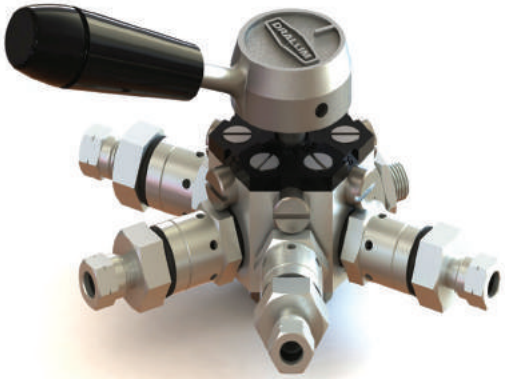
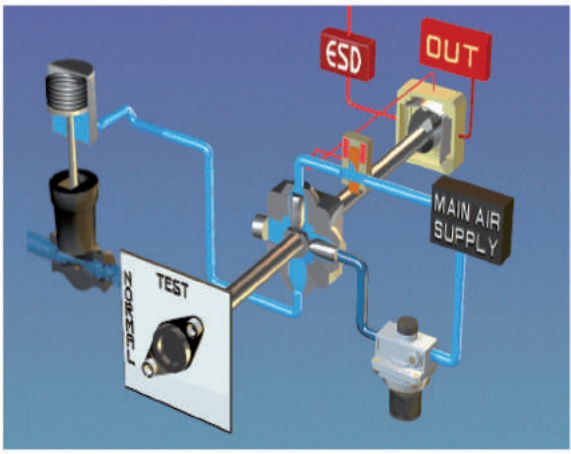
DRALLIM

INDUSTRIAL

Leading Innovators in Technology and Quality

Rotary Selector Valve

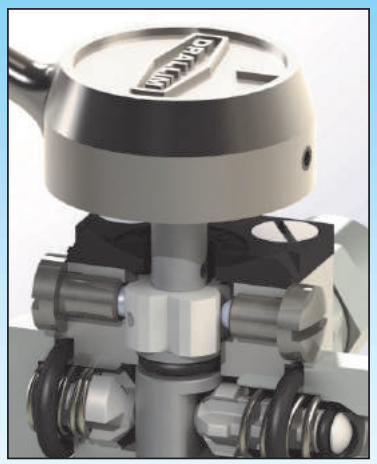




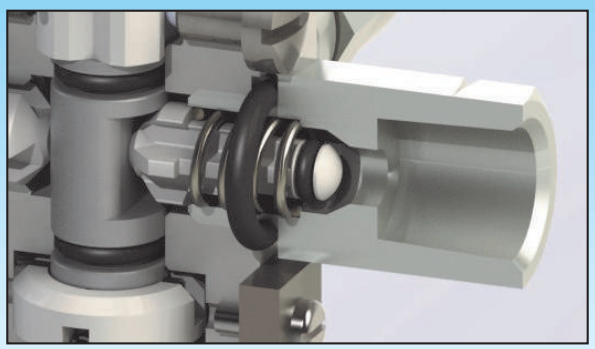
Industrial

Applications
Circuit planning
Valve Selection
Valve Configuration
Installation Details

