

UHL

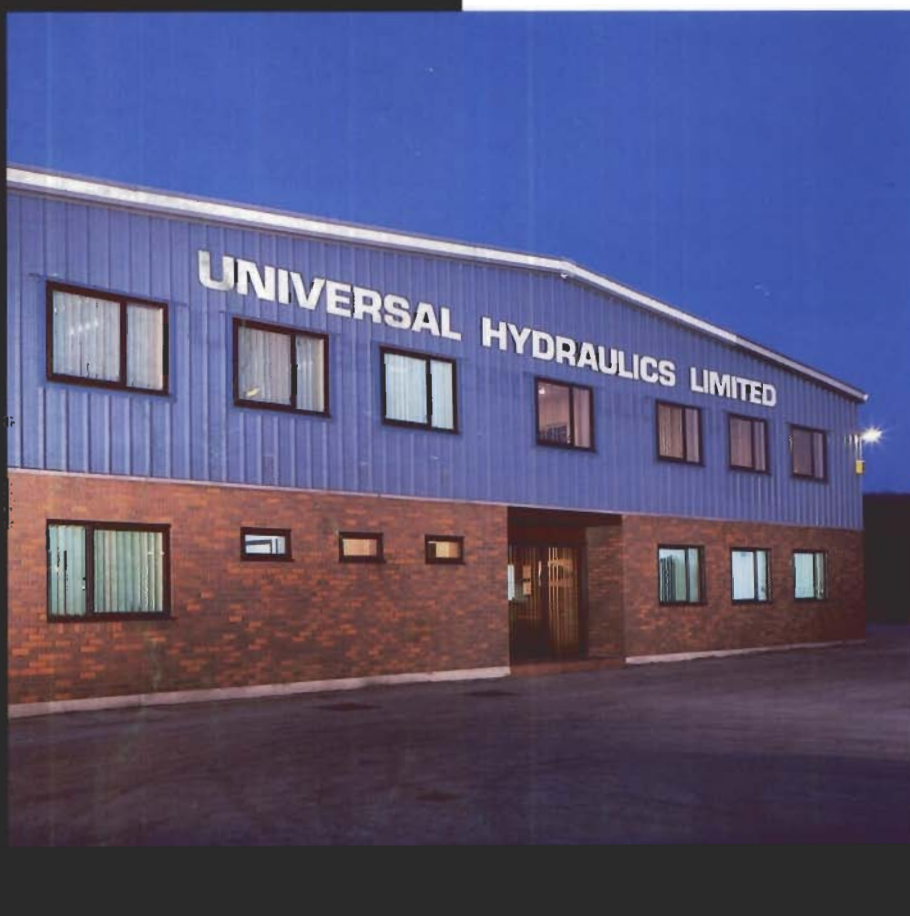
Universal Hydraulic Equipment

Gear Pumps
Tandem Gear Pumps
Cast Iron Gear Pumps
Bellhousing and Drive Couplings
SAE Bellhousing and Drive Couplings
Hand Pumps
Hydraulic Motors
CETOP 3 Valves
CETOP 5 Valves
CETOP 7 Valves
Monoblock Valves
Circuit Valves
Cartridge Valves
Filters and Accessories
Pressure Gauges
Hydraulic Cylinders
Power Pack PPS
Power Pack PPM
Power Pack PPL
Power Pack PPX
Power Pack PPA(P)
Power Pack PPV
Power Pack MP
700 Bar Power Pack PPHP
700 Bar Foot Pump
700 Bar Hand Pump

component and power pack sales



Universal Hydraulics Limited



*UHL
Headquarters
Chesterfield*

introduction

Welcome to the second edition of the UHL catalogue, the first has served us well but the time has arrived for a comprehensive re - appraisal, the result is in your hands and we trust that you will approve.

RETAINED FEATURES

Ease of use
Full printed price list
Reliable overnight delivery

NEW ADDITIONS

An increase in the number of products offered
Many more standard powerpack options
Variable delivery packs as standard build
DC/AC minipacks

EVEN BETTER SERVICE

Much increased stockholding
CAD design
ISO 9002
Declaration of Incorporation where appropriate

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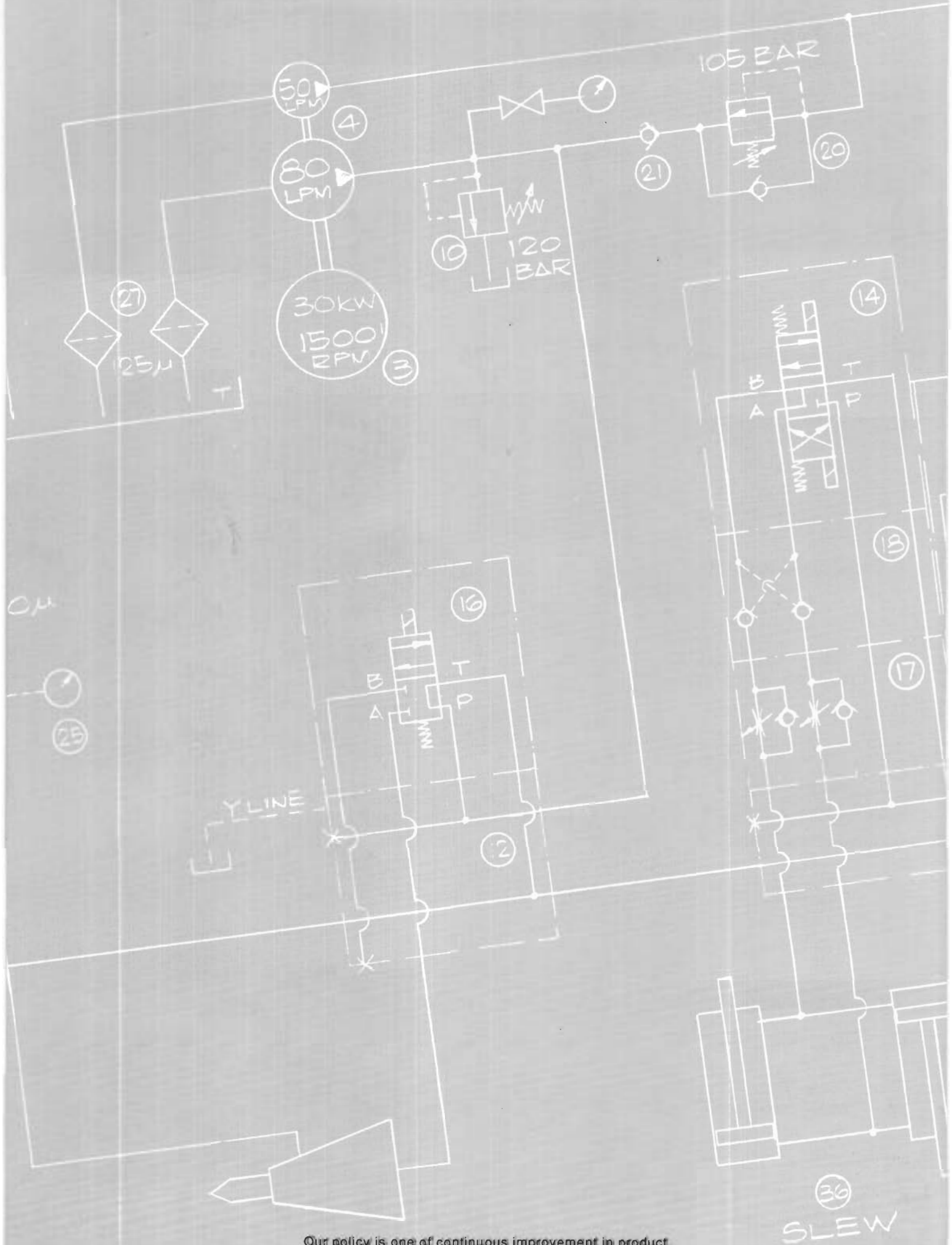


700 bar foot pump 85 - 86



700 bar hand pump 87 - 88





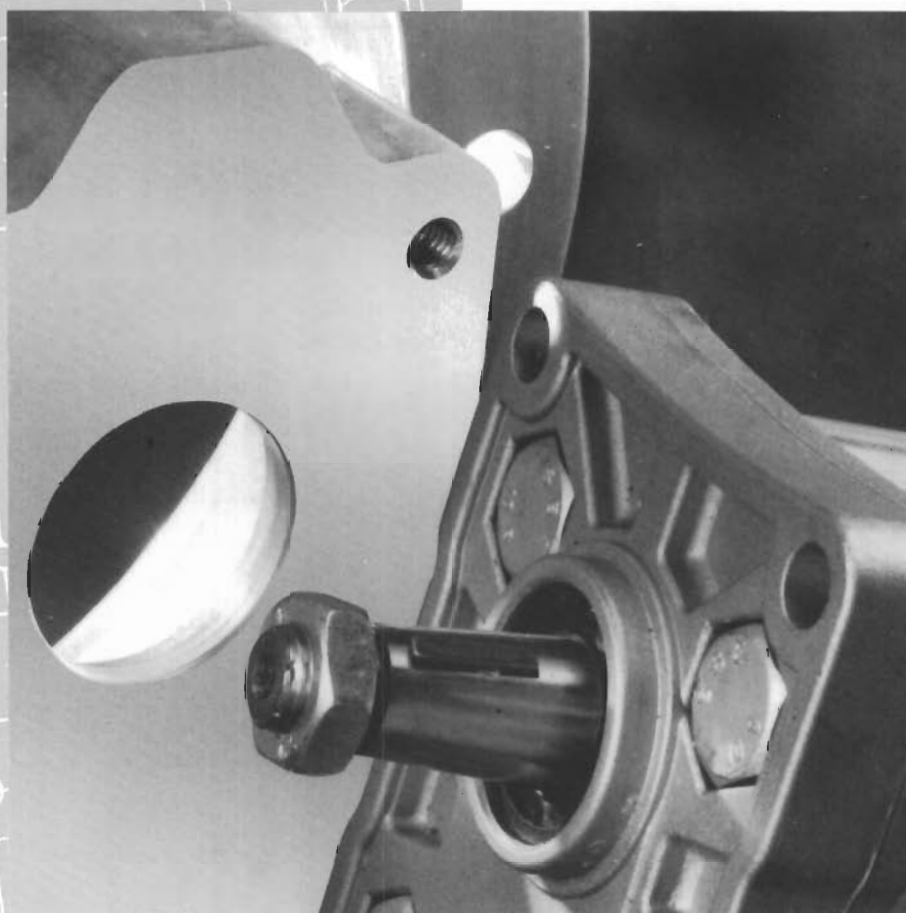
Our policy is one of continuous improvement in product.
 Specifications may therefore be changed without prior notice.

POLARIS®

UHL

KAPPA®

Universal Gear Pumps Bellhousings Drive Couplings



Page 8 - Polaris Aluminium Bodied Pumps and Motors.

Page 9 - Polaris Tandem Pumps.

Page 10 - Kappa Cast Iron Bodied Pumps and Motors.

Page 11 - Standard Bellhousings and Drive Couplings.

Page 12 - SAE. Bellhousings and Couplings.

CASAPPA

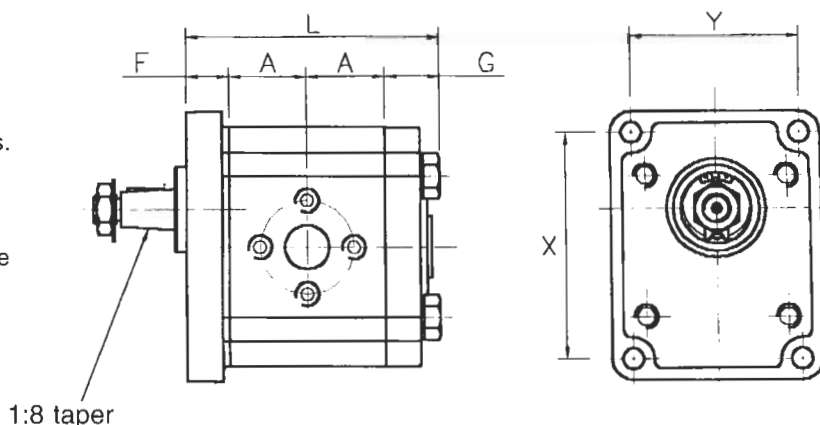
polaris gear pumps

Details Shown are European Standard
Taper Shaft Pumps.

Alternatives available:

Tandem and Multiple Pumps,
(see page 9) SAE and German Flanges.
Gear Motors.
Parallel and Splined Shafts.
Elbow and Straight Adaptors.
Complete Technical Catalogue Available
On Request.

PLP. .D clockwise
PLP. .S anti-clockwise



Pump Group	Model No. (cc/rev) Clockwise	Delivery 1500 RPM lmp	Pressure P1/P2/P3 bar	Port Elbow		X mm	Y mm	F mm	G mm	L mm	A mm	
				Inlet	Outlet							
GROUP 1	PLP 10.1D	1.5	260/280/290	CPL1GQ12	CPL1GQ12	72	52	14	16.5	66	17.6	
	PLP 10.2D	3.0								69	19.2	
	PLP 10.3D	4.6								73	21.0	
	PLP 10.4D	6.0								76	22.4	
	PLP 10.5D	7.5	240/250/260							79	24.0	
	PLP 10.6D	9.5	200/210/220							83	26.0	
	PLP 10.8D	12.0	160/160/170							88	28.8	
	PLP 10.10D	15.0	130/130/130							95	32.0	
GROUP 2	PLP 20.4D	7.2	250/280/300	CPL1G12	CPL1G12	96.2	71.5	18	23.5	93	25.8	
	PLP 20.6D	9.7								96	27.0	
	PLP 20.8D	12.5								98	28.3	
	PLP 20.11D	16.6								103	30.5	
	PLP 20.14D	21.6	200/220/240							108	33.0	
	PLP 20.16D	24.9	CPL2G34							111	34.8	
	PLP 20.20D	31.2								118	38.5	
	PLP 20.25D	39								126	42.0	
PLP 20.31D	49	170/190/210	136	47.0								
GROUP 3	PLP 30.22D	33	250/270/280	CP3G10	CPL2G34	128	98	24	28	130	39.0	
	PLP 30.27D	40								133	40.5	
	PLP 30.34D	52	240/260/270							138	43.0	
	PLP 30.38D	58								141	44.5	
	PLP 30.43D	66								230/250/260	144	46.0
	PLP 30.51D	77								210/230/230	149	48.5
	PLP 30.61D	91	190/210/210							155	51.5	
	PLP 30.73D	110	160/170/180							CPL3.5G114	CPL3G10	163
GROUP 3.5	PLP 35.51D	77	210/230/240	CPL3G10	CPL3G10	149.4	114.3	25	28	151	48.5	
	PLP 35.61D	91	190/210/220	CPL3.5G114	CPL3G10					157	51.5	
	PLP 35.73D	110	170/190/200							165	55.5	
	PLP 35.82D	122	160/170/180							170	58.0	
	PLP 35.90D	136	150/160/170							176	61.0	

P1 Continuous P2 - 20 sec/min P3 - 8 sec/min

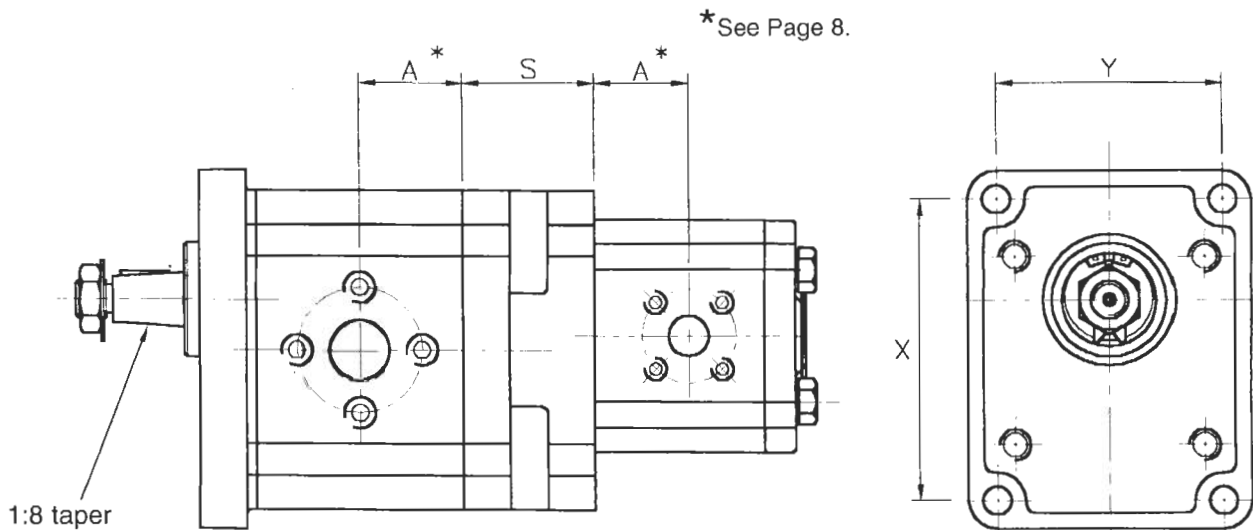


polaris tandem pumps

Details Shown are European Standard
Taper Shaft Pumps.
Tandem and Multiple Combinations
For Flows and Pressures see page 8.

PLP .D clockwise
PLP .S anti-clockwise

Alternatives available:
as single pumps



Pump Group Combination	Model No. Clockwise	X mm	Y mm	S mm
GP1/GP1	TLP 10._/10._D	72	52	12
GP2/GP1	TLP 20._/10._D	96.2	71.5	42
GP2/GP2	TLP 20._/20._D			42
GP3/GP1	TLP 30._/10._D	128	98	44
GP3/GP2	TLP 30._/20._D			44
GP3/GP3	TLP 30._/30._D			48
GP3.5/GP1	TLP 35._/10._D	149.4	114.3	44
GP3.5/GP2	TLP 35._/20._D			44
GP3.5/GP3	TLP 35._/30._D			48

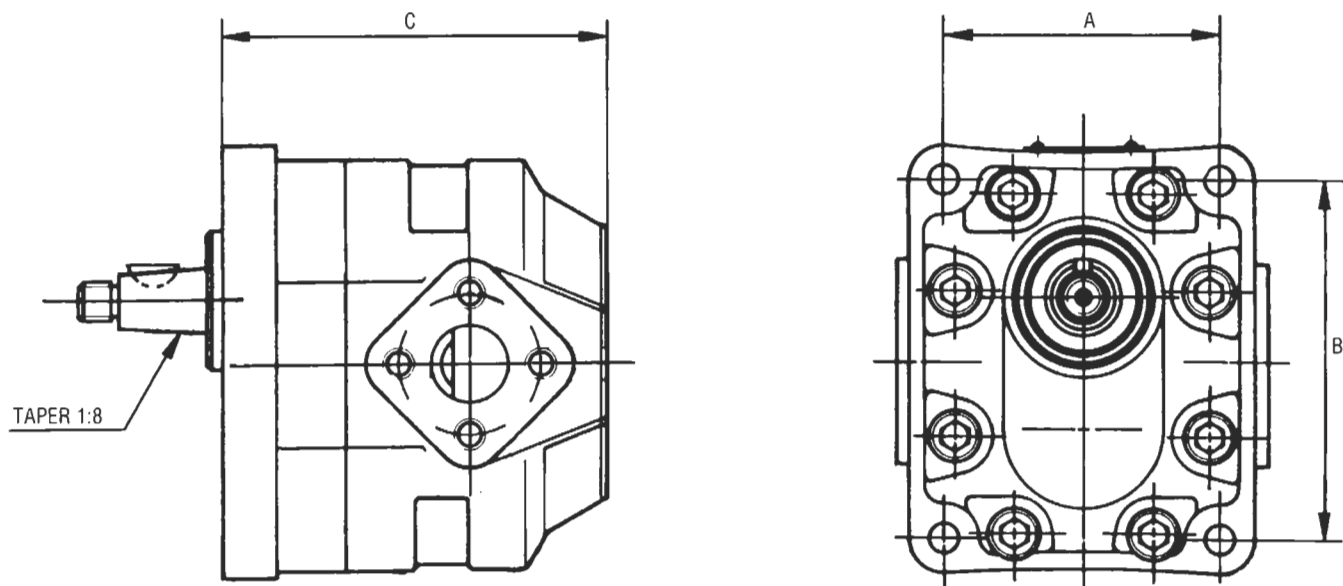
See page 8 for Dimensions, Flow Rates and Pressures.



Kappa cast iron gear pumps

STANDARD EUROPEAN 4 BOLT FLANGE WITH TAPER SHAFT

Also available
tandem and multiple pumps
motor versions

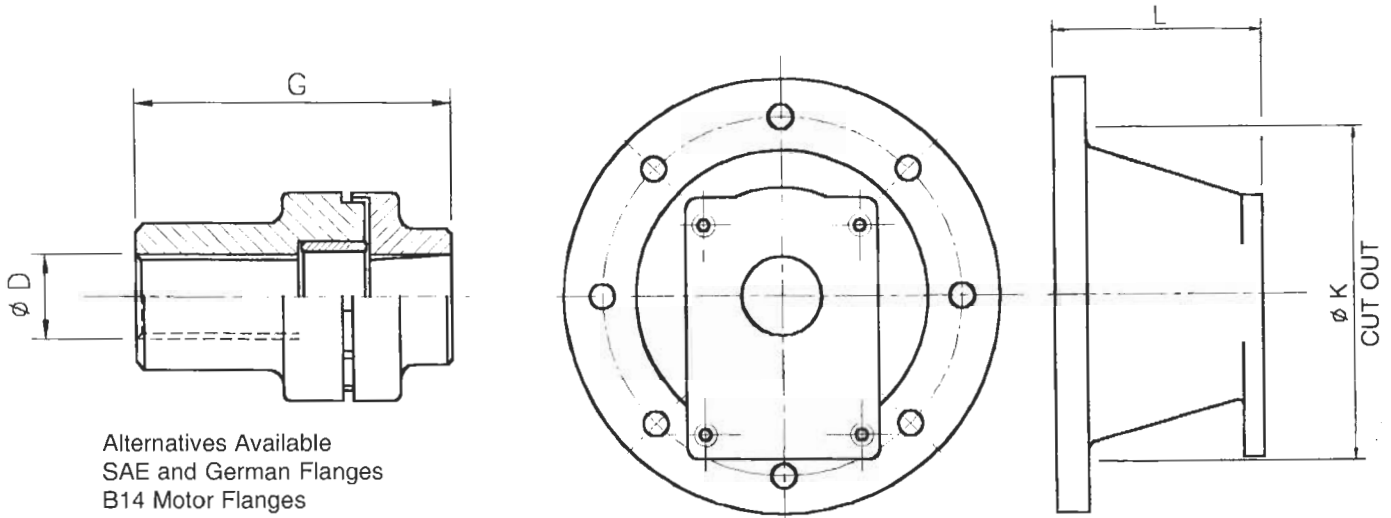


Pump Group	Model No. Standard/ Clockwise	Delivery @ 1500 rpm lpm	Pressure cont./peak bar	A mm	B mm	C mm
Group 2	KP 4D	7.2	270/330	71.5	96.2	88
	KP 6D	9.6				90
	KP 8D	12.5				93
	KP 11D	16.6	260/320			96
	KP 14D	21.6				100
	KP 16D	25				106
	KP 20D	31	210/250			112
	KP 25D	39	180/220			120
	KP 31D	49	140/180			130
Group 3	KP 27D	40	280/310	98	128	128
	KP 34D	52	260/300			133
	KP 38D	58				136
	KP 43D	66	250/290			139
	KP 51D	77	230/270			144
	KP 61D	91	200/240			150
	KP 73D	110	180/220			158



bell housings & drive couplings

Bellhousing and Flexible Drive Coupling to Suit Metric B5
Flange Electric Motors and Standard Taper Shaft Pumps.



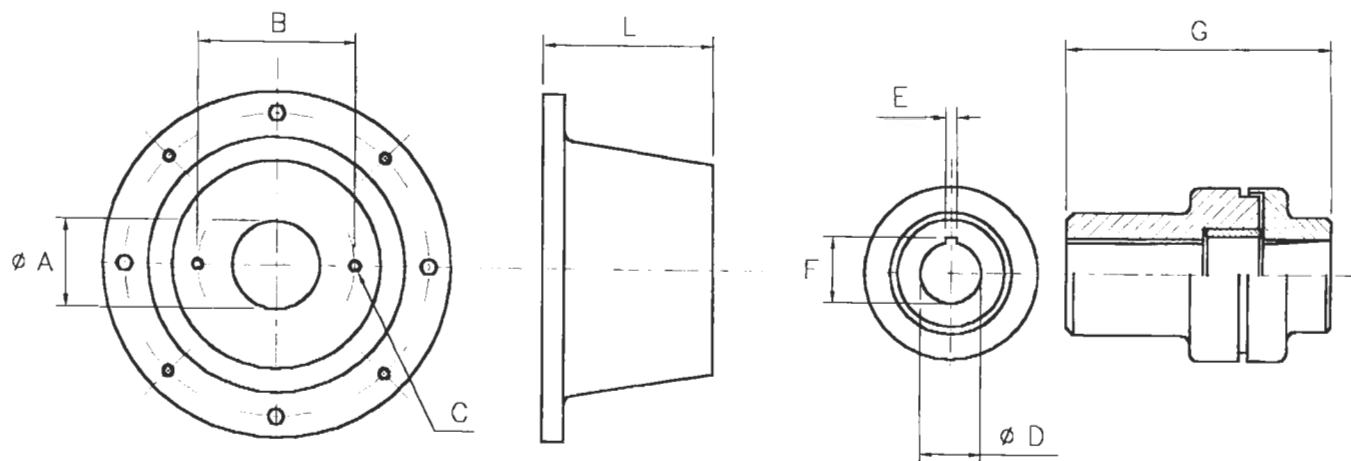
Alternatives Available
SAE and German Flanges
B14 Motor Flanges

Pump Group	Electric Motor 1500 RPM kW	Motor Frame Size	Motor Flange Diameter mm	Motor Shaft Dia D mm	Bellhousing			Coupling	
					Ref.	L	K	Ref.	G
Group 1	0.37	71	160	14	L161	70	114	GE141	62
	0.55/0.75	80	200	19	L201	95	140	GE191	87
	1.1/1.5	90	200	24	L201	95	140	GE241	87
	2.2/3/4	100/112	250	28	L251	105	190	GE281	97
Group 2	0.55/0.75	80	200	19	L202	95	140	GE192	87
	1.1/1.5	90	200	24	L202	95	140	GE242	87
	2.2/3/4	100/112	250	28	L252	105	190	GE282	97
	5.5/7.5	132	300	38	L302	143	240	GE382	135
	11/15	160	350	42	L352	178	260	GE422	168
	18.5/22	180	350	48	L352	178	260	GE482	168
Group 3	2.2/3/4	100/112	250	28	L253	115	190	GE283	107
	5.5/7.5	132	300	38	L303	143	240	GE383	135
	11/15	160	350	42	L353	178	260	GE423	168
	18.5/22	180	350	48	L353	178	260	GE483	168
	30	200	400	55	L403	188	310	GE553	176
	37/45	225	450	60	L453	218	360	GE603	206
Group 3.5	5.5/7.5	132	300	38	L3035	143	240	GE3835	135
	11/15	160	350	42	L3535	188	260	GE4235	176
	18.5/22	180	350	48	L3535	188	260	GE4835	176
	30	200	400	55	L4035	188	310	GE5535	176
	37/45	225	450	60	L4535	218	360	GE6035	206
Group 4	11/15	160	350	42	L354	188	260	GE424	176
	18.5/22	180	350	48	L354	188	260	GE484	176
	30	200	400	55	L404	188	310	GE554	176
	37/45	225	450	60	L454	218	360	GE604	206



sae bell housings & drive couplings

Details Shown are SAE Standard



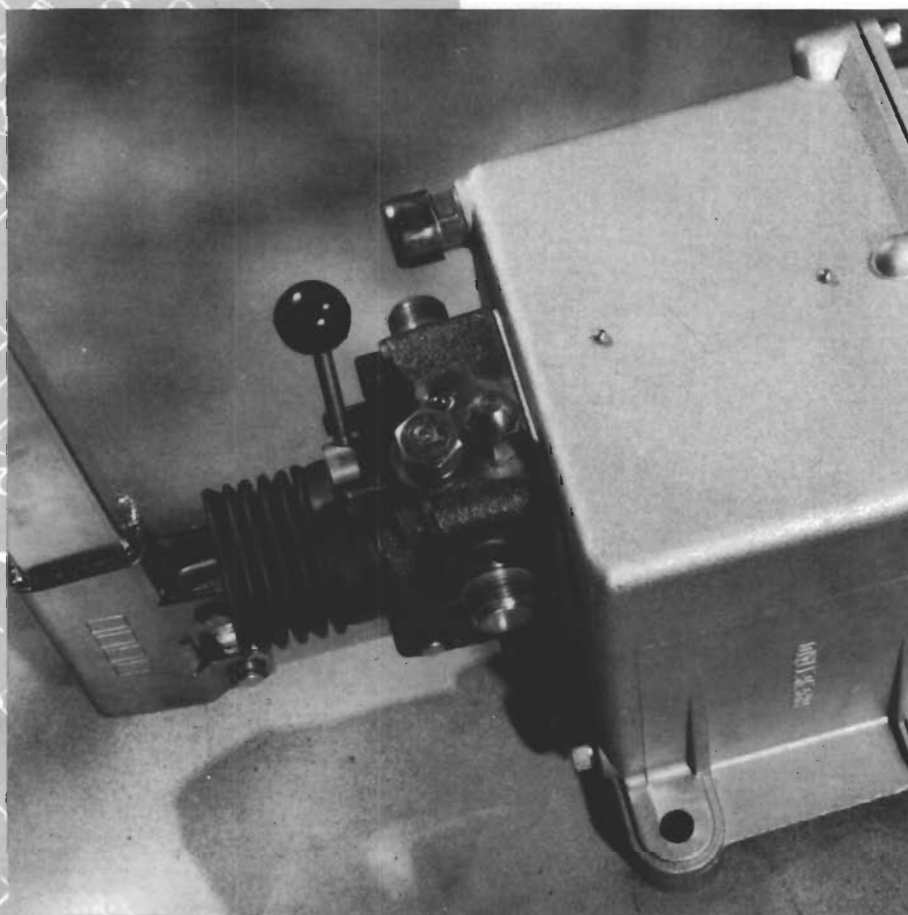
	A	B	C	D	E	F
SAE A	82.55	106	M10	19.05	4.76	21.6
SAE B	101.6	146	M12	22.22	4.76	24.8
SAE C	127.0	181	M16	31.75	6.35	35.1

Pump Group	Electric Motor 1500 RPM kW	Frame Size	Bellhousing		Coupling	
			Ref.	L	Ref.	G
SAE A	1.1/1.5	90	L20SA	126	GE24SA	116
	2.2/3/4	100/112	L25SA	136	GE28SA	128
	5.5/7.5	132	L30SA	170	GE38SA	156
	11/15	160	L35SA	195	GE42SA	182
SAE B	5.5/7.5	132	L30SB	170	GE38SB	156
	11/15	160	L35SB	195	GE42SB	182
	18.5/22	180	L35SB	195	GE48SB	182
	30	200	L40SB	206	GE55SB	182
SAE C	11/15	160	L35SC	195	GE42SC	182
	18.5/22	180	L35SC	195	GE48SC	182
	30	200	L40SC	206	GE55SC	182
	37/45	225	L45SC	235	GE60SC	221



UHL

Universal Hand Pumps



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PMS & PMSD Series Hand Pumps,
Suitable for Reservoir Mounting.

