

# OILPATH

## MODEL OP10 DIRECTIONAL HYDRAULIC CONTROL VALVES PARALLEL CIRCUIT



Up to four spools available

- Reduced weight, compact size.
- High pressure capability.
- Ideal for small tractors, mowers, forklifts and other lightweight machinery.
- Recommended for all applications requiring high performance but where control operating space is limited.

## FEATURES

- Proven monoblock high-integrity casting.
- High working pressure.
- Negligible leakage rate.
- Choice of side or top ports for both inlet and outlet.
- Provision for CLOSED CIRCUIT or POWER BEYOND supplied with valve at shipment.
- 1 to 4 spools available, each spool supplied as D, S or M configuration as required.
- 4-way adjustable handle.
- Fully adjustable relief and non-return check contained in one cartridge.
- Hardened steel non-return check seat.
- Additional internal tank gallery. This facility ensures that all seals and PRV vent remain at low pressure when valve is used in POWER BEYOND mode.

**DESIGNED &  
MANUFACTURED  
IN AUSTRALIA**

## SPECIFICATIONS

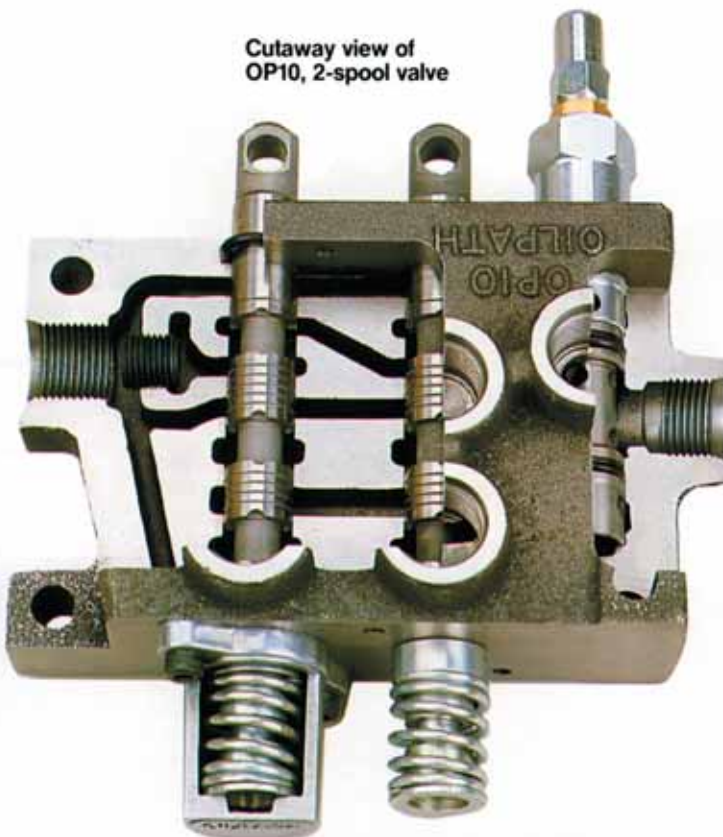
<b>Max. flow capacity</b>	45 litres/min (10 gpm.lmp.)
<b>Max. operating pressure</b>	5000 psi (345 bar)
<b>Max. back pressure</b>	1500 psi (103 bar)
<b>Port size (all ports)</b>	3/4" UNF-16 (SAE 8) 3/8" BSPP on request.
<b>Valve circuitry</b>	Parallel
<b>Approx. weight</b>	1 spool: 3.1kg 2 spools: 4.6kg 3 spools: 6.1kg 4 spools: 7.6kg
<b>O/all fixed dimensions (mm)</b>	198 x 65 (length x height*)
<b>O/all width (mm)</b>	1 spool: 120 2 spools: 160 3 spools: 200 4 spools: 240