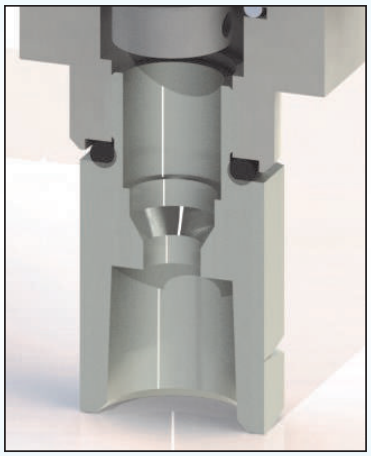
The Rotary Selector Valve



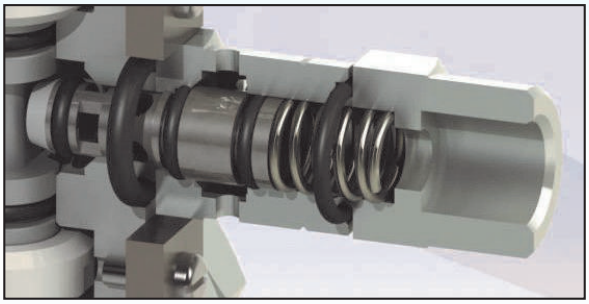
POSITIVE INDEXING



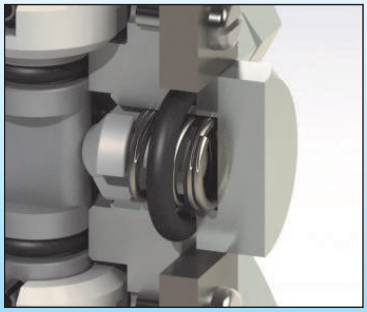
OPERATIVE CONNECTOR



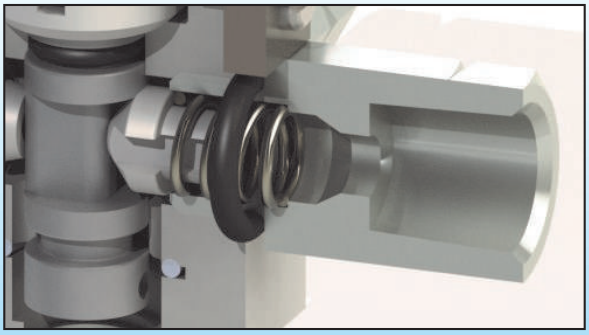
BASE ENTRY



VENTING CONNECTOR



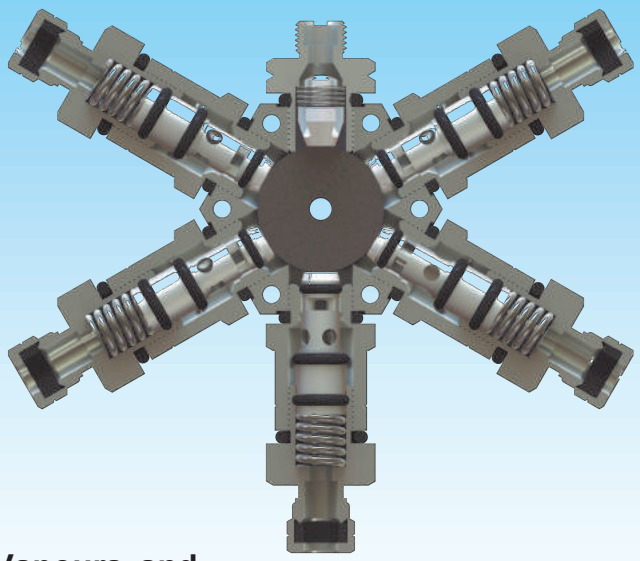
PERMANENTLY CLOSED



PERMANENTLY OPEN

Whatever configuration you need, we can meet the challenge with our multi-talented Rotary Selector Valve

… Fluid Control Since 1958



A Fluid Control Valve Suitable For Air/Gases/Vapours and other Liquids, Pressure range –1 +10 Bar, Fluid Temperature 85°C (185°F) Available in Brass and St/Stl, with Fluoro-Elastomer Seals and PTFE or ACETAL Resin Stems, depending on the nature of the fluid or gas being used.

Some typical applications of the RSV:

- Propeller pitch controls
- Fuel changeover systems
- Energy conservation control systems
- Tank gauging
- Water fountain display control
- Emergency Stop system on trains
- Cylinder control and bypass and test circuits
- Emergency stop systems for trains

Use within the process industry:

- Partial Stroke Testing (LMT or Limited Movement Testing)
- Water treatment/polishing plant for nuclear power generation
- Pneumatic actuator override panels
- Bypass systems for isolation & diversion of flows
- Used for flow diversion within pressurised cable systems

Fuel systems:

- Military Vehicles. Example: Tank Ventilation Systems
- Aerospace - Ground Test Equipment for Altimeters and Airspeed Indicators
- Hydraulic Isolation - Low Pressure, High Voltage Cables
- Gas Analysis Test Sets
- Purge & Leak Test Set
- Boats/Submarines
- NASA - White Sands Test facility

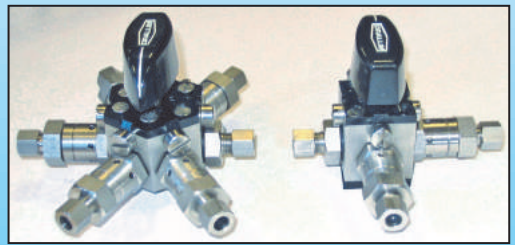
Purge & Leak Test Set

Benefits of the RSV over the Multi-Port Ball Valve:

- Eliminates Cross Port Leakage
- Each Port Seals Individually
- Lower Cost Than Multi-Port Ball Valves
- Electrical Switching Options
- Caters for very complex configurations

The Rotary Selector Valve Range

Typical Multi-Port Ball Valve



Series 60 Series 40

Series 70

Series 95

Product Description

Inside the RSV

Series 40 & 70 Valves (fig 1)

Each face of the body (1) is threaded to receive a removable port (2) incorporating also the tubing connector, available in various types and sizes. Valve action is obtained by movement of a spring-loaded stem (3) grooved near its outer end for an o-ring (4) which docks with a conical seating in the connector body. Movement is caused by rotation of the operating spindle (5) which, being milled with one to three flats, acts as a cam on the stems, opening and closing ports as it turns.