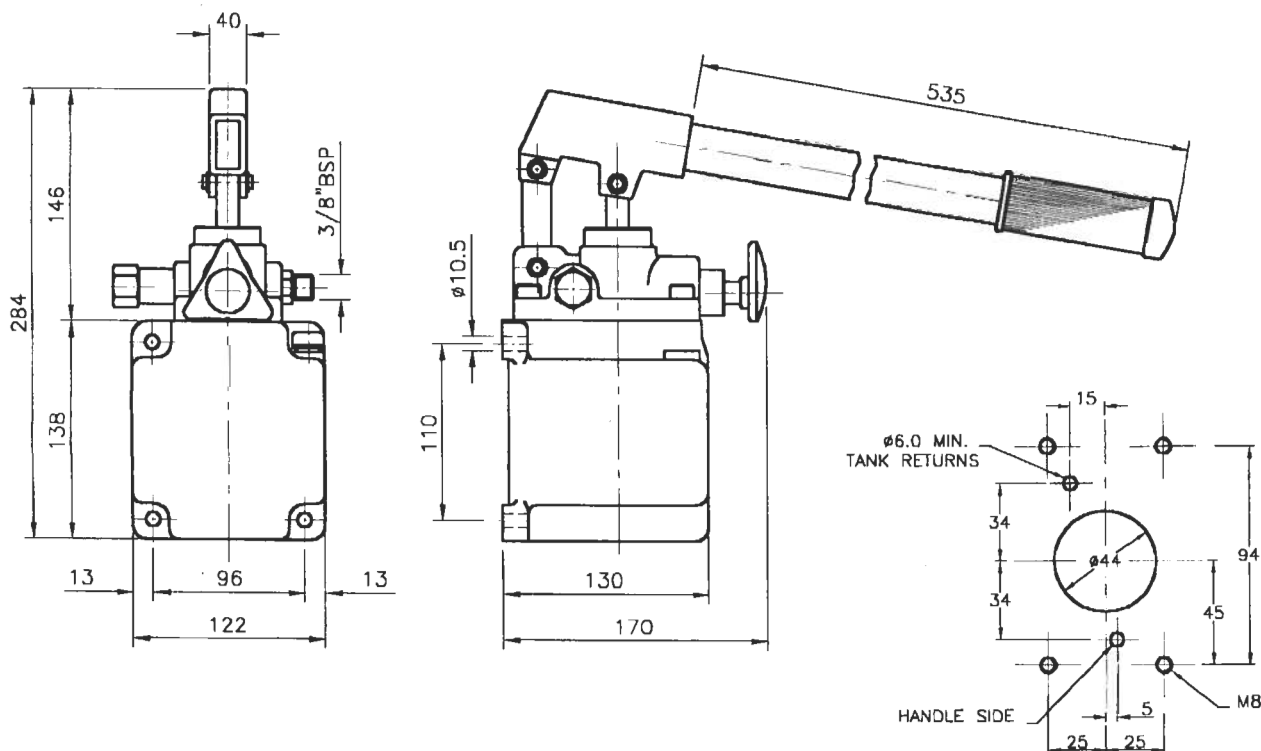
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PM Series Hand Pumps, Inline Mounting,
Cast Iron Construction.

CASAPPA

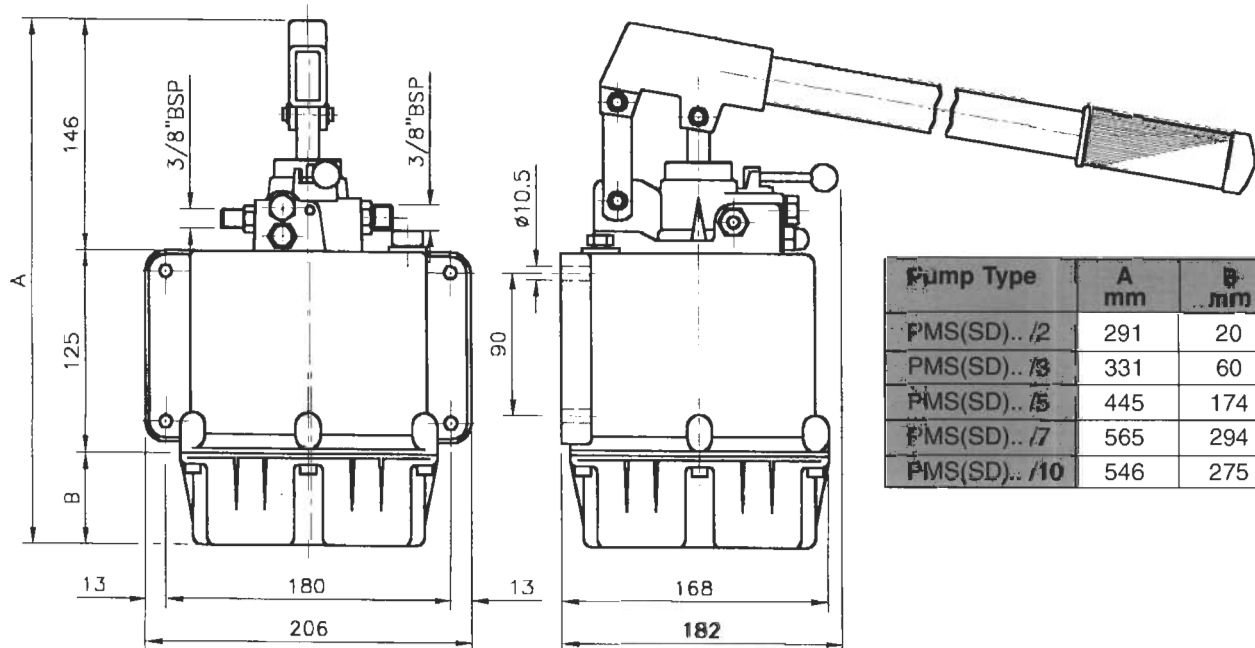
hand pumps PMS and PMSD

PMS.../1



PMSD.../2 etc.

Pump mounting details
(no reservoir)

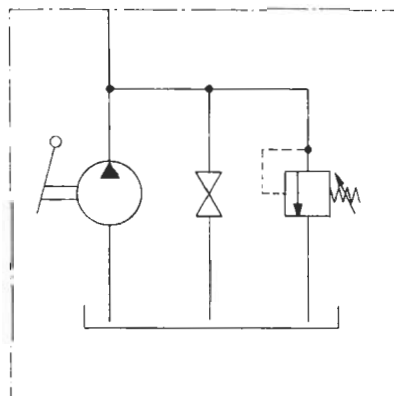


Pump Type	A mm	B mm
PMS(SD).../2	291	20
PMS(SD).../3	331	60
PMS(SD).../5	445	174
PMS(SD).../7	565	294
PMS(SD).../10	546	275



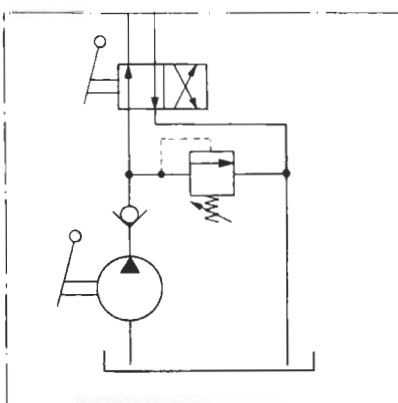
PMS SERIES

Designed for reservoir mounting
Built-in shut-off valve
Built-in relief valve
Supplied with or without reservoir

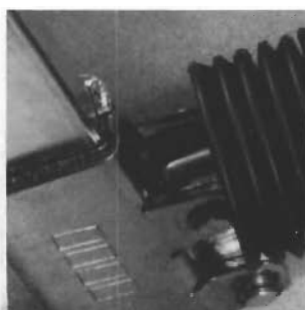


PMSD SERIES

Designed for reservoir mounting
Built-in 4 way valve
Built-in relief valve
Supplied with or without reservoir

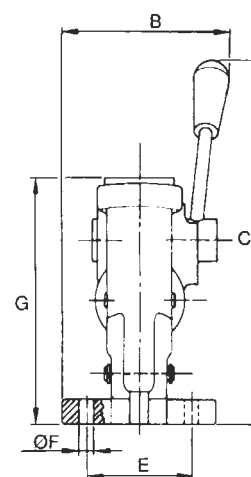
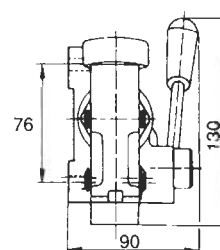
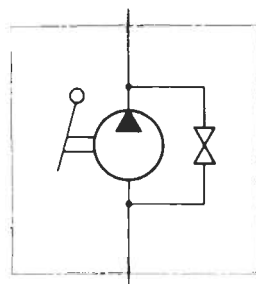


Pump type	Displacement cm ³ /cycle	Max. pressure bar	Tank capacity litre	Weight kg
PMS(D) 12/1	12	350	1	4,5
PMS(D) 12/2	12	350	2	5,4
PMS(D) 12/3	12	350	3	5,6
PMS(D) 12/5	12	350	5	6,2
PMS(D) 25/1	25	300	1	4,5
PMS(D) 25/2	25	300	2	5,4
PMS(D) 25/3	25	300	3	5,6
PMS(D) 25/5	25	300	5	6,2
PMS(D) 25/7	25	300	7	7
PMS(D) 25/10	25	300	10	7,8
PMS(D) 45/2	45	250	2	5,8
PMS(D) 45/3	45	250	3	6
PMS(D) 45/5	45	250	5	6,6
PMS(D) 45/7	45	250	7	7,5
PMS(D) 45/10	45	250	10	8,3



h a n d p u m p s P M

Cast iron construction
Suitable for underground use
Built-in shut-off valve



Pump type	Displacement	Max. pressure	Weight	A	B	C	D	E	F	G
	cm³/cycle	bar	kg							
PM 20	20	300	3	—	—	—	—	—	—	—
PM 50	36	250	5	275	105	250	87	60	8,5	145
PM 70	63	200	7	310	120	260	95	79	10,5	160



ORBITA®

UHL

Universal Low Speed High Torque Motor



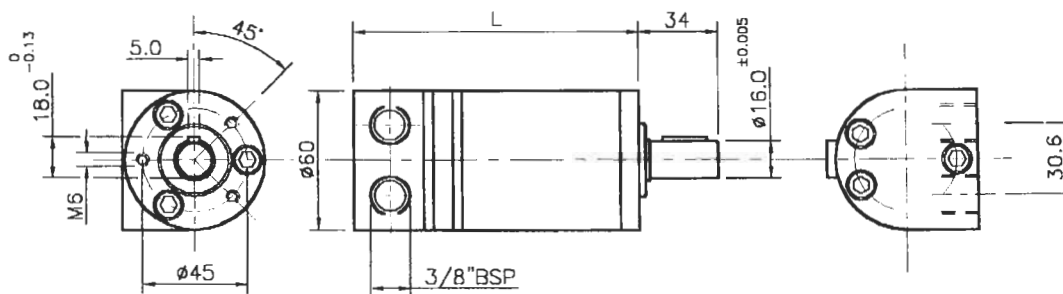
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Technical & Ordering Details.

CASAPPA

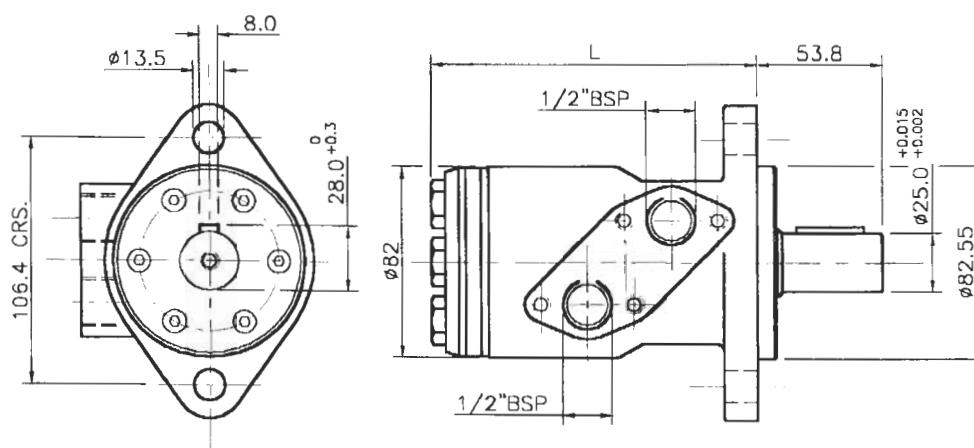
low speed high torque motors

RBM



Model Code	Displacement cc/rev.	Max. Press bar Cont/Int	Max. Torque (da Nm)	Max. Speed rpm	L mm	Weight kg
RBM 12.5	12.9	100/140	1.6/2.2	1550	118.5	1.9
RBM 20	20.0		2.5/3.6	1000	121.0	2.1
RBM 32	31.8		4.1/5.7	629	126.0	2.3

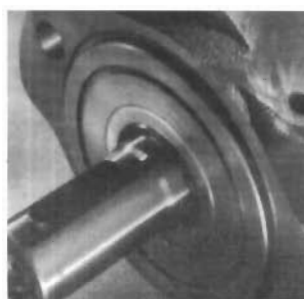
RBP



Model Code	Displacement cc/rev.	Max. Press bar Cont/Int	Max. Torque (da Nm)	Max. Speed rpm	L mm	Weight kg
RBP 50	46.2	105/140	6.6/8.5	866	139.5	5.6
RBP 80	69.3		9.8/13.0	866	143.0	5.7
RBP 100	96.0		13.1/17.2	580	146.7	5.6
RBP 160	159.4		22.9/29.2	350	155.4	6.2
RBP 200	184.8		25.6/33.2	305	158.9	6.3
RBP 250	231.1	90/115	28.2/36.5	240	165.2	6.5
RBP 300	277.3	70/105	27.7/38.1	206	171.6	6.7
RBP 400	369.7		37.2/51.1	152	184.3	7.0

Large Additional Range of Motors Available:

Wheel Mounts - Brakes.
Spline and Taper Shafts.
4 and 6 Bolt Flanges.
Pressures to 225 bar disp to 750cc/rev.
Manifold bolt-on valves available.
Please request full technical catalogue.



Generally Interchangeable with:

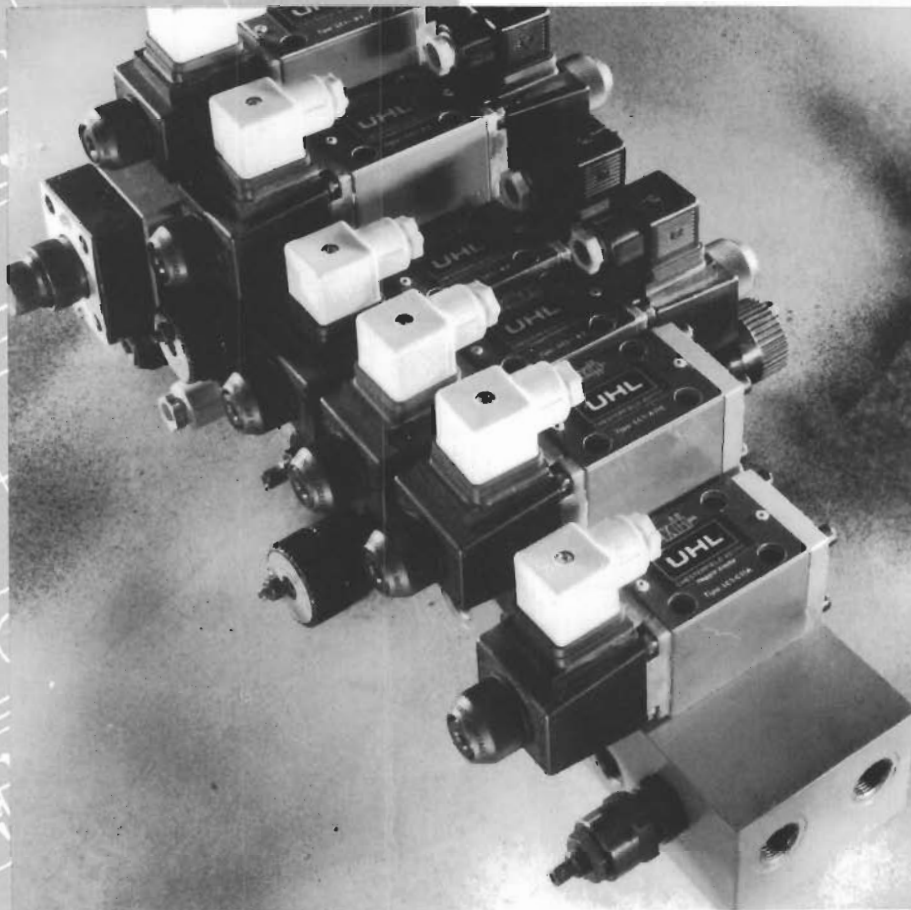
Char-Lynn H and S*, TRW MG and MF*
Danfoss OMP and OMR*, SAM AG and AR*,

Whites* and Adan*

*These are reg TM's.



Universal CETOP 3 Valves



Flows up to : 50 L/min.

Max. pressures : 250 & 350 Bar.

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Installation Drawings.

Order Code & Spools.

Modules

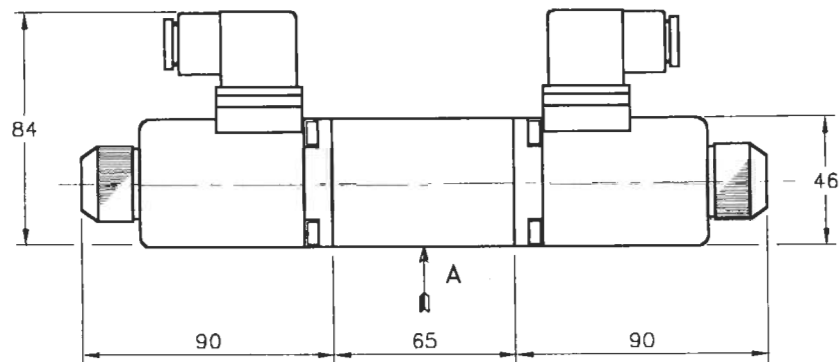
Multi-Station Manifolds.

Single Subplates.

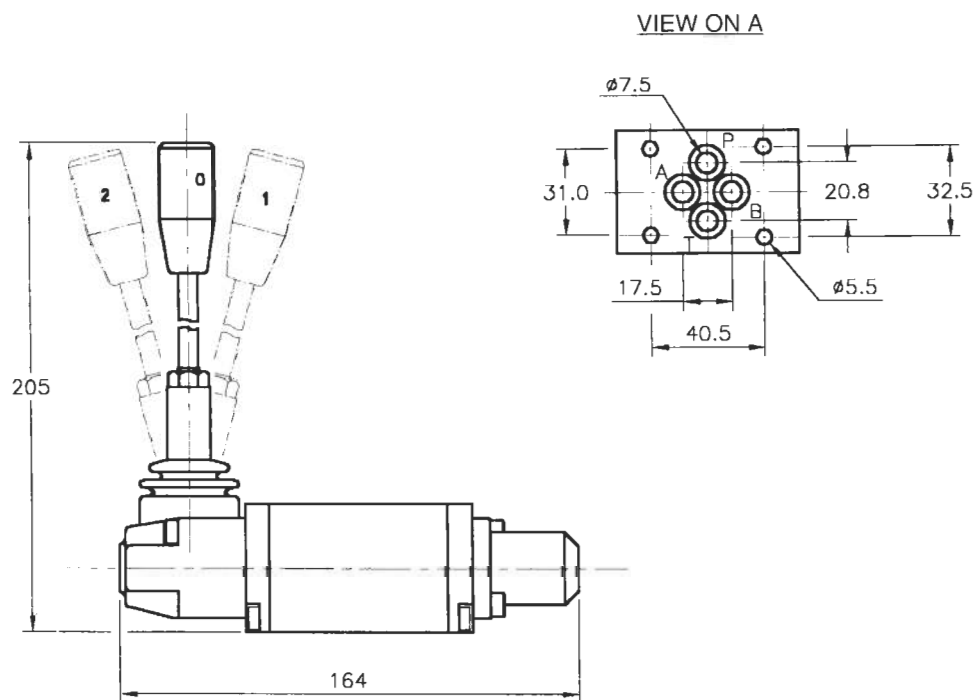


cetop 3 directional valves

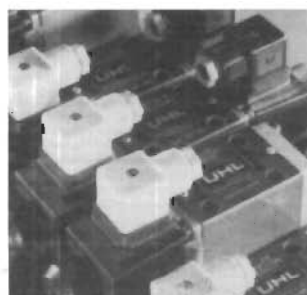
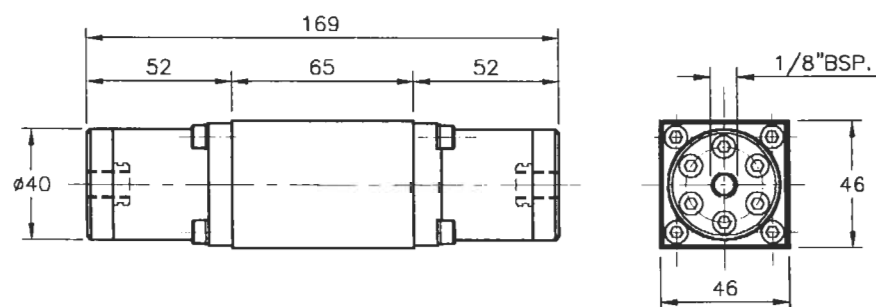
UH3 - S



UH3 - L

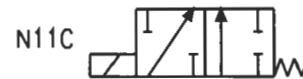
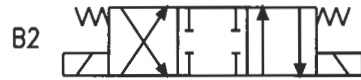
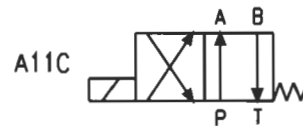
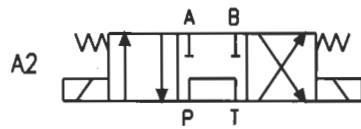


UH3 - P



cetop 3 directional valves

SPOOLS



ORDERING CODE

U3 — S — A2 — 110/50 — 3M

VALVE SIZE — CETOP 3

VALVE TYPE —
 S — Solenoid 250 bar
 SX — Solenoid 350 bar
 L — Lever
 P — Pilot

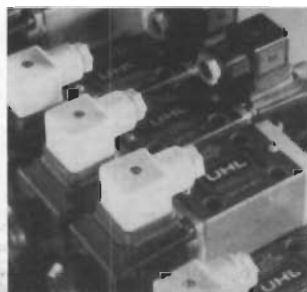
SPOOL TYPE — See Above

LEVER CONTROL
 Omit for solenoid & pilot valve
 3M — 3 pos. spg. ctr
 2M — 2 pos. spg. offset
 3F — 3 pos. detent
 2F — 2 pos. detent

SOLENOID VOLTAGE
 Omit for lever & pilot valve
 240/50
 110/50
 24 dc
 12 dc

SOLENOID CURRENT

	Voltage & Frequency	Inrush	Holding
U3 - S	12 Volts DC.	28 Watts	28 Watts
	24 Volts DC.		
	110 Volts 50 Hz.	V.Amp231	V.Amp64
	220 Volts 50 Hz.		
U3 - SX	12 Volts DC.	28 Watts	28 Watts
	24 Volts DC.		
	110 Volts 50 Hz.	28 Watts	28 Watts
	220 Volts 50 Hz.		



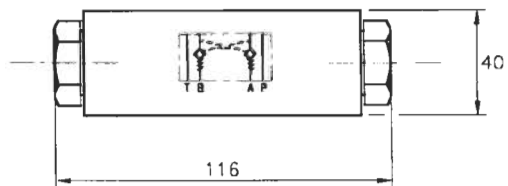
cetop 3 modules

UH3 - NR/AB

Double pilot operated check valve.

UH3 - NR/A

Single pilot operated check valve port A.



UH3 - RV/P

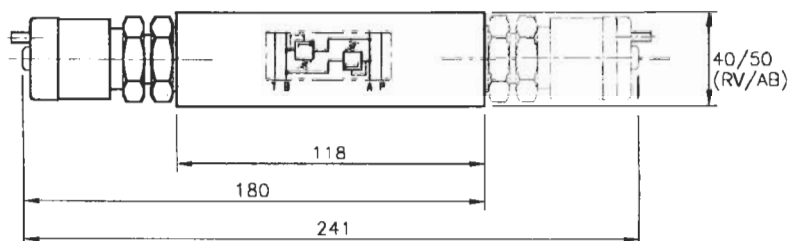
Pressure relief valve P to T

UH3 - RV/A

Pressure relief valve A to T

UH3 - RV/AB

Cross line relief valve

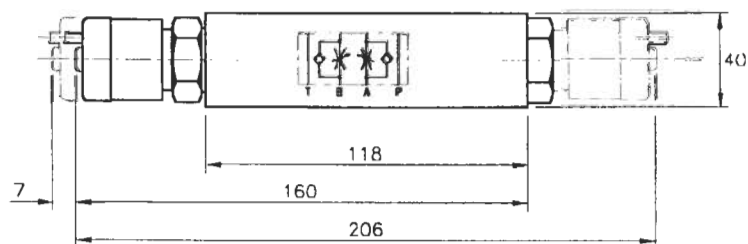


UH3 - F/A

Flow control meter out A

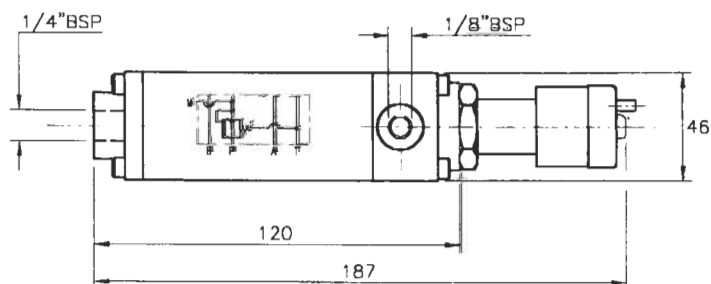
UH3 - F/AB

Flow control meter out A and B



UH3 - PRM

Pressure reducer port P



UH3 - PS/A

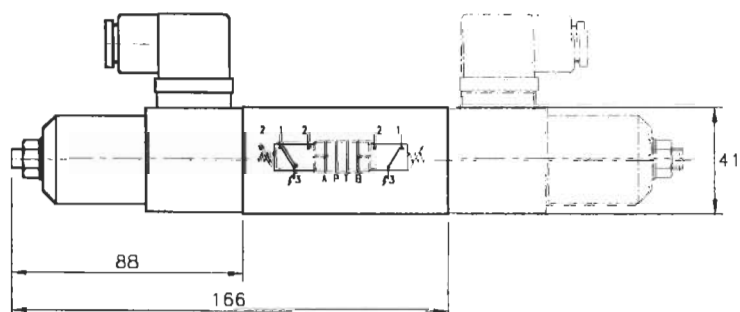
Pressure switch A port

UH3 - PS/AB

Pressure switch A and B port

UH3 - PS/P

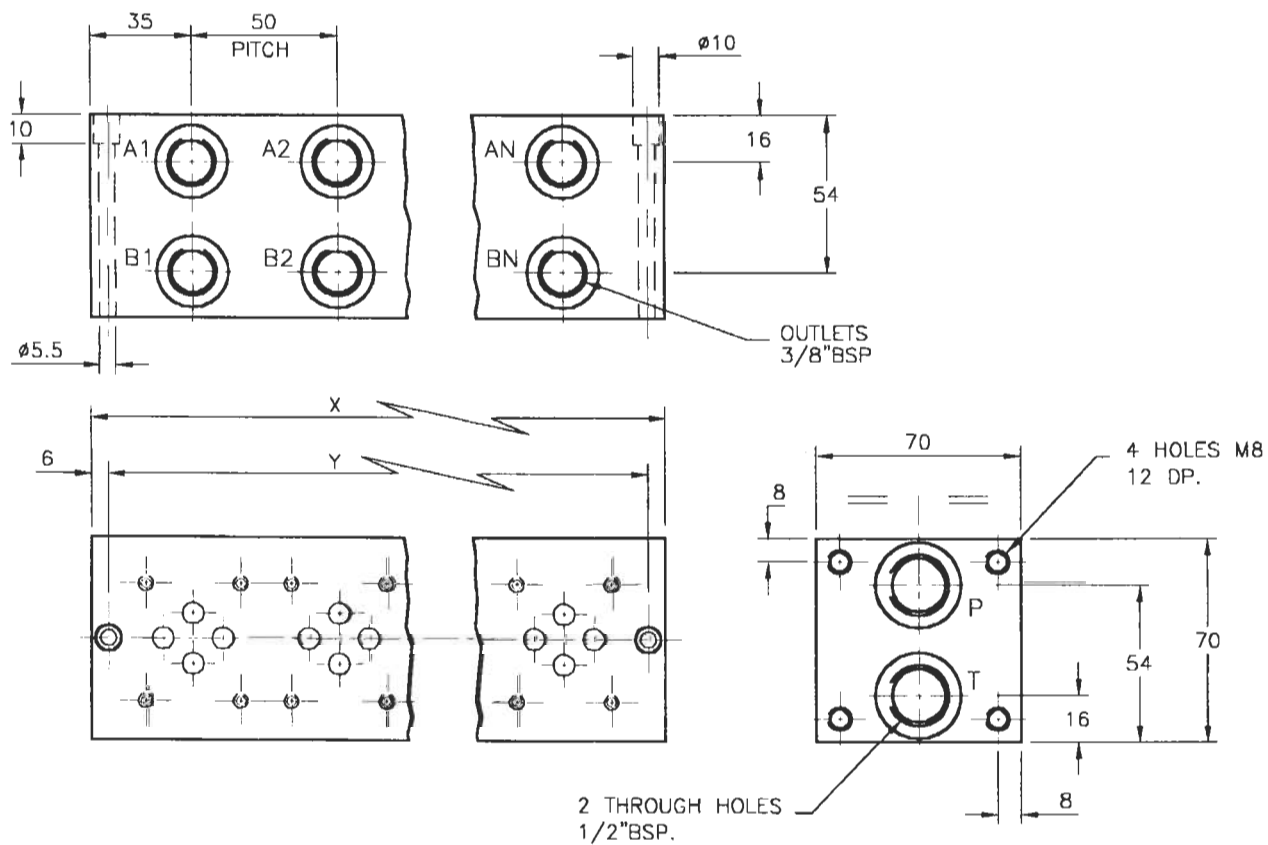
Pressure switch P port



cetop 3 manifolds

UH3 - M/NO. OF STATIONS (MAX.8)

Manifold parallel

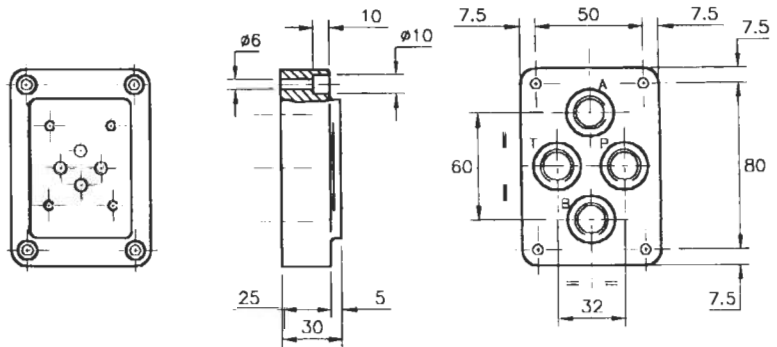


Type	X	Y
UH3 - M/2	120	108
UH3 - M/3	170	158
UH3 - M/4	220	208
UH3 - M/5	270	258
UH3 - M/6	320	308
UH3 - M/7	370	350
UH3 - M/8	420	408

