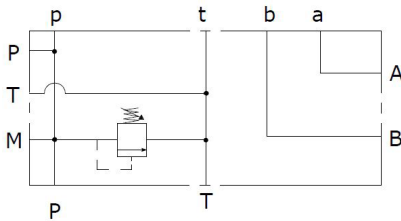


Cetop 3 Manifolds (1/2" BSPP Ports P+T)

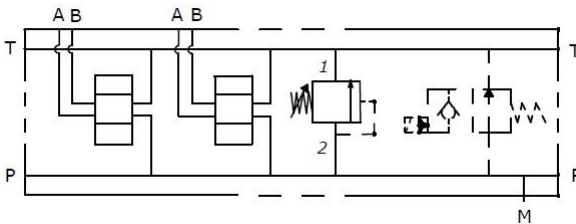
Part #	List Price \$	Stations	Relief Bar	A-B	P-T	Unloader Cavity	Gauge Port	Nominal Flow	Max Flow	Material
EA06-10-38-1-3-H		1	50-220 (M20)	3/8" BSPP	3/8" BSPP	n/a	1/4" BSPP	30 lpm	40 lpm	Aluminium
EA06-14-38-2-4-3-H		2	50-220 (M20)	3/8" BSPP	1/2" BSPP	Yes (SAE8-2)	1/4" BSPP	30 lpm	40 lpm	Aluminium
EA06-14-38-3-4-3-H		3	50-220 (M20)	3/8" BSPP	1/2" BSPP	Yes (SAE8-2)	1/4" BSPP	30 lpm	40 lpm	Aluminium
EA06-14-38-4-4-3-H		4	50-220 (M20)	3/8" BSPP	1/2" BSPP	Yes (SAE8-2)	1/4" BSPP	30 lpm	40 lpm	Aluminium
EA06-14-38-5-4-3-H		5	50-220 (M20)	3/8" BSPP	1/2" BSPP	Yes (SAE8-2)	1/4" BSPP	30 lpm	40 lpm	Aluminium
EA06-14-38-6-4-3-H		6	50-220 (M20)	3/8" BSPP	1/2" BSPP	Yes (SAE8-2)	1/4" BSPP	30 lpm	40 lpm	Aluminium
EA06-14-38-7-4-3-H		7	50-220 (M20)	3/8" BSPP	1/2" BSPP	Yes (SAE8-2)	1/4" BSPP	30 lpm	40 lpm	Aluminium
EA06-14-38-8-4-3-H		8	50-220 (M20)	3/8" BSPP	1/2" BSPP	Yes (SAE8-2)	1/4" BSPP	30 lpm	40 lpm	Aluminium

Note: Unload valve not included

10-38



14-38



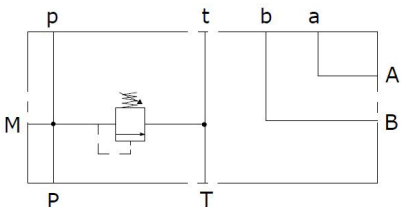
Relief options
page 215

Cetop 3 High Flow Manifolds (3/4" BSPP Ports P+T)

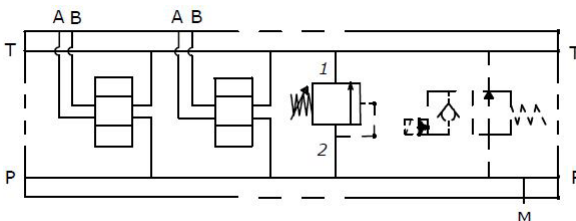
Part #	List Price \$	Stations	Relief Bar	A-B	P-T	Unloader Cavity	Gauge Port	Flow	Material
EA06-10-12-1-3-H		1	20-215 (M20)	1/2" BSPP	1/2" BSPP	n/a	1/4" BSPP	30 lpm	Aluminium
EA06-28-12-2-4-3-H		2	10-240 (SAE10-2)	1/2" BSPP	3/4" BSPP	Yes (SAE10-2)	1/4" BSPP	80 lpm	Aluminium
EA06-28-12-3-4-3-H		3	10-240 (SAE10-2)	1/2" BSPP	3/4" BSPP	Yes (SAE10-2)	1/4" BSPP	80 lpm	Aluminium
EA06-28-12-4-4-3-H		4	10-240 (SAE10-2)	1/2" BSPP	3/4" BSPP	Yes (SAE10-2)	1/4" BSPP	80 lpm	Aluminium
EA06-28-12-5-4-3-H		5	10-240 (SAE10-2)	1/2" BSPP	3/4" BSPP	Yes (SAE10-2)	1/4" BSPP	80 lpm	Aluminium
EA06-28-12-6-4-3-H		6	10-240 (SAE10-2)	1/2" BSPP	3/4" BSPP	Yes (SAE10-2)	1/4" BSPP	80 lpm	Aluminium

