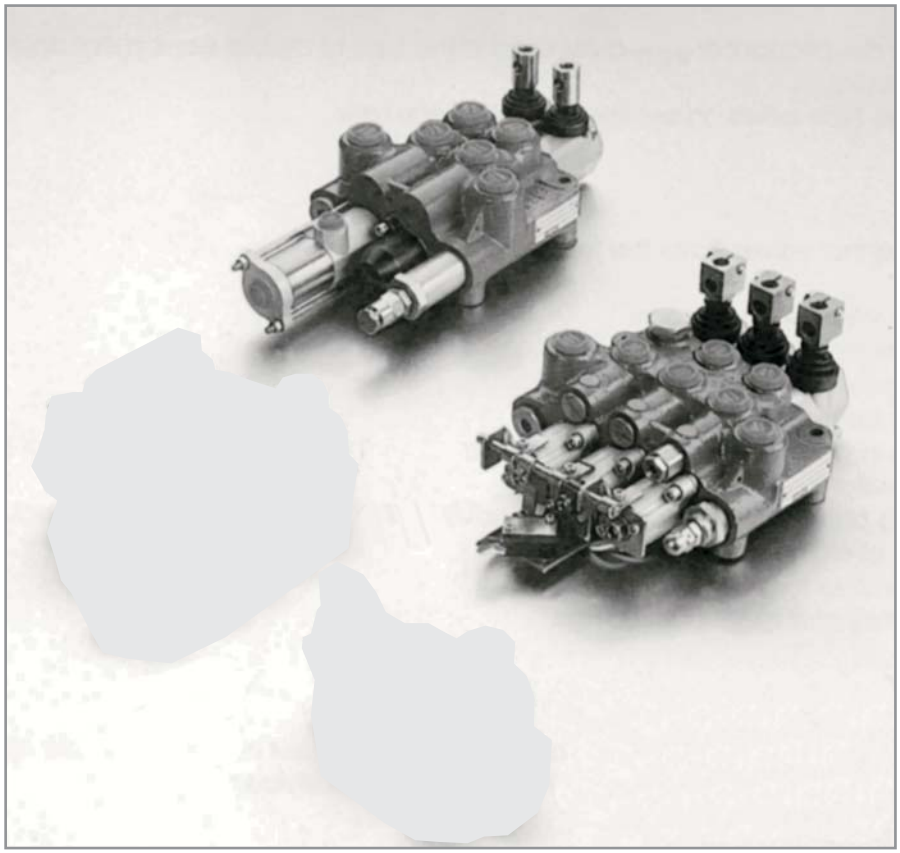
# VDM07 - VDM09

## DIRECTIONAL CONTROL VALVE
## MONOBLOCK TYPE

## FEATURES



| TYPE | Internal diameter | | Nominal flow | | Inlet pressure | | Number of spools |
|---|---|---|---|---|---|---|---|
| | mm. | in. | l/min. | U.S. gpm | bar | psi | |
| VDM07 | 11 | .43 | 50 | 14 | 280 | 4000 | 1÷6 |
| VDM09 | 13 | .51 | 75 | 21 | 280 | 4000 | 1÷6 |

# VDM07 - VDM09

## DIRECTIONAL CONTROL VALVE MONOBLOCK TYPE

## FEATURES

**Flow restrictor ST-SP**: Directy fitted on the ports orifice.

• **Devices**

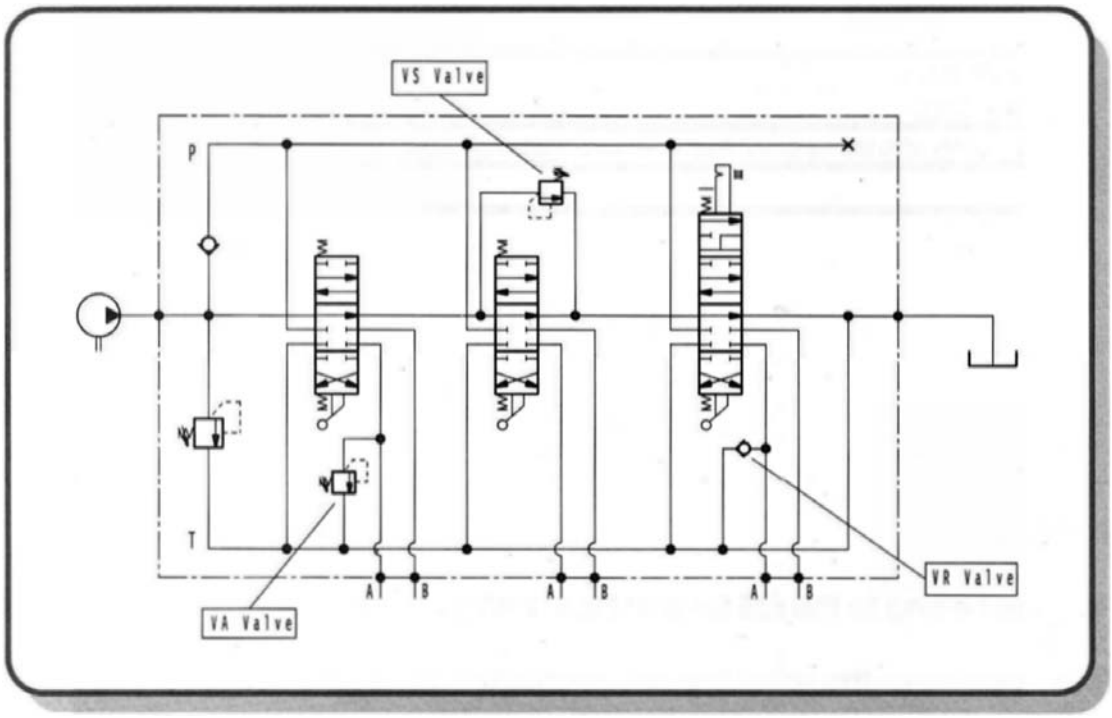
**Manual safety device**: Avoids accidental operation of the spool.

**Control device for microswitches**: For the operation of D.C. motor driven pumps at one or more rotation speeds.

**Emergency manual device**: Allows manual actings when the spool is usually electrically activated.

**Anti-tilt device**: Returns the spool automatically to the neutral position when the pressure reaches a pre-set value to avoid cranes from becoming unstable.

**Hydraulic kick-out**: Returns the spool automatically to the neutral position when the preset pressure of port A or B is exceeded. Also combined with float spool



**DIRECTIONAL CONTROL VALVE**
**MONOBLOCK TYPE**

# VDM07 - VDM09

## WORKING CONDITIONS

| | |
|---|---|
| HYDRAULIC FLUID | Mineral oil according to DIN 51524 |
| VISCOSITY | |
| Viscosity range | 10 ..... 460 $mm^2$/sec. |
| | 0.015 ..... 0.713 sq.in./sec. |
| Optimal viscosity | 12 ..... 75 $mm^2$/sec. |
| | 0.019 ..... 0.116 sq.in./sec. |
| TEMPERATURE | |
| Fluid range temperature | - 20 ..... + 85° C |
| | - 4 ..... + 185° F |
| Suggested range | +30 ..... + 60° C |
| | +86 ..... + 140° F |
| MAXIMUM CONTAMINATION LEVEL | NAS 1638: class 9<br>ISO 4406: 19/16 |
| MAXIMUM PRESSURE ON TANK (T) PORT | 20 bar |
| | 300 psi |
| ROOM TEMPERATURE | - 30 ..... + 60° C |
| | - 22 ..... + 140° F |
| WORKING LIMITS | See diagrams |
| PRESSURE DROPS | See diagrams |
| For operation with fire resistant fluid, please contact our sales departement | |