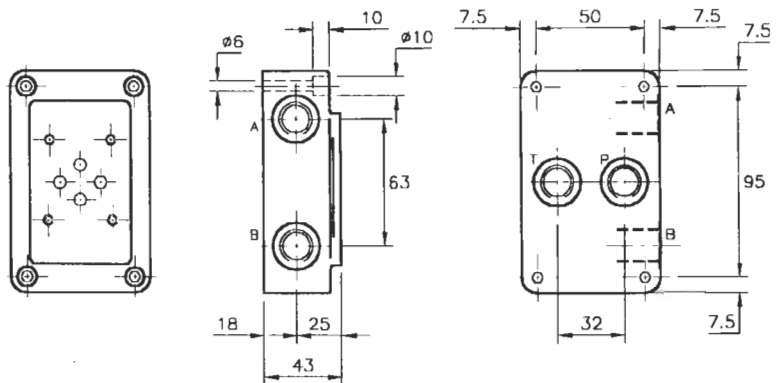


cetop 3 subplates

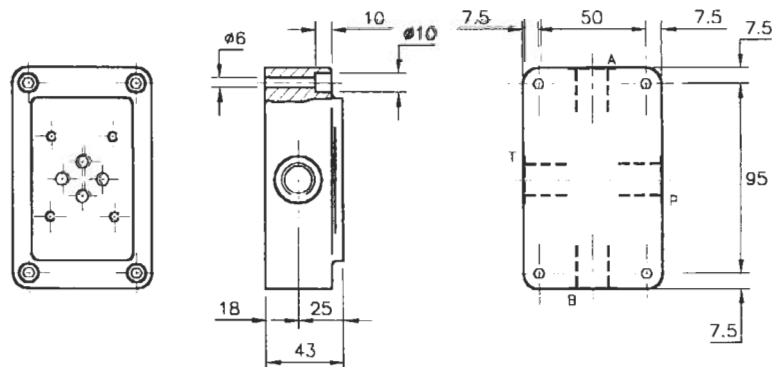
UH3 - 20
Rear entry.
3/8" bsp



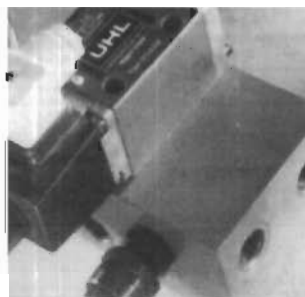
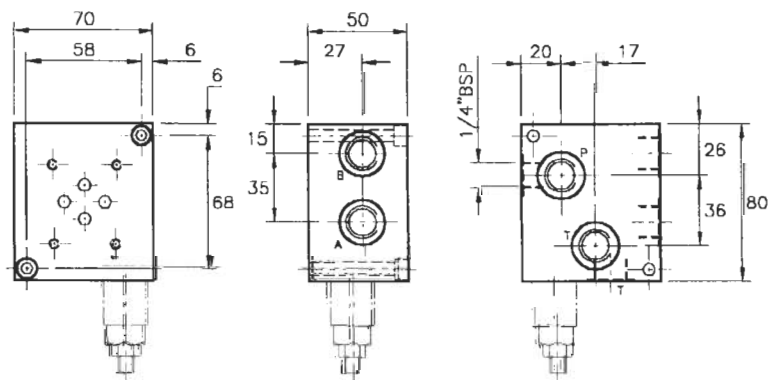
UH3 - 21
Side and rear entry
3/8" bsp



UH3 - 21/LAT
Side entry.
3/8" bsp

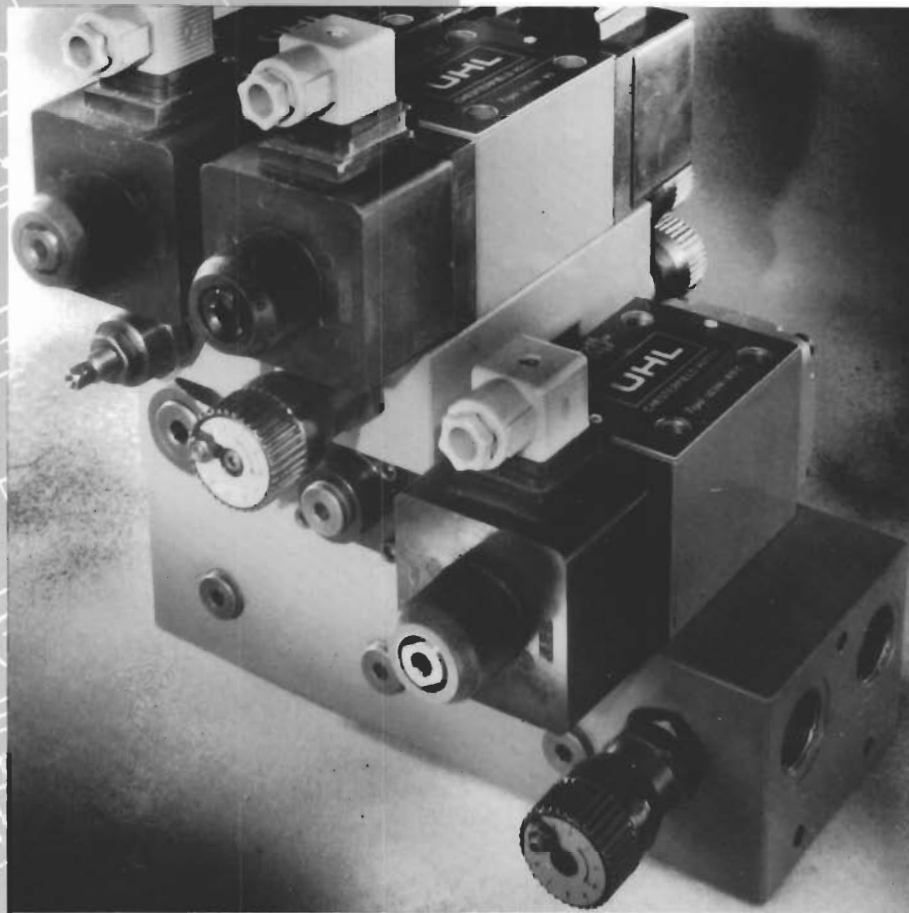


UH3 - C3
Side and rear entry.
with intergral
relief valve.
3/8" bsp





Universal CETOP 5 Valves



Flows up to : 90 L/min.

Max. pressures : 250 & 350 Bar.

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Installation Drawings.

Order Code & Spools.

Modules

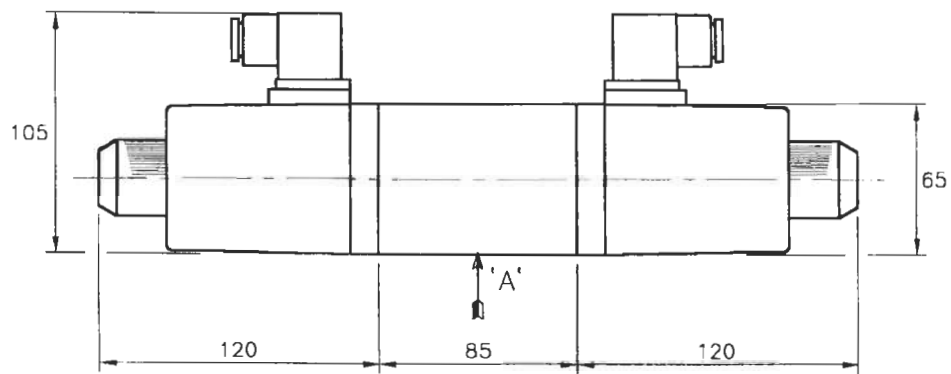
Multi-Station Manifolds.

Single Subplates.



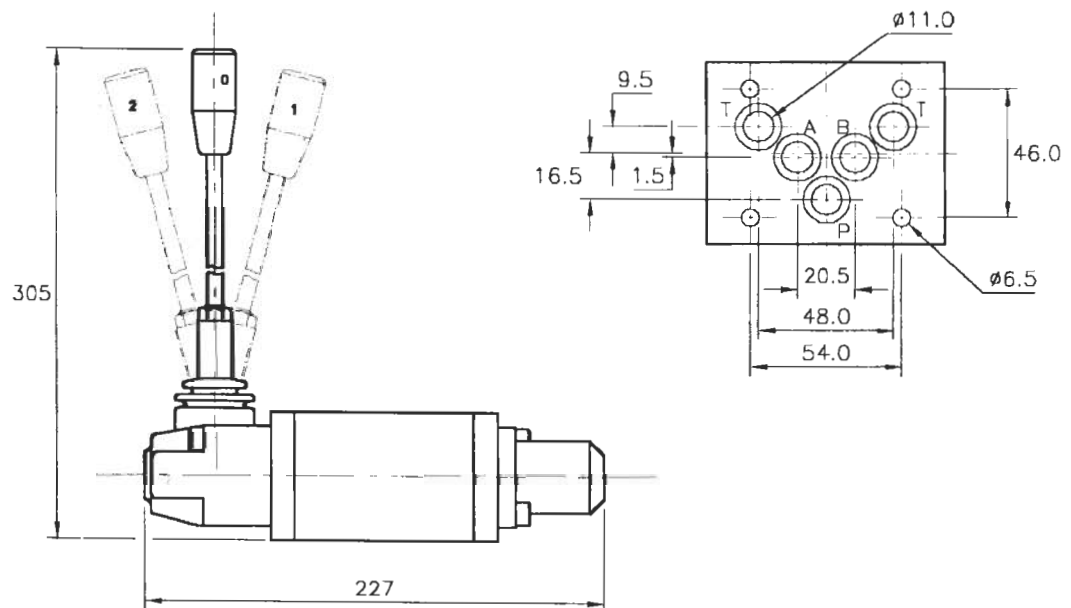
cetop 5 directional valves

UH5 - S

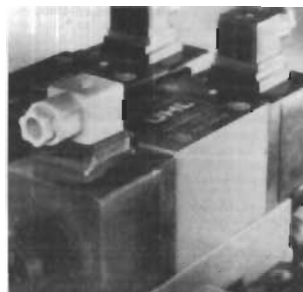
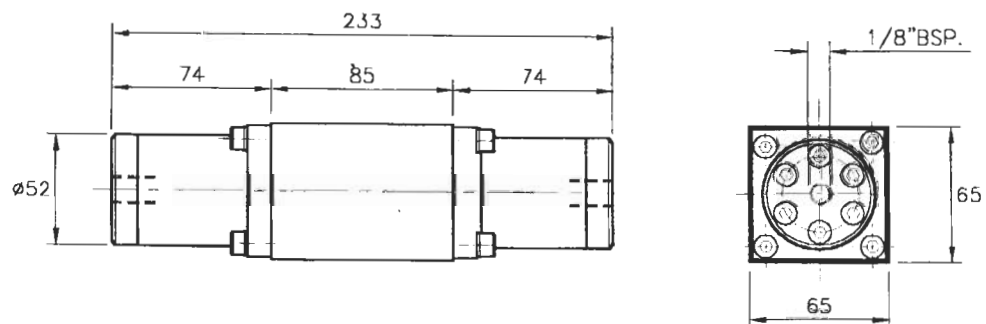


VIEW ON 'A'

UH5 - L

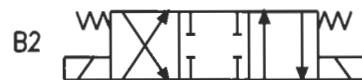
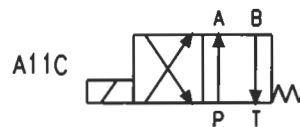
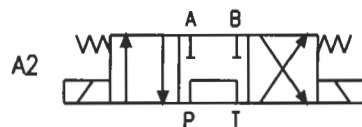


UH5 - P



cetop 5 directional valves

SPOOLS



ORDERING CODE

UH5 — S — A2 — 110/50 — 3M
 VALVE SIZE — CETOP 5
 VALVE TYPE —
 S — Solenoid 250 bar
 SX — Solenoid 350 bar
 L — Lever
 P — Pilot
 SPOOL TYPE — See Above

LEVER CONTROL

Omit for solenoid & pilot valve

3M — 3 pos. spg. ctr
 2M — 2 pos. spg. offset
 3F — 3 pos. detent
 2F — 2 pos. detent

SOLENOID VOLTAGE

Omit for lever & pilot valve

240/50
 110/50
 24 dc
 12 dc

SOLENOID CURRENT

	Voltage & Frequency	Inrush	Holding
UH5 - S	12 Volts DC.	48 Watts	48 Watts
	24 Volts DC.		
	110 Volts 50 Hz. 220 Volts 50 Hz.	V.Amp561	V.Amp121
UH5 - SX	12 Volts DC.	48 Watts	48 Watts
	24 Volts DC.		
	110 Volts 50 Hz. 220 Volts 50 Hz.	48 Watts	48 Watts



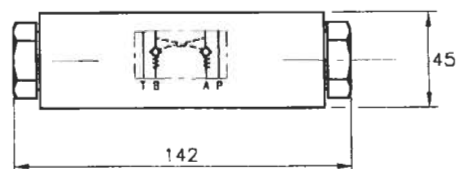
c e t o p 5 m o d u l e s

UH5 - NR/AB

Double pilot operated check valve.

UH5 - NR/A

Single pilot operated check valve port A.



UH5 - RV/P

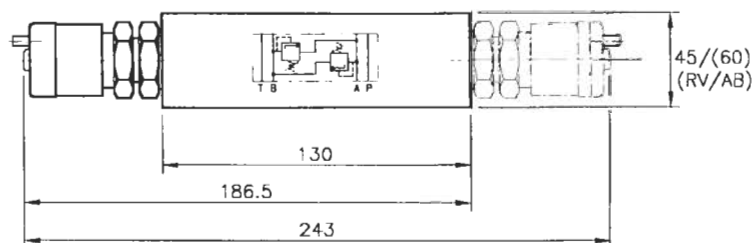
Pressure relief valve P to T

UH5 - RV/A

Pressure relief valve A to T

UH5 - RV/AB

Cross line relief valve

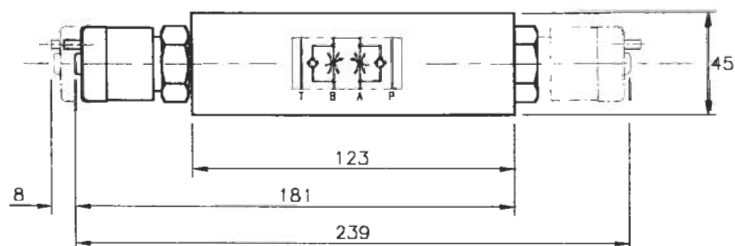


UH5 - F/A

Flow control meter out A

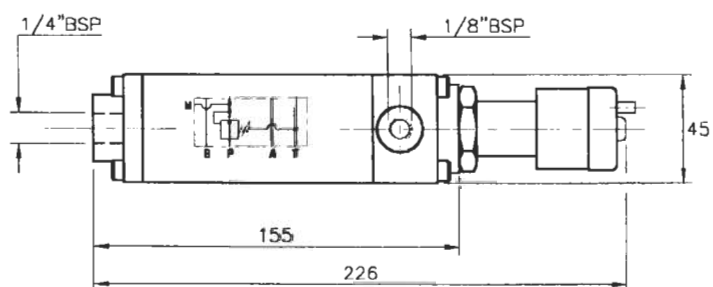
UH5 - F/AB

Flow control meter out A and B



UH5 - PRM

Pressure reducer port P



UH5 - PS/A

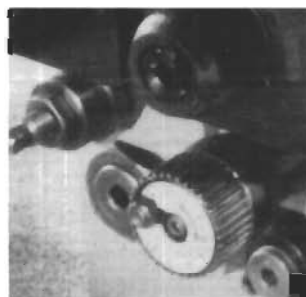
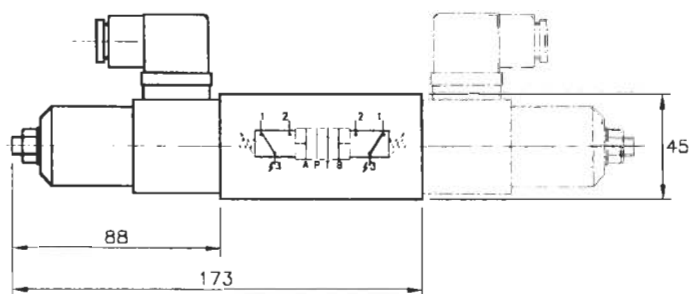
Pressure switch A port

UH5 - PS/AB

Pressure switch A and B port

UH5 - PS/P

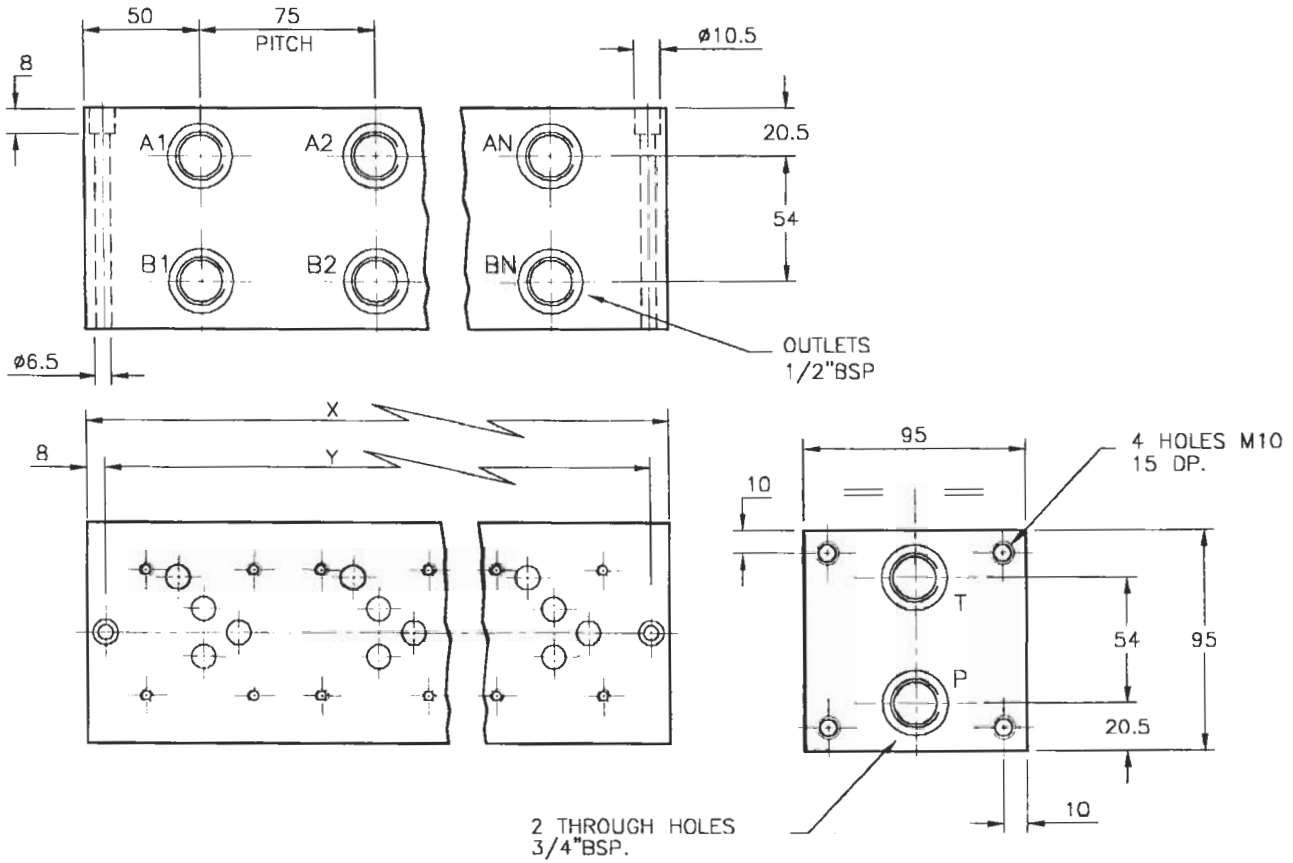
Pressure switch P port



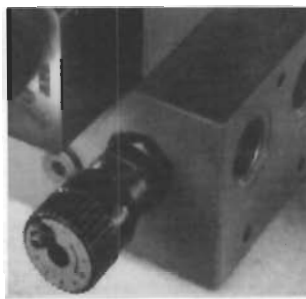
cetop 5 manifolds

UH5 - M/NO. OF STATIONS (MAX.8)

Manifold parallel



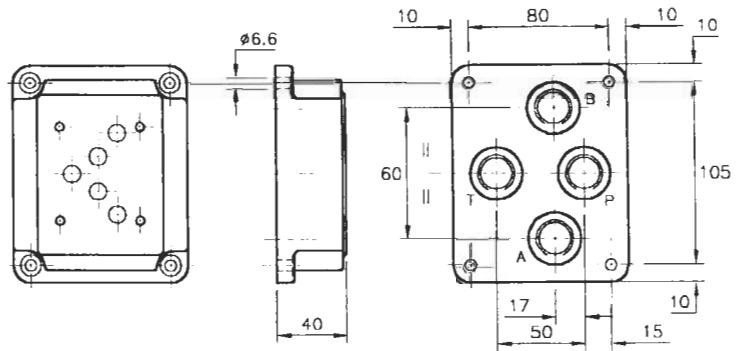
Type	X	Y
UH5 - M/2	175	159
UH5 - M/3	250	234
UH5 - M/4	325	309
UH5 - M/5	400	384
UH5 - M/6	475	459
UH5 - M/7	550	534
UH5 - M/8	625	609



cetop 5 subplates

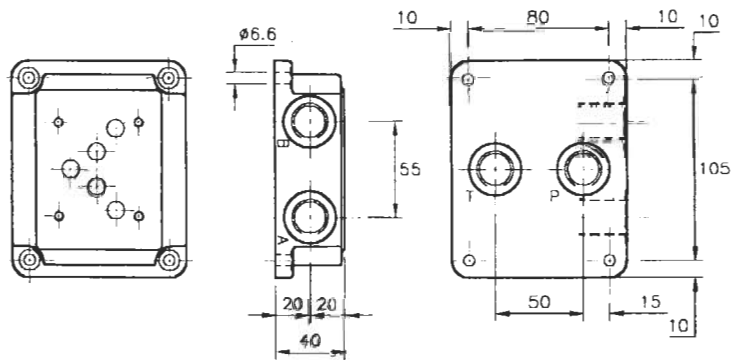
UH5 - 20

Rear entry.
1/2" bsp



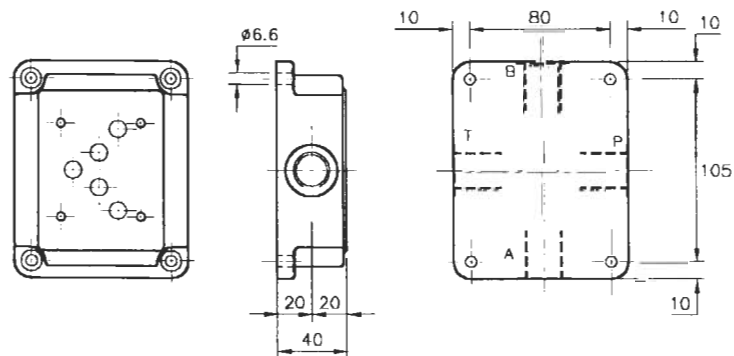
UH5 - 21

Side and rear entry.
1/2" bsp



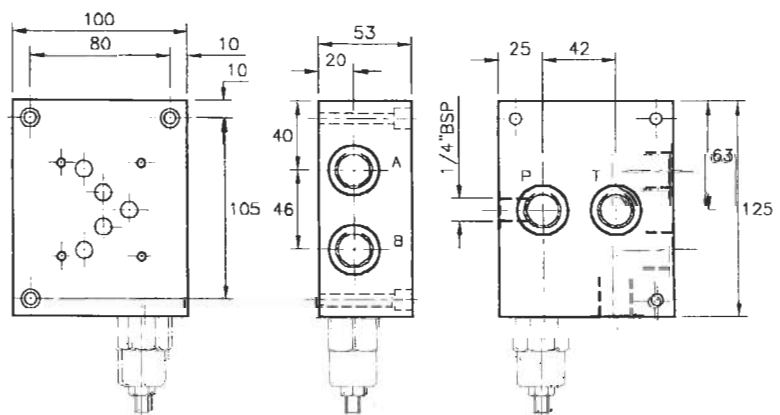
UH5 - 21/LAT

Side entry.
1/2" bsp



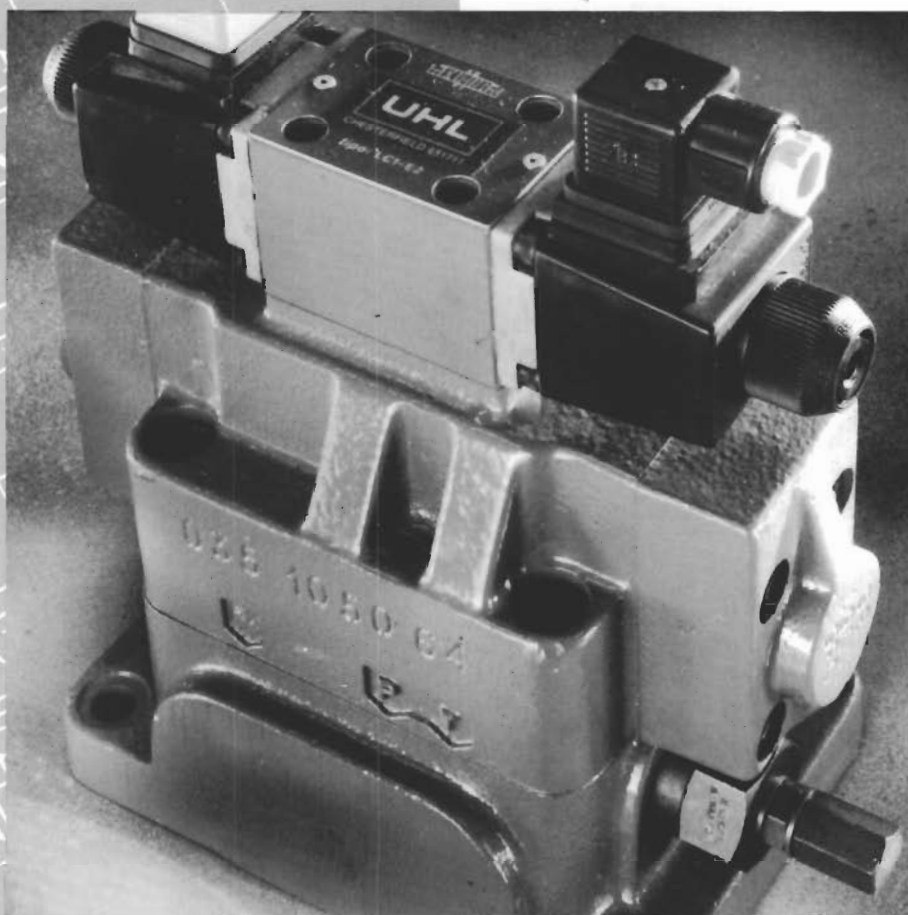
UH5 - C5

Side and rear entry.
with integral
relief valve.
1/2" bsp



UHL

Universal CETOP 7 Valves



Flows up to : 210 L/min.

Max. pressures : 250 & 350 Bar.

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Installation Drawings.

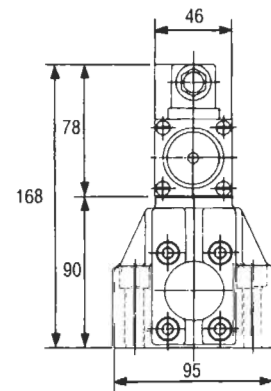
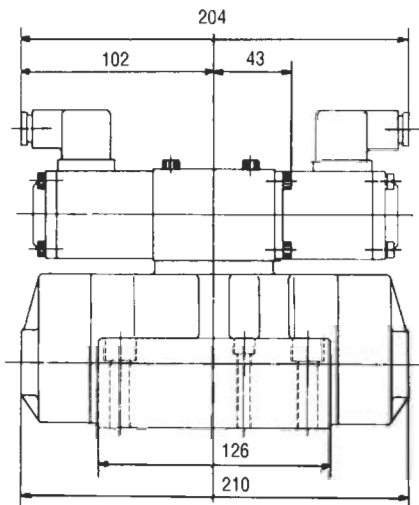
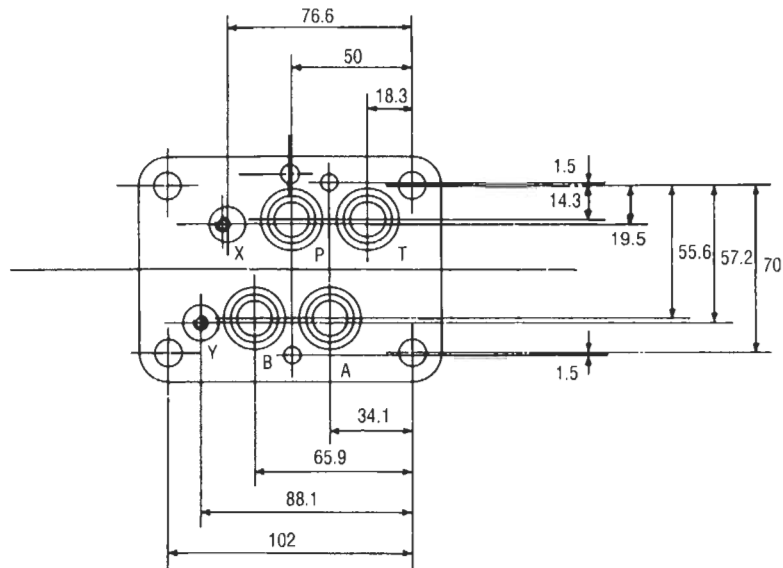
Order Code & Spools.

Subplates.

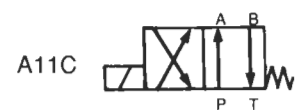


cetop 7 directional valves

UH7-S



SPOOLS



cetop 7 directional valves

ORDERING CODE

UH7 — **S** — **A**2 — 110/50 — **PI** — **DE** — **PCV**

VALVE SIZE — CETOP 7

VALVE TYPE

S — Solenoid 250 bar

SX — Solenoid 350 bar

L — Lever

P — Pilot Operated

SPOOL TYPE — See Above

SOLENOID VOLTAGE

Omit for lever & pilot valve

240/50

110/50

24 dc

12 dc

PCV — Pilot check valve

N — Omit

DRAIN TYPE

DE — External drain

DI — Internal drain

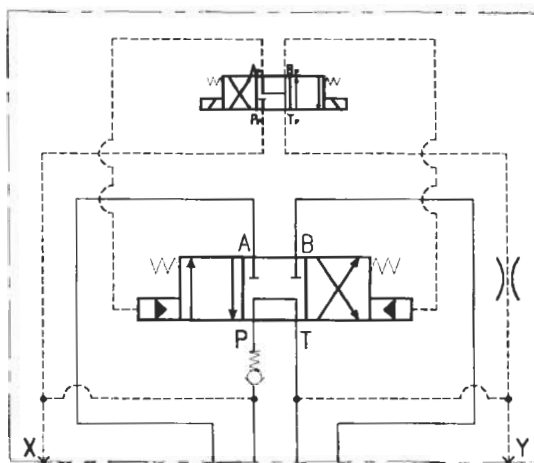
PILOT TYPE

PI — Internal pilot

PE — External pilot

SOLENOID CURRENT

	Voltage & Frequency	Inrush	Holding
UH7 - S	12 Volts DC.	28 Watts	28 Watts
	24 Volts DC.	28 Watts	28 Watts
	110 Volts 50 Hz. 220 Volts 50 Hz.	V.Amp231	V.Amp64
UH7 - SX	12 Volts DC.	28 Watts	28 Watts
	24 Volts DC.	28 Watts	28 Watts
	110 Volts 50 Hz. 220 Volts 50 Hz.	28 Watts	28 Watts



NOTE

Standard valve includes pilot pressure check valve in P port allowing internal pilot, internal drain.