Note: Unload valve not included

10-12



28-12



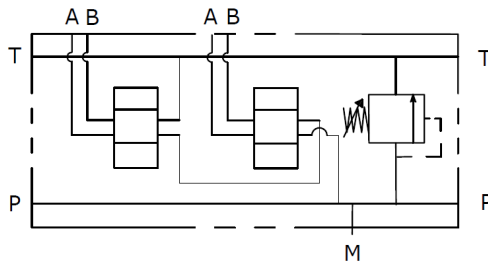
Unload valves options
page 85-86

Cetop 3 Series Manifolds (1/2" BSPP Ports P+T)

Part #	List Price \$	Stations	Relief Bar	A-B	P-T	Unloader Cavity	Gauge Port	Nominal Flow	Max Flow	Material
EA06-19-38-2-1-3-H		2	50-215 (M20)	3/8" BSPP	1/2" BSPP	No	1/4" BSPP	30 lpm	40 lpm	Aluminium
EA06-19-38-3-1-3-H		3	50-215 (M20)	3/8" BSPP	1/2" BSPP	No	1/4" BSPP	30 lpm	40 lpm	Aluminium
EA06-19-38-4-1-3-H		4	50-215 (M20)	3/8" BSPP	1/2" BSPP	No	1/4" BSPP	30 lpm	40 lpm	Aluminium

Relief options
page 215

Unload valve options
page 85-86



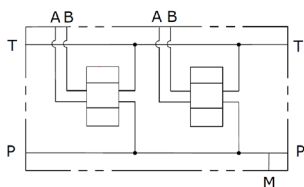
Cetop 3 Manifolds with Relief Valves

Part #	List Price \$	Stations	Max Flow	P-T	A-B	Relief	Material
BPT3A		P+T block only	30 lpm	1/2" BSPP	1/2" BSPP	SAE8-2	Aluminium
BS3C2		1	30 lpm	1/2" BSPP	3/8" BSPP	20-210 bar *	Aluminium
BM2AC2		2	40 lpm	1/2" BSPP	3/8" BSPP	20-210 bar *	Aluminium
BM3AC2		3	40 lpm	1/2" BSPP	3/8" BSPP	20-210 bar *	Aluminium
BM4AC2		4	40 lpm	1/2" BSPP	3/8" BSPP	20-210 bar *	Aluminium
BM5AC2		5	40 lpm	1/2" BSPP	3/8" BSPP	20-210 bar *	Aluminium
BM6AC2		6	40 lpm	1/2" BSPP	3/8" BSPP	20-210 bar *	Aluminium

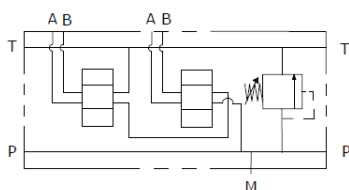
* 10-90 bar available on request

Cetop 3 Manifolds without Relief Valves

Part #	List Price \$	Stations	Max Flow	P-T	A-B	Relief	Material
BM2A		2	40 lpm	1/2" BSPP	3/8" BSPP	-	Aluminium
BM3A		3	40 lpm	1/2" BSPP	3/8" BSPP	-	Aluminium
BM4A		4	40 lpm	1/2" BSPP	3/8" BSPP	-	Aluminium
BM5A		5	40 lpm	1/2" BSPP	3/8" BSPP	-	Aluminium
BM6A		6	40 lpm	1/2" BSPP	3/8" BSPP	-	Aluminium



BM2A



BM2AC2



BM



BPT

BS3

Relief options
page 215

Cetop 5 Manifold Subplate

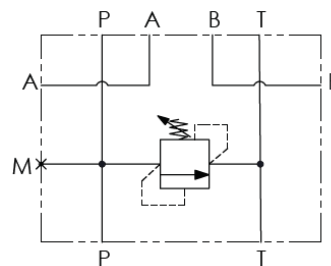
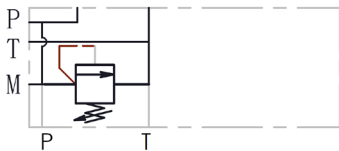
Part #	List Price \$	Stations	Max Flow	Port Size P-T-A-B	Gauge Port	Relief	Material
BPT5A		P+T block only	80 lpm	3/4" BSPP	1/4" BSPP	SAE10-2	Aluminium
BS5C2		1	80 lpm	3/4" BSPP	1/4" BSPP	20-210 bar	Aluminium