In this example, Port 1 (top), being required inoperative, is fitted with a blanking plug (6), which nevertheless contains a truncated stem and spring to prevent an unbalanced lateral thrust on the spindle. Port 2 (right) has its stem on the full diameter of the spindle and is therefore closed until a flat arrives at that position. Port 3 is required to be permanently open (inlet or outlet) and therefore has a truncated stem (7) similar to that in Port 1. Port 4 is fully open since its stem is on the spindle flat, and will also be open in the next clockwise position owing to the adjacent flats.

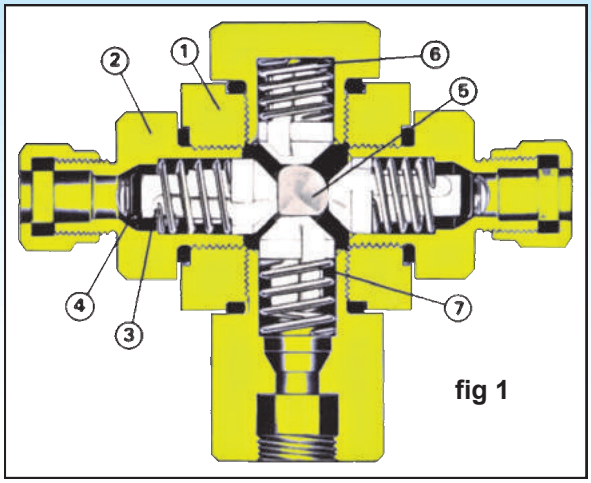


fig 1

Series 60 Valves (fig 2)

Each face of the body (1) is threaded to receive a removable port (2) incorporating also the tubing connector, available in various types and sizes. Valve action is obtained by movement of a spring-loaded stem (3) grooved near its outer end for an o-ring (4) which docks with a conical seating in the connector body. Movement is caused by rotation of the operating spindle (5) which, being milled with one to five flats, acts as a cam on the stems, opening and closing ports as it turns.

I Operative (in closed position).

II Operative (in open position).

III Permanently closed.

IV Operative (in closed position).

V Permanently open.

VI Venting connector – allows trapped air in line or cylinder to escape to atmosphere through drillings (6) in the body as soon as the stem closes onto the supply.

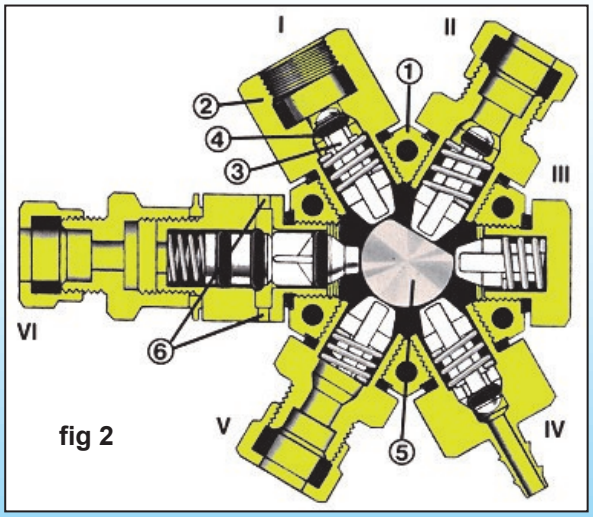
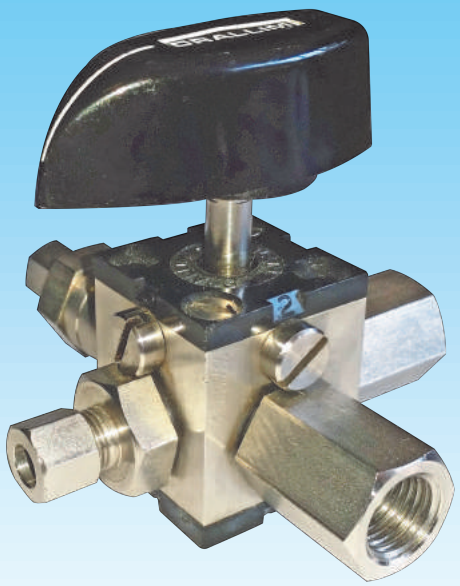


fig 2

As shown, air would be entering Port V (permanently open) and leaving through Port II, the stem of which is on the only flat on this particular spindle. All other ports are closed, temporarily or permanently (III). Note that when the spindle flat reaches Port V the valve is completely 'off'. For although this port is open, there is no exit.

DRALLIM

Series 40



Positive Positioning

Positive Positioning comes from an indexing mechanism allowing the operator to have genuine feel of the valves various positions, eliminating the possibility of the valve being left in mid position.

Flexibility

Flexibility comes from the fact that each valve can have its own unique inner spindle, so with multibank valves each bank can have its own configuration.

Security

Should it be required, security is provided by keylocking the valve. Heavy-duty stainless steel versions are available for harsh environments.

Electrical Interface

Electrical Interface is provided from a rotary electrical switch directly coupled to the spindle and mounted on the base of the valve.