## OPERATING PRINCIPLE

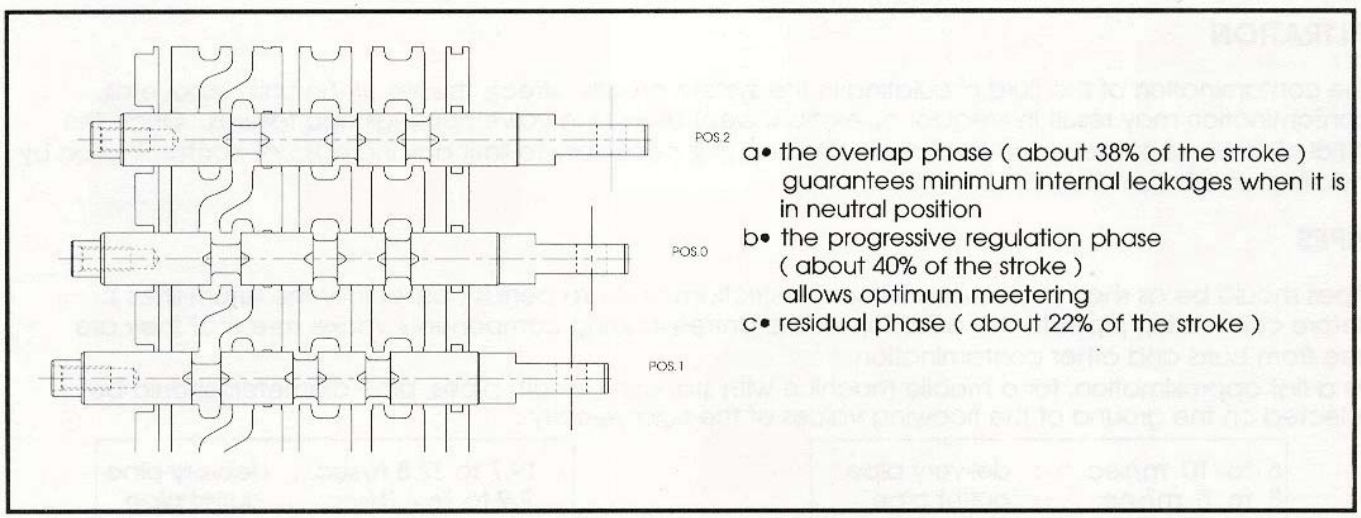
Salami directional control valves belong to the 6/3 ( or 6/4 ) type; they can control 6 paths in 3 ( or 4) spool positions simultaneously.
They are open circuit types: when the spool is in neutral position, the fluid flows directly to the tank with minimum internal pressure drops ( approximatively 1 bar / 14,5 psi for each spool at nominal flow).
When the spool is moved from this position, the central path is gradually throttled and the connection between pump and implement, through the corresponding port, is made.
When a pressure exceeds the value of the pressure existing in port A or B, the fluid flows through the check valve to the implement.

# VDM07 - VDM09

**DIRECTIONAL CONTROL VALVE**
**MONOBLOCK TYPE**

## FEATURES

There are 3 characteristic phases in the spool stroke:




a• the overlap phase ( about 38% of the stroke ) guarantees minimum internal leakages when it is in neutral position
b• the progressive regulation phase ( about 40% of the stroke ) allows optimum meetering
c• residual phase ( about 22% of the stroke )

## CIRCUIT TYPES

**Parallel circuit** : The spools, when activated simultaneously, will use full system pressure while dividing the available flow by the number of sections up to the maximum rating.

## HYDRAULIC FLUIDS

Usually a mineral-base oil with a good viscosity index should be used, preferably with good lubricating properties and corrosion, oxydation and foaming resistant.
Sometimes the fluids supplied by the manufacturers do not satisfy purity requirements ( see WORKING CONDITIONS ). It is therefore necessary to filter the fluid carefully before filling. Your supplier can give you the information about the NAS class of its fluids. To maintain the proper purity class, the use of filters of high dirt capacity with clogging indicator is recommended.
Under humidity conditions it is necessary to use igroscopic salts.
For operation with fire resistant and ecological fluids, please contact our technical department.

**DIRECTIONAL CONTROL VALVE**
**MONOBLOCK TYPE**

# VDM07 - VDM09

## FEATURES

### INSTALLATION

When proceeding to mount the unit on the structure and to connect adaptors to work ports, it is necessary to comply with the values of tightening torques as indicated in the maintenance book.
The attachment of linkages to spools should not affect their operation. The mounting position can be vertical or horizontal.

### FILTRATION

The contamination of the fluid circulating in the system greatly affects the life of the unit. Above all, contamination may result in irregular operation, wear of seals in valve housings and failures. Once the initial cleanliness of the system has been attained, it is necessary to limit any increase of contamination by installing an efficient filtration system.

### PIPES

Pipes should be as short as possible, without restrictions or sharp bends ( especially the return lines ).
Before connecting pipes to the adaptors of the corresponding components, make sure that they are free from burrs and other contamination.
As a first approximation, for a mobile machine with standard length pipes, pipe diameters should be selected on the ground of the floowing values of the fluid velocity :

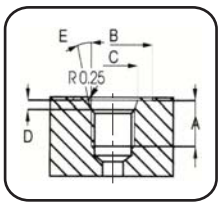
| | |
|---|---|
| 6 to 10 m/sec | : delivery pipe |
| 3 to 5 m/sec. | : outlet pipe |

| | |
|---|---|
| 19.7 to 32.8 ft/sec | : delivery pipe |
| 9.9 to 16.4 ft/sec | : outlet pipe |

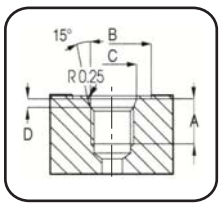
The lowest velocity in the pipes is required when the temperature range is wide and / or for continuous running.
Alternatively, the highest velocity is required when the temperature range is more limited and / or for intermittent operations.

### PORTS

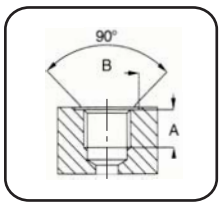
Following are standard ports. For other port types, please contact our sales department.




| Dimensions | | SAE UN-UNF (ISO 725) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | in. | 7/16-20 UNF SAE4 | | 9/16-18 UNF SAE6 | | 3/4-16 UNF SAE8 | | 7/8-14 UNF SAE10 | | 1"1/16-12 UN SAE12 | | 1"5/16-12 UN SAE16 | | 1"5/8-12 UN SAE20 | | 1"7/8-12 UN SAE24 | |
| A | | 12 | 0,47 | 13 | 0,51 | 15 | 0,59 | 17 | 0,67 | 20 | 0,79 | 20 | 0,79 | 20 | 0,79 | 20 | 0,79 |
| B | | 21 | 0,83 | 25 | 0,98 | 30 | 1,18 | 34 | 1,34 | 41 | 1,61 | 49 | 1,92 | 58 | 2,28 | 65 | 2,56 |
| C | | 12,4 | 0,49 | 15,6 | 0,61 | 20,6 | 0,81 | 23,9 | 0,94 | 29,2 | 1,15 | 35,5 | 1,40 | 43,5 | 1,71 | 49,5 | 1,95 |
| D | | 2,4 | 0,09 | 2,5 | 0,10 | 2,5 | 0,10 | 2,5 | 0,10 | 3,3 | 0,13 | 3,3 | 0,13 | 3,3 | 0,13 | 3,3 | 0,13 |
| E | | 12° | | | | 15° | | | | | | | | | | | |