Where required i.e. A2 - C2 - A11S.

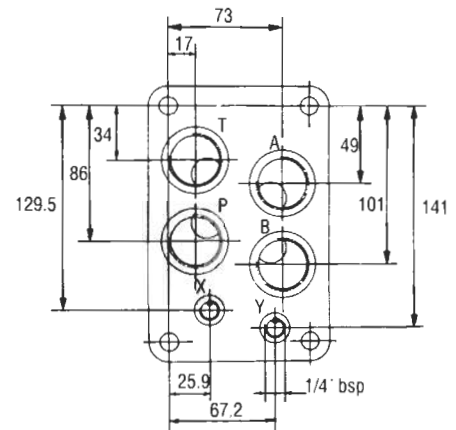
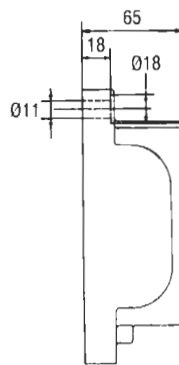
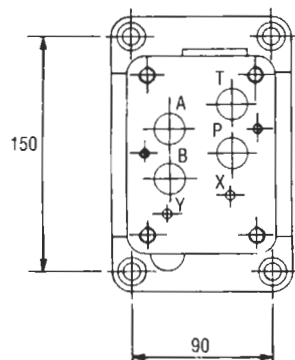
Other configurations available, please consult.



cetop 7 subplates

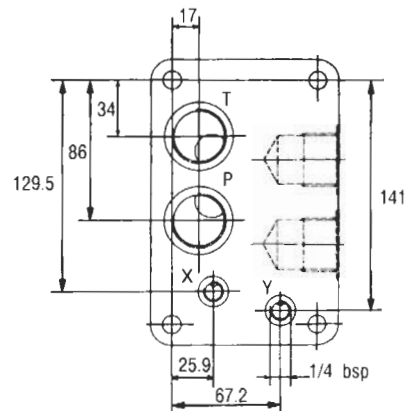
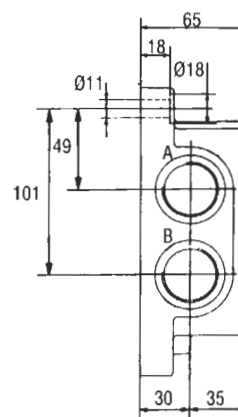
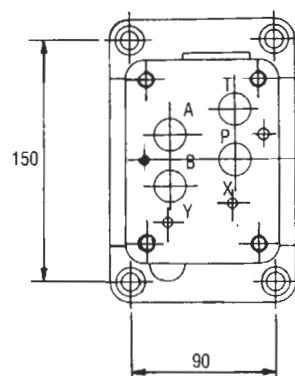
UH7 - 20

Rear entry 1" bsp



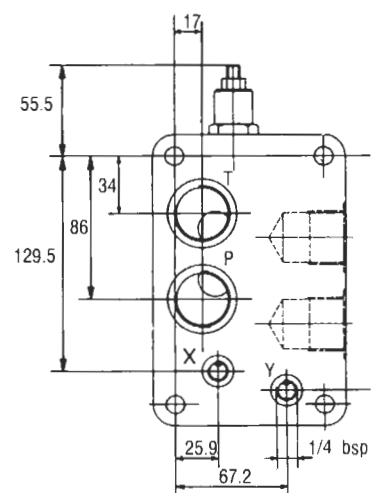
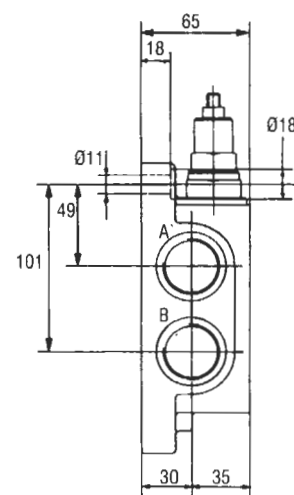
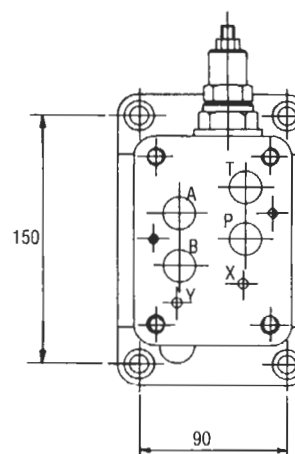
UH7 - 21

Side and rear entry 1" bsp



UH7 - C7

Side and rear entry with integral relief valve 1" bsp





Universal Monoblock Valves



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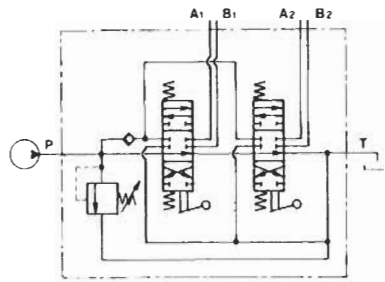
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Installation Details - SD4 & SD5.

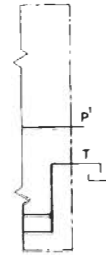
Installation Details - SD11, SD14 & SD18.

Order Code and Options.

monoblock valves

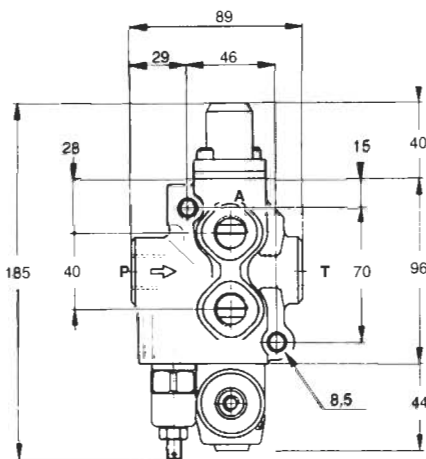


Standard
2 spool valve hydraulic circuit

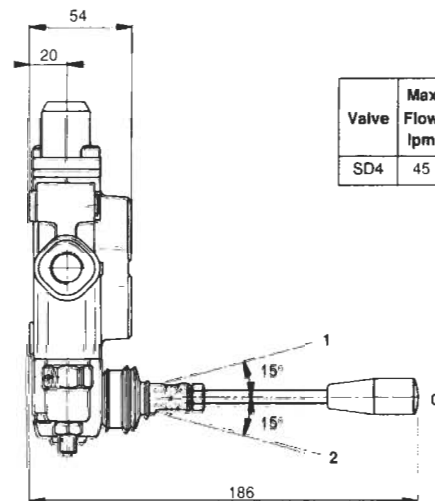


AE
With pressure carry-over

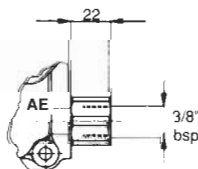
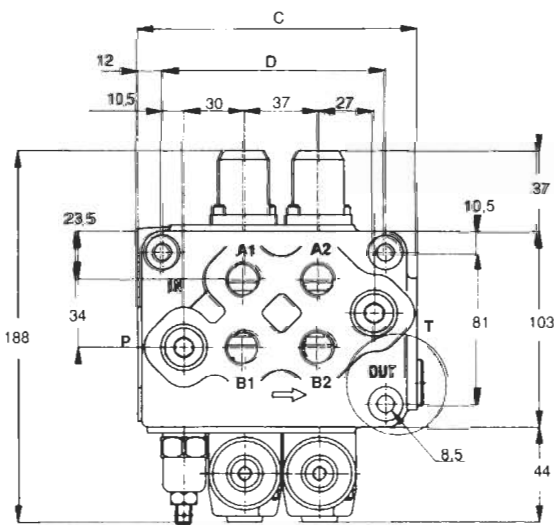
SD4 Ports ABPT – 3/8" bsp



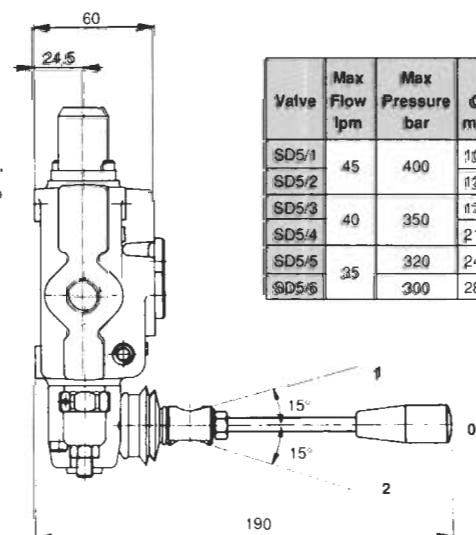
Valve	Max Flow lpm	Max Pressure bar	Weight kg
SD4	45	250	2



SD5 Ports ABPT – 3/8" bsp

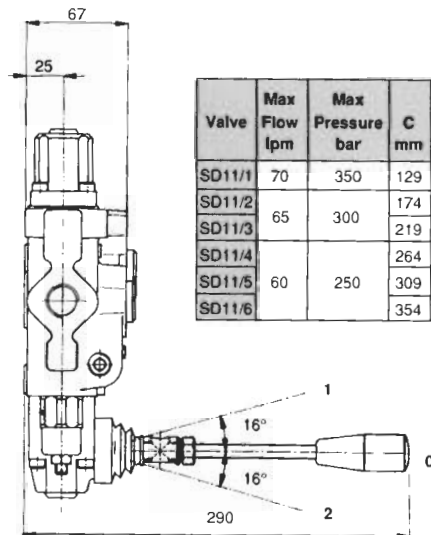
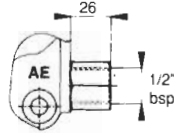
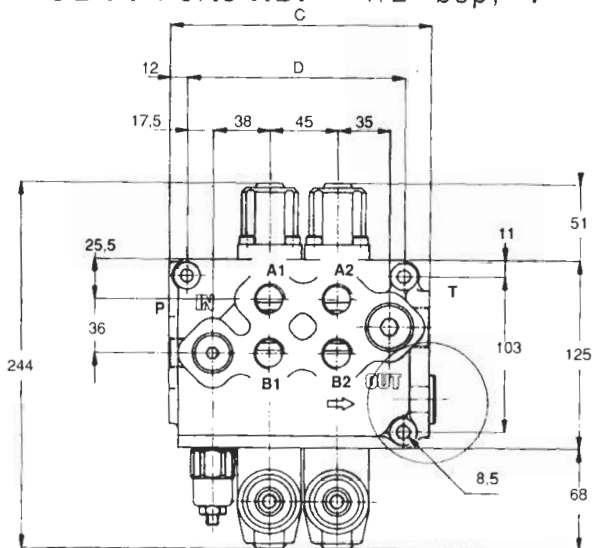


Valve	Max Flow lpm	Max Pressure bar	C mm	Ø mm	Weight kg
SD5/1	45	400	101	73	3
SD5/2	45	400	138	110	4.5
SD5/3	40	350	176	147	6
SD5/4	40	350	212	184	7.5
SD5/5	35	320	249	224	9
SD5/6	35	300	286	258	11



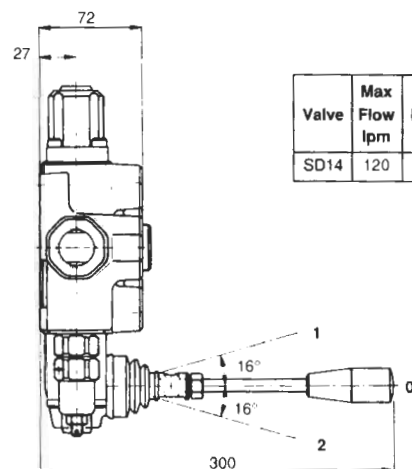
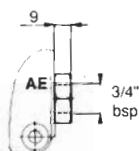
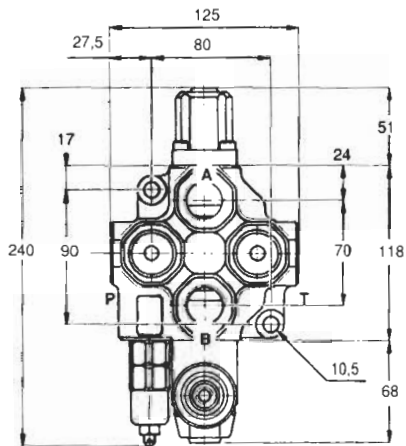
monoblock valves

SD11 Ports ABP – 1/2" bsp, T – 3/4" bsp



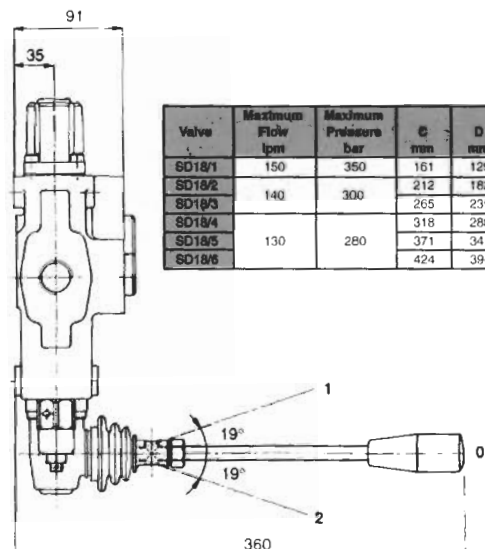
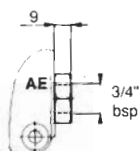
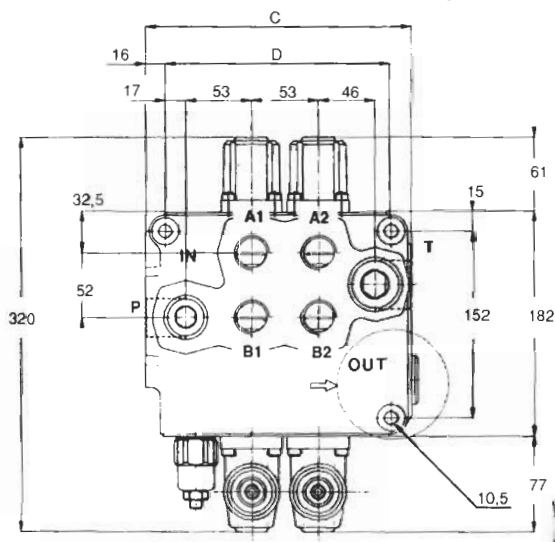
Valve	Max Flow lpm	Max Pressure bar	C mm	D mm	Weight kg
SD11/1	70	350	129	100	6.5
SD11/2			174	145	8.5
SD11/3	65	300	219	190	11
SD11/4			264	235	13.5
SD11/5	60	250	309	280	16.5
SD11/6			354	325	18.5

SD14 Ports ABPT – 3/4" bsp

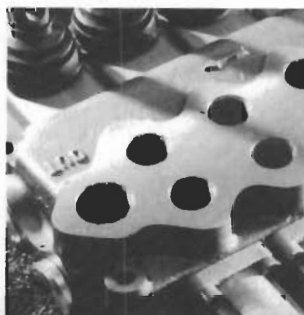


Valve	Max Flow lpm	Max Pressure bar	Weight kg
SD14	120	250	4.5

SD18 Ports ABP – 3/4" bsp, T – 1" bsp



Valve	Maximum Flow lpm	Maximum Pressure bar	C mm	D mm	Weight kg
SD18/1	150	350	161	129	13
SD18/2			212	182	18.5
SD18/3	140	300	265	235	24
SD18/4			318	288	28
SD18/5	130	280	371	341	32
SD18/6			424	394	36



MONOBLOCK VALVES ORDERING CODE - STOCK ITEMS

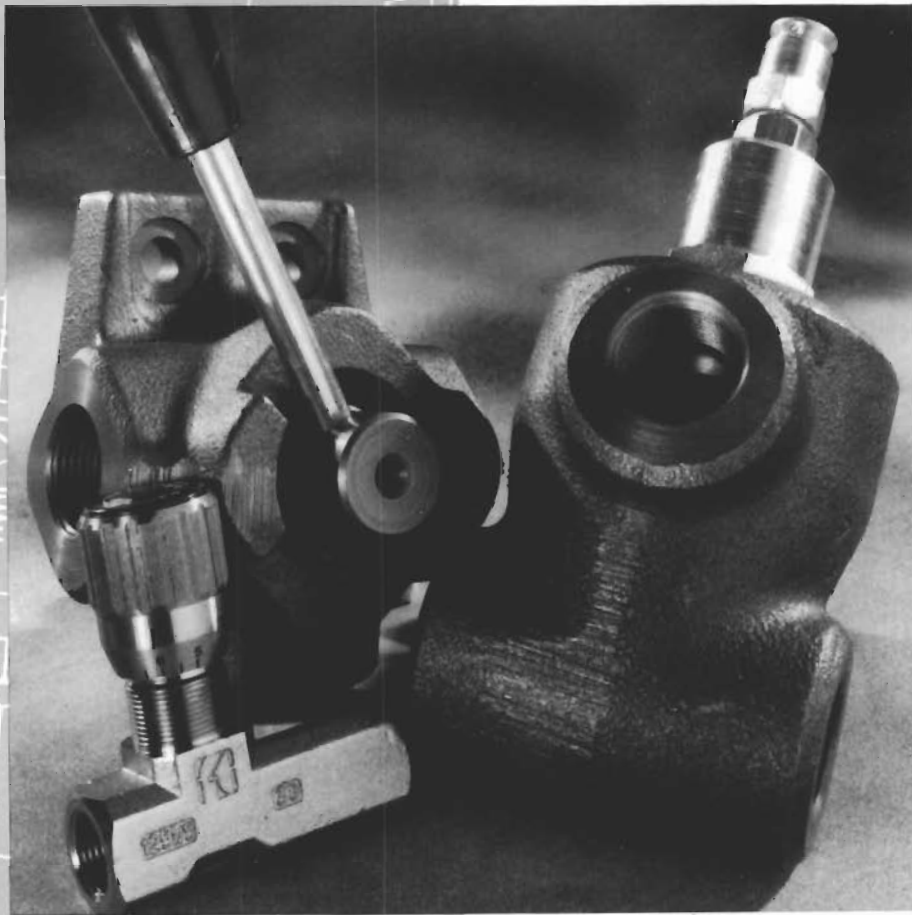
For other options see full technical catalogue

	SD5	/	3	(G3)	/	2	8	L	AE
VALVE SIZE									
SD4 (1 spool only)									
SD5									
SD11									
SD14 (1 spool only)									
SD18									
No. OF SPOOLS									
MAIN RELIEF VALVE									
G1 — Relief Valve 20-40 bar									
G2 — Relief Valve 30-80 bar									
G3 — Relief Valve 50-220 bar									
G4 — Relief Valve 180-350 bar									
SV — No Relief Valve									
SPOOL TYPE									
See Above									
1 — Standard Double Acting									
2 — Motorspool A, B - T									
3 — Single Acting									
Other types available									
SPOOL CONTROL									
8 — 3 Position Spring Centred									
11 — 3 Position Detent									
Other types available									
LEVER TYPE									
L — Standard Lever									
LB — Non-Aluminium Lever (Underground use)									
HIGH PRESSURE CARRYOVER									
Omit if not required									
Not available SD4 and SD14									





Universal Circuit Valves



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Diverter Valves DH.
Ball Valves BV.

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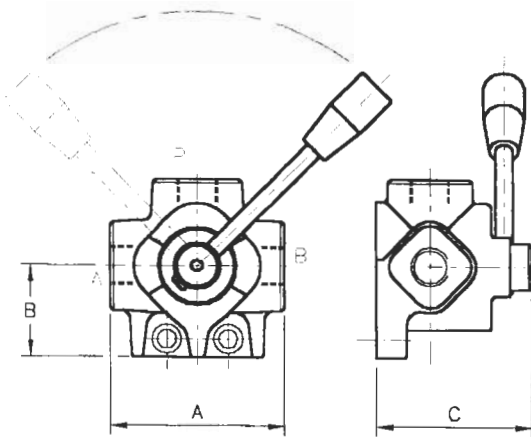
Solenoid Diverter DFE.

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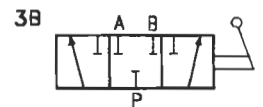
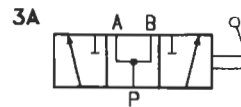
Relief Valve VMP.
Check Valve CV.
Double P.O. Check VBP.

circuit valves

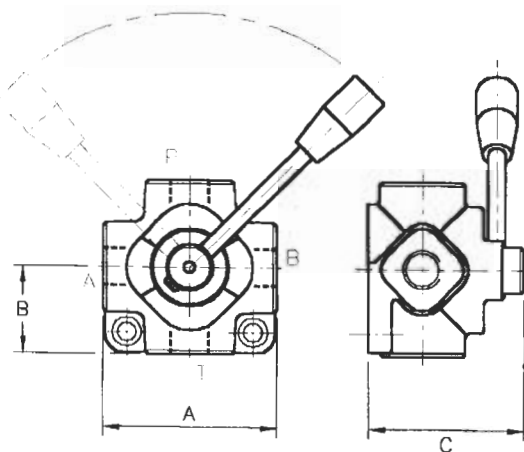
3 - Way Diverter Valve



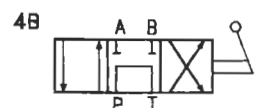
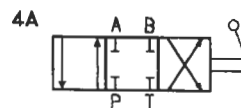
Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm	C mm
DH5	3/8	60	350	70	41	65
DH10	1/2	90	300	85	53	72
DH20	3/4	140	300	90	60	83
DH25	1	200	300	98	70	94
DH35	1-1/2	280	250	130	85	116



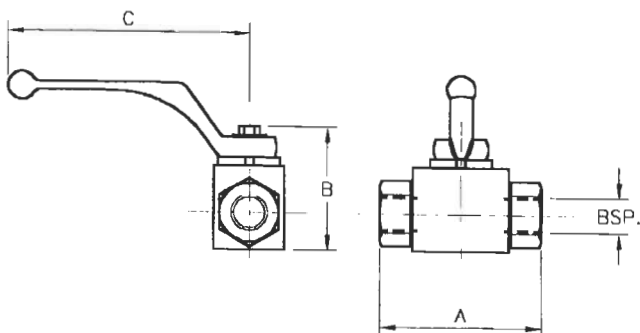
4 - Way Diverter Valve



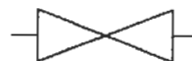
Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm	C mm
DH5	3/8	60	350	78	39	72
DH10	1/2	90	300	94	47	83
DH20	3/4	140	300	100	50	89
DH25	1	200	300	122	56	95



High Pressure Ball Valve

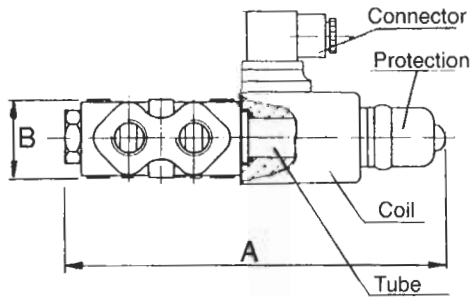


Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm	C mm
BV3	1/4	25	500	69	45	150
BV5	3/8	45	500	72	52	150
BV10	1/2	70	500	83	55	150
BV20	3/4	140	350	95	75	200
BV25	1	180	350	113	78	200
BV30	1-1/4	250	350	120	78	200
BV35	1-1/2	350	350	121	78	200



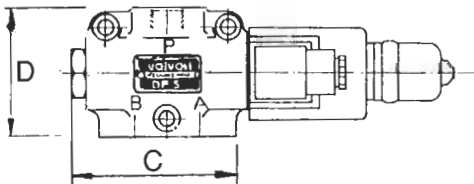
circuit valves

DFE ... / 3 - Solenoid Diverter Valve

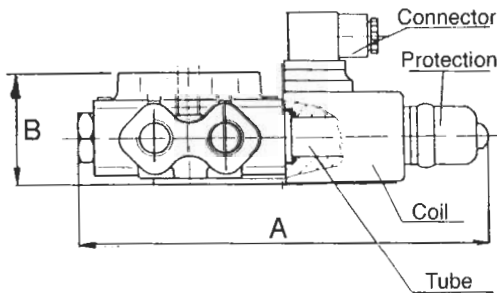


Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm	C mm	D mm
DFE5	3/8	30	250*	184	42	78	70
DFE10	1/2	60	250*	214	46.5	85.5	76
DFE20	3/4	110	250*	241	57	110	85

*With draining

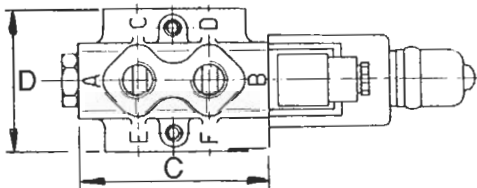


DFE ... / 6 - Solenoid Diverter Valve

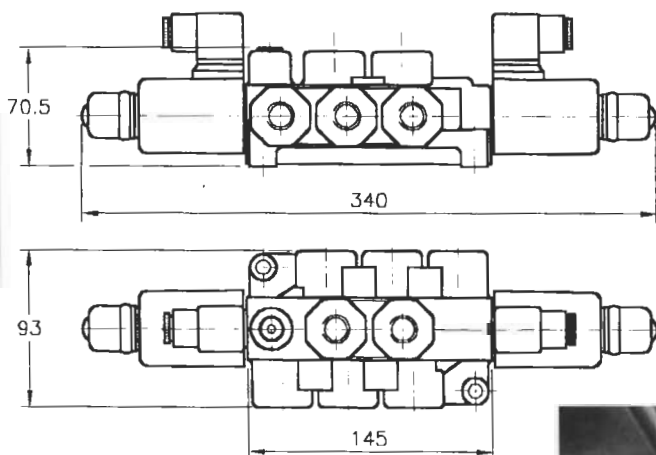


Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm	C mm	D mm
DFE5	3/8	30	250*	198	55	92.5	76
DFE10	1/2	60	250*	241	62	112	88.5
DFE20	3/4	110	250*	262	75	145.5	106

*With draining

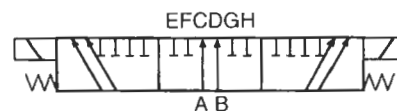


DFE 5/8 - Solenoid Diverter Valve



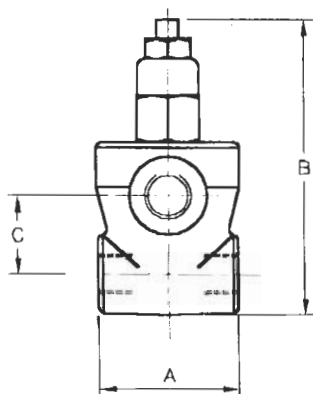
Valve	bsp	Maximum Flow lpm	Maximum Pressure bar
DFE5/8	3/8	30	250*

*With draining



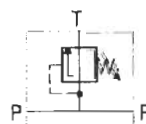
circuit valves

VMP / 3 / G3 Inline Relief Valve



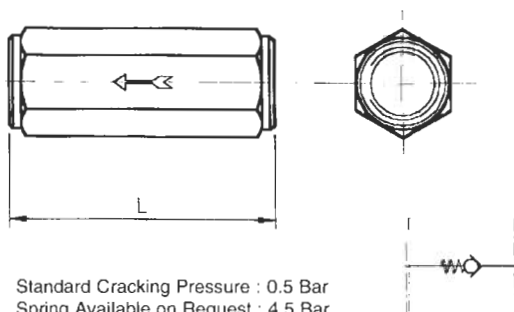
Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm	C mm
VMP5	3/8	40	350	50	113	28
VMP10	1/2	70		60	136	41
VMP20	3/4	120		80	165	52
VMP25	1	220		92	207	60

Relief Valve Springs



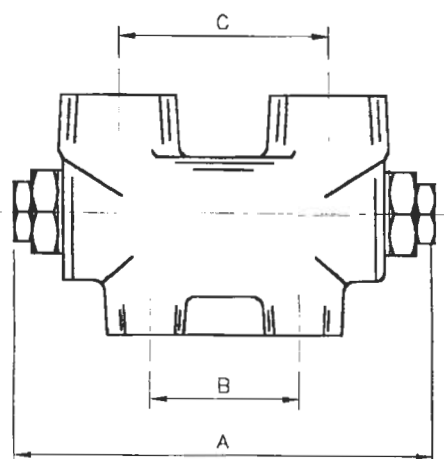
Spring Code	Pressure Range bar
G1	20-40
G2	30-80
G3	50-220
G4	180-350

CV - Inline Check Valve



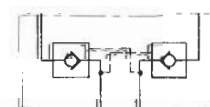
Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	L mm	A/F mm
CV3	1/4	25	450	55	19
CV5	3/8	40	400	65	24
CV10	1/2	65	350	72	28
CV20	3/4	100	300	84	36
CV25	1	150	300	102	46
CV30	1-1/4	250	250	130	55
CV35	1-1/2	350	250	147	60

VBP - Double Pilot Operated Check Valve



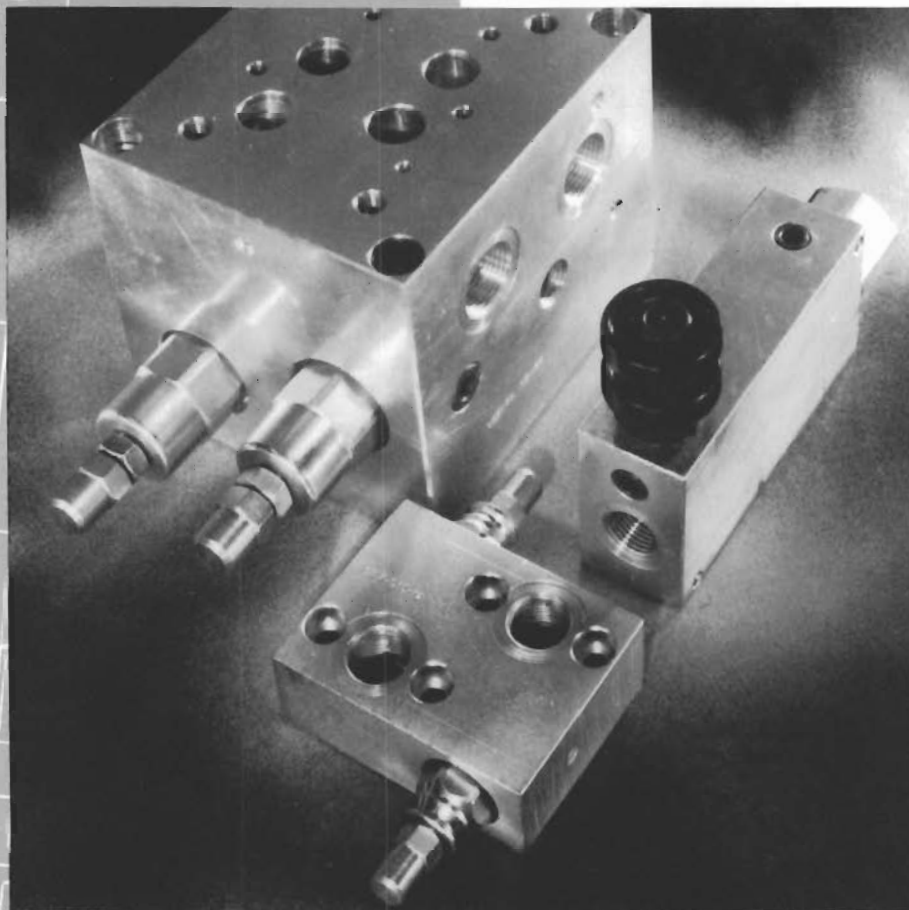
Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm	C mm
VBP5	3/8	40	320	123	34	60
VBP10	1/2	70	300	128	36	73
VBP20	3/4	120	250	173	52	85

Pilot ratio 1:3



UHL

Universal Cartridge Valves



Page 44 -

Inline Relief Valve VMP/BL.
Double Cross Line Relief Valve VAIL.
Sequence Valve VDSRL.