Ordering Chart

Weatherproof Enclosure (for electric switch only)
Yes W
No **No code required**

Electric Switch Code:
See Electric Switch Page

No. of Positions: 2,3,4
(No code required if unrestricted)

Mounting Type:
Panel (No code required)
Base Mounting Plate 1

Connections:
1/4" BSP Female F2
1/4" NPT Female F6

Operators
Knob A
Lever D
Key Lock T Type F

Port Code

No. of Banks 1 to 8

Class (See Below)

Class B:
Brass Body
Stainless Steel Spindle
Acetal Resin Stems
Fluoro Elastomer Seals

Class C:
Brass Body
Stainless Steel Spindle
PTFE Stems
Fluoro Elastomer Seals

Class D:
Stainless Steel Body
Stainless Steel Spindle
Acetal Resin Stems
Fluoro Elastomer Seals

Class E:
Stainless Steel Body
Stainless Steel Spindle
PTFE Stems
Fluoro Elastomer Seals

EXAMPLE B 1 02 A F6 1

Series 40 Port Coding

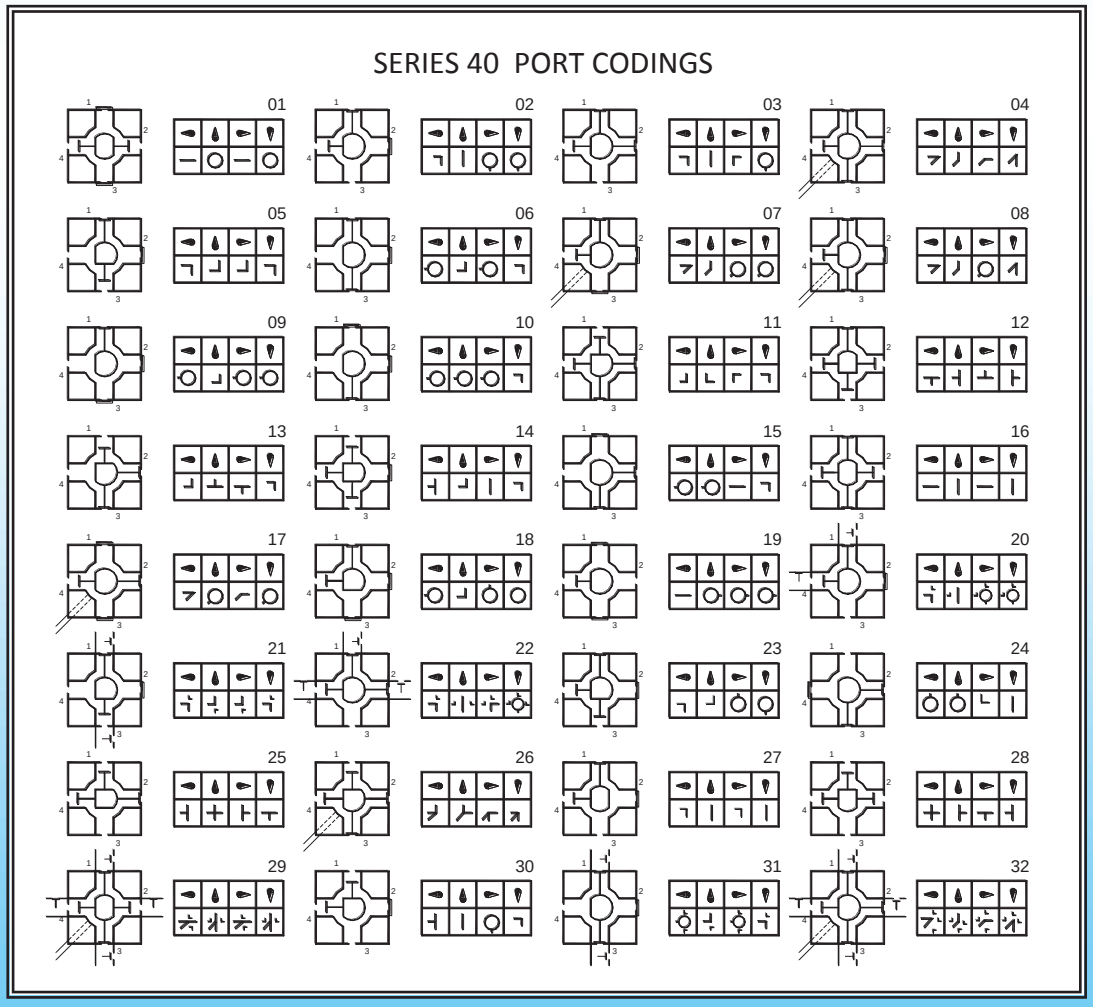
With a choice of operative, permanently open and permanently closed ports in any of the four positions, plus a spindle with one flat, two adjacent, two opposite, or three flats, the number of permutations in just one bank is clearly enormous.