| | | METRIC (ISO 6149) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimensions | | M18X1,5 | | | | M22X1,5 | | | | M27X2 | | | | M33X2 | | | |
| mm | in. | ISO 262 | | ISO 6149 | | ISO 262 | | ISO 6149 | | ISO 262 | | ISO 6149 | | ISO 262 | | ISO 6149 | |
| A | | 14 | 0,55 | 14,5 | 0,57 | 16 | 0,63 | 16 | 0,63 | 18 | 0,71 | 19 | 1,75 | 20 | 0,79 | 19 | 0,75 |
| B | | 27,5 | 1,08 | 29 | 1,14 | 31,5 | 1,24 | 34 | 1,34 | 37,7 | 1,48 | 40 | 1,57 | 45 | 1,77 | 46 | 1,81 |
| C | | | | 19,8 | 0,78 | | | 23,8 | 0,94 | | | 29,4 | 1,16 | | | 35,4 | 1,39 |
| D | | | | 2,4 | 0,09 | | | 2,4 | 0,09 | | | 3,1 | 0,12 | | | 3,1 | 0,12 |




| Dimensions | | BSP (ISO 228) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | in. | G 1/8 | | G 1/4 | | G 3/8 | | G 1/2 | | G 3/4 | | G 1 | | G 1 1/4 | | G 1 1/2 | |
| A | | 10 | 0,39 | 14 | 0,55 | 14 | 0,55 | 16 | 0,63 | 18 | 0,71 | 20 | 0,79 | 22 | 0,87 | 24 | 0,94 |
| B (min) | | 15 | 0,59 | 19 | 0,75 | 23 | 0,91 | 27 | 1,06 | 33 | 1,30 | 40 | 1,57 | 50 | 1,97 | 56 | 2,20 |

# VDM07 - VDM09

## DIRECTIONAL CONTROL VALVE MONOBLOCK TYPE

## QUICK REFERENCE

| | VDM07 | VDM09 |
|---|---|---|
| **NUMBER OF SPOOLS** | 1 ÷ 6 | 1 ÷ 6 |
| Internal diameter | 11 mm. | 13 mm. |
| | ,43 in. | ,51 in. |
| **NOMINAL FLOW** | 50 l/min. | 75 l/min. |
| | 14 g p m US | 21 g p m US |
| **PRESSURE** | | |
| Working pressure on P port | 280 bar | 280 bar |
| | 4000 psi | 4000 psi |
| Working pressure on A-B ports | 315 bar | 315 bar |
| | 4560 psi | 4560 psi |
| Internal leakage A/B → T, 200 bar at 2860 psi, 16 cSt | **22** $cm^3$/min. | **35** $cm^3$/min. |
| Main pressure relief valve (max. setting) | 315 bar | 315 bar |
| | 4560 psi | 4560 psi |
| Prearrangement for auxiliary valves on B port (optional) | ● | ● |
| **AUXILIARY VALVES** | | |
| Overload valve on B port VA | ● | ● |
| Anticavitation check valve on B port VR | ● | ● |
| Cross-over pressure relief valve VX | ● | |
| Secondary pressure relief valve VS | ● | ● |
| Flow limiting valve LC | ● | ● |
| Double-single acting conversion valve CV | ● | ● |
| Flow restrictor ST-SP | ● | ● |
| **SPOOL CONTROLS** | | |
| Manual | ● | ● |
| Cable | ● | ● |
| Hydraulic proportional | ● | ● |
| Pneumatic ON-OFF | | |
| Pneumatic proportional | ● | ● |
| Electric ON-OFF | ● | |
| Electro-pneumatic ON-OFF | ● | |
| Power beyond | ● | ● |
| Micro-switch | ● | ● |

Note: Nominal flow meaning: flow causing 1 bar pressure drop each section, with spools in neutral position

**DIRECTIONAL CONTROL VALVE**
**MONOBLOCK TYPE**

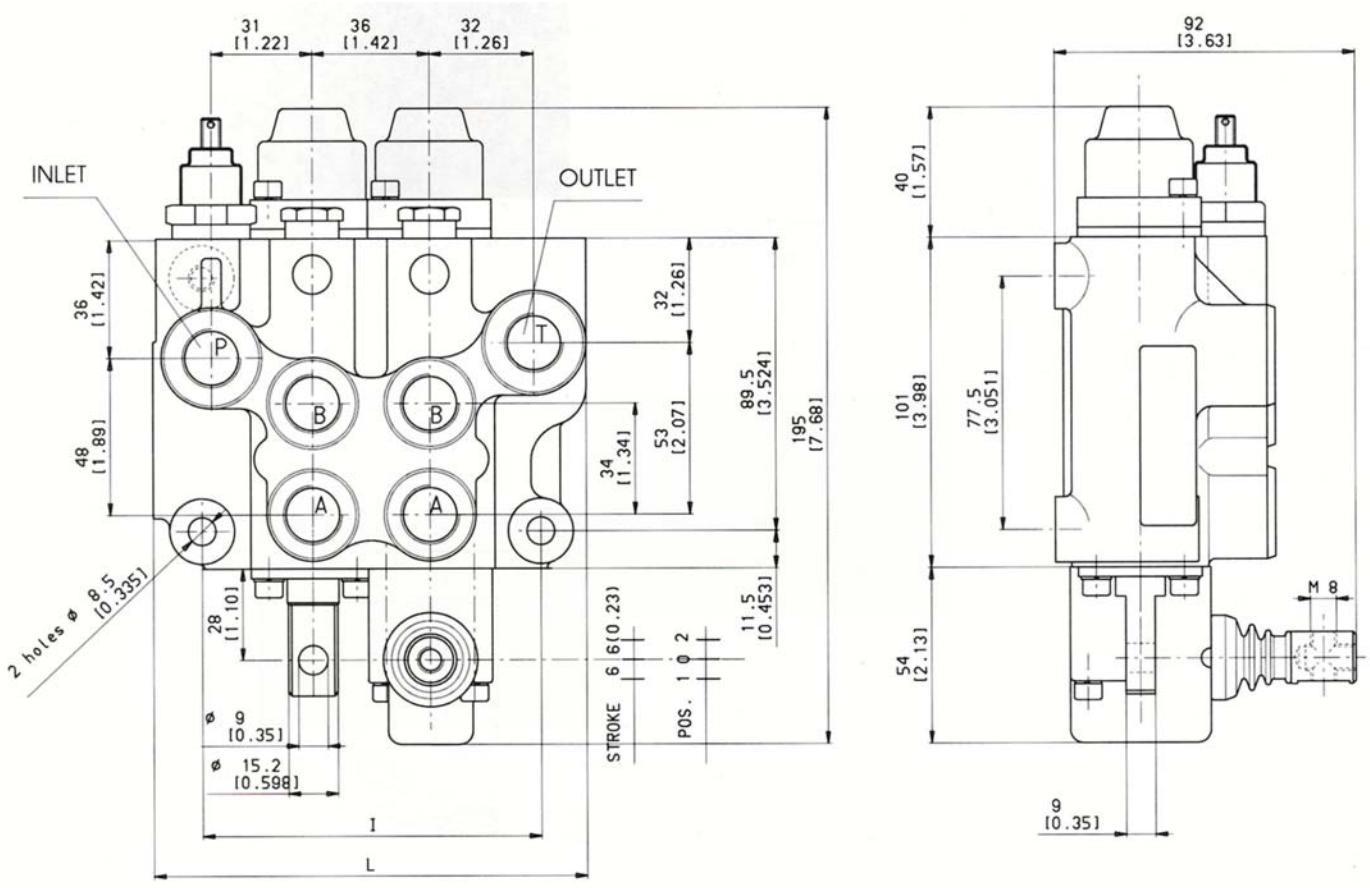
# VDM07

## DIMENSIONS FROM 1 TO 6 SECTIONS MONOBLOCK

Nominal flow: 50 l/min.
Pressure on P port: 280 bar
Pressure on A/B port: 315 bar