Page 45 -

Dual Overcentre Valve VODL.
Face Mounted Double P.O. Check Valve VBPD/F.

Page 46 -

Face Mounted Unloader Valve VEP/C.
Unloader Valve VEP.

Page 47 -

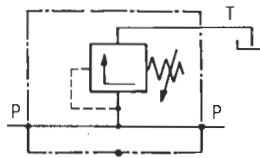
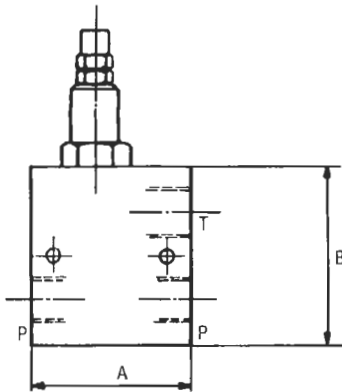
50 - 50 Flow Divider.
Priority Flow Control Valve VPR/T.
Priority Flow Control Valve VPR/P.

Page 48 -

Hose Burst Valve VB.
Flow Control Valve FT & VSR.
Solenoid Check Valve VE.

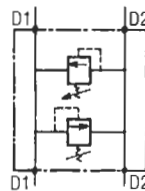
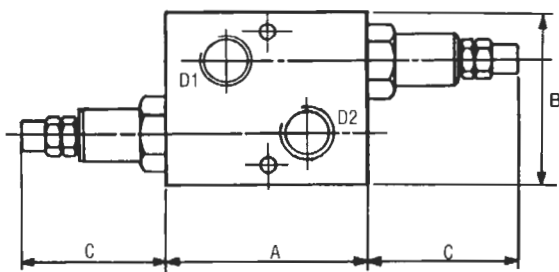
relief and sequence

VMP/BL/ . . Inline Relief Valve



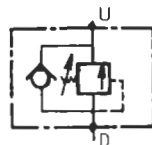
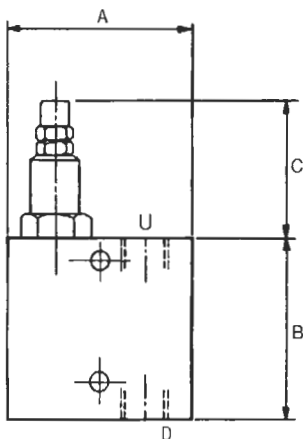
Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm
VMP/BL/5	3/8	40	350	60	70
VMP/BL/10	1/2	70		70	78
VMP/BL/20	3/4	120		70	100
VMP/BL/25	1	220		85	120

VAIL/ . . Double cross line relief valve



Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm	C mm
VAIL/5	3/8	40	350	70	70	60
VAIL/10	1/2	70		90	82	66
VAIL/20	3/4	120		100	95	72
VAIL/25	1	220		120	95	72

VDSRL/ . . Sequence valve with reverse flow check

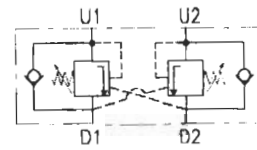
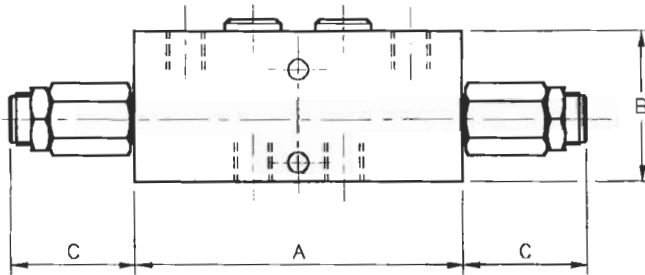


Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm	C mm
VDSRL/5	3/8	40	350	80	70	60
VDSRL/10	1/2	70		90	80	66
VDSRL/20	3/4	120		110	100	72



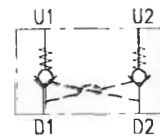
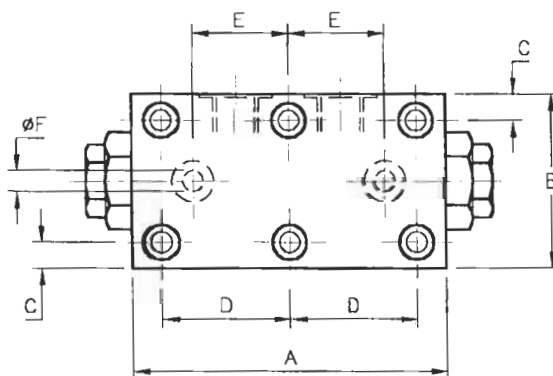
overcentre and p o check

VODL / . . Dual Overcentre Valves



Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm	C mm
VODL/5	3/8	35	210	141	65	52
VODL/10	1/2	60		149	70	54
VODL/20	3/4	75		184	90	66
VODL/25	1	150		218	100	66

VBPD / F . . Facemounted Double Pilot Operated Check Valves



Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm	C mm	D mm	E mm	F mm
VBPD/F/3	1/4	35	210	90	50	7.5	36.5	27.5	5
VBPD/F/5	3/8	50		110	70	15	40	32.5	7
VBPD/F/10	1/2	50		110	70	15	40	32.5	7
VBPD/F/20	3/4	100		165	90	20	67.5	52.5	14



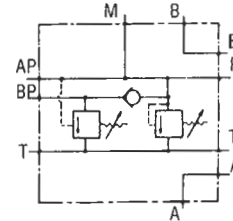
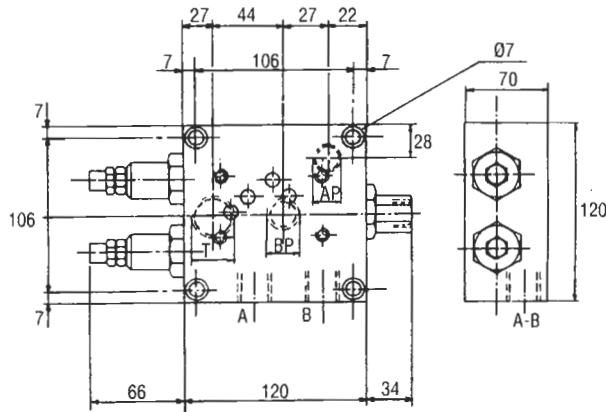
relief / unloader

Relief/Unloader valves – high/low pressure

VEP/C3 – CETOP 3

VEP/C5 – CETOP 5 Illustrated

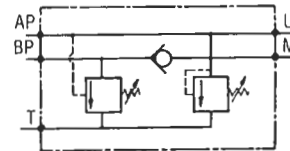
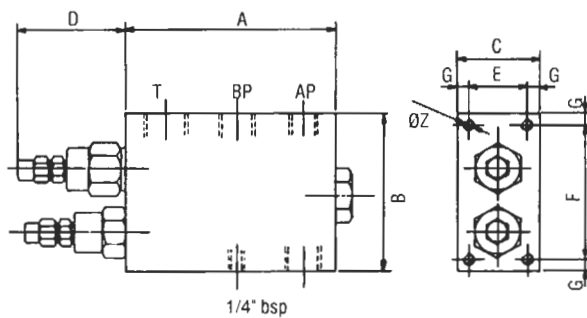
VEP/C7 – CETOP 7



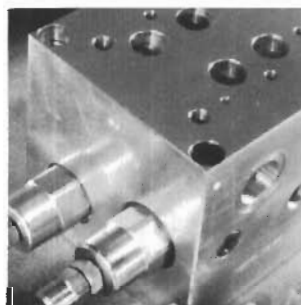
Valve	bsp				Maximum Flow lpm			Pressure Range bar	
	AP	BP	T	A/B	AP	BP	A/B	AP	BP
VEP/C3	1/4	3/8	1/2	3/8	10	25	30	50-220	20-70
VEP/C5	3/8	1/2	3/4	1/2	20	45	55		
VEP/C7	1/2	3/4	1	3/4	30	80	100		

Relief/Unloader valves – high/low pressure

VEP... Inline mounting (reservoir lid fixing)



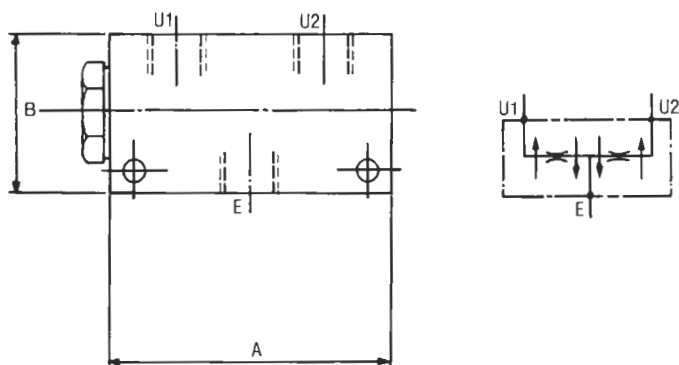
Valve	A	B	C	D	E	F	G	Z	bsp				Maximum Flow lpm			Pressure range bar	
									AP	BP	T	U	AP	BP	U	AP	BP
VEP 5	98	90	40	60	28	78	6	M6	1/4	3/8	1/2	3/8	10	25	30	50-220	20-70
VEP 10	120	100	50	65	38	88	6	M6	3/8	1/2	3/4	1/2	20	45	55		
VEP 20	150	130	60	72	44	114	8	M8	1/2	3/4	1	3/4	30	80	100		
VEP 25	180	150	70	85	50	130	10	M8	3/4	1	1-1/4	1	50	150	180		
VEP 30	200	180	80	85	60	160	10	M8	3/4	1-1/4	1-1/2	1-1/2	80	200	250		



flow divider, priority valves

VDFR / . . 50-50 Flow divider/combiner

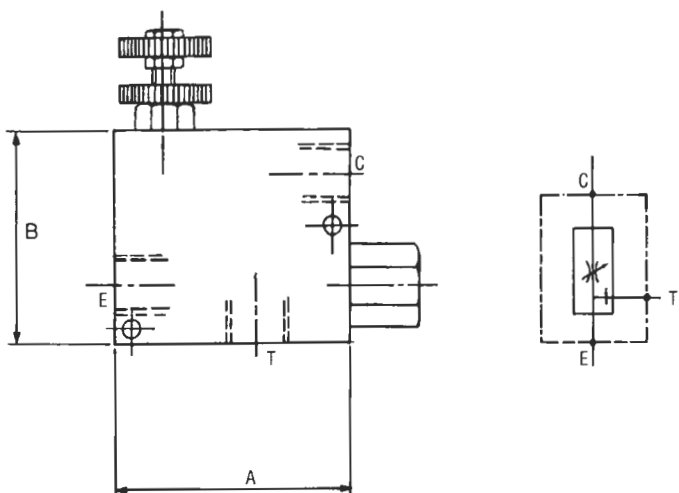
Line mounted – pressure compensated – maximum pressure 210 bar



Valve	E bsp	U ¹ U ² bsp	Flow lpm Min/Max	A mm	B mm
VDFR/5/12	3/8	3/8	4/12	115	60
VDFR/5/24	3/8	3/8	12/24	115	60
VDFR/10	1/2	3/8	24/40	115	60
VDFR/20	3/4	1/2	40/90	160	80
VDFR/25	1	3/4	90/150	160	80

VPR/T/ . . Priority flow control valve – maximum pressure 210 bar

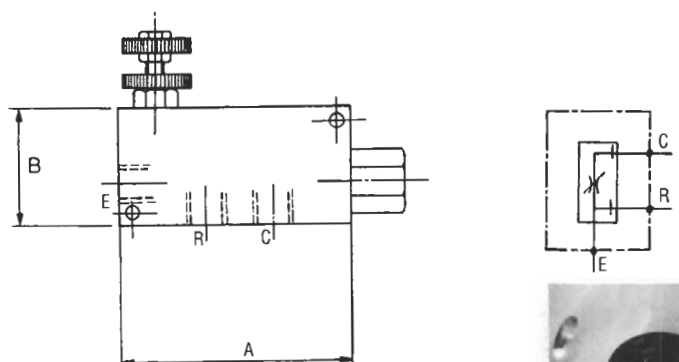
Line mounted – pressure compensated – excess flow to tank



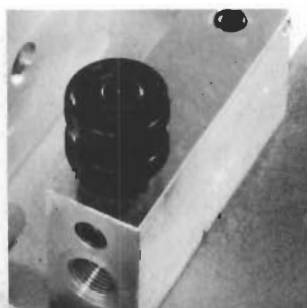
Valve	bsp	Max Flow lpm		A mm	B mm
		E	C		
VPR/T/5	3/8	50	30	90	90
VPR/T/10	1/2	90	50	90	90
VPR/T/20	3/4	150	90	110	110

VPR/P/ . . Priority flow control valve – maximum pressure 210 bar

Line mounted – pressure compensated – excess flow to service

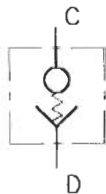
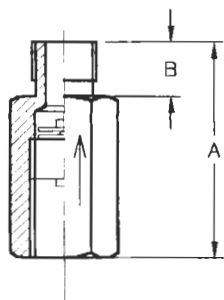


Valve	bsp	Max Flow lpm		A mm	B mm
		E	C		
VPR/P/5	3/8	50	30	130	70
VPR/P/10	1/2	90	50	130	70
VPR/P/20	3/4	150	90	155	90



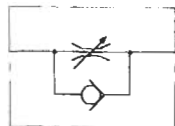
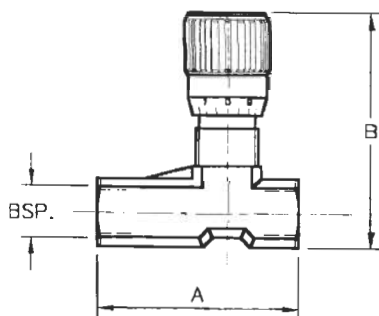
hoseburst, flow control, solenoid check

VB . . Hose Burst Valves

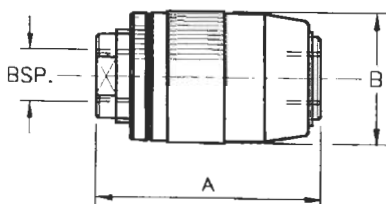


Valve	bsp	Maximum Flow lpm	A mm	B mm
VB3	1/4	25	50	10
VB5	3/8	40	55	14
VB10	1/2	80	70	14
VB20	3/4	150	78	16

FT & VSR - Inline Flow Control Valves



Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm
FT3	1/4	25	210	46	57
FT5	3/8	40	210	55	69
FT10	1/2	60	210	70	82
FT20	3/4	100	400	114	120
FT25	1	150	320	139	150
FT30	1-1/4	250	320	157	157



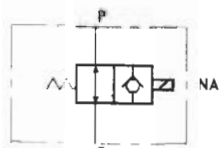
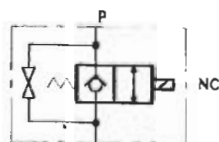
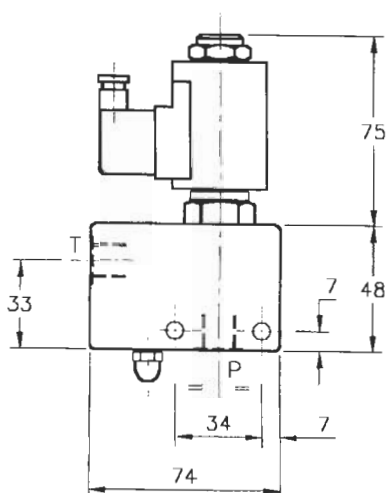
Valve	bsp	Maximum Flow lpm	Maximum Pressure bar	A mm	B mm
VSR3	1/4	25	450	62	35
VSR5	3/8	40	400	72	42
VSR10	1/2	60	350	80	48
VSR20	3/4	100	300	100	55
VSR25	1	150	250	122	66
VSR30	1-1/4	250	250	144	77

VE . . 2 Way Solenoid Operated, Check Valve

/NC normally closed

/NA normally open

all common voltages available



Valve	bsp	Maximum Flow lpm
VE3	1/4	20
VE5	3/8	40
VE10	1/2	60

VE10 Dimensions on request.



Universal Filters and Accessories



Page 50 -

Filler / Air Breather Cap. UH-FB.
Fluid Level Gauge UH - LM.
Suction Strainer UH - MSZ.

Page 51 -

Tank Top Return Line Filter RFM.

Page 52 -

Spin-on Cartridge Filter AMF.

Page 53 -

Pressure Filter HPM.

Page 54 -

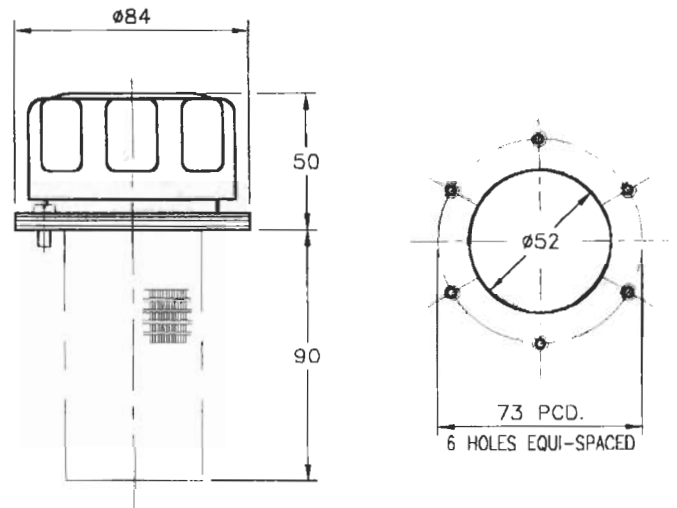
Float Level Switch UH - FLS.
Temperature Switch UH - TS.
Pressure Switch UH - PS.

accessories

UH - FB

Filler / air breather cap

Bayonet type
Strainer basket
40 micron air filter

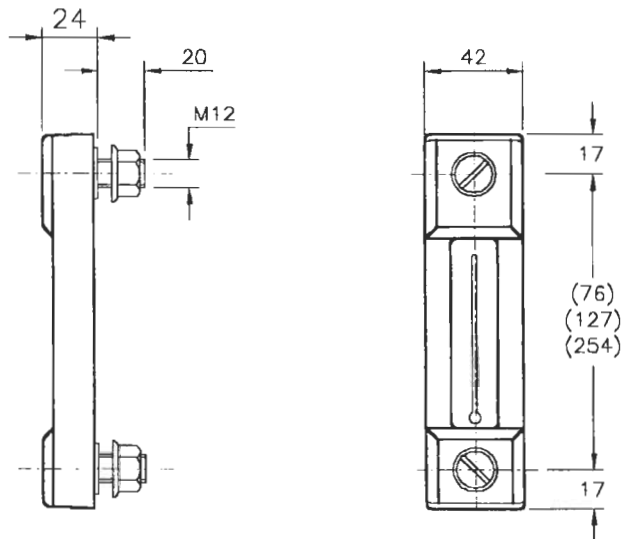


UH - LM - 76T

UH - LM - 127T

UH - LM - 254T

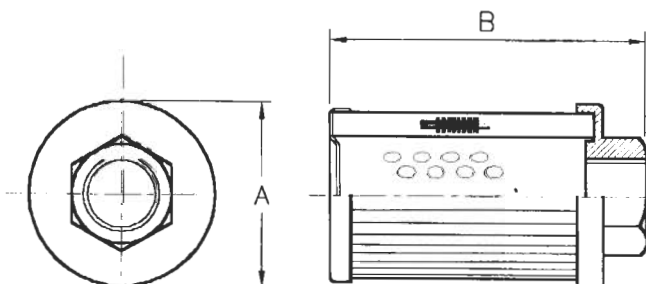
Fluid level gauges with thermometer



UH - MSZ

Suction strainer

125 micron



Part No.	Flow lpm	Thread bsp	A mm	B mm
MSZ101	15	1/2"	46	106
MSZ201	25	3/4"	64	110
MSZ202	50	1"	64	140
MSZ301	95	1 - 1/2"	86	140
MSZ302	130	1 - 1/2"	86	200
MSZ303	180	2"	86	260
MSZ401	225	2"	150	150
MSZ402	350	2 - 1/2"	150	212
MSZ403	500	3"	150	272



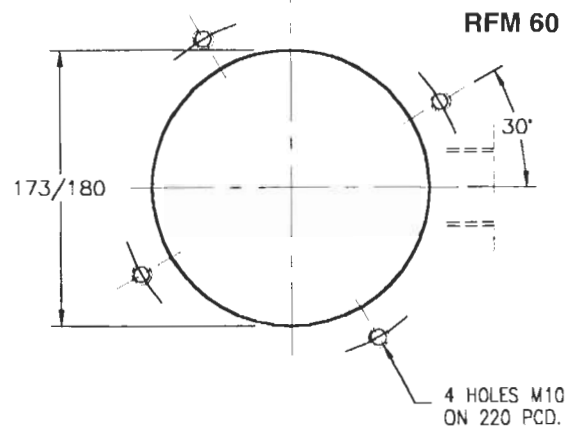
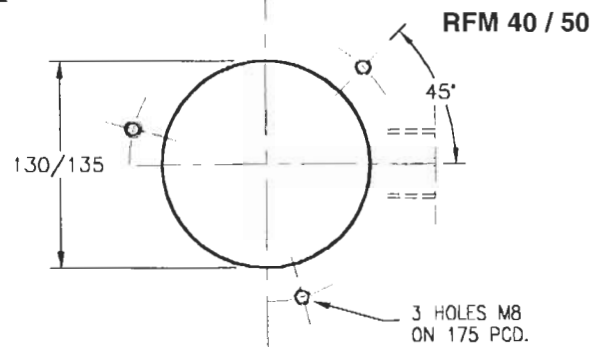
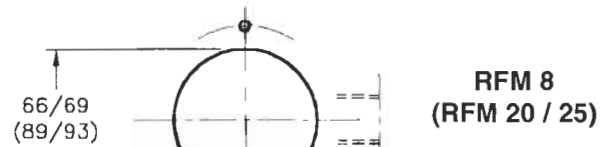
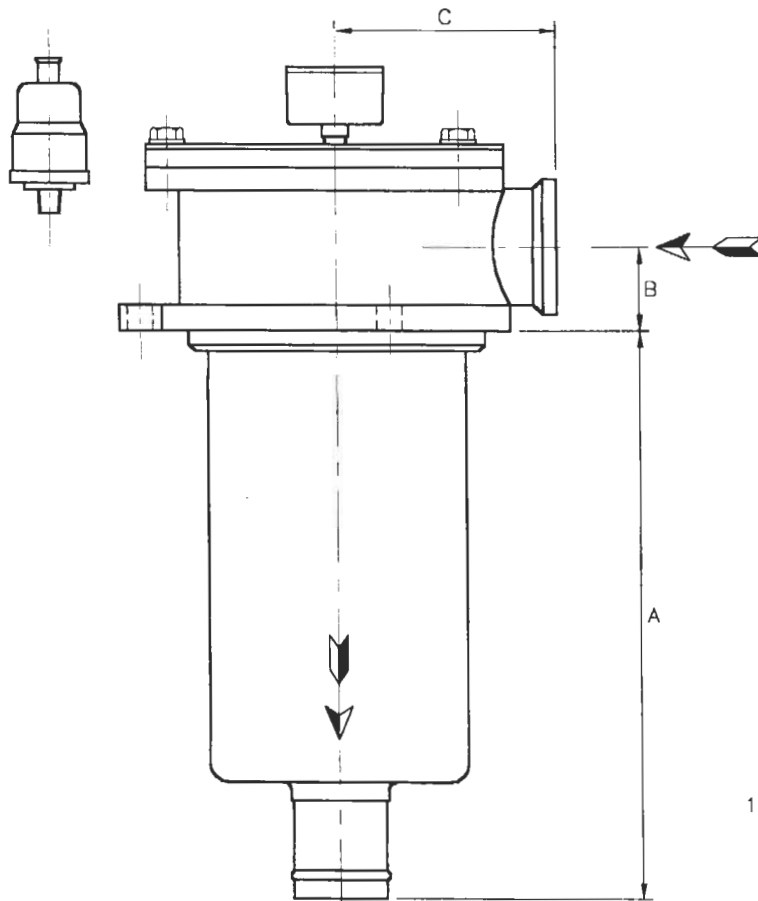
tank - top filter

RFM . . . Return line filter for tank top mounting

Filter element 25 micron phenolic resin impregnated paper

By - pass valve Δp 1.3 bar

Visual and electrical indicators available



ORDERING CODE

RFM 40 - CV - A

FILTER SIZE

8
20
25
40
50
60

INDICATOR

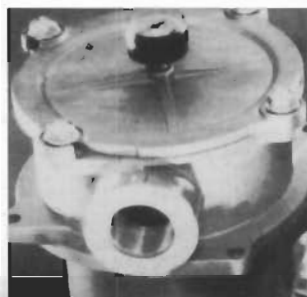
O - None
A - Visual
C - Electrical

ELEMENT

CV - 25 micron paper
CD - 10 micron paper

RFM - Complete filter
RE - Element only

Part No.	Flow lpm	Thread bsp	A mm	B mm	C mm
RFM8	30	1/2"	82	21	50
RFM20	80	3/4"	137	29	67
RFM25	100	1"	137	29	67
RFM40	150	1"	235	35	95
RFM50	180	1 - 1/4"	235	35	95
RFM60	200	1 - 1/4"	166	38	120



spin - on filters

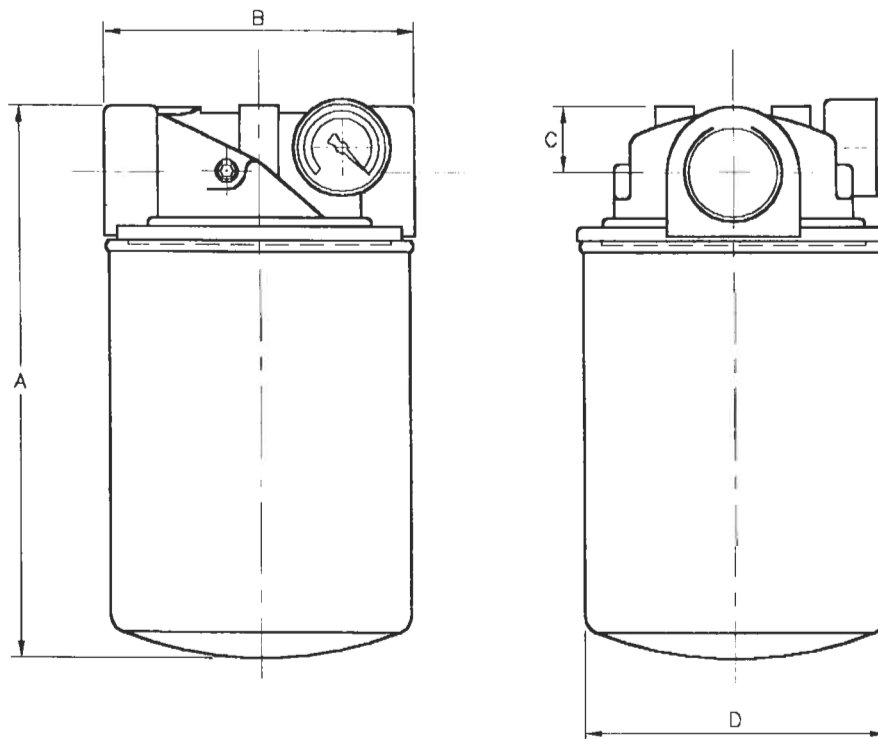
AMF . . . In line spin - on cartridge filters

Filter element 10 or 25 micron phenolic resin impregnated paper

Element interchangeable with other manufacturers

By - pass valve Δp 1.7 bar

Visual and electrical indicators available



Part no.	Thread bsp	Flow lpm		A mm	B mm	C mm	D mm
		CV	CD				
AMF151	3/4"	70	45	185	95	20	97
AMF301	1-1/4"	180	120	246	133	28	129

ORDERING CODE

AMF	151	-	CV	-	A
	FILTER SIZE				INDICATOR
	see table				O - None
					A - Visual
					C - Electrical

ELEMENT
CV - 25 micron paper
CD - 10 micron paper

AMF - Inline
CA - Element only



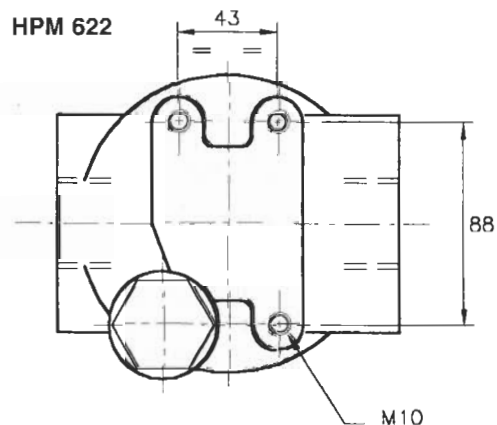
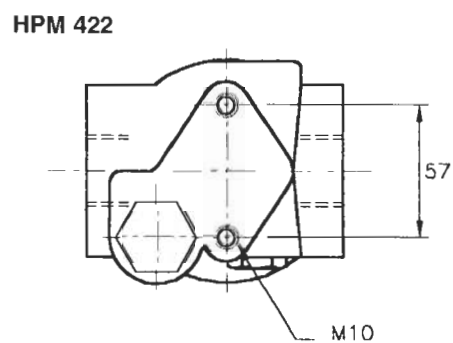
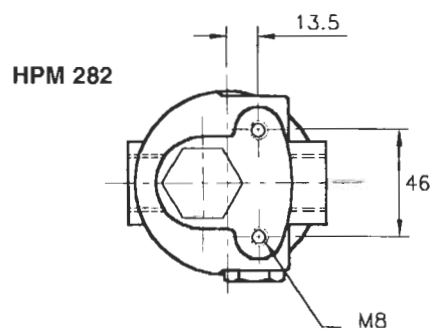
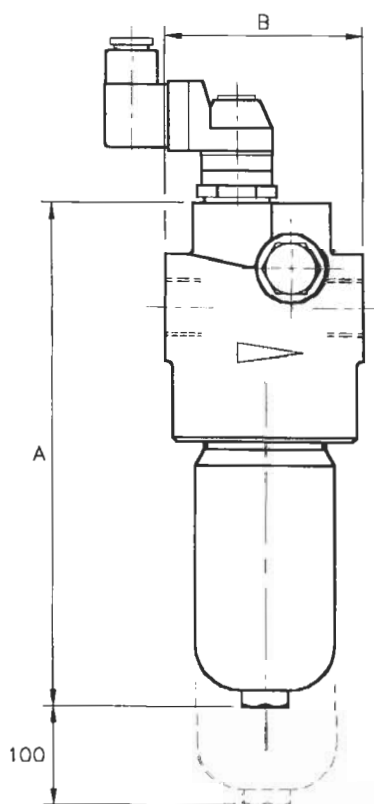
HPM . . . Pressure line filter

Working pressure 420 bar

Element 10 micron inorganic fibre

By - pass valve Δp 6 bar

Visual indicator or visual and electrical indicator



Part No.	Thread bsp	Flow lpm	A mm	B mm	C mm
HPM 282	3/4"	70	219	87	45
HPM 422	1"	140	390	110	45
HPM 622	1-1/4"	280	393	140	62

ORDERING CODE

HPM 282 - FD - F1

FILTER SIZE

282

422

622

ELEMENT

10 micron inorganic fibre

INDICATOR

☐ - None

F1 - Visual

G1 - Visual / Electrical

HPM - Complete filter

CH - Element only



UH - FLS Float level switch

Vertically mounted

Switch closes when liquid level falls below float.