In practice however the great majority of requirements are to be found from amongst the 32 bank configurations shown and coded below.

These show not only a cross-section through the banks in a highly simplified form but, alongside, a representation of how the flow paths change as the knob is turned.

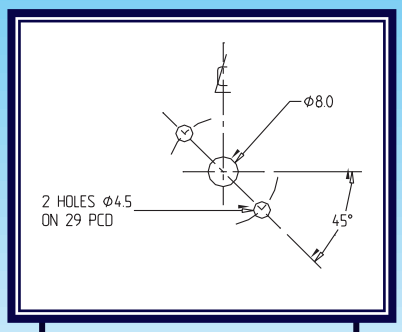
Permanently open and permanently closed ports are quite obvious, the way of showing the permanently-open base connection first appears in Code 04, and the venting connector in Code 20. Although the banks are sealed internally from one another, there is nothing to prevent an external connection between any two banks by tubing.

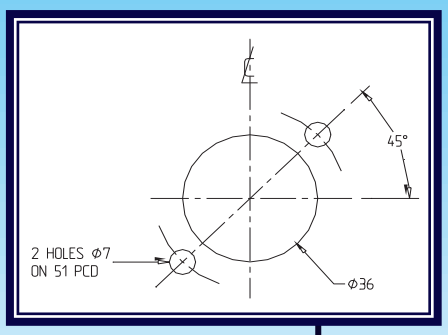
In ordering multibank valves the bank nearest the handle is coded first, and banks calling for a base connection can be used only in the last or lowermost position. A base-mounted electrical rotary switch precludes this option. Banks can be assembled together in any orientation required, but unless requested multibank RSVs will be supplied with all banks orientated as shown below.