Nominal flow: 14 gpm US
Pressure on P port: 4000 psi
Pressure on A/B port: 4560 psi

| Ports | P | T | A-B |
|---|---|---|---|
| BSP ISO 228 | 3/8 | 3/8 | 3/8 |
| METRICA ISO 6149 | M18X1.5 | M18X1.5 | M18X1.5 |
| SAE ISO 725 | 3/4-16 UNF | 3/4-16 UNF | 3/4-16 UNF |




| Spool | | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| I | mm. | 68 | 104 | 140 | 176 | 212 | 248 |
| | in. | 2.67 | 4.09 | 5.51 | 6.92 | 8.34 | 9.76 |
| L | mm. | 96.5 | 132.5 | 168.5 | 204.5 | 240.5 | 276.5 |
| | in. | 3.79 | 5.21 | 6.63 | 8.05 | 9.46 | 10.89 |
| M | kg | 2.8 | 4.5 | 6.3 | 8 | 9.7 | 11.4 |
| | lb | 6.16 | 9.9 | 13.86 | 17.6 | 21.34 | 25.08 |

# VDM07

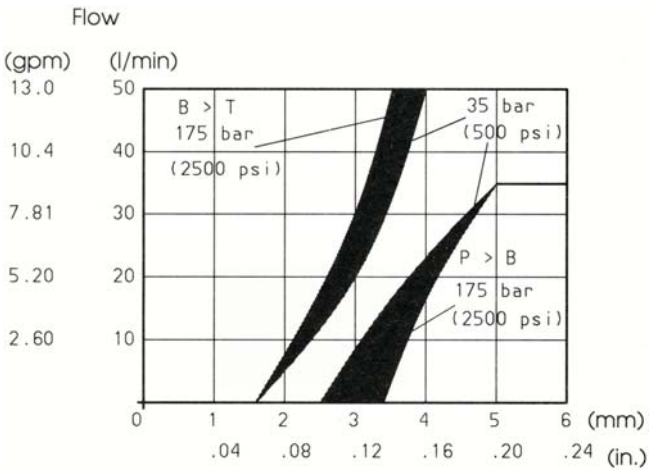
## DIRECTIONAL CONTROL VALVE MONOBLOCK TYPE

## PERFORMANCE DATA

Performance curves carried out with oil viscosity at 16cSt

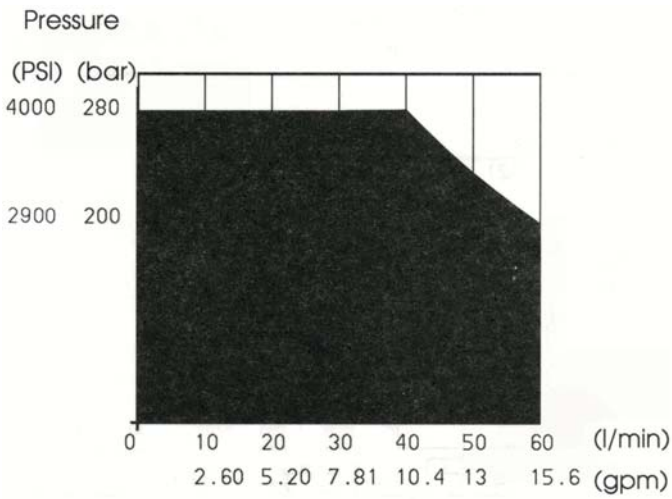
Internal leakages
A/B → T **22** $cm^3$/min. (0.92 cu. in./min.) at 200 bar (2900 psi)

### Meetering



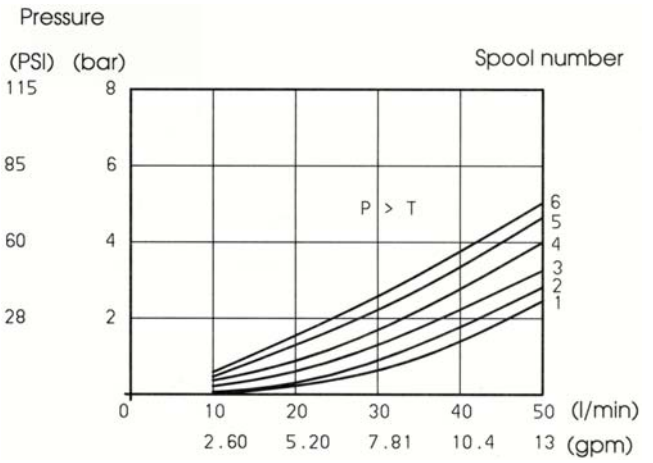

Stroke

### Working limits



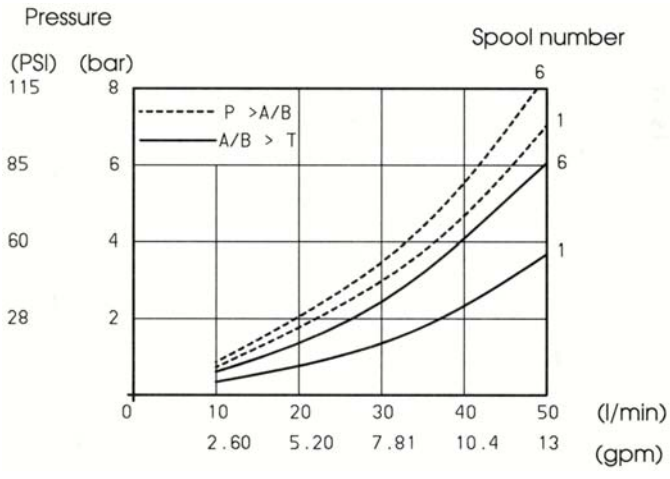

Flow

### Pressure drop




Flow

### Pressure drop

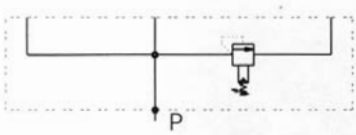



Flow

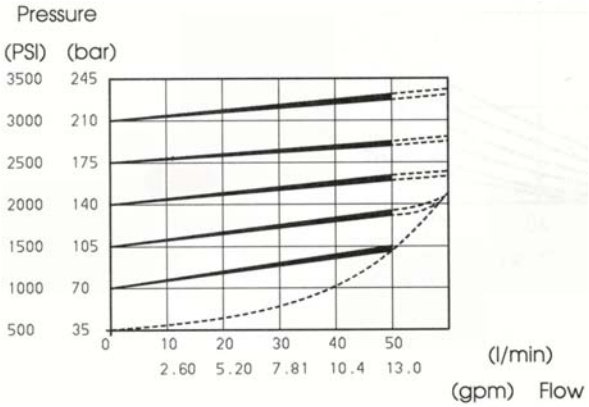
**DIRECTIONAL CONTROL VALVE**
**MONOBLOCK TYPE**

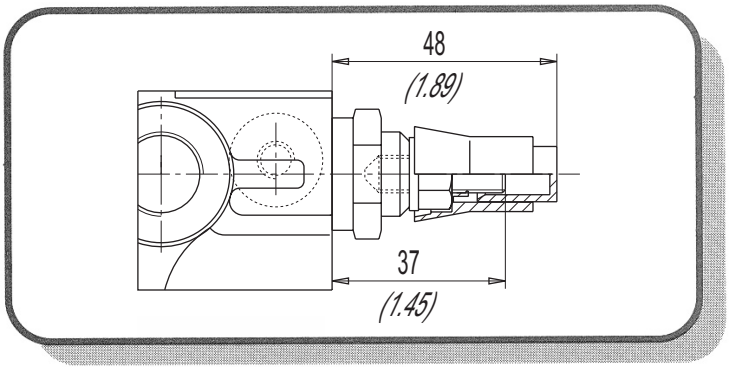
# VDM07 - VDM09

## INLET TYPES

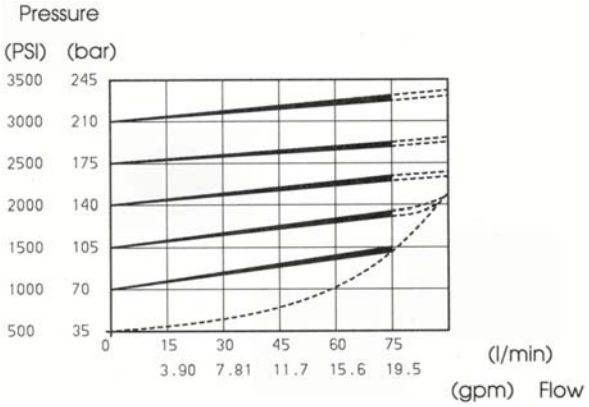
| Code | Hydraulic symbol | Description | VDM07 | VDM09 |
|---|---|---|---|---|
| 01 |  | Top inlet port | ● | ● |
| 02 | | Side inlet port (top port plugged) | | |
| 03 | | Top and side inlet port | | |
| 41 | | Down inlet port | | |