BPT5A



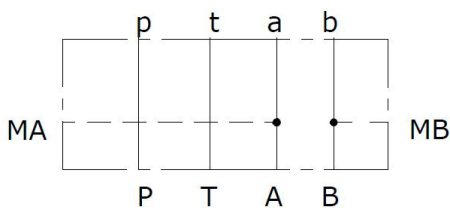
BS5C2



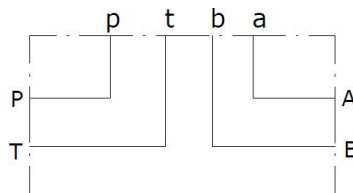
Relief options (BPT5A)
page 215

Cetop 5 Manifold Subplate

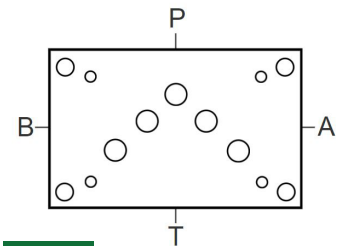
Part #	List Price \$	Port Position A-B-P-T	Port Size P-T-A-B	Flow	Material
EA10-02-34		Side	3/4" BSPP	80 lpm	Aluminium
ES10-02-34		Side	3/4" BSPP	80 lpm	Steel
ES10-01-34		Rear	3/4" BSPP	80 lpm	Steel



01-34



02-34



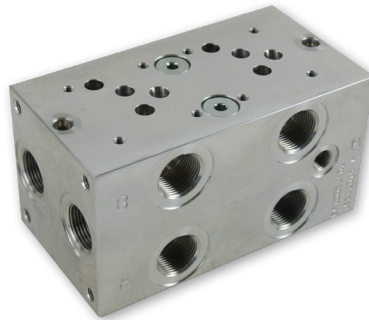
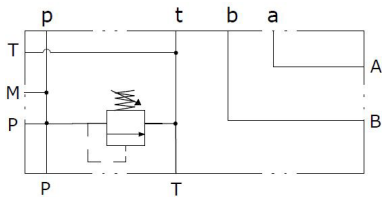
02-34



Cetop 5 Manifolds

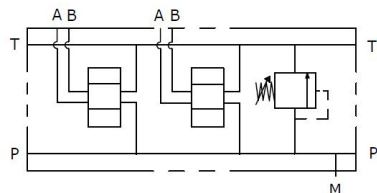
Part #	List Price \$	Stations	Relief Bar	A-B	P-T	Unloader Cavity	Gauge Port	Flow	Material
EA10-09-34-1-3-H		1	70-250 (M26)	3/4" BSPP	3/4" BSPP	No	1/4" BSPP	80 lpm	Aluminium
EA10-06-34-2-1-3-H		2	70-250 (M26)	1/2" BSPP	3/4" BSPP	No	1/4" BSPP	80 lpm	Aluminium
EA10-06-34-3-1-3-H		3	70-250 (M26)	1/2" BSPP	3/4" BSPP	No	1/4" BSPP	80 lpm	Aluminium
EA10-06-34-4-1-3-H		4	70-250 (M26)	1/2" BSPP	3/4" BSPP	No	1/4" BSPP	80 lpm	Aluminium
EA10-06-34-5-1-3-H		5	70-250 (M26)	1/2" BSPP	3/4" BSPP	No	1/4" BSPP	80 lpm	Aluminium
EA10-06-34-6-1-3-H		6	70-250 (M26)	1/2" BSPP	3/4" BSPP	No	1/4" BSPP	80 lpm	Aluminium

10-09



EA10-09

10-06



EA10-06



Cetop 5 Subplates

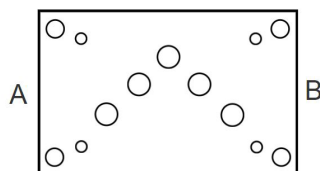
Part #	List Price \$	Description	Material
EA610-05-0		Cetop 5 to 3 reducing subplate	Aluminium