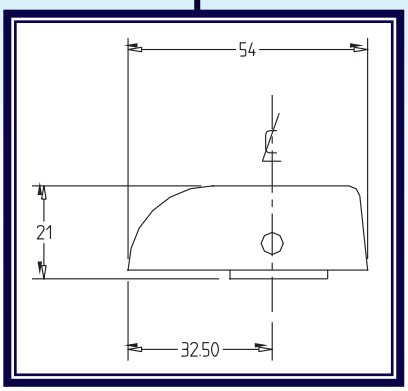
Series 40 Installation

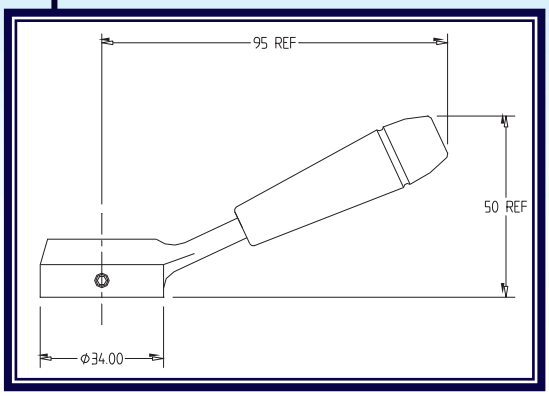
Panel Mounting Detail

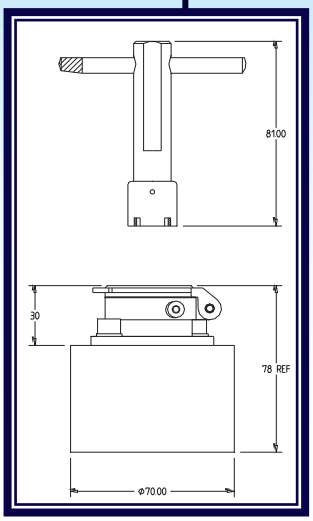




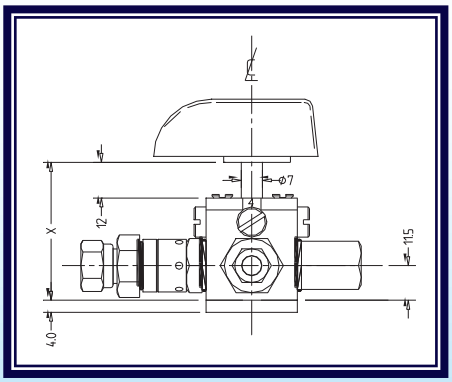
Handle Options





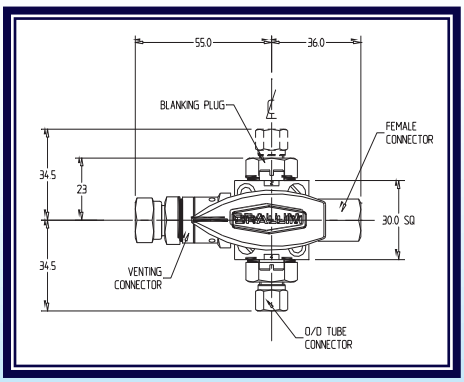


Body Dimensions

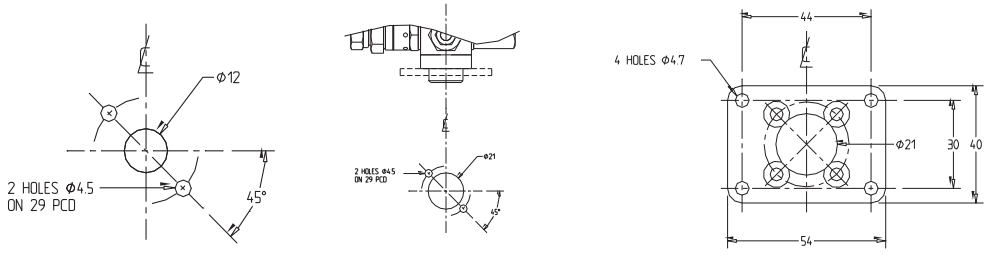


No Of Banks	Dimension X
1	46
2	76
3	106
4	136
5	166
7	196

All Dimensions In mm

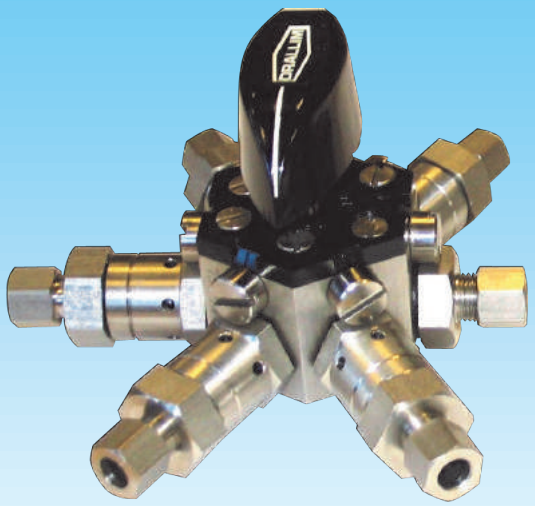


Base Mounting Detail



Notes

Series 60



Proven Design

Series 60 Valves encompass the same proven design of the Series 40 Valve but offer far greater permutations.

Versatility

With the choice of operative, permanently open and permanently closed ports in any of the six positions, plus a spindle with 1 to 5 flats the number of permutations in just one bank is clearly enormous.

Applications

Series 60 Valves cover many applications including multi-tank gauging systems, compressor unloader systems and all wheel drive selection on military vehicles.

Environmental Details

Fluids: Air and other gases, vapours and liquids compatible with the materials of construction.

Pressure Range -1 to +10 bar

Fluid Temperature 85°C (185°F)

Ordering Chart

Weatherproof Enclosure (for electric switch only)
Yes W
No **No code required**

Electric Switch Code
(See Electric Switch Page)

No. of Positions 2,3,4,5,6
(No code required if unrestricted)

Mounting
Panel mounting only
(No code required)

Connections
1/4“ BSP Female F2
1/4“ NPT Female F6

Operators
Knob A
Lever D

Port Code

No. of Banks 1 to 6

Class (See Below)

Class V:
Brass Body
Stainless Steel Spindle
Acetal Resin Stems
Fluoro Elastomer Seals

Class W:
Brass Body
Stainless Steel Spindle
PTFE Stems
Fluoro Elastomer Seals

Class X:
Stainless Steel Body
Stainless Steel Spindle
Acetal Resin Stems
Fluoro Elastomer Seals

Class Y:
Stainless Steel Body
Stainless Steel Spindle
PTFE Stems
Fluoro Elastomer Seals