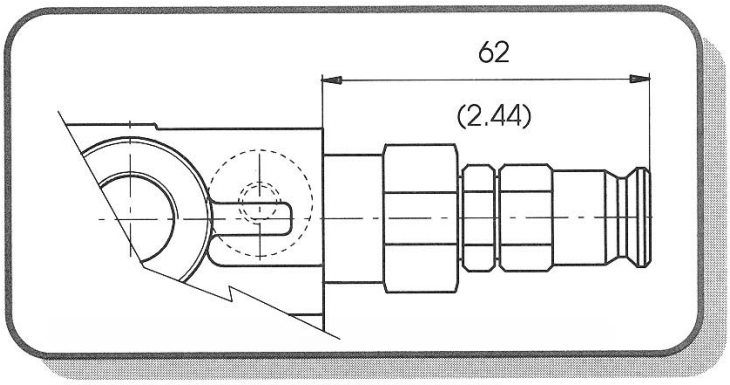
## MAIN PRESSURE RELIEF VALVE - VDM07




## MAIN PRESSURE RELIEF VALVE - VDM09

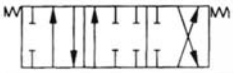
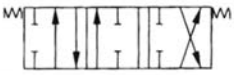
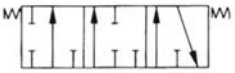
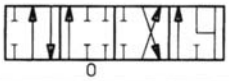
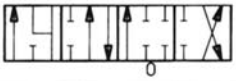
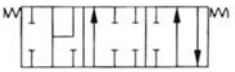
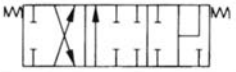
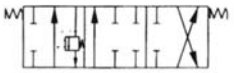
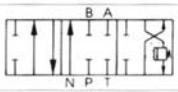
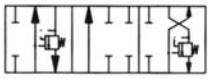


# VDM07 - VDM09

## DIRECTIONAL CONTROL VALVE
## MONOBLOCK TYPE

## SPOOL TYPES

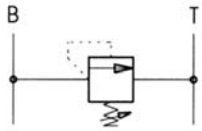
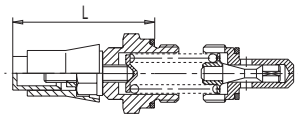
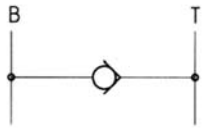
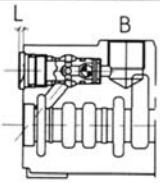
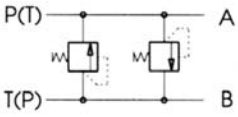
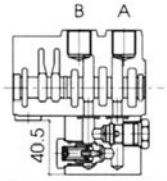
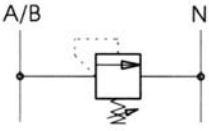
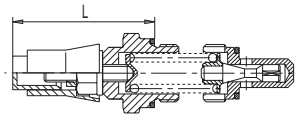
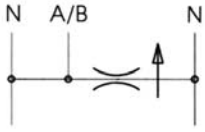
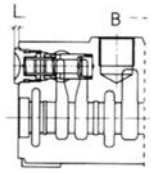
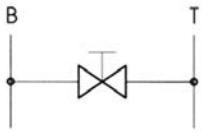
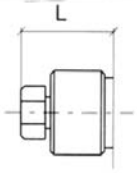
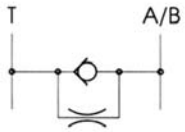
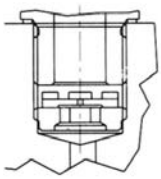
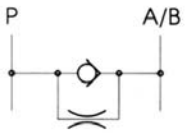
| Code | Hydraulic symbol | Description | VDM07 | VDM09 |
|---|---|---|---|---|
| 01 |  | Double acting spool | ● | ● |
| 02 |  | Double acting motor spool | ● | ● |
| 03 |  | Double acting motor spool (B port blocked) | ● | ● |
| 04 |  | Double acting motor spool (A port blocked) | ● | ● |
| 05 |  | Single acting spool A working port | ● | ● |
| 06 |  | Single acting spool B working port | ● | ● |
| 11 |  | Double acting spool with third float position (spool in) | ● | ● |
| 12 |  | Double acting spool with third float position (spool out) | ● | ● |
| 17 |  | Double acting spool with regenerative position (spool out)** | ● | |
| 18 |  | Double acting spool with regenerative position (spool out)** | ● | |
| 52 |  | Over center double acting spool A working port | ● | |
| 53 |  | Over center double acting spool B working port | ● | |
| 54 |  | Over center double acting spool A and B working port | ● | |

** Need a modification on the cast iron body

## SPOOL CHOICE ACCORDING TO THE INLET FLOW

| Code | Description |
|---|---|
| A | Nominal flow |
| C | 2/3 of nominal flow |

## AUXILIARY VALVES

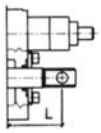
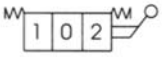
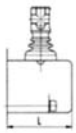
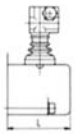
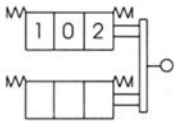
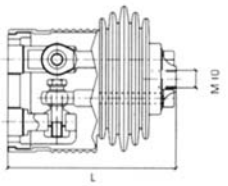
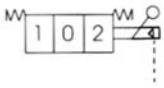
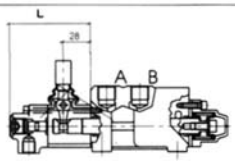
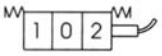
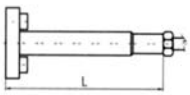
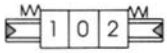
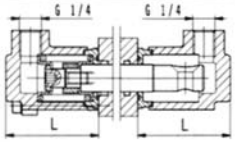
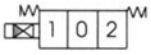
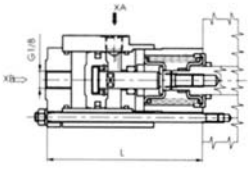
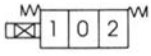
| Code | Hydraulic symbol | Description | | VDM07 | VDM09 |
|---|---|---|---|---|---|
| VA |  | Overload valve on B port |  | ● **L=48 1.89"** | ● **L=62 2.44"** |
| VR |  | Anticavitation check valve on B port |  | ● L=5 0,20" | ● L=5 0,20" |
| VX |  | Cross over pressure relief valve |  | ● | |
| VS |  | Secondary pressure relief valve |  | ● **L=48 1.89"** | ● **L=62 2.44"** |
| LC |  | Flow limiting valve |  | ● | ● |
| CV |  | Double-single acting conversion valve |  | ● L=25 0,98" | ● L=31 1,22" |
| ST |  | Flow restrictor |  | ● | ● |
| SP |  | Flow restrictor | | ● | ● |

Note: the port valves for monoblock are optional and need a modification to the cast-iron body