Cetop 5 Subplates

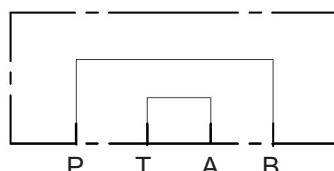
Part #	List Price \$	Description	Material
ES10-00-10		Cetop 5 blanking plate	Steel
ES10-00-20-3		Cetop 5 crossover plate P-B T-A	Steel
ES10-10-14-1		Cetop 5 subplate A + B ports 1/4" BSPP	Steel
ES10-10-14-4		Cetop 5 subplate P + T ports 1/4" BSPP	Steel



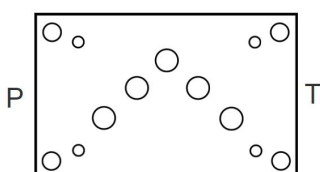
00-10



14-1



20-3



14-4



Manifold Gaskets

Part #	List Price \$	Description	Compatible Manifolds	
NEW GAS-S3		Gasket to suit single cetop 3 or P+T manifold	BPT3A	EA06-10
NEW GAS-M3		Gasket to suit single cetop 3 or 2-6 station manifold	EA06-14	EA06-19
NEW GAS-M5		Gasket to suit single cetop 5 or 2-6 station manifold	EA10-06	
NEW GAS-S5		Gasket to suit single cetop 5 or P+T manifold	EA10-09-34-1-3-H	BPT5A

Direct Acting Relief Cartridge SAE-08

Part #	List Price \$	Size	Pressure Range	Maximum Flow
DRV-S08-04-60-N-H		SAE8-2	16-160 bar	30 lpm
DRV-S08-04-135-N-H		SAE8-2	25-135 bar	30 lpm
DRV-S08-04-220-N-H		SAE8-2	50-220 bar	30 lpm
DRV-S08-04-350-N-H		SAE8-2	120-350 bar	30 lpm
CPS-08		Steel blanking plug, SAE8-2 cavity		



Direct Acting Relief Cartridge SAE-10

Part #	List Price \$	Size	Pressure Range	Maximum Flow
DRV-S10-02-110-N-H		SAE10-2	5-110 bar	80 lpm
DRV-S10-02-240-N-H		SAE10-2	10-240 bar	80 lpm
DRV-S10-02-350-N-H		SAE10-2	50-350 bar	80 lpm
CPS-10		Steel blanking plug, SAE10-2 cavity		



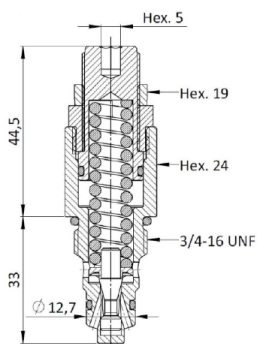
Direct Acting Relief Cartridge M20

Part #	List Price \$	Size	Pressure Range	Maximum Flow
DRV-M20-02-055-N-H		M20	5-55 bar	30 lpm
DRV-M20-02-110-N-H		M20	25-110 bar	30 lpm
DRV-M20-02-215-N-H		M20	50-215 bar	30 lpm
DRV-M20-02-350-N-H		M20	100-350 bar	30 lpm
CPS-M20		Steel blanking plug, M20 cavity		

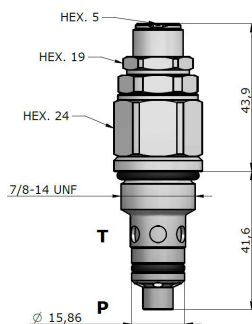


Direct Acting Relief Cartridge M26

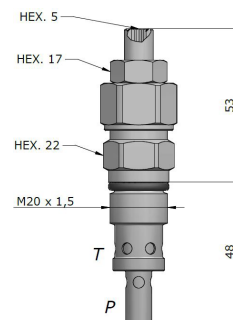
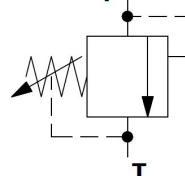
Part #	List Price \$	Size	Pressure Range	Maximum Flow
DRV-M26-01-055-N-H		M26	5-55 bar	80 lpm
DRV-M26-01-110-N-H		M26	25-110 bar	80 lpm
DRV-M26-01-250-N-H		M26	75-250 bar	80 lpm
CPS-M26		Steel blanking plug, M26 cavity		



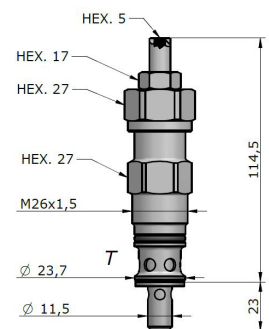
SAE-08



SAE-10



M20



M26

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