EXAMPLE V 1 50 D F2

Series 60 Port Coding

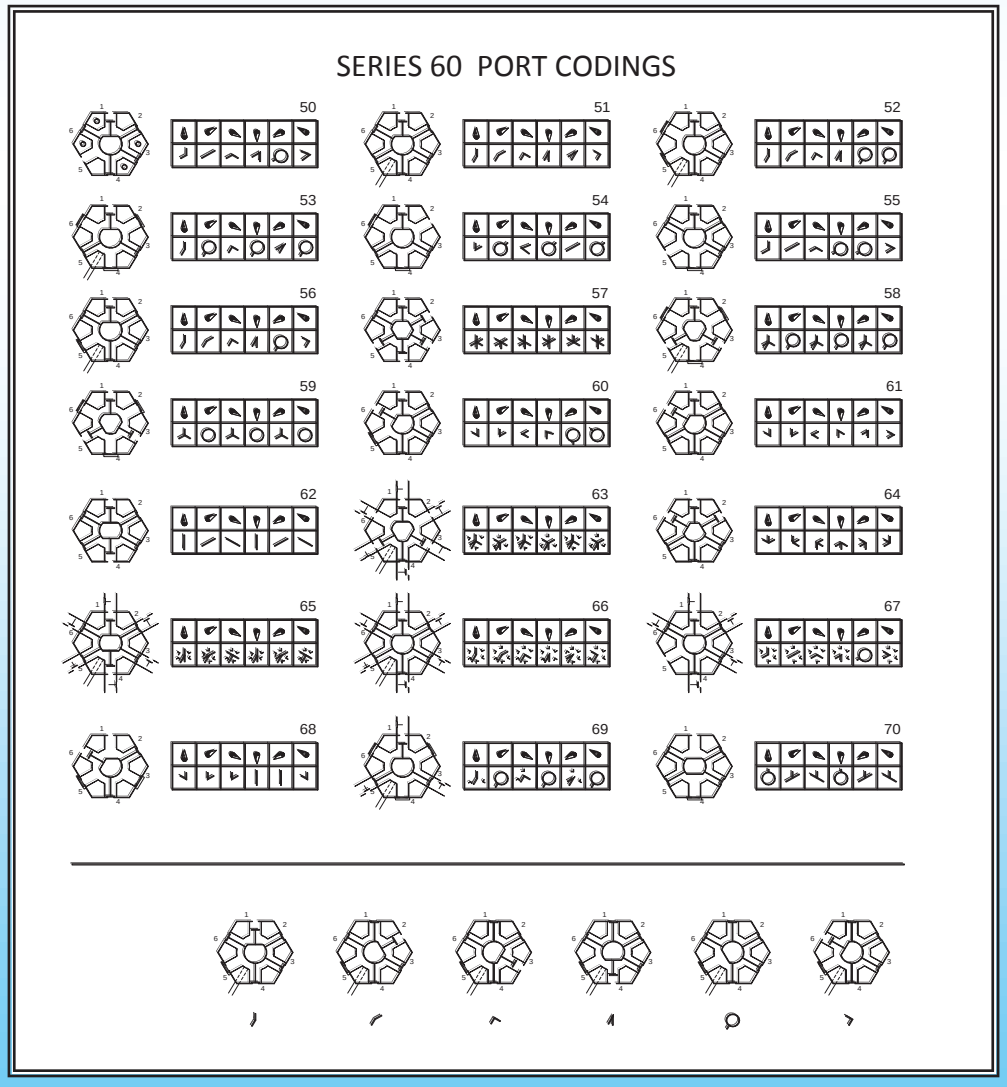
With a choice of operative, permanently open and permanently closed ports in any of the six positions, plus a spindle with from 1 to 5 flats the number of permutations in just one bank is clearly enormous.

In practice however the great majority of requirements are to be found from amongst the 21 bank configurations shown and coded below.

These show not only a cross-section through the banks in a highly simplified form but, alongside, a representation of how the flow paths change as the knob is turned.

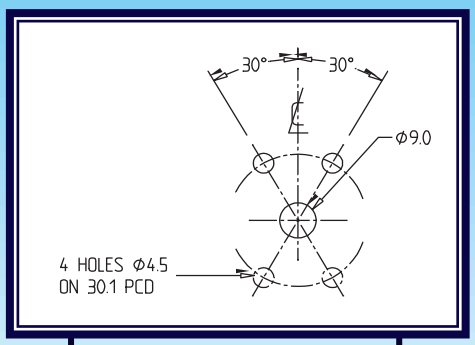
Permanently open and permanently closed ports are quite obvious, the way of showing the permanently-open base connection first appears in Code 51, and the venting connector in Code 63. Although the banks are sealed internally from one another, there is nothing to prevent an external connection between any two banks by tubing.

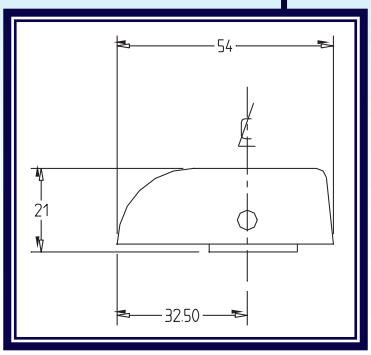
In ordering multibank valves the bank nearest the handle is coded first, and banks calling for a base connection can be used only in the last or lowermost position. A base-mounted electrical rotary switch precludes this option. Banks can be assembled together in any orientation required, but unless requested multibank PIVs will be supplied with all banks orientated as shown below.



