



The OP20 Directional Valve Series provides a compact range of manually operated directional valves for low flow applications. The physical size of OP20 valves is ideally suited for mounting on small and large machines and has a higher flow range than other valves of this size. Like all Oilpath DCV's the handle assembly is fully enclosed to reduce the likelihood of corrosion affecting the handle mechanism. The handle bracket and spring end cover are made from glass filled nylon that has better impact and wear properties than aluminium. The OP20 has individual lift drop checks in the end of each spool giving the valve a unique feature in having a checks to maintain lift individually for all appropriate valve functions. (e.g. a 5 spool double acting valve has 10 lift drop checks). Closed centre and power beyond are also available with the use of plugs.

OVERALL SPECIFICATIONS

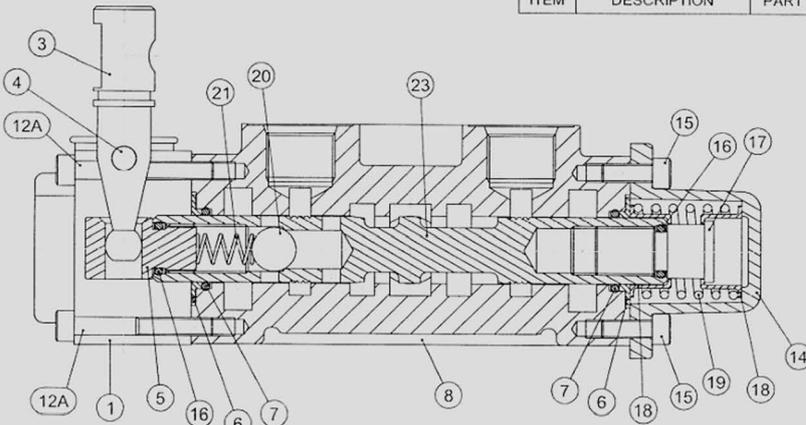
- Number of Spools.....1 to 5
- Maximum working pressure.....280 bar (4000 psi)
- Rated flow.....118 ltrs/min (10 Imp. gpm)
- MATERIAL SPECIFICATIONS Body.....High tensile strength Australian cast iron
- Spools.....Hardened steel
- Seals.....Buna - N

STANDARD FEATURES

- Series Parallel circuit
- Integral HydraForce direct acting relief valve, adjustable [Set at 175 bar (2530 psi)]
- Optional side/top inlet and outlet ports
- 7/8" UN O-Ring inlet, outlet and work ports (optional threads include 3/4 bspp & 1-1/16" un)
- Open or closed centre positions, 3-way or 4-way operation, motor spool and other spool options
- Individual steel ball non-return checks located in spools

OPTIONS

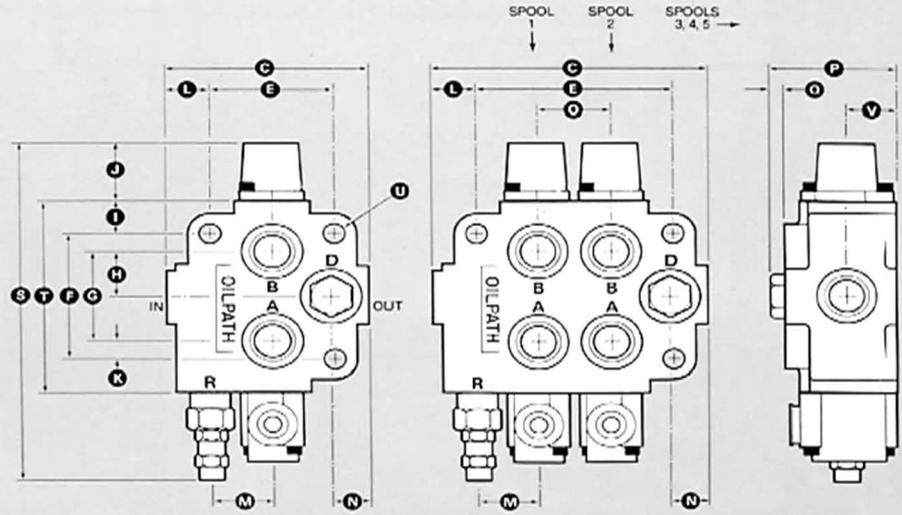
- Micro switch actuation on spool shift
- 2 and 3 position detent & spring centred detent
- Pneumatic spool actuation
- Closed circuit & power beyond
- Cable control



25	OP20 L SPOOL	249010
24	OP20 M SPOOL	249008
23	OP20 S SPOOL	249007
22	OP20 D SPOOL	249006
21	S/C SPRING STRONG	416036
20	9/16" STEEL BALL	417002
ITEM	DESCRIPTION	PART NO