\*Excluding handle

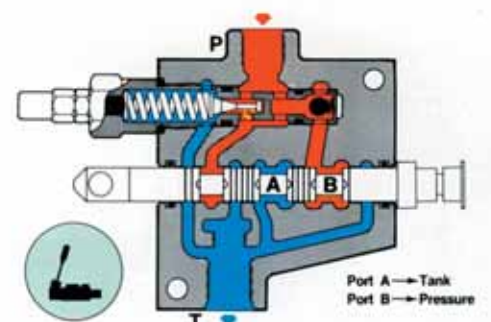
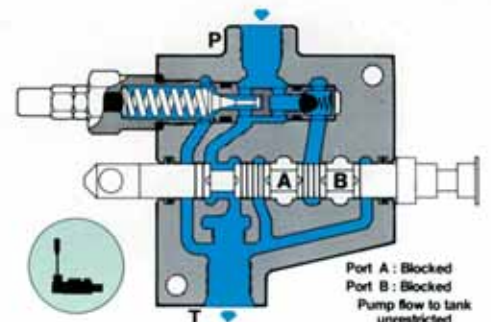
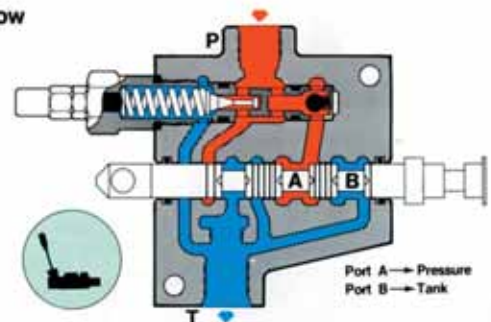
Information given herein is correct at the time of publication. The manufacturers are engaged in continuous product development and reserve the right to change specifications and procedures without prior notice.

Diagrams showing oil flow for D (double acting) configuration

Cutaway view of OP10, 2-spool valve

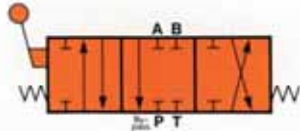


Note: When spool travels into body, port A becomes action. When spool is extended out from neutral, port B is action. This applies to all configurations.

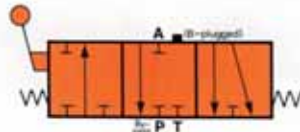


## AVAILABLE SPOOL CONFIGURATIONS

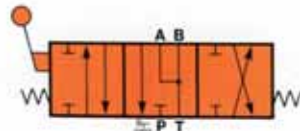
**D** } Double acting  
**Q** }  
 (Low flow applications)



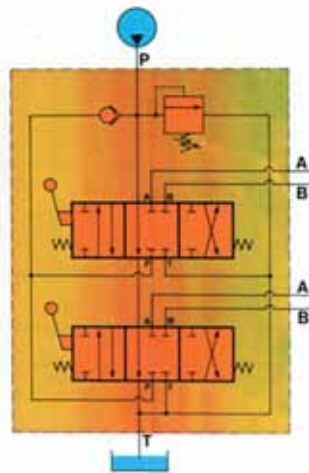
**S** Single acting



**M** Motor

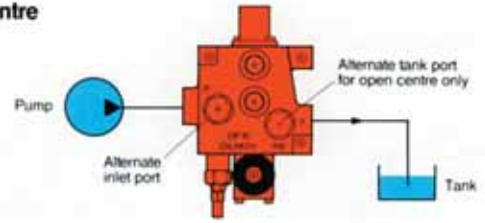


**OP10:**  
 Typical circuit  
 for 2-spool  
 double-acting  
 configuration

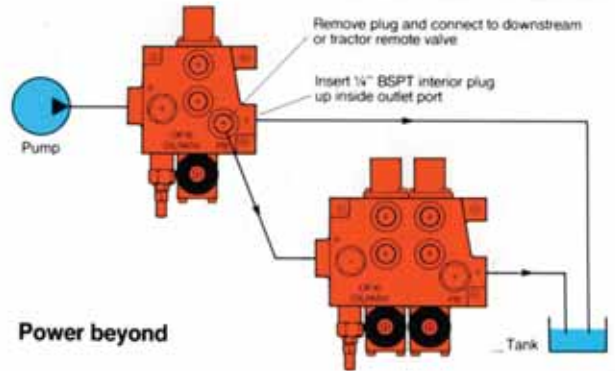
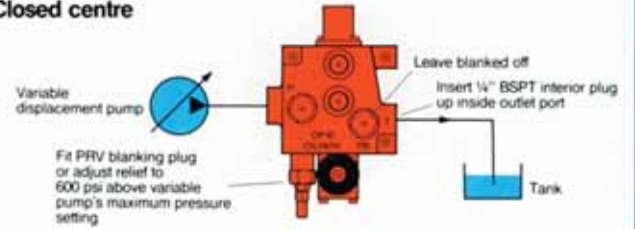