Can offer protection for pump, by disconnecting motor, if oil falls.

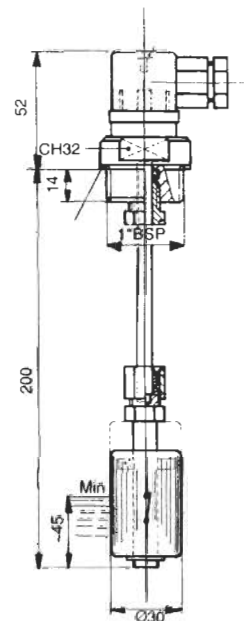
Volts Max. : 220V AC.

Amps. Max. : 0.8A Resistive

Watts Max. : 60W

Protection : IP67

Note : Other lengths available from stock upto 1000mm.



UH - TS Temperature switch

Compact unit

Applications : High temperature cutout.

Can provide electrical signal for oil cooler.

Volts Max. : 240V AC.

Amps. Max. : 10A Resistive

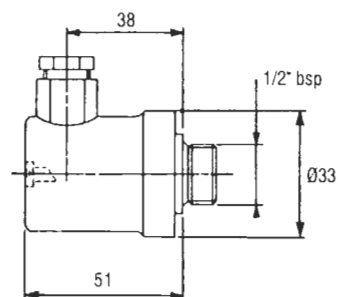
Temperature : 60°C Switch closes

Protection : IP65

Contacts : Normally open

Differential : 11°C Variable

Note : Other switching temperatures available are
31, 38, 47, 70, 80, 90, 105 and 110°C.



UH - PS Pressure switch

Heavy duty piston type switch in compact enclosure.

Easily mounted with visual indication of pressure setting.

Both normally open and normally closed contacts are provided.

Connect as required.

Volts Max. : 240V AC.

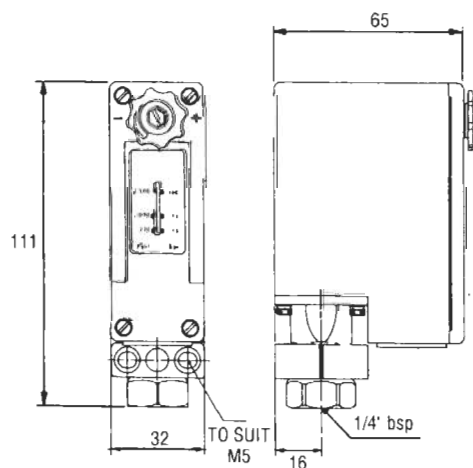
Amps. Max. : 10A

Differential : 20 bar

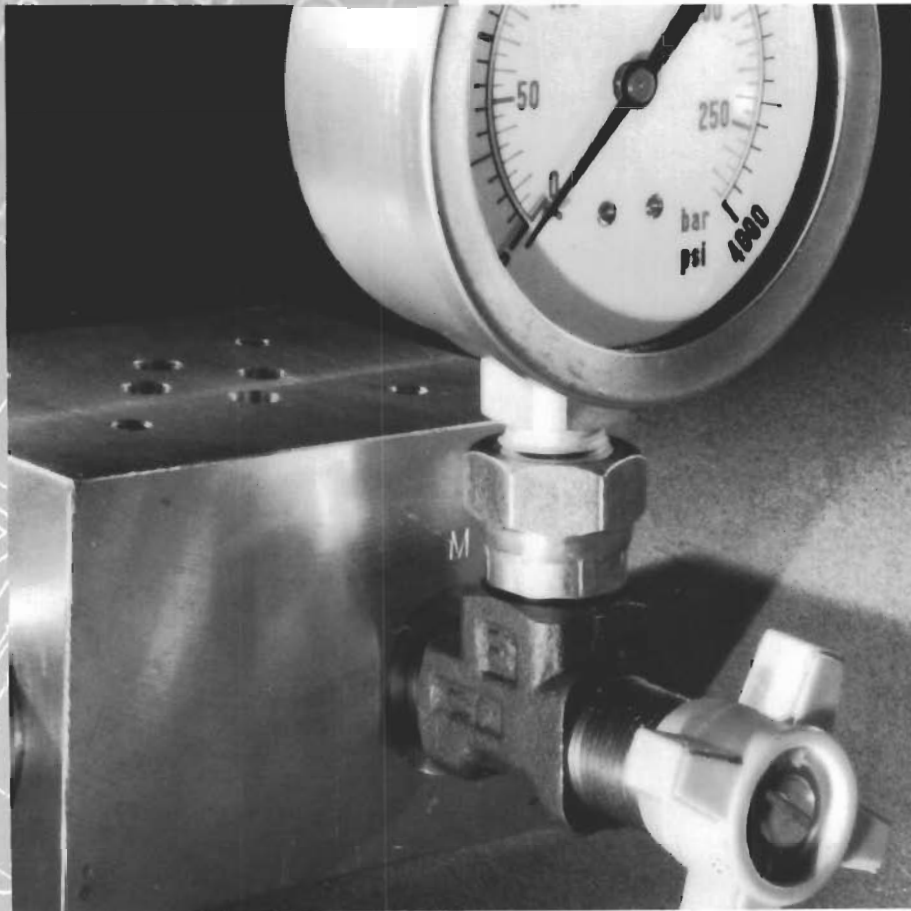
Protection : IP66

Contacts : Normally open
& normally closed.

Pressure range : 30 - 300 bar



Universal Pressure Gauges & Isolator Valves



Page 56 -

63 & 100mm Dia. Pressure Gauges.
Isolator Valves.



Universal Hydraulic Cylinders



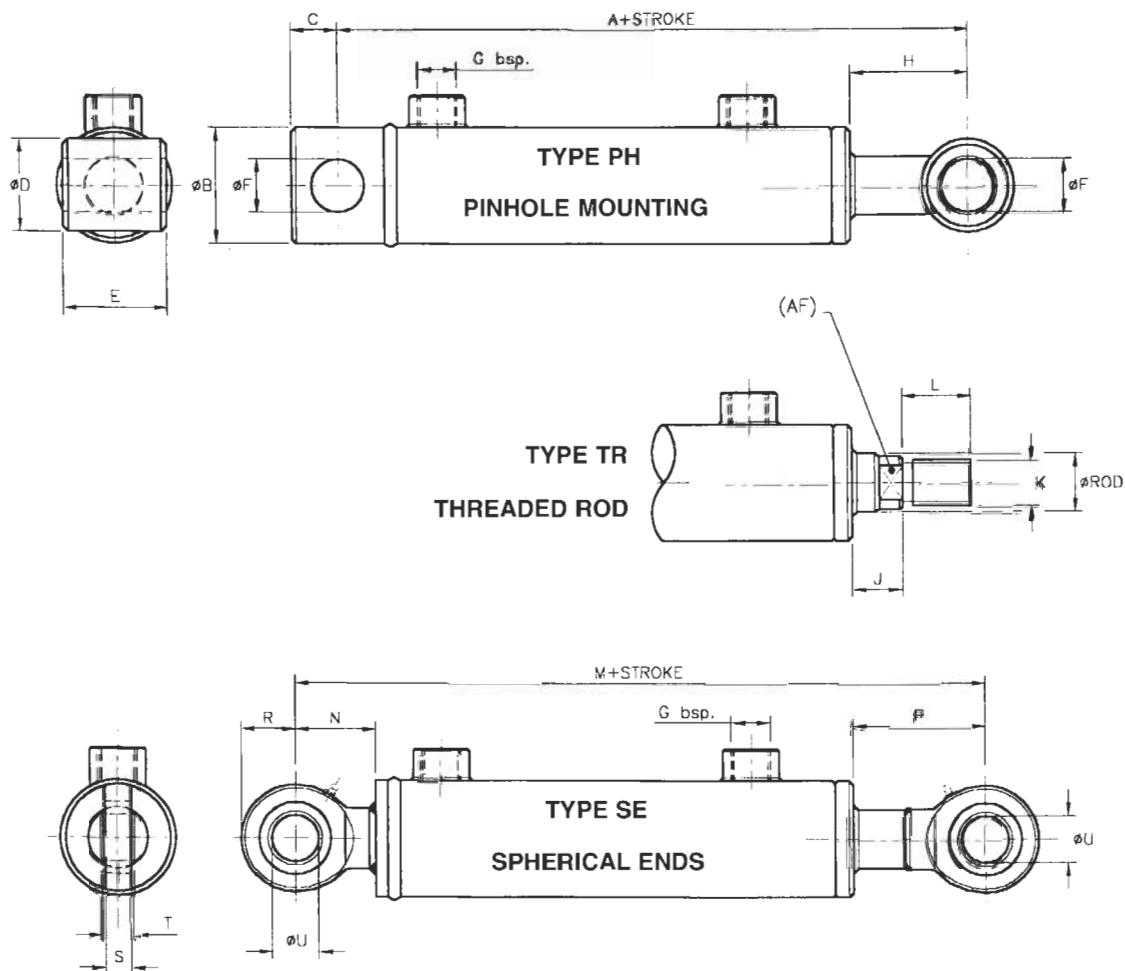
Page 58 -

Pinhole Mounted Cylinders,
Spherical Ended Cylinders,
Optional Threaded Rod.

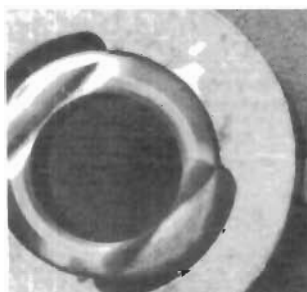
hydraulic cylinders

ORDERING CODE

UHC BORE STROKE REAR END TYPE ROD TYPE
 80 200 PH TR



Bore Dia	Rod Dia	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	K mm	L mm	AF mm	M mm	N mm	P mm	R mm	S mm	T mm	U mm
32	20	155	40	17	30	35	16.2	1/4"	28	18	M12x1.5	18	14	207	31	44	20	10	12	15
40	25	170	50	19	35	40	20.5	3/8"	50	18	M16x2	24	19	207	38	51	26.5	13	16	20
50	30	200	60	25	40	45	25.5	3/8"	54	18	M24x2	36	24	239	45	58	32	17	20	25
60	30	200	70	25	40	45	25.5	3/8"	54	18	M24x2	36	24	239	45	58	32	17	20	25
70	40	210	80	25	50	55	30.5	3/8"	38	20	M27x2	40	30	279	51	64	36.5	19	22	30
80	40	210	90	25	50	55	30.5	3/8"	38	20	M27x2	40	30	315	69	82	46	23	28	40
100	50	225	115	34	65	70	30.5	3/8"	46	22	M33x2	50	41	356	77	92	51	27	32	45
120	70	270	140	40	80	80	40.5	1/2"	55	30	M55x2	83	60	406	88	103	56	30	35	50



UHL

Universal Power Pack PPS



A range of well designed power packs

built to a compact modular concept.

Flows to 27 lpm.

Pressures to 240 bar.

Competitive prices.

All components in stock.

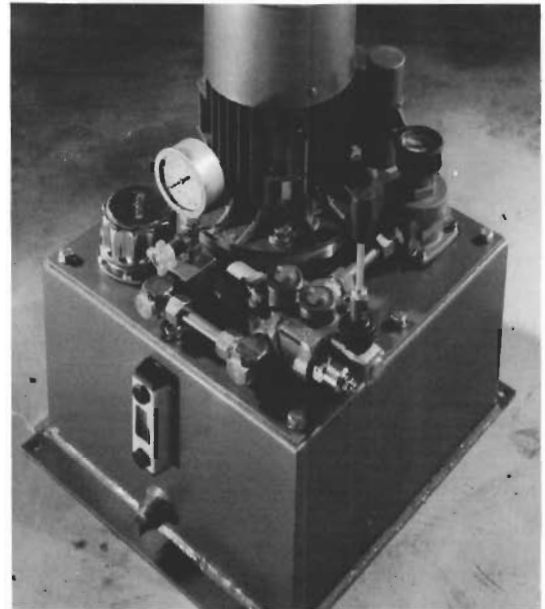
Delivery normally 48 hours.

All models supplied complete with:

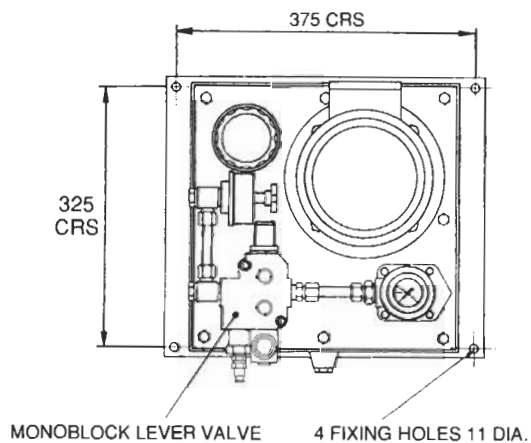
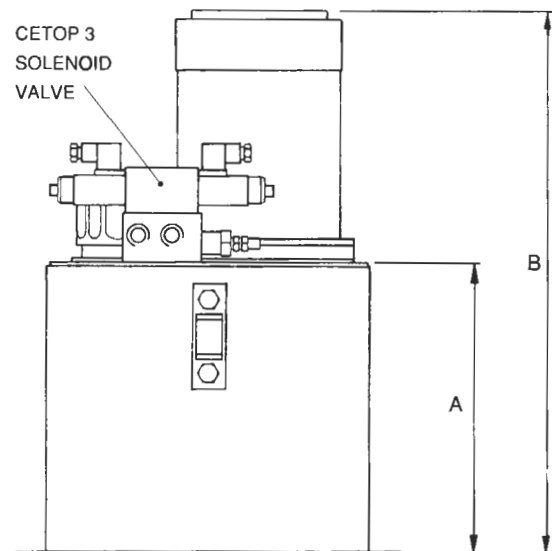
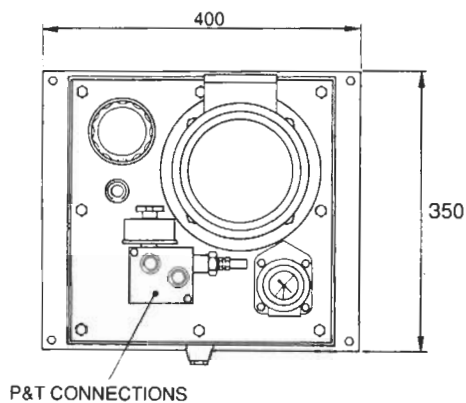
- Electric Motor – Metric Frame TEFC
- Robust Gear Pump
- Pressure Relief Valve
- Pressure Gauge and Isolator Valve
- Suction Filter
- Large Capacity Filler/Air Breather Cap
- Fluid Level Gauge

Options include:

- Return Line Filter
- Directional Control Valve – Manual – Solenoid – Pilot Operated
- Stackable Circuit Valves (CETOP 3)
- Additional Directional Controls and Manifolds
- Pressure Filter
- Level/Temperature Switch

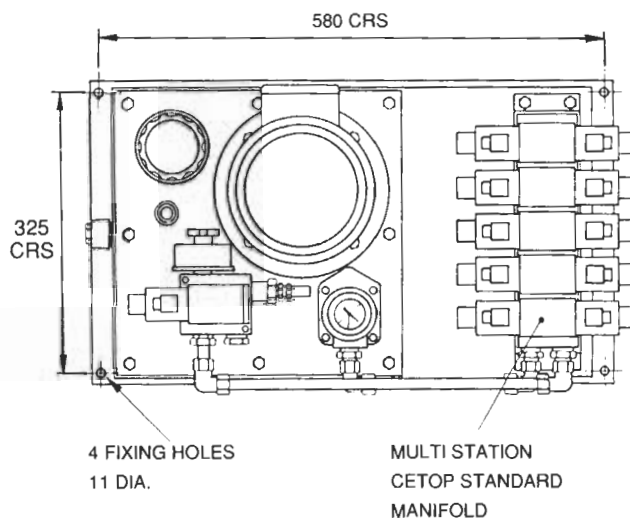
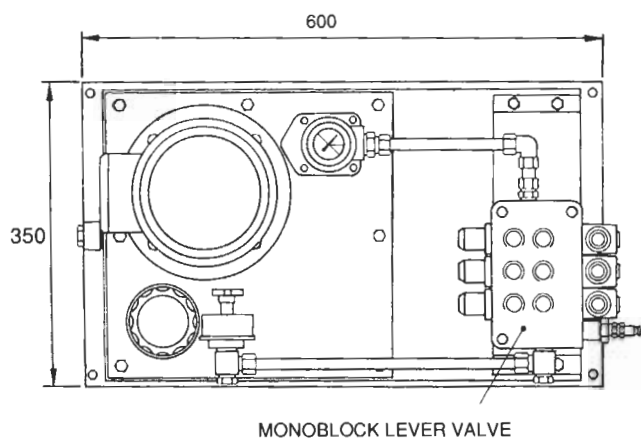


15-45 LITRE RESERVOIR

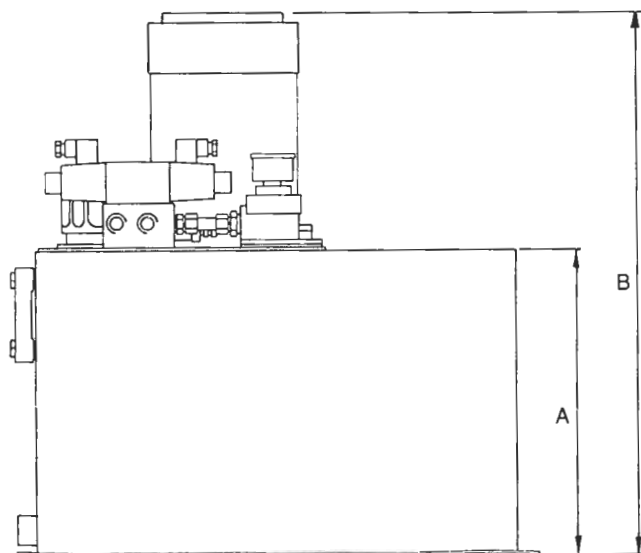


power pack PPS

50 LITRE RESERVOIR



Reservoir Capacity	DIM	Motor Power			
		0.37kW	0.55 0.75 kW	1.1kW	1.5 2.2 kW
15 Litres	A	220	220	220	220
	B	425	455	470	490
30 Litres	A	350	350	350	350
	B	555	585	600	620
45 Litres	A	480	480	480	480
	B	685	715	730	750
50 Litres	A	350	350	350	350
	B	555	585	600	620



power pack PPS

Flow LPM	Max Press BAR	Motor Size kW	Size Ref.
1.3	120	0.37	11
1.3	185	0.55	12
1.3	260	0.75	13
2.6	62	0.37	14
2.6	92	0.55	15
2.6	130	0.75	16
2.6	190	1.1	17
2.6	260	1.5	18
4.0	60	0.55	19
4.0	85	0.75	20
4.0	125	1.1	21
4.0	170	1.5	22
5.4	65	0.75	23
5.4	95	1.1	24
5.4	130	1.5	25
5.4	190	2.2 *	26
6.5	55	0.75	27
6.5	80	1.1	28
6.5	110	1.5	29
8.5	125	2.2 *	30
8.5	62	1.1	31
8.5	85	1.5	32
10.5	50	1.1	33
10.5	68	1.5	34
10.5	100	2.2 *	35
13.5	40	1.1	36
13.5	55	1.5	37
13.5	80	2.2 *	38
17.0	62	2.2 *	39
21.5	50	2.2 *	40
27.0	40	2.2 *	41
4.0	250	2.2	42

*3000 RMP

PPS - 26 - 3PH - F - D4 - X - 15

SIZE REFERENCE

See Table

MOTOR VOLTAGE

3PH — Three Phase 415v
1PH — Single Phase 240v

RETURN LINE FILTER

F — Return Filter
Visual Indicator
(Necessary with D4)
X — No return filter

DIRECTIONAL CONTROL VALVE

D4 — Monoblock lever Valve
3S — Single Solenoid Valve
3D — Double Solenoid Valve
X — Not required

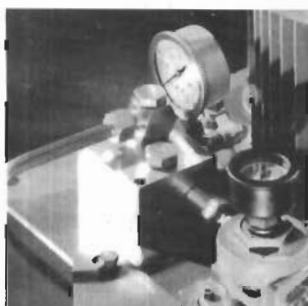
RELIEF PORTING BLOCK

PT — P & T Connection
C3 — CETOP 3 Mounting Face
X — No Porting Block (D4 Only)

RESERVOIR

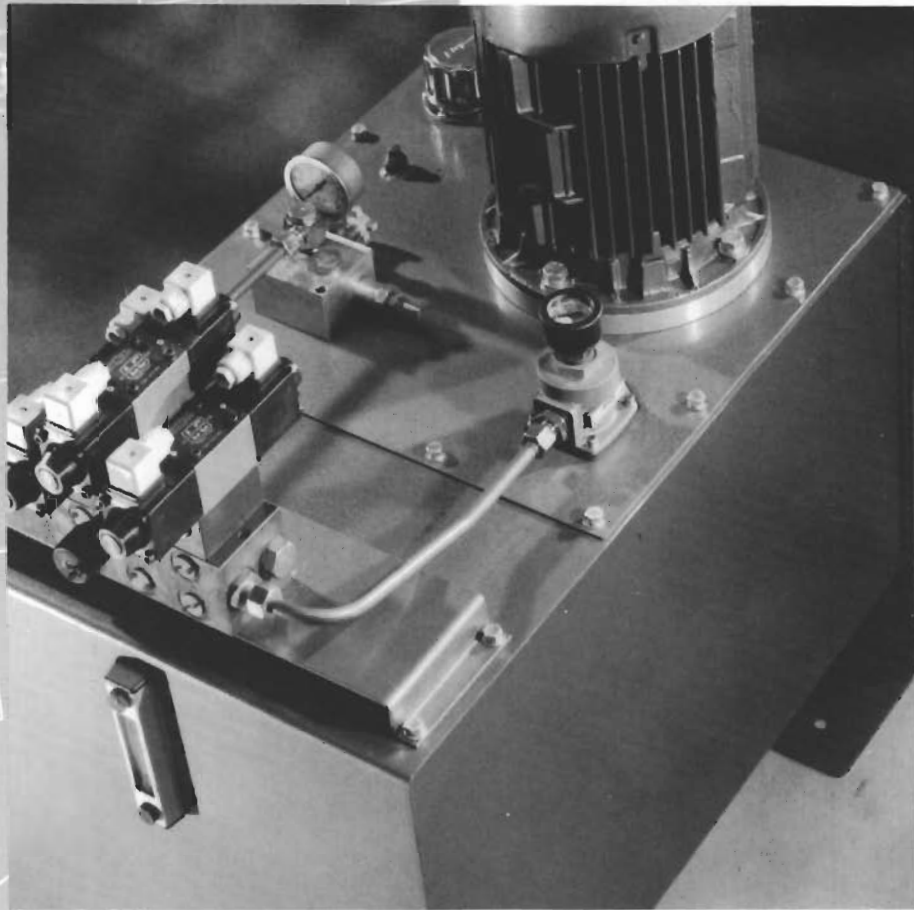
TYPE

15 Litre
30 Litre
45 Litre
50 Litre





Universal Power Pack PPM



A range of well designed power packs built to a compact

modular concept.

Flows to 82 lpm.

Pressures to 225 bar.

Competitive prices.

All components in stock.

Delivery normally 48 hours.

All models supplied complete with:

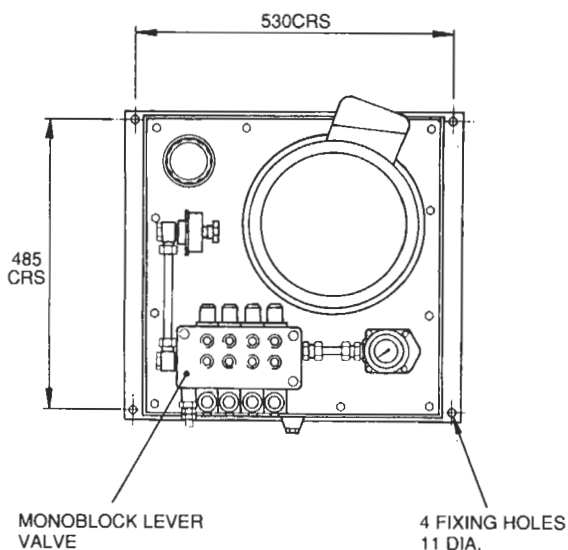
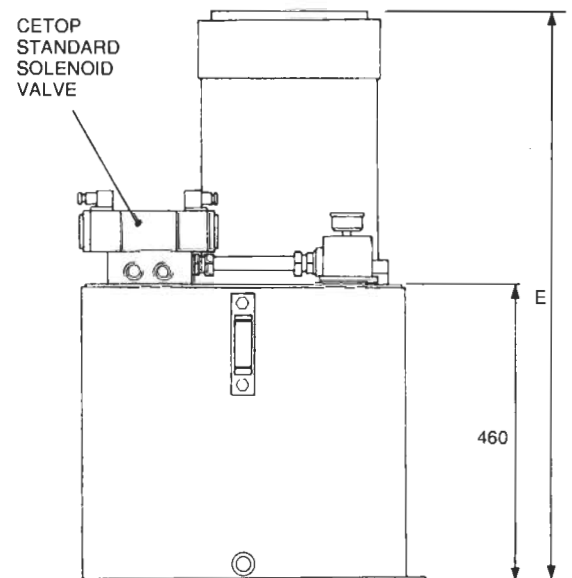
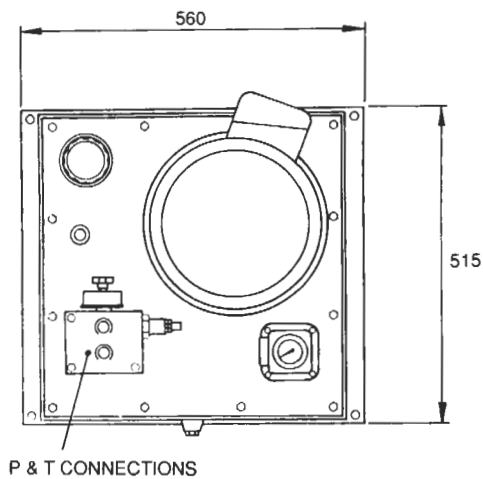
- Electric Motor – Metric Frame TEFC
- Robust Gear Pump
- Pressure Relief Valve
- Pressure Gauge and Isolator Valve
- Suction Filter
- Large Capacity Filler/Air Breather Cap
- Fluid Level Gauge

Options include:

- Return Line Filter
- Directional Control Valve – Manual – Solenoid – Pilot Operated
- Stackable Circuit Valves (CETOP 3 & 5)
- Additional Directional Controls & Manifolds
- Pressure Filter
- Level/Temperature Switch

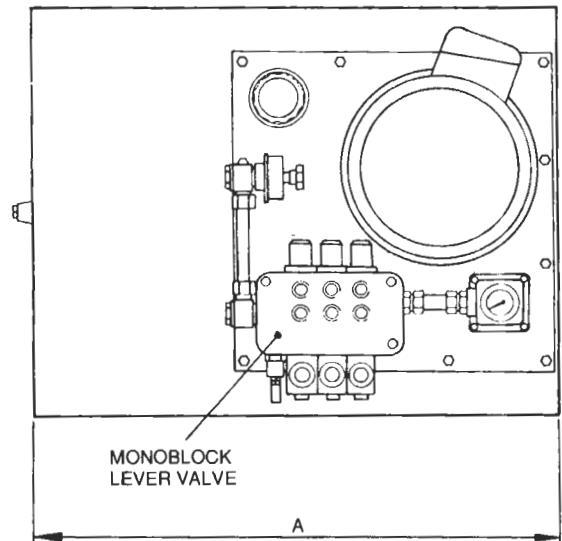
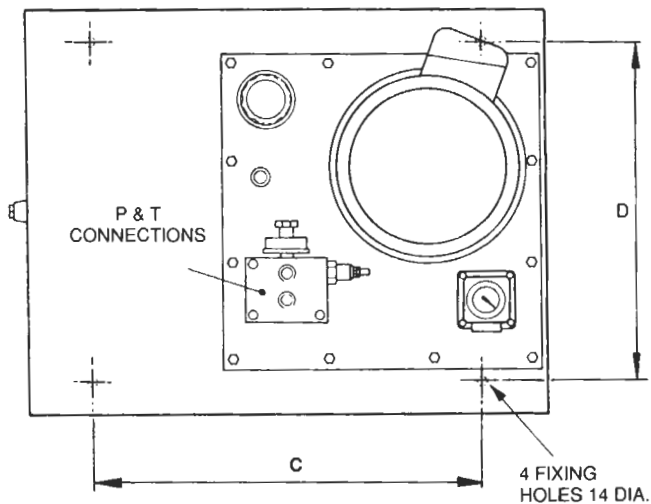


80 LITRE RESERVOIR – INSTALLATION DETAILS

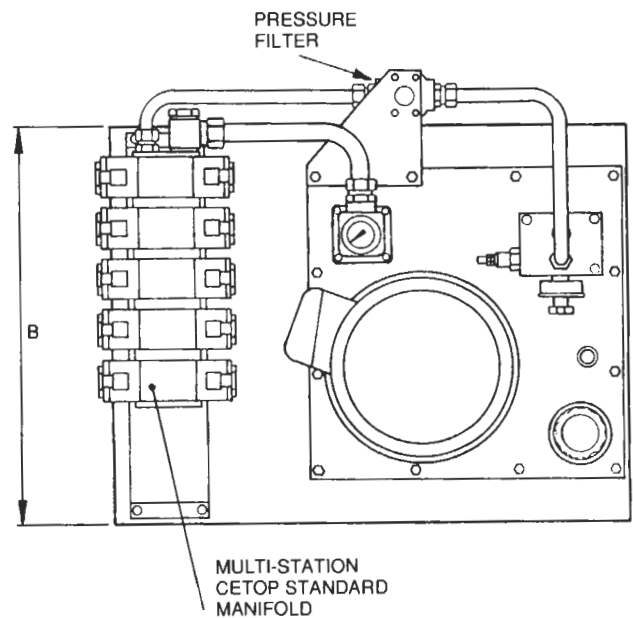


power pack PPM

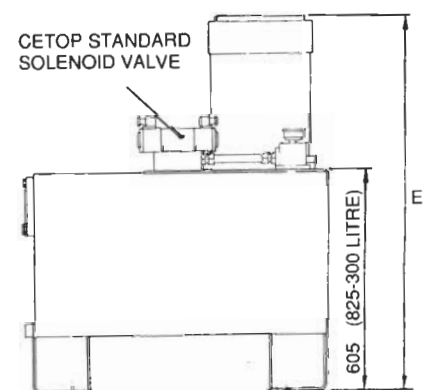
150 - 300 LITRE RESERVOIR - INSTALLATION DETAILS



DIM	Reservoir Capacity		
	150 litres	200 litres	300 litres
A	755	805	805
B	500	625	625
C	550	600	600
D	400	525	525