# VDM07 - VDM09

## DIRECTIONAL CONTROL VALVE MONOBLOCK TYPE

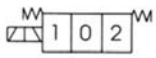
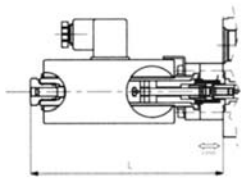
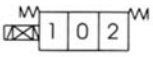
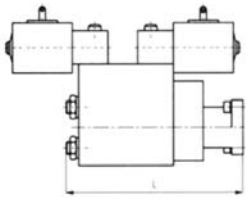
## SPOOL CONTROLS

| Code | Hydraulic symbol | Description | | VDM07 | VDM09 |
|---|---|---|---|---|---|
| SL |  | Without lever |  | ● L=28 1,10" | ● L=38 1,50" |
| NL |  | With protected lever |  | ● L=54 2,13" | ● L=65 2,56" |
| MP |  | With protected clamp lever |  | ● L=54 2,13" | ● L=65 2,56" |
| L1 |  | Cross lever for 2 spools with fulcrum on up-stream spool |  | ● L=96 3,78" | ● L=106 4,17" |
| L2 | | Cross lever for 2 spools with fulcrum on down-stream spool | | | |
| MO |  | With protected lever and device for spool return in NEUTRAL position by an external acting |  | ● L=83 3,26" | |
| TC |  | Cable control (with mounting kit on directional control valve) |  | ● L=80 3,15" | ● L=90 3,54" |
| IP |  | Hydraulic proportional min: 57 psi (4 bar) max 357 psi (25 bar) |  | ● L=54 2,13" | ● L=68 2,68" |
| PP |  | Pneumatic proportional min: 35 psi (2,5 bar) max 85 psi (6 bar) |  | ● L=54 2,13" | ● L=68 2,68" |
| PO |  | Pneumatic ON-OFF min: 50 psi (3,5 bar) | | | |

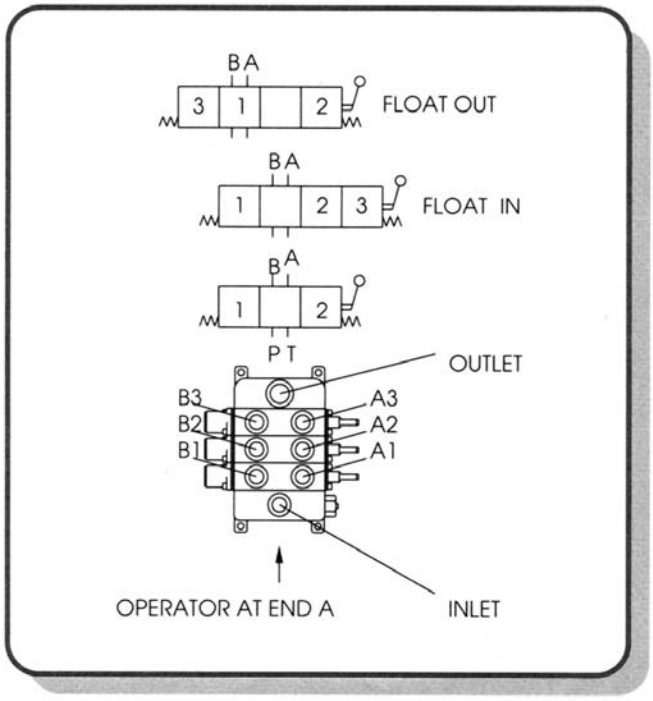
**DIRECTIONAL CONTROL VALVE**
**MONOBLOCK TYPE**

# VDM07 - VDM09

## SPOOL CONTROLS

| Code | Hydraulic symbol | Description | | VDM07 | VDM09 |
|---|---|---|---|---|---|
| E1 |  | Electric 3 positions<br>ON-OFF 12V c.c.<br>(induced current = 3,8A<br>absorbed power = 46W) |  | • | |
| E2 | | Electric 3 positions<br>ON-OFF 24V c.c.<br>(induced current = 1,9A<br>absorbed power = 46W) | | L=140<br>5,51" | |
| P1 |  | Electric pneumatic<br>ON-OFF 12V c.c.<br>(max 9 bar/130 psi)<br>(induced current = 1,5A<br>absorbed power = 18W) |  | • | • |
| P2 | | Electric pneumatic<br>ON-OFF 24V c.c.<br>(max 9 bar/130 psi)<br>(induced current = 0,75A<br>absorbed power = 18W) | | L=85<br>3,35" | L=98<br>3,86" |

## SPOOL CONTROL LOCATION SCHEMATIC VIEW



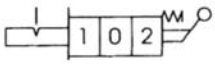
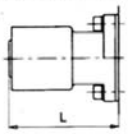
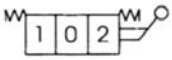
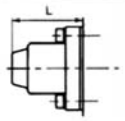
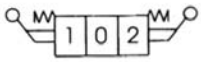
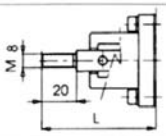
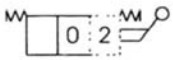
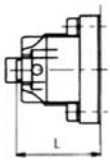
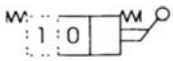
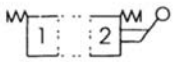
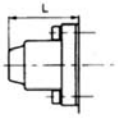
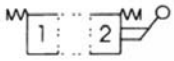
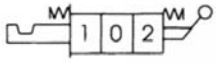
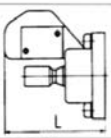
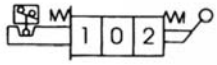
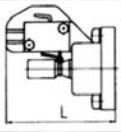

Positioning levers on B port is not standard but is possible using special spools.

The electric, pneumatic and electro-pneumatic actings are usually on the B port side.

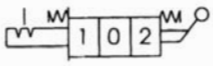
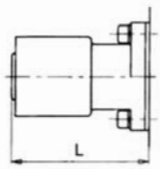
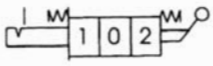
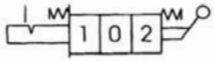
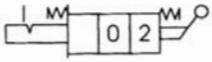
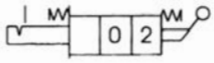
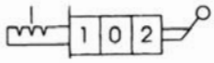
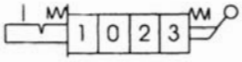
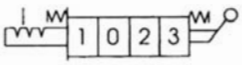
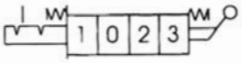
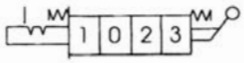
# VDM07 - VDM09

## DIRECTIONAL CONTROL VALVE MONOBLOCK TYPE

## SPOOL POSITIONINGS

| Code | Hydraulic symbol | Description | | VDM07 | VDM09 |
|---|---|---|---|---|---|
| C0 |  | With friction on each position |  | ● L=45 1,77″ | |
| C2 |  | Spring centered to NEUTRAL |  | ● L=40 1,57″ | ● L=43 1,69″ |
| C3 |  | Spring centered to NEUTRAL with double control (screw tap) |  | ● L=70 2,76″ | ● L=73 2,87″ |
| C5 |  | Two positions (NEUTRAL/spool-IN) with spring return in neutral |  | ● L=40 1,57″ | ● L=43 1,69″ |
| C6 |  | Two positions (NEUTRAL/spool-OUT) with spring return in neutral | | | |
| C7 |  | Two positions-spool IN/spool OUT with spring return in spool OUT |  | ● L=54 2,13″ | ● L=68 2,68″ |
| C8 |  | Two positions-spool IN/spool OUT with spring return in spool IN | | ● L=40 1,57″ | ● L=43 1,69″ |
| CE |  | Pre-arrangement for electrical device |  | ● L=70 2,76″ | ● L=75 2,95″ |
| CM |  | Microswitch to start an electric motor (Max current = 10A at 250 Vca) |  | ● L=70 2,76″ | ● L=75 2,95″ |
| PE | | Prearrangement for electrical/potentiometer device | | ● | ● |
| PM | | Microswitch to start an electric motor and potentiometer device (Max current = 10A at 250 Vca) | | ● | ● |