## TYPICAL INSTALLATIONS

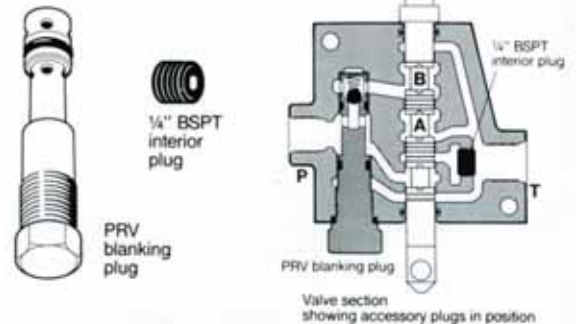
**Open centre**



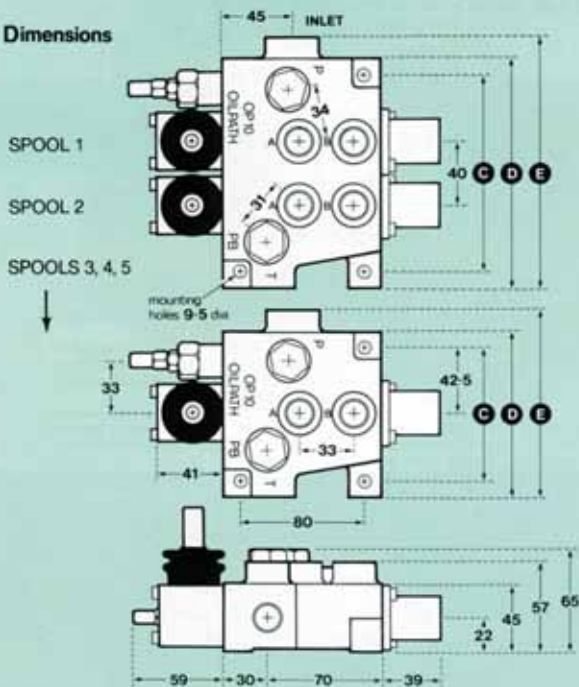
**Closed centre**



**Power beyond**



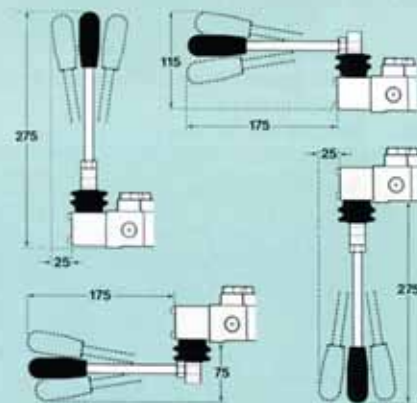
**Dimensions**



**Variable dimensions**  
 (to nearest mm)

Dim.	Number of spools				
	1	2	3	4	5
C	85	125	165	205	245
D	107	147	187	227	267
E	120	160	200	240	280

**Approximate clearances for 4-way handle positions**



**Notes:**

1. Threaded holes on boss provide for end- or side-mounting of operating handle.
2. Dimensions shown are for minimum handle extent. Handle length can be effectively increased by 10mm.

## ORDERING INFORMATION

Oilpath OP10 control valves may be ordered by quoting a number/letter group sequence as follows:  
 Valve series; Spool configuration; Relief setting; Options required.

VALVE MODEL	SPOOL CONFIGURATION Starting from inlet	RELIEF SETTING	OPTIONS																																
OP10	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; font-weight: bold; font-size: 1.5em;">D</td> <td>Double acting spring centred</td> </tr> <tr> <td style="text-align: center; font-weight: bold; font-size: 1.5em;">Q</td> <td>Double acting spring centred, with metering to suit low flows.</td> </tr> <tr> <td style="text-align: center; font-weight: bold; font-size: 1.5em;">S</td> <td>Single acting spring centred</td> </tr> <tr> <td style="text-align: center; font-weight: bold; font-size: 1.5em;">M</td> <td>Motor spring centred</td> </tr> </table>	D	Double acting spring centred	Q	Double acting spring centred, with metering to suit low flows.	S	Single acting spring centred	M	Motor spring centred	<p>Specify relief setting required, followed by spring type (X, Y or Z). Relief setting must be within the range for each spring.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <tr> <td style="text-align: center; font-weight: bold;">X</td> <td>400 — 1100 psi</td> </tr> <tr> <td style="text-align: center; font-weight: bold;">Y</td> <td>1100 — 3000 psi</td> </tr> <tr> <td style="text-align: center; font-weight: bold;">Z</td> <td>3000 — 5000 psi</td> </tr> </table> <p>If no setting is specified when ordering, relief valve will be factory set at 2000 psi using Y spring.</p>	X	400 — 1100 psi	Y	1100 — 3000 psi	Z	3000 — 5000 psi	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; font-weight: bold;">PB</td> <td>High pressure carry over. Plug supplied separate as standard. If PB is quoted, plug will be factory fitted.</td> </tr> <tr> <td style="text-align: center; font-weight: bold;">CC</td> <td>Closed centre.</td> </tr> <tr> <td style="text-align: center; font-weight: bold;">NR</td> <td>Relief valve not required.</td> </tr> <tr> <td style="text-align: center; font-weight: bold;">SCA</td> <td>Spring centred detent (port A).</td> </tr> <tr> <td style="text-align: center; font-weight: bold;">SCB</td> <td>Spring centred detent (port B).</td> </tr> <tr> <td style="text-align: center; font-weight: bold;">A</td> <td>Air control OP103. For single spool model only.</td> </tr> <tr> <td style="text-align: center; font-weight: bold;">D*</td> <td>Three position detent.</td> </tr> <tr> <td style="text-align: center; font-weight: bold;">E*</td> <td>Electric limit switch.</td> </tr> <tr> <td style="text-align: center; font-weight: bold;">R*</td> <td>Cable control Morse RVC.</td> </tr> </table>	PB	High pressure carry over. Plug supplied separate as standard. If PB is quoted, plug will be factory fitted.	CC	Closed centre.	NR	Relief valve not required.	SCA	Spring centred detent (port A).	SCB	Spring centred detent (port B).	A	Air control OP103. For single spool model only.	D*	Three position detent.	E*	Electric limit switch.	R*	Cable control Morse RVC.
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EXAMPLES: **OP10 D 1200 X PB**  
**OP10 DD 2500 Y**  
**OP10 DSD 3500 Z D13**