Motor Power	E mm		
	80 litres	150 200 litres	300 litres
$\frac{2.2}{3}$ kW	800	950	1170
4 kW	845	995	1215
5.5 kW	880	1030	1250
$\frac{7.5}{11}$ kW	920	1070	1290



Flow LPM	Max Press BAR	Motor Size kW	Size Ref.
5.5	200	2.2	51
7	160	2.2	52
7	215	3.0	53
9	125	2.2	54
9	165	3.0	55
9	215	4.0	56
11	100	2.2	57
11	135	3.0	58
11	170	4.0	59
13	80	2.2	60
13	105	3.0	61
7	250	4.0	62
15	70	2.2	63
15	95	3.0	64
15	125	4.0	65
15	175	5.5	66
20	55	2.2	67
20	75	3.0	68
20	100	4.0	69
20	135	5.5	70
20	185	7.5	71
23	65	3.0	72
23	85	4.0	73
23	115	5.5	74
23	160	7.5	75
23	235	11.0 *	76
28	65	4.0	77
28	90	5.5	78
28	125	7.5	79
35	75	5.5	80
35	100	7.5	81
40	135	11.0 *	82
45	60	5.5	83
45	80	7.5	84
45	115	11.0 *	85
53	50	5.5	86
53	70	7.5	87
60	60	7.5	88
57	90	11.0 *	89
73	70	11.0 *	90
5.5	250	3.0	91
9	250	5.5	92
11	225	5.5	93
11	250	7.5	94
15	235	7.5	95
18	250	11.0 *	96
31	170	11.0 *	97

*3000 RPM

PPM - 51 - X - X - PT3 - 80

SIZE REFERENCE

See Table

RETURN LINE FILTER

Size Ref: 51-79

F8 — Filter With Visual Indicator

Size Ref: 80-90

F20 — Filter With Visual Indicator

The above filters are necessary with Manual Valve

X — No return line filter

DIRECTIONAL CONTROL VALVE

Size Ref: 51-79

3S — Single Solenoid

3D — Double Solenoid

D5/1 — One Bank Manual

D5/2 — Two Bank Manual

D5/3 — Three Bank Manual

D5/4 — Four Bank Manual

Size Ref: 80-90

5S — Single Solenoid

5D — Double Solenoid

D11/1 — One Bank Manual

D11/2 — Two Bank Manual

D11/3 — Three Bank Manual

X — Not required

RELIEF/PORTING BLOCK

Size Ref: 51-79

PT3 — P & T Connection

C3 — CETOP 3 Mounting Face

Size Ref: 80-90

PT5 — P & T connection

C5 — CETOP 5 Mounting Face

X — No Porting Block (Manual Valve)

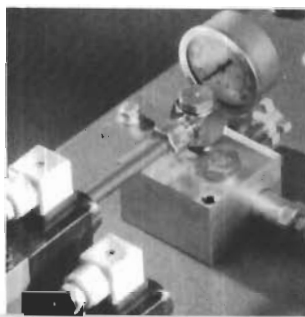
RESERVOIR

80 Litre

150 Litre

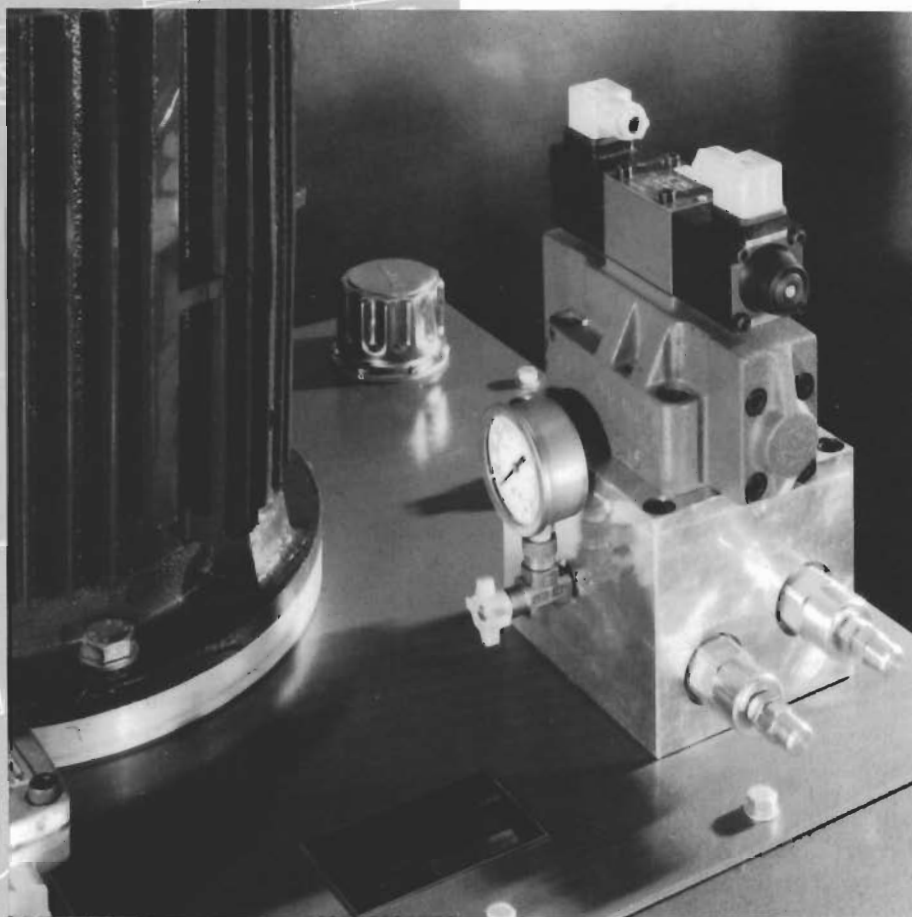
200 Litre

300 Litre



UHL

Universal Power Pack PPL



A range of well designed power packs
built to a compact modular concept.

Flows to 200 lpm.

Pressures to 205 bar.

Competitive prices.

All components in stock.

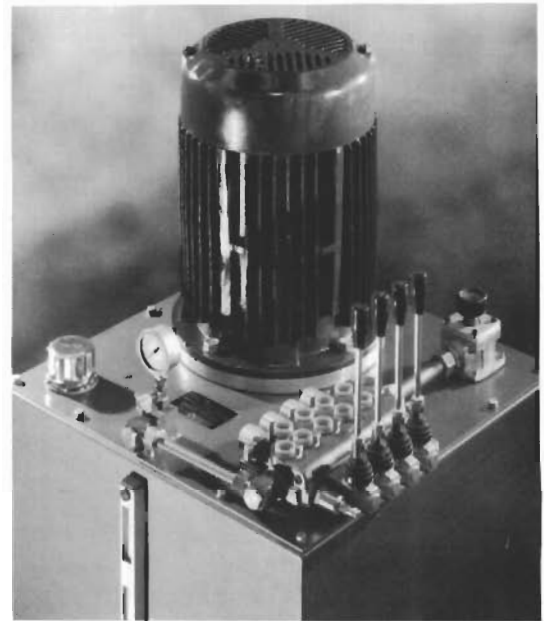
Delivery normally 7 days.

All models supplied complete with:

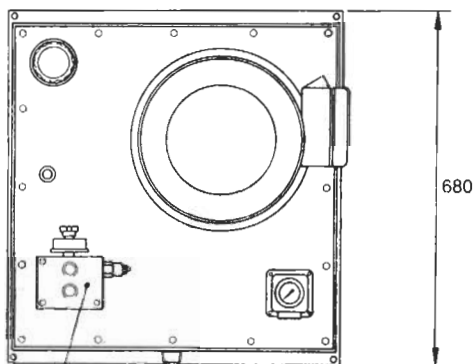
- Electric Motor – Metric Frame TEFC
- Robust Gear Pump
- Pressure Relief Valve
- Pressure Gauge and Isolator Valve
- Suction Filter
- Large Capacity Filler/Air Breather Cap
- Fluid Level Gauge

Options include:

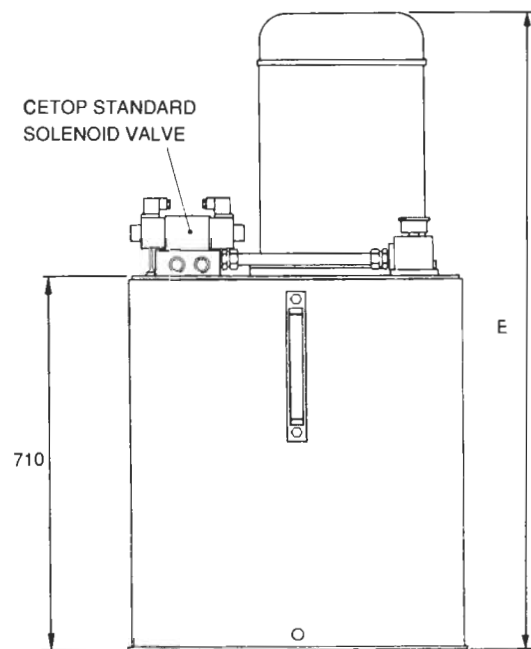
- Return Line Filter
- Directional Control Valve – Manual – Solenoid – Pilot Operated
- Stackable Circuit Valves (CETOP 5 & 7)
- Additional Directional Controls and Manifolds
- Pressure Filter
- Level/Temperature Switch



250 LITRE RESERVOIR



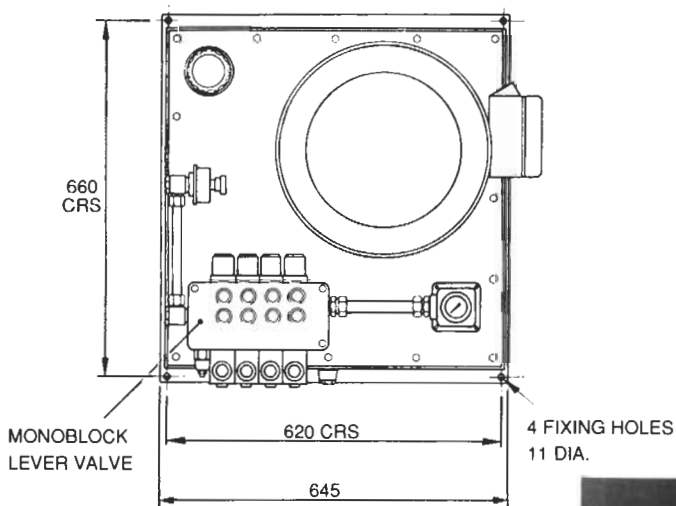
P&T CONNECTIONS



CETOP STANDARD
SOLENOID VALVE

710

E



MONOBLOCK
LEVER VALVE

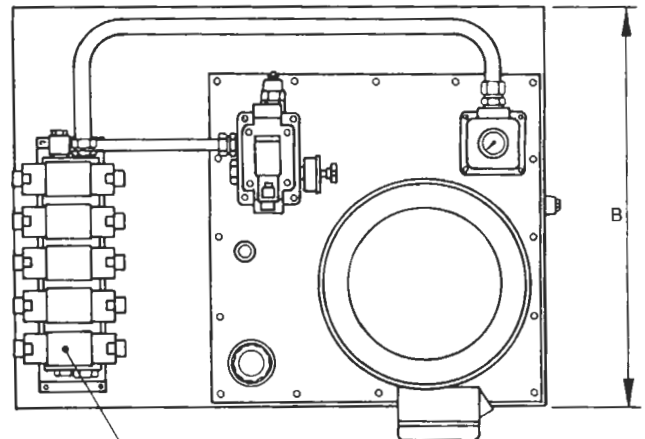
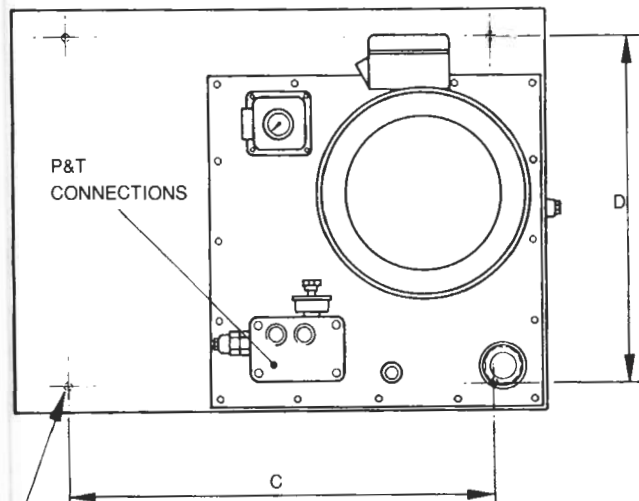
620 CRS

645

4 FIXING HOLES
11 DIA.



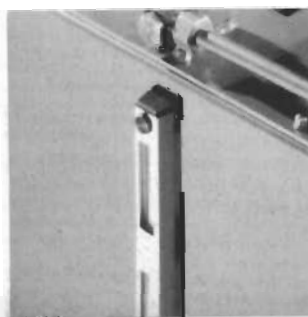
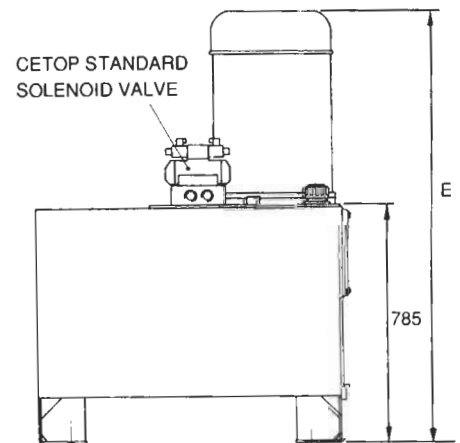
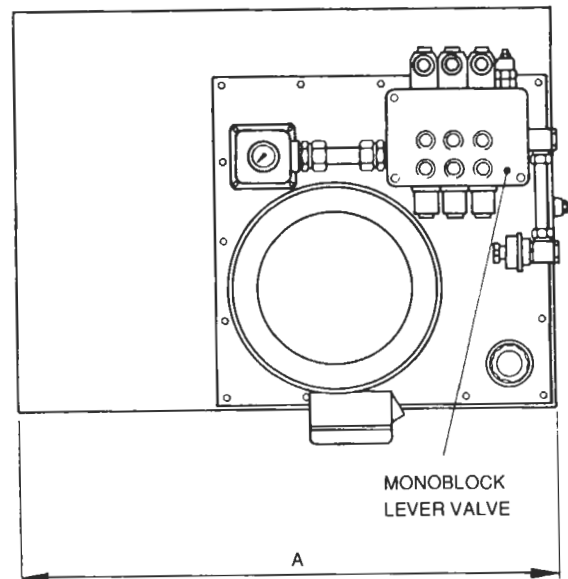
400-600 LITRE RESERVOIR - INSTALLATION DETAILS



MULTI-STATION
CETOP STANDARD
MANIFOLD

Dim	Reservoir Capacity	
	400 Litres	600 Litres
A	1010	1260
B	750	850
C	800	1050
D	650	750

Motor Power	E
11kW	1285
15kW	1335
18.5kW	1375
22kW	1395
30kW	1445
37kW	1505



Flow LPM	Max Press BAR	Motor Size kW	Size Ref.
37	145	11	01
37	200	15	02
48	110	11	03
48	150	15	04
48	190	18.5	05
54	100	11	06
54	135	15	07
54	170	18.5	08
54	200	22	09
62	90	11	10
62	120	15	11
62	150	18.5	12
62	175	22	13
62	240	30	14
73	75	11	15
73	105	15	16
73	125	18.5	17
73	150	22	18
73	200	30	19
87	63	11	20
87	85	15	21
87	105	18.5	22
87	125	22	23
87	175	30	24
98	190	37*	25
105	52	11	26
105	70	15	27
105	90	18.5	28
105	105	22	29
105	145	30	30
110	170	37*	31
115	80	18.5	32
115	95	22	33
115	130	30	34
125	150	37*	35
130	70	18.5	36
130	85	22	37
130	115	30	38
155	70	22	39
155	100	30	40
190	57	22	41
190	78	30	42
37	245	18.5	43
48	225	22	44
54	240	30	45

* 3000 RPM.

PPL 06 - X - X - PT5 - 250

SIZE REFERENCE

See Table

RETURN LINE FILTER

Size Ref: 01-19

F20 — Filter with visual indicator

Size Ref: 20-40

F40 — Filter with visual indicator

The above filters are necessary with manual valve

X — No return line filter

DIRECTIONAL CONTROL VALVE

Size Ref: 01-19

5S — Single Solenoid

5D — Double Solenoid

D11/1 — One Bank Manual

D11/2 — Two Bank Manual

D11/3 — Three Bank Manual

D11/4 — Four Bank Manual

Size Ref: 20-40

7S — Single Solenoid

7D — Double solenoid

D18/1 — One Bank Manual

D18/2 — Two Bank Manual

D18/3 — Three Bank Manual

X — Not Required

RELIEF/PORTING BLOCK

Size Ref: 01-19

PT5 — P & T Connection

C5 — CETOP 5 Mounting Face

Size Ref: 20-40

PT7 — P & T Connection

C7 — CETOP 7 Mounting Face

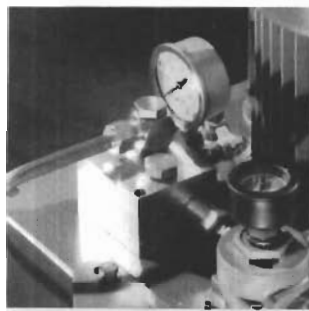
X — No Porting Block
(Manual Valve)

RESERVOIR

250 Litre

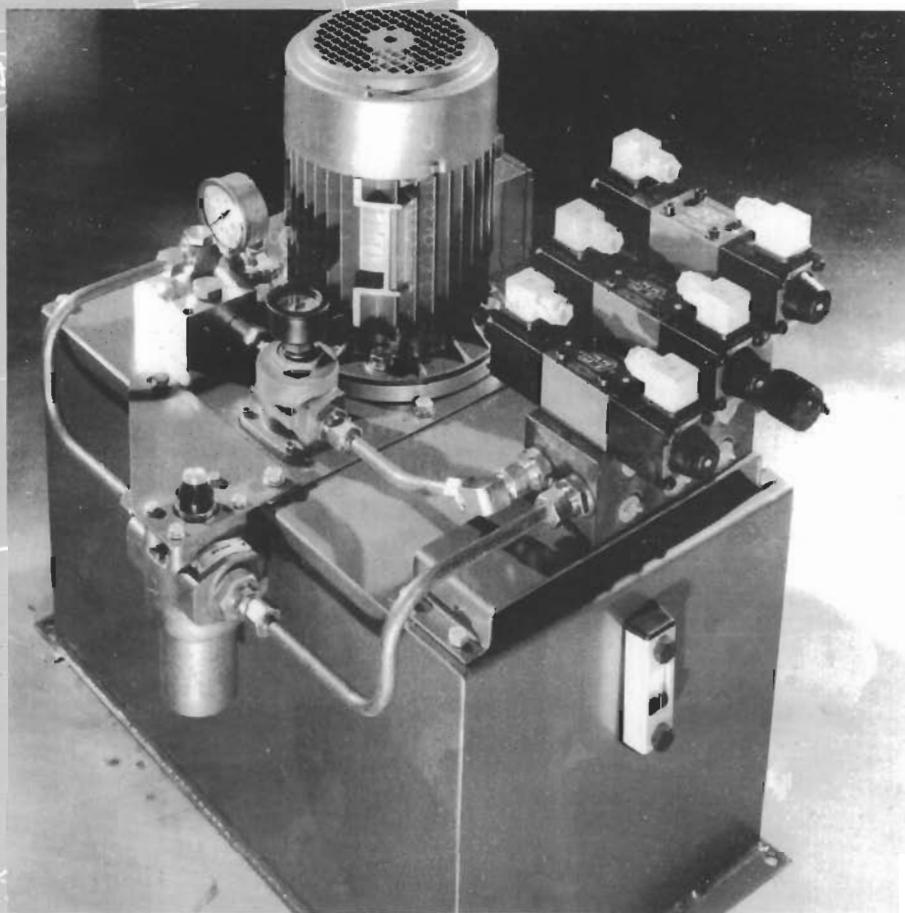
400 Litre

600 Litre



UHL

Universal Power Pack PPX



High pressure power packs built to

a modular concept.

Working pressure 350 bar.

Flows to 12 lpm.

All components in stock.

power pack PPX

All models supplied complete with:

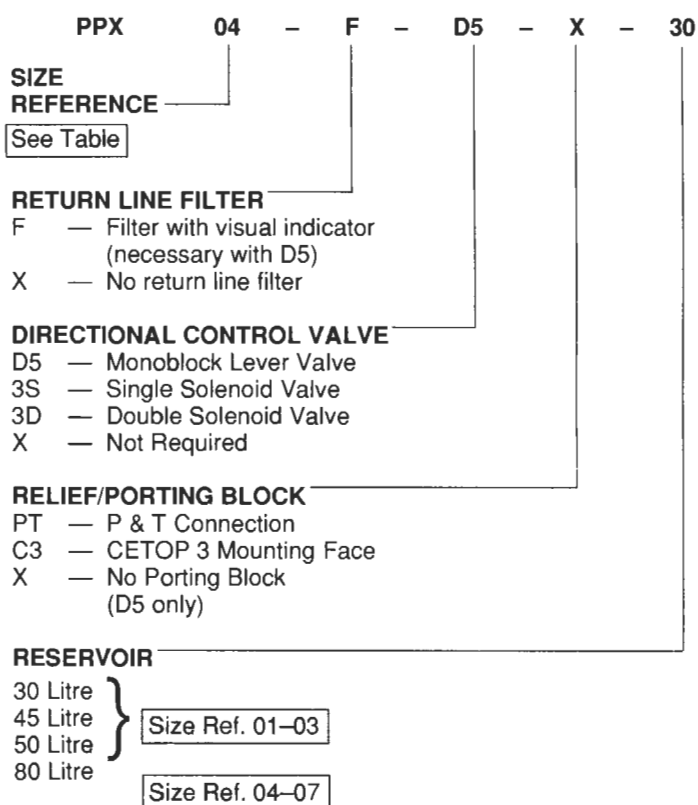
- Electric Motor – Metric Frame TEFC
- Robust Piston Pump
- Pressure Relief Valve
- Pressure Gauge and Isolator Valve
- Suction Filter
- Large Capacity Filler/Air Breather Cap
- Fluid Level Gauge

Options include:

- Return Line Filter
- Directional Control Valve – Manual – Solenoid – Pilot Operated
- Stackable Circuit Valves (CETOP 3)
- Additional Directional Controls and Manifolds
- Pressure Filter
- Level/Temperature Switch

Flow LPM	Max Press BAR	Motor Size kW	Size Ref.
1	350	0.75	01
1.5		1.1	02
2.5		1.5	03
3.5		2.2	04
6.0		4.0	05
8.5		5.5	06
12.0		7.5	07

NOTE: FOR INSTALLATION DETAIL OF PPX POWER PACK SEE PAGES 60,61 AND 64



UHL

Universal Power Pack PPA/PPP



Suitable for use where an electric pack would be hazardous or there is no electricity supply.

A range of well designed power packs.

Built to a modular concept.

PPA – air motor driven.

PPP – petrol engine driven.

Flows to 39 lpm.

Pressures to 240 bar.

All components in stock.

All models supplied complete with:

- PPA ● Air Motor – Metric Frame
- PPP ● Petrol Engine – ANSI Standard
- Robust Gear Pump
- Pressure Relief Valve
- Pressure Gauge and Isolator Valve
- Suction Filter
- Large Capacity Filler/Air Breather Cap
- Fluid Level Gauge

Options include:

- Return Line Filter
- Directional Control Valve – Manual – Air Pilot Operated
- Additional Directional Controls and Manifolds
- Pressure Filter
- Level/Temperature Switch

PPP

Max Flow LPM	Min Flow LPM	MAX Press BAR	Size Ref.
3.5	2.0	240	P-1
6.6	3.8	240	P-2
13.3	7.6	130	P-3
23.5	13.5	75	P-4
39.0	26.0	40	P-5

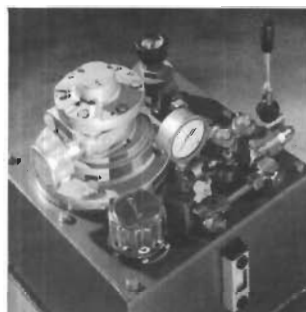
PPA

Max Flow LPM	Min Flow LPM	MAX* Press BAR	MAX* Air Cons. M ³ /H	Size Ref.
3.0	1.0	240	110	A-1
5.7	1.9	240	190	A-2
11.5	3.8	150	190	A-3
17.0	5.7	100	190	A-4
27.0	9.0	65	190	A-5

*These figures are based on an airline pressure of 5.5 bar.

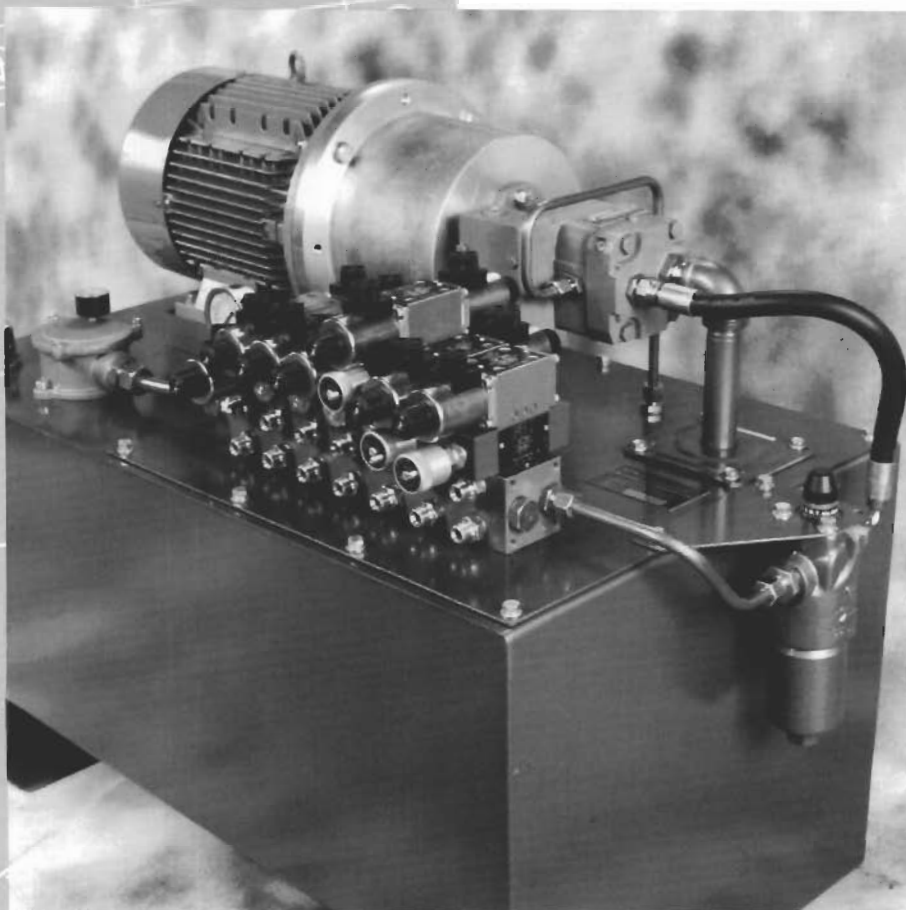
NOTE: FOR INSTALLATION DETAIL OF PPA/PPP POWER PACK SEE PAGES 60 AND 61

PP	A-1	-	F	-	D4	-	X	-	15
TYPE AND SIZE REFERENCE A-... — Air Motor P-... — Petrol Engine See Tables									
RETURN LINE FILTER F — Filter with visual indicator (necessary with D4) X — No return line filter									
DIRECTIONAL CONTROL VALVE D4 — Monoblock Lever Valve 3P — Air Pilot Valve (CETOP 3) X — Not Required									
PORTING BLOCK PT — P & T Connection C3 — CETOP 3 Mounting Face X — No Porting Block (D4 only)									
RESERVOIR TYPE 15 Litre 30 Litre 45 Litre 50 Litre									



UHL

Universal Power Pack PPV



A range of well designed power packs built to a compact modular concept.

Flows to 100 lpm.

Pressure to 350 bar.

Competitive prices.

All components in stock.