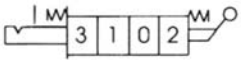
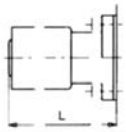
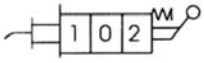
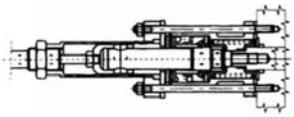
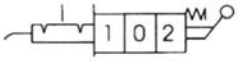
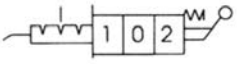
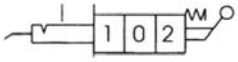
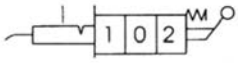
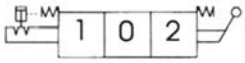
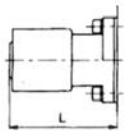
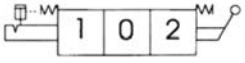
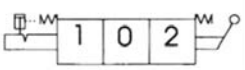
## SPOOL POSITIONINGS

| Code | Hydraulic symbol | Description | | VDM07 | VDM09 |
|---|---|---|---|---|---|
| R2 |  | Detent on spool IN-OUT position with spring return in NEUTRAL |  | ● L=66 2,60" | ● L=72 2,83" |
| R4 |  | Detent on spool OUT position with spring return in NEUTRAL | | ● L=66 2,60'' | ● L=72 2,83'' |
| R5 |  | Detent on spool IN position with spring return in NEUTRAL | | ● L=66 2,60'' | ● L=72 2,83'' |
| R6 |  | Detent on spool IN, 2 positions with spring return in NEUTRAL | | ● L=66 2,60'' | ● L=72 2,83'' |
| R7 |  | Detent on spool OUT, 2 positions with spring return in NEUTRAL | | | |
| R9 |  | Detent on spool IN-NEUTRAL-OUT, 3 positions without spring | | ● L=66 2,60'' | |
| F1 |  | Detent on float spool IN, with spring return in NEUTRAL | | ● L=66 2,60'' | ● L=72 2,83'' |
| F2 |  | Detent on spool FLOAT-IN-OUT, position with spring return in NEUTRAL | | ● L=66 2,60'' | ● L=72 2,83'' |
| F3 |  | Detent on spool FLOAT-OUT, position with spring return in NEUTRAL | | ● L=66 2,60'' | ● L=72 2,83'' |
| F4 |  | Detent on spool FLOAT-IN, position with spring return in NEUTRAL | | ● L=66 2,60'' | ● L=72 2,83'' |

# VDM07 - VDM09

**DIRECTIONAL CONTROL VALVE**
**MONOBLOCK TYPE**

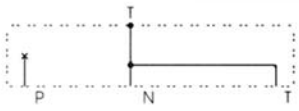
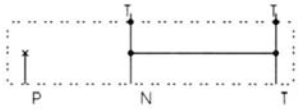
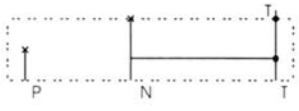
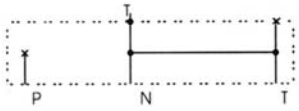
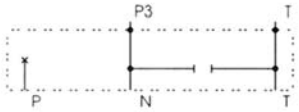
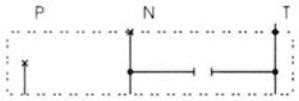
## SPOOL POSITIONINGS

| Code | Hydraulic symbol | Description | | VDM07 | VDM09 |
|---|---|---|---|---|---|
| F5 |  | Detent on spool float OUT position with spring return in neutral |  | ● L=66 2,60'' | ● L=72 2,83'' |
| D1 |  | Cable remote control cap side |  | ● L=66 2,60'' | ● L=72 2,83'' |
| D2 |  | Cable remote control and detent on spool IN-OUT position | | ● L=66 2,60'' | ● L=72 2,83'' |
| D3 |  | Cable remote control and detent on spool IN-NEUTRAL-OUT position | | ● L=66 2,60'' | ● L=72 2,83'' |
| D4 |  | Cable remote control and detent on spool OUT position | | ● L=66 2,60'' | ● L=72 2,83'' |
| D5 |  | Cable remote control and detent on spool IN position | | ● L=66 2,60'' | ● L=72 2,83'' |
| G2 |  | Detent on spool IN-OUT position with hydraulic kick-out |  | | |
| G4 |  | Detent on spool OUT position with hydraulic kick-out | | ● L=65 | ● L=69 |
| G5 |  | Detent on spool IN position with hydraulic kick-out | | | |

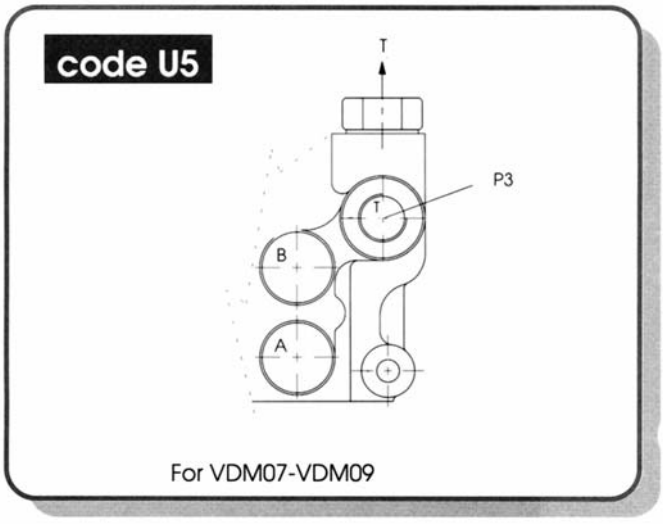
## DETENT IN/OUT EFFORT

| | Detent IN | Detent OUT |
|---|---|---|
| 1st and 2nd positions | 250N/56,2 $lb_f$ | 33,72 $lb_f$ (min) 150N (min) |
| 3rd position | 350N/78,7 $lb_f$ | 33,72 $lb_f$ (min) 150N (min) |

## OUTLET TYPES

| Code | Hydraulic symbol | Description | VDM07 | VDM09 |
|---|---|---|---|---|
| U1 |  | Top outlet port | ● | ● |
| U2 |  | Top and side outlet port | ● | ● |
| U3 |  | Side outlet port (top port plugged) | ● | ● |
| U4 |  | Top outlet port (side port plugged) | ● | ● |
| U5 |  | Power beyond configuration (P3)<br>U5 configuration is achieveable by U2-U3-U4 with the power beyond kit. | ● | ● |
| U7 |  | Closed center circuit configuration<br>(P3 port plugged)<br>Obtained with U5 + plug | ● | ● |

## POWER BEYOND (P3)

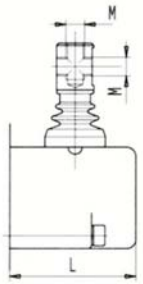


# VDM07 - VDM09

**DIRECTIONAL CONTROL VALVE**
**MONOBLOCK TYPE**

## CLAMP LEVERS CODE NL - MP - SS

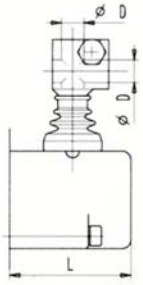
Protected lever




**code NL**

Protected lever NL

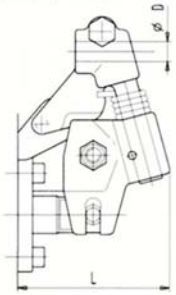
Protected clamp lever




**code MP**

Available for VDM07 and VDM09

Safety device




**code SS**

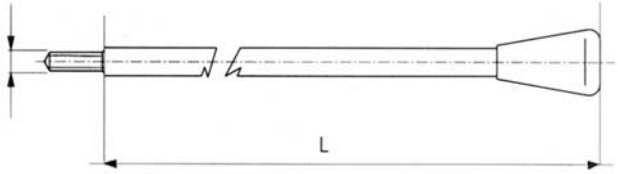
Available for VDM07 and VDM09. This code is not included in the codification: if requested, please add to the order