\* Code letter to be followed by numeral indicating for which spool option is required (counting from inlet).

Single spool. Double acting spring centred; 1200 psi relief; X spring; High pressure carry over.  
 Double spool. 1st spool double acting spring centred; 2nd spool double acting spring centred; 2500 psi relief; Y spring. No options required.  
 Triple spool. 1st spool double acting with detent; 2nd spool single acting spring centred; 3rd spool double acting with detent; 3500 psi relief; Z spring.

### FURTHER INFORMATION

OILPATH Pty Ltd manufactures a comprehensive range of additional precision hydraulic valves. Contact our local representative for information on:

- OP3. Solenoid directional valve.
- OP20. Multi spool series/parallel control valve.
- OP27. Selector valve.
- OP80. Double sector valve.
- OP101. Double lock valve.
- OP103. Air actuated control unit.

### WARRANTY

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*Oilpath products are warranted to be free of defects in material or workmanship.  
 This Warranty voids all other warranties, whether expressed or implied, and shall be in effect for twelve months from date of purchase.  
 The Warranty is limited to replacement or repair, excluding seals or damage arising from misuse or incorrect installation.  
 The Company accepts no liability for faults caused by improper use or faulty maintenance of the product, or its operation beyond recommended specifications, or contingent or consequential loss or damage under any situation whatsoever.  
 All unauthorised modifications to the product automatically voids the conditions of this Warranty.*

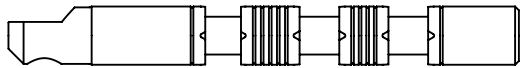
Manufactured by :

**OILPATH** PTY. LTD.  
INC. IN SOUTH AUSTRALIA  
 A.B.N. 97 007 683 472

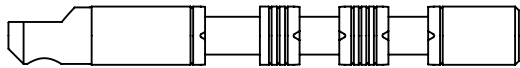
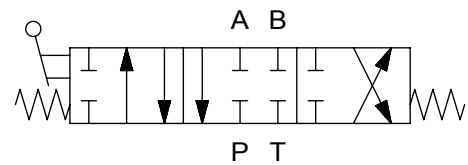
21 Deloraine Road,  
 Edwardstown, South Australia.  
 PO Box 132, Edwardstown 5039,  
 Ph: (08) 8277 4933 Fax: (08) 8277 9126

# OP10/11 Spool Types

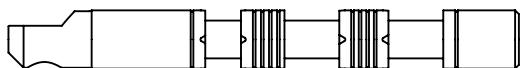
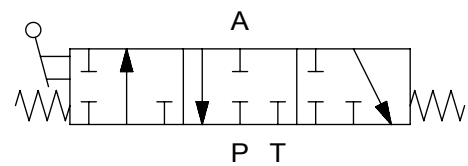
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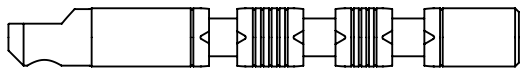
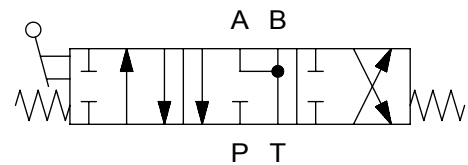
D Spool



S Spool



M Spool



Q Spool