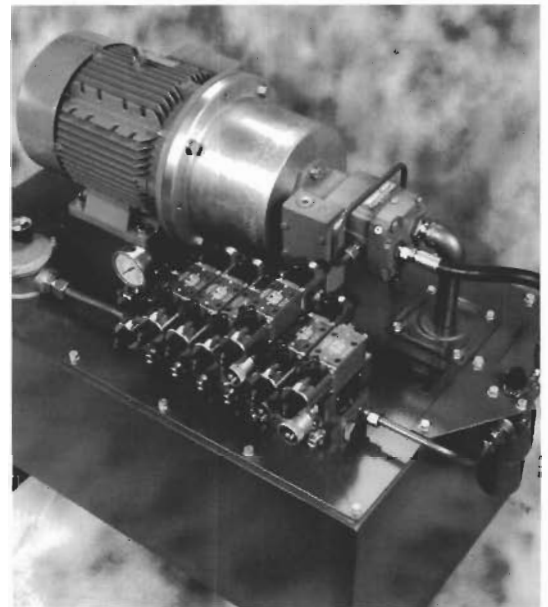
power pack PPV

All Models Supplied Complete With:

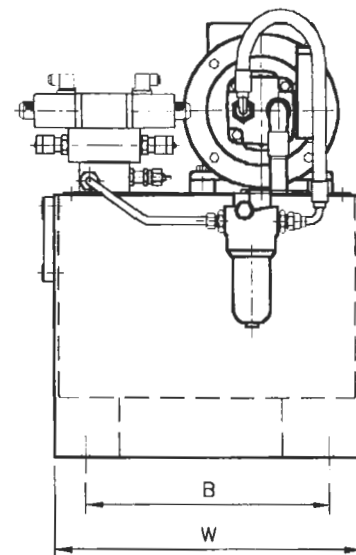
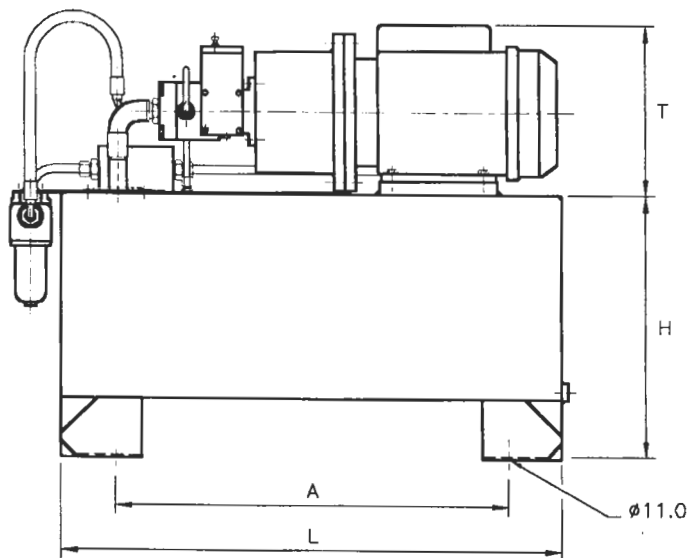
- Electric Motor - Metric TEFC
- Robust Variable Displacement Pressure Compensated Pump
- Pressure Relief Valve
- Pressure Gauge and Isolator Valve
- Suction Filter
- Large Capacity Filler/Air Breather Cap
- Return Line Filter C/W Visual Blockage Indicator

Options Include:

- Pressure Filter C/W Visual Blockage Indicator
- Directional Control Valve - Manual
Solenoid - Pilot Operated
- Stackable Circuit Valves (CETOP 3,5,&7)
- Additional Directional Controls & Manifold
- Level/Temperature Switch
- Load Sensing Pump
- Electrical Filter Blockage Indicator



Typical Installation Layout



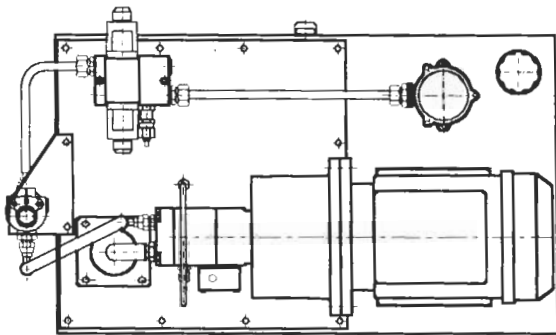
Motor Height (T) Dim.	
3 kW	236
4 kW	260
5.5/7.5 kW	300
11/15 kW	385
18.5/22 kW	421
30 kW	525
37/45 kW	565

Reservoir Capacity				
DIM	80 Litres	150 Litres	250 Litres	400 Litres
L	825	955	1005	1205
H	450	500	630	680
W	490	570	700	800
A	620	750	800	1000
B	390	470	600	700

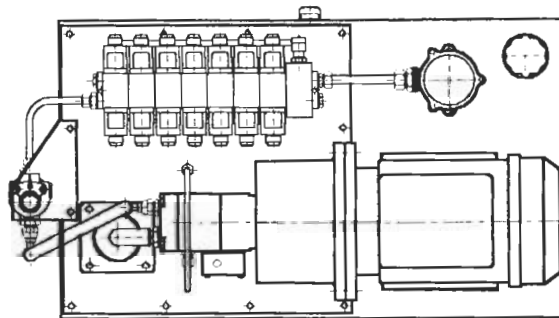


power pack PPV

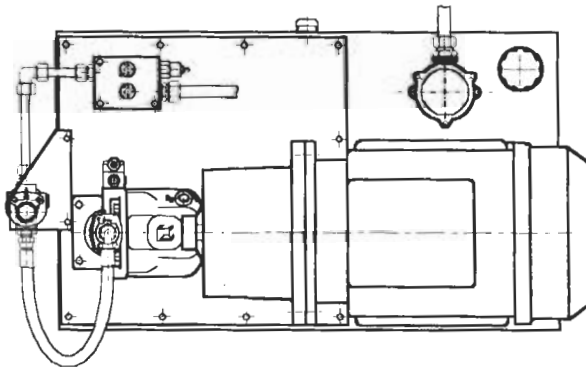
Single CETOP 5 with Relief Valve



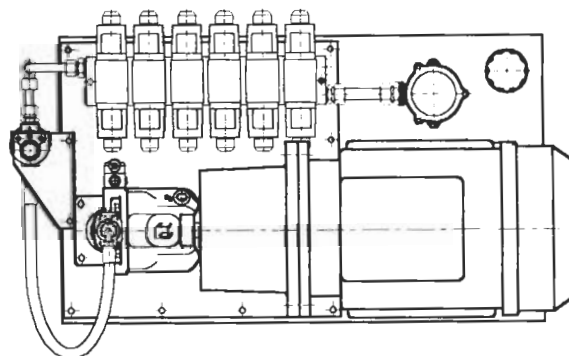
Multiple CETOP 3 with Relief Valve



PT5 Relief Valve



Multiple CETOP 5 with Relief Valve



power pack PPV

Flow Max LPM	Max Press BAR	Motor Size kW	Reservoir Ltr. (Recommended)	Size Ref.
14	85	3	80	01
14	120	4	80	02
14	180	5.5	80	03
14	250	7.5	80	04
14	350	11	150	05
19	90	4	80	06
19	120	5.5	80	07
19	170	7.5	80	08
19	250	11	150	09
30	60	4	150	10
30	85	5.5	150	11
30	120	7.5	150	12
30	180	11	150	13
30	210	15	150	14
40	65	5.5	150	15
40	90	7.5	150	16
40	150	11	150	17
40	200	15	150	18
40	250	18.5	250	19
50	50	5.5	250	20
50	75	7.5	250	21
50	120	11	250	22
50	160	15	250	23
50	195	18.5	250	24
50	240	22	250	25
63	55	7.5	250	26
63	85	11	250	27
63	120	15	250	28
63	150	18.5	250	29
63	190	22	250	30
63	250	30	250	31
90	55	11	400	32
90	80	15	400	33
90	105	18.5	400	34
90	125	22	400	35
90	170	30	400	36
90	215	37	400	37
100	50	11	400	38
100	70	15	400	39
100	90	18.5	400	40
100	115	22	400	41
100	155	30	400	42
100	190	37	400	43
100	240	45	400	44

PPV - 06 - PF1 - 3D - C3 - 80

SIZE REFERENCE

See Table

PRESSURE FILTER

Size Ref : 01 - 31

PF1

Size Ref : 32 - 44

PF2

Filter with visual indicator

X — No pressure filter

DIRECTIONAL CONTROL VALVE

Size Ref : 01 - 08

3S — Single Solenoid Valve

3D — Double Solenoid Valve

Size Ref : 09 - 31

5S — Single Solenoid Valve

5D — Double Solenoid Valve

Size Ref : 32 - 44

7S — Single Solenoid Valve

7D — Double Solenoid Valve

X — Not Required

RELIEF / PORTING BLOCK

Size Ref : 01 - 08

PT3 — P & T Connection

C3 — Cetop 3 Mounting Face

Size Ref : 09 - 31

PT5 — P & T Connection

C5 — Cetop 5 Mounting Face

Size Ref : 32 - 44

PT7 — P & T Connection

C7 — Cetop 7 Mounting Face

X — Not required

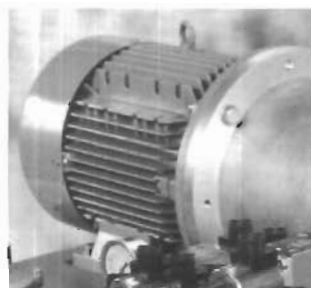
RESERVOIR

80 Litre

150 Litre

250 Litre

400 Litre





Universal Mini Pack MP



A broad range of small industrial power packs

AC or DC motors

Modular concept

Flows to 20 Lpm.

Pressure to 210 bar.

Reservoirs from 2.3 to 15 Litres

For basic or multi- function circuits

 **SMITHS INDUSTRIES**
Hydraulics Company

mini pack MPU

Features :-

- Compact - for use where space is at a premium.
- Adaptable - many integral valve options providing numerous standard circuits.

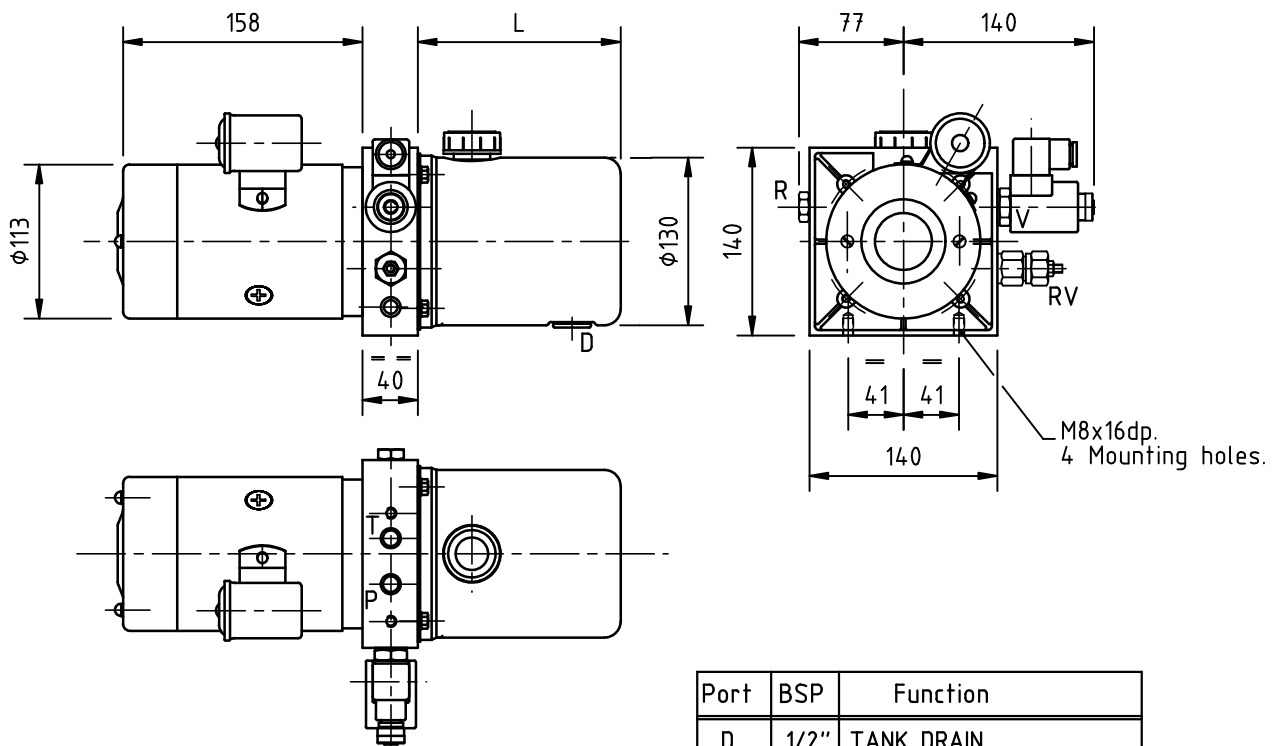
All models supplied complete with :

- Electric Motor - DC or AC.
- Robust gear pump
- Pressure Relief Valve
- Reservoir - sizes from 1.5L to 25L

Options Include :

- Lowering valve N/O & N/C.
- Multiple CETOP 3 Stackable Circuit Valves.
- Directional Control Valves - Manual -
Solenoid - Air/Oil Pilot Operated
- Return Line Filter.

1.5 or 2.5 Litre Reservoir - Horizontal Mounting (Shown with DC. Motor & Lowering Valve)

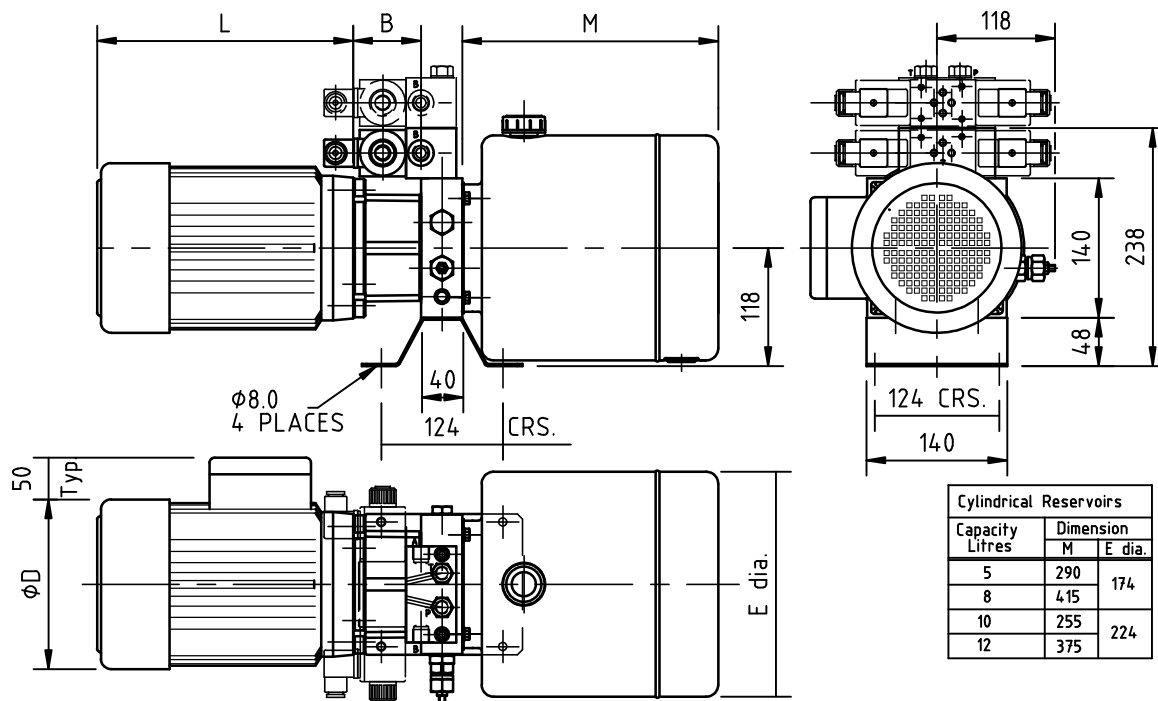


Reservoir	Dimension L
1.5 Litres	150
2.5 Litres	235

Port	BSP	Function
D	1/2"	TANK DRAIN
RV	-	RELIEF VALVE ADJ.
T	1/4"	RETURN
V	-	LOWERING VALVE CAVITY
P	1/4"	PRESSURE
R	1/4"	AUXILIARY RETURN

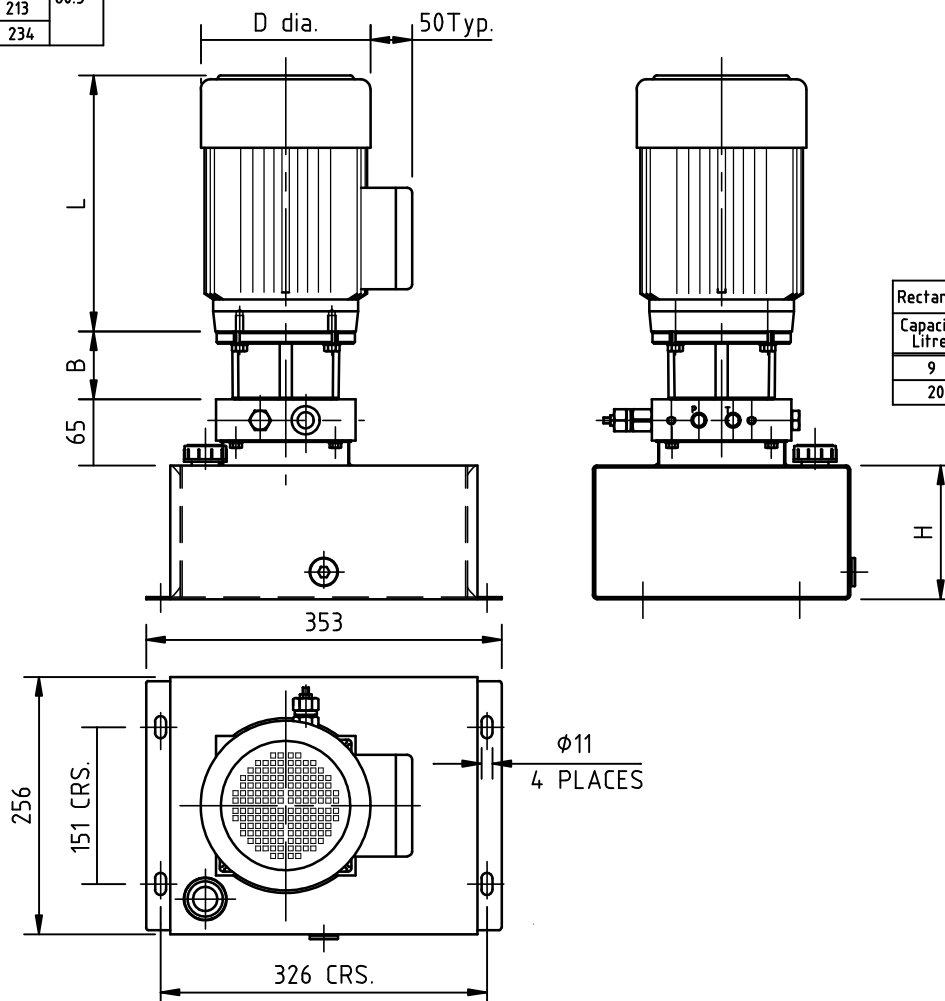
mini pack MPU

5 to 12 Litre Reservoirs - Horizontal mounting
(Shown with AC Motor & CETOP3 valve mounting faces)



Motor Size KW	Dimension		
	L	D dia.	B
0.37	213	142	9.5
0.55-0.75	230	160	60.5
1.1 - 1.5	258	190	
2.2 - 3.0	298	213	
4.0	325	234	

9 & 20 Litre Reservoirs - Vertical mounting
(Shown with AC Motor & P-T Connections)



Rectangular Reservoirs	
Capacity Litres	Dimension
	H
9	133
20	306

mini pack MPU

AC

FLOW LPM	PRESSURE (Max.) bar.	MOTOR SIZE KW	SIZE REF.
1.5	125	0.37	10
1.5	184	0.55	11
1.5	250	0.75	12
2.2	86	0.37	13
2.2	127	0.55	14
2.2	173	0.75	15
2.2	250	1.1	16
3.0	62	0.37	17
3.0	92	0.55	18
3.0	124	0.75	19
3.0	181	1.1	20
3.5	75	0.55	21
3.5	102	0.75	22
3.5	149	1.1	23
3.5	202	1.5	24
4.5	63	0.55	25
4.5	85	0.75	26
4.5	125	1.1	27
4.5	169	1.5	28
4.5	249	2.2	29
6.0	66	0.75	30
6.0	96	1.1	31
6.0	130	1.5	32
6.0	190	2.2	33
7.0	50	0.75	34
7.0	74	1.1	35
7.0	100	1.5	36
7.0	148	2.2	37
10.0	54	1.1	38
10.0	73	1.5	39
10.0	108	2.2	40
10.0	146	3.0	41
12.0	64	1.5	42
12.0	95	2.2	43
12.0	128	3.0	44
12.0	171	4.0	45
16.0	47	1.5	46
16.0	69	2.2	47
16.0	93	3.0	48
16.0	124	4.0	49

12 VOLT DC

FLOW LPM	PRESSURE (Max.) bar.	MOTOR SIZE KW	SIZE REF.
3.0	200	5.5	50
3.5	100	9.5	51
4.2	200	4.0	52
5.0	100	5.0	53
6.0	200	1.7	54
7.5	100	4.5	55
8.5	50	9.0	56
8.0	150	1.5	57
9.5	100	3.0	58
11.0	50	6.5	59
11.0	100	2.5	60
12.0	50	5.5	61
12.0	75	3.0	62
13.5	50	5.0	63
14.0	75	3.0	64
15.5	50	4.0	65
17.0	35	6.0	66

24 VOLT DC

FLOW LPM	PRESSURE (Max.) bar.	MOTOR SIZE KW	SIZE REF.
3.0	200	5.5	67
3.5	100	10.0	68
4.0	200	3.5	69
4.7	100	7.5	70
6.0	200	2.0	71
7.0	100	4.0	72
8.0	50	9.0	73
8.0	140	2.0	74
9.0	100	3.0	75
10.0	70	5.0	76
10.0	100	2.5	77
12.0	50	5.5	78
12.0	70	3.0	79
13.0	50	5.0	80
13.0	75	2.5	81
15.0	50	4.0	82
17.0	25	8.0	83

MPU 16 -3PH -F -LV -PT -5 -H

SIZE REFERENCE
(SEE TABLE)

MOTOR VOLTAGE

3PH - Three Phase 415v
1PH - Single Phase 240v
1PH - Single Phase 110v
Inc. in Size Ref. for DC

RETURN LINE FILTER

F — Return Line Filter
X — Not Required

CONTROL VALVE

LV — Solenoid Operated Lowering Valve
3S — Single Solenoid CETOP3 Valve
3D — Double Solenoid CETOP3 Valve
3L — CETOP3 Lever Valve
X — Not Required

PORTING BLOCK

PT — 1/4" BSP P&T Connection
C3 — Single CETOP3 Mounting Face
C3/2 — Double CETOP3 Mounting Faces
C3/3 — Triple CETOP3 Mounting Faces
(Add extra valve codes to end of
part Number, ie. C3/3-H-3S-3D)

RESERVOIR

1.5 LITRE
2.5 LITRE
5 LITRE
8 LITRE
10 LITRE
12 LITRE
SL9 LITRE (Rectangular)
SL20 LITRE (Rectangular)

MOUNTING ORIENTATION

H — Minipack centreline positioned Horizontally
V — Minipack centreline positioned Vertically

NOTE.

The lowering valve can be used
together with C3/2 & C3/3
to act as an unloading valve.



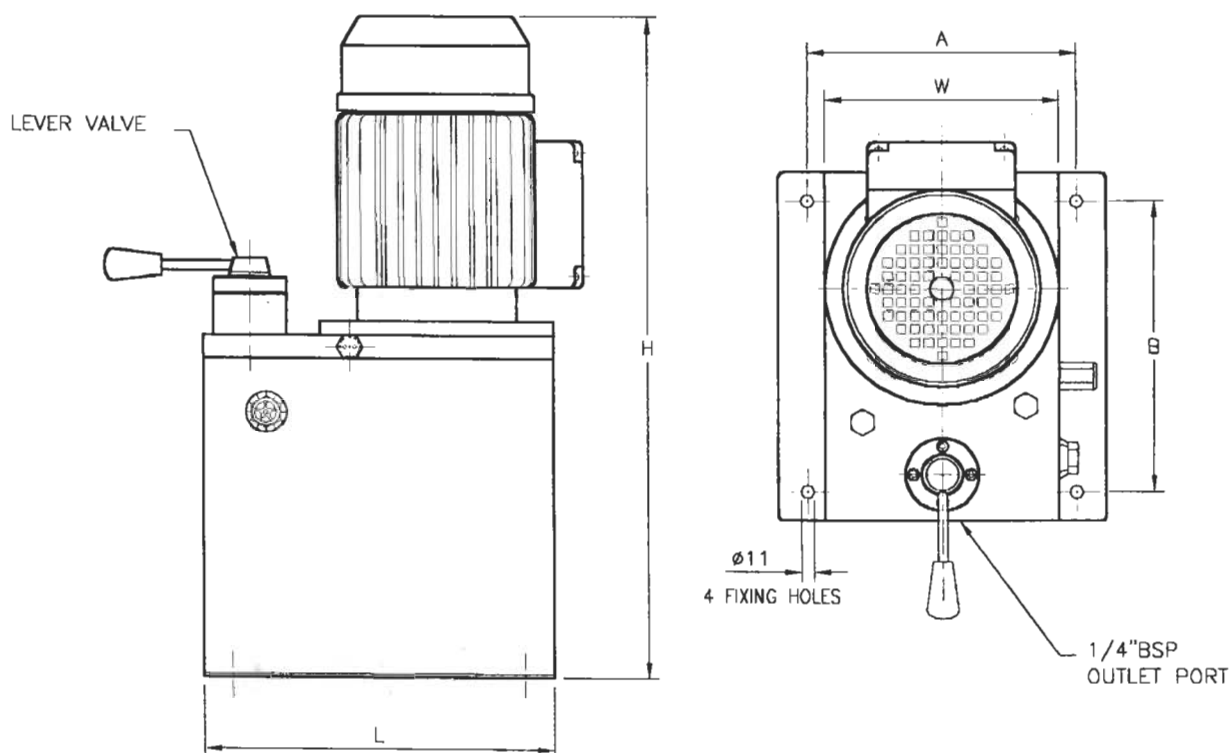
Universal 700 Bar Power Pack PPHP



Flows to 1.7 lpm at 700 bar/
8 lpm at 60 bar.

Single Phase & Three Phase.

power pack 700 bar



Reservoir Capacity	A mm	B mm	L mm	W mm	H mm
10 Litres	230	250	300	200	570
20 Litres	430	250	400	400	535

Flow LPM @700 BAR	Motor Size kW	Size Ref.
1.0	1.5	01
1.7	2.2	02

ORDERING CODE

PPHP - 01 - 3PH - MLS - 20

SIZE REFERENCE

See Table

RESERVOIR

10 Litre
20 Litre

MOTOR VOLTAGE

3PH - Three Phase 415v
1PH - Single Phase 240v

DIRECTIONAL CONTROL VALVE

MLS - Single Acting Lever Valve
MLD - Double Acting Lever Valve
SS - Single Acting Solenoid Valve
SD - Double Acting Solenoid Valve
PT - P & T Connection



UHL

Universal 700 Bar Foot Pump



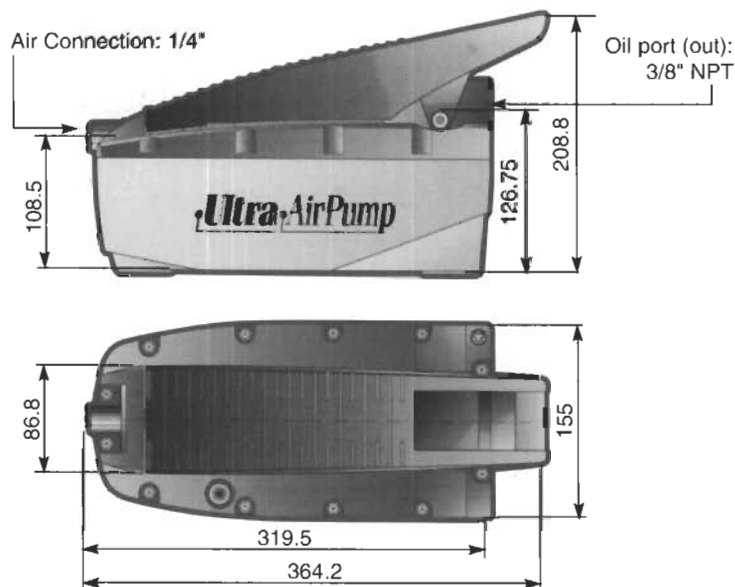
ognibene®

Air Oil Intensifier

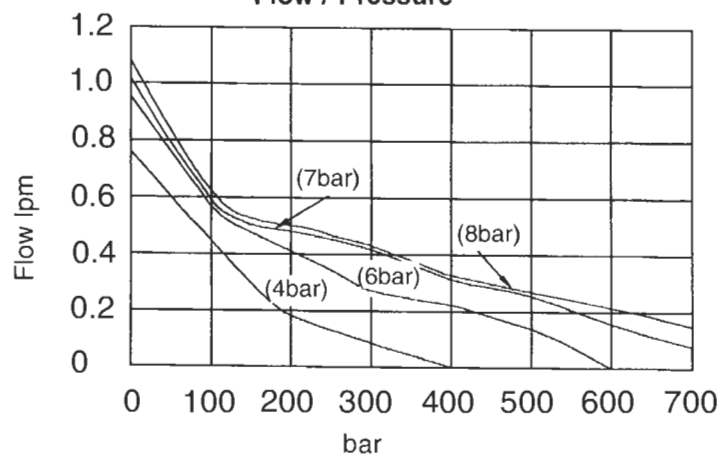
700 bar foot pump

Ordering Code : UPF702

- Pressure Ranges
250 bar, 500 bar, 700 bar.
- Tank Capacity
2.5 Ltr. (Larger Version Available)
- Connects To Dry Air Supply Of
2.8 to 10 bar.
- Low Noise (75dba).
- Weight 6.3 kg.
- Heavy Duty Construction.
- Control Options Include : UPF - Foot Pedal (Standard)
UPC - Cetop Valve
UPM - Manual
UPL - Pilot



Flow / Pressure



UHL

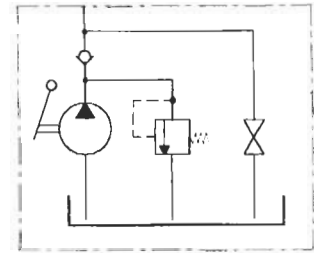
Universal 700 Bar Hand Pump



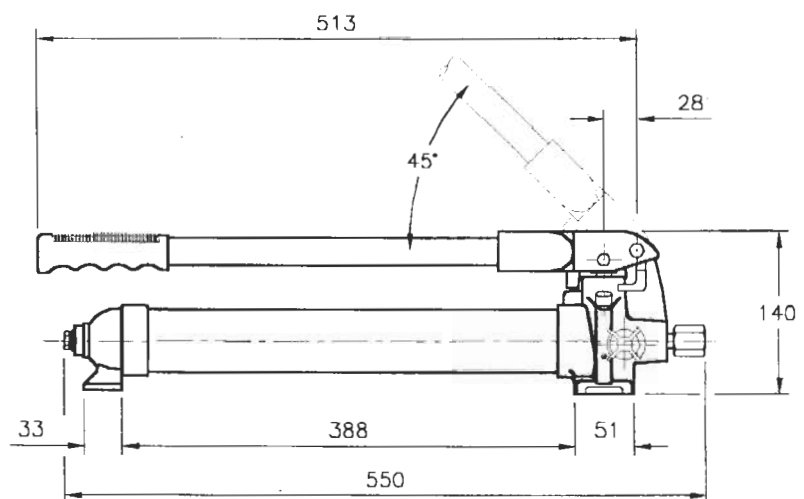
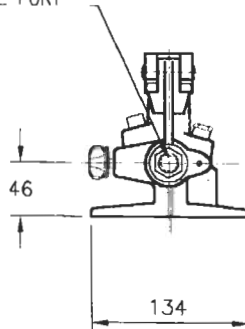
700 bar hand pump

Ordering Code : HTHP

- Completely Self Contained For Instant Use.
- Compact Portable Unit.
- Maximum Pressure Pre-Set Relief Valve.
- External Load Release Valve.
- High Pressure Hose and Quick Release Couplers Optional Extra.



3/8"NPT or 1/4"NPT
PRESSURE PORT



TECHNICAL DATA

Max Working Pressure	:	700 Bar
Displacement	:	2.66 cc/Stroke
Oil Capacity (Useable)	:	750 (650) cc
Weight	:	5.75 kg.
Max Handle Force	:	60 kgf.



technical data

Pipe bore (ID)	bsp	Acceptable flow lpm			
		Pressure Lines	Return Lines	Suction Lines	Valves & Fittings (Approx. max.)
6	1/4	10	8	2	15
10	3/8	25	20	7	50
12	1/2	40	25	10	90
20	3/4	110	70	25	210
25	1	170	110	40	250
30	1-1/4	230	160	60	350
38	1-1/2	400	250	100	500
50	2	650	450	175	800

1 Litre = 0.220 Gallon = 1000 cm³

1 Gallon = 4.546 Litre = 4546 cm³

1 kg = 2.205 lbs

1 lb = 0.454 kg

1 bar = 14.504 psi = 100 kpa

1 psi = 0.069 bar = 6.895 kpa

1 da Nm = 7.376 lb ft = 10 Nm

1 lb ft = 0.136 da Nm = 1.356 Nm

1 cm³ = 0.061 in³

1 in³ = 16.387 cm³

1 N = 0.225 lbf = 0.102 kp

1 lbf = 4.448 N = 0.454 kp

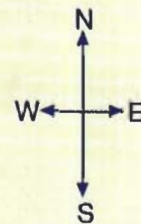
1 kw = 1.341 hp

1 hp = 0.746 kw

1 m³/H = 0.589 ft³/min

1 ft³/min = 1.699 m³/H

Universal Hydraulics Limited
Carrwood Road
Chesterfield Trading Estate
Sheepbridge
Chesterfield
S41 9QB
Tel: (01246) 451711
Fax: (01246) 450399



CARRWOOD ROAD

BROOMBANK ROAD



UHL

Universal Hydraulics Limited

Carrwood Road,
Chesterfield Trading Estate,
Sheepbridge,
Chesterfield S41 9QB.

Telephone: (01246) 451711

Fax: (01246) 450399