19	SPRING CENTRE	416013
18	SPRING CAP	248017
17	SPRING STUD	248002
16	O RING BS112	401007
15	M6 x 16 SHCS	415016
14	SPRING CAP	340004
13	DETENT SLEEVE	246004
12A	M6 x 45 SHCS	415011
12	SPRING DETENT	416004
11	Ø1/4" STEEL BALL	417005
10	PISTON DETENT	238005
9	O RING WASHER	251002
8	VALVE BODY OP20	212005
7	O RING BS118	401012
6	STEP WASHER	251001
5	SPOOL EYE	248003
4	PIVOT PIN	236008
3	SHIFT LEG	232002
2	RUBBER BOOT	413001
1	LEVER BOX	230005
ITEM	DESCRIPTION	PART NO

Dimensions (to nearest mm)					
Number of spools					
Dim.	1	2	3	4	5
C	129	177	225	273	321
E	79	127	175	223	271
F	89				
G	67				
H	34				
I	27				
J	43				
K	11				
L	27				
M	39				
N	23				
O	48				
P	74				
Q	7				
S	252 (acorn nut closed)				
T	143				
U	Mounting hole 10.3 dia.				
V	33				



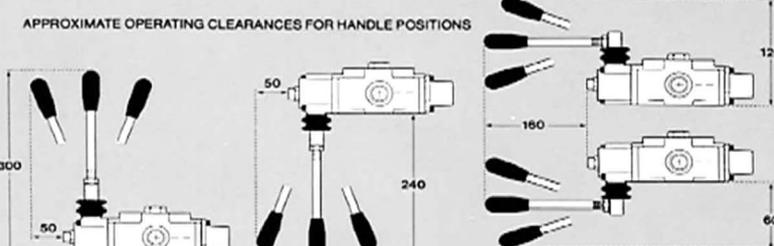
C, E: variable dimensions
F - V: fixed dimensions

Notes:
1. When spool travels into body, port A becomes action. When spool is extended out from neutral, port B is action. This applies to all configurations.
2. Port D is alternate outlet. When high pressure carry over is fitted, port D is connected to tank unrestricted.

Specifications given in this brochure are correct at time of publication. The manufacturer reserves the right to change specifications without notice.

DESIGNED & MANUFACTURED IN AUSTRALIA

APPROXIMATE OPERATING CLEARANCES FOR HANDLE POSITIONS



Spool Type		Relief Setting	Options			
D	Double Acting		Specify pressure within a range of 600-4000 psi	PB	High Pressure carry over	D
S	Single Acting	CC		Closed Centre	W	Air Control OP106
M	Motor Control	NR		No Relief	BF	Bottom face Outlet
K	Flow Control not pressure compensated	SCDA		Spring centred detent to "A"	SCDB	Spring centred detent to "B"
L	Double Acting Spool with no load checks	H		Handle on auxiliary control e.g. W1H1	HI FLOW	Hi Flow, increasing flow to 120 l/min with 3/4"bspp or 1-1/16" un R2 relief
P	Pressure Compensated Flow Control	OP106S		Electric over air solenoid control state voltage required e.g. OP106S24V	MU	special plating and hardware for mine or marine use
Please Note: Maximum tank pressure is 250 psi on OP20 valves		RESTA		Restricted detent to "A" port	RESTB	Restricted detent to "B" port

OP20D 2000 PB
 OP20DDS 2500 W123H123
 OP20DSSS 1500 SCDB1
 OP20DDDDM 3500 SCDB23

Single Double acting spool 2000psi relief high pressure carry over
 Triple 1st & 2nd spool double acting 3rd spool single acting 2500 psi relief with air and handle operation on all spools
 Four spool valve 1st spool double acting spools 2nd 3rd & 4th spools single acting 1500 psi relief with spring centred detent to "B" detent on 1st spool
 Five spool with double acting spools on 1,2,3, & 4 and motor spool on 5th spool 3500 psi relief spring with 24volt solenoid unloading relief valve

OP20 Directional Control Valve Pricing

Part Number	Description		
0201xxxx	Single Spool Valve		
0202xxxx	Two Spool Valve		
0203xxxx	Triple Spool Valve		
0204xxxx	Four Spool Valve		
0205xxxx	Five Spool Valve		

OP20 Options Pricing

OPTIONS for OP20	Part Number	Description	
P	-	Priority Flow Control Spool Factory fit only, lead time applies	
M	-	Motor Spool, penalty per each when factory fitted	
K	-	Spool includes friction detent and can only be factory fitted	
L	-	L Spool is D/A and has no load checks, used for high flows applications	
D1	507007	Detent per spool, (3 position) factory fit, # indicates position	
SCDB	509020	Spring Centred Detent with det. Acting on B port is pressurised	
SCDA	509007	Spring Centred Detent with det. acting on A port is pressurised	
PB	511003	High Pressure Carry over plug for power beyond "Hi-Cap"	
PBH	511005	High Pressure Carry over plug 1- 1/16" UNF Hi - Flow	
CC	511047	Closed Centre Plug (Plug A) part of kit for closed centre	
NR	511002	Pressure Relief Plug (Plug B) part of kit for closed centre	
LW	-	Pressure Relief Lock Wire (lead seal)	
BF	-	Bottom Face Outlet available only as special build from factory	