## STANDARD SHAFTS FOR PROTECTED LEVERS CODE NL

| | VDM07 | VDM09 |
|---|---|---|
| M | M8 | M10 |
| L | 180 mm-7,1" | 240 mm-9,5" |

**code LA**

M




This code is not included in the codification: if requested, please add to the order

## STANDARD SHAFTS FOR LEVERS CODE MP - SS

| | VDM07 | VDM09 |
|---|---|---|
| D | 8 mm-0,31" | 10 mm-0,39" |
| L | 180 mm-7,1" | 240 mm-9,5" |

**code LB**

D

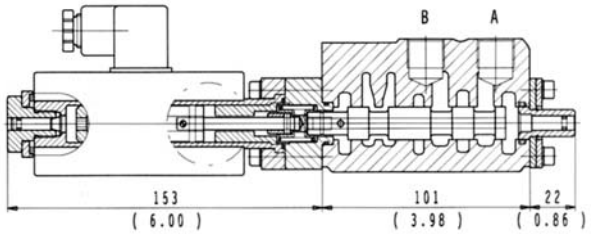

This code is not included in the codification: if requested, please add to the order

**DIRECTIONAL CONTROL VALVE**
**MONOBLOCK TYPE**

# VDM07 - VDM09

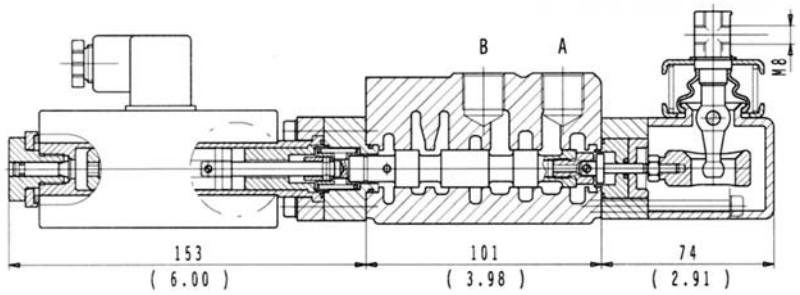
## ON-OFF ELECTRIC CONTROL

**code SLA/B-E1/2**



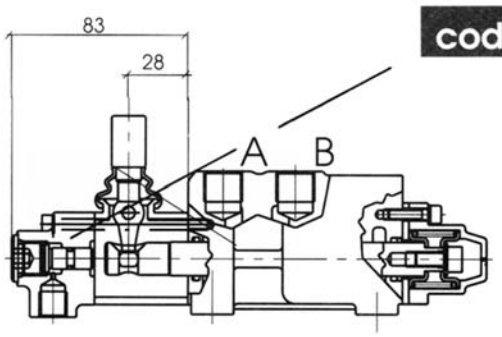

## ON-OFF ELECTRIC AND EMERGENCY MANUAL CONTROL

**code LTA/B-E1/2**

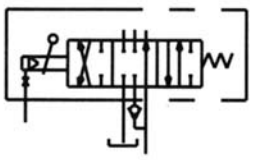



## DEVICE FOR SPOOL POSITIONING IN NEUTRAL BY AN EXTERNAL ACTING

**code MO**



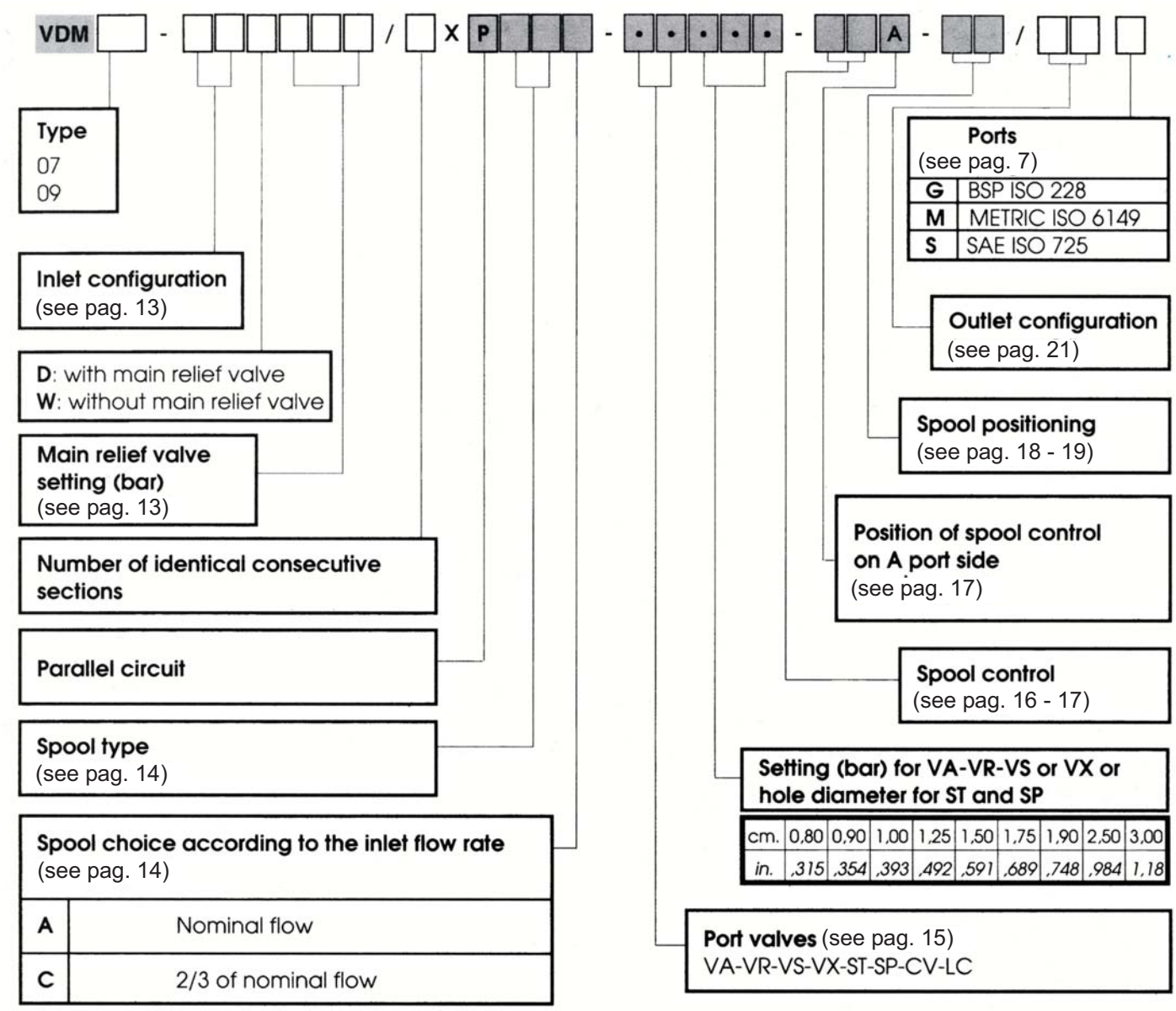

Available for VDM07



This code is not included
in the codification: if requested,
please add to the order

# How to order/ VDM07-VDM09

## DIRECTIONAL CONTROL VALVE SECTIONAL TYPE




• Omit if not requested