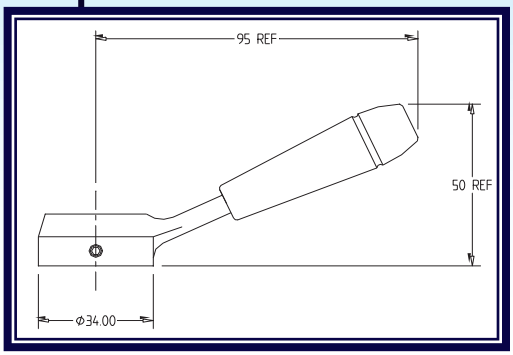
Series 60 Installation

Panel Mounting Detail

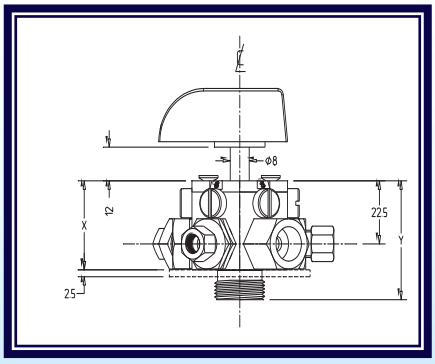




Handle Options



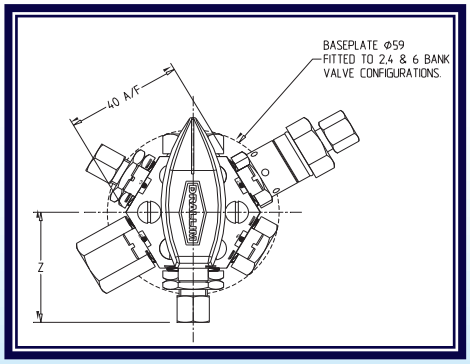
Body Dimensions



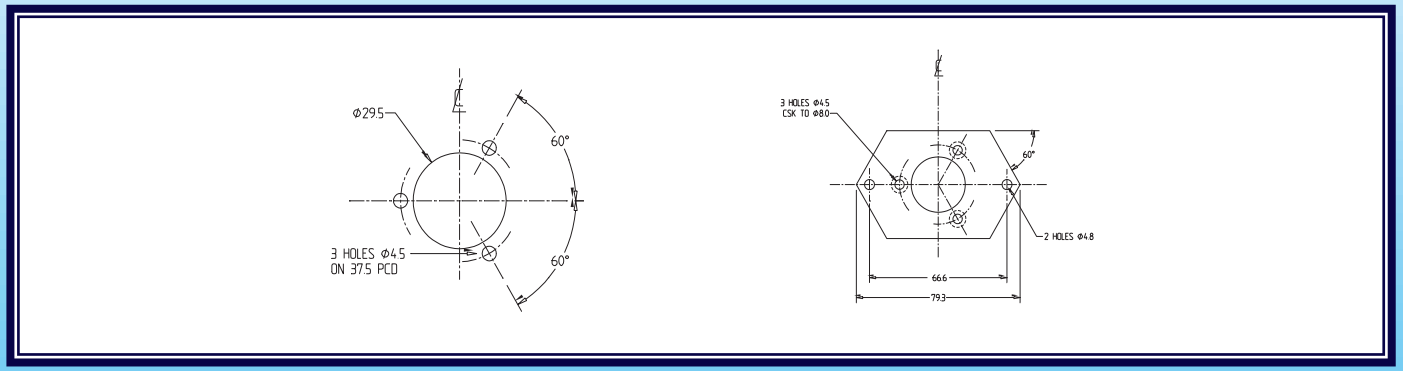
No Of Banks	Dim X	Dim Y
1	32	42.5
2	60	75
3	85.5	96
4	113.5	128.5
5	139	150
6	167	182

Connector Type	Dim Z
Blanking Plug	28
Venting	60
O/D Tube	39.5
Female Threaded	41

All Dimensions In mm



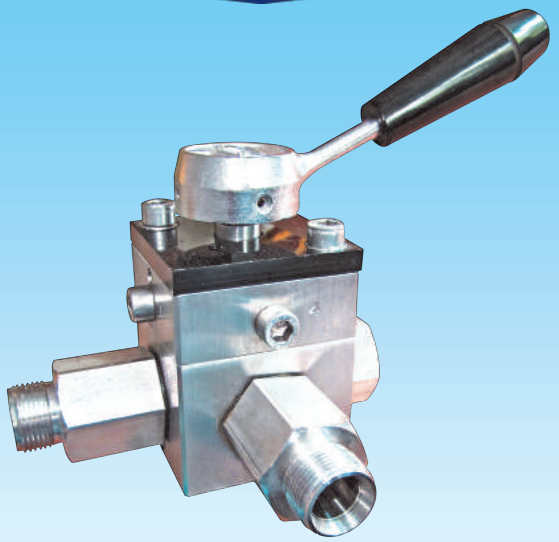
Base Mounting Detail



Notes

DRALLIM

Series 70



High Flow Capacity

Series 70 Valves offer a higher flow capacity than their sister products, 40 & 60 Series.

Flexibility

Flexibility is once more a major feature of our product design. Many spindle combinations and valve arrangements can be accommodated including base entry types.

Versatility

Used in a wide variety of applications this robust product is particularly useful in emergency shut down applications where the valve is used as a kill switch on isolated offshore platforms.

Permutations

With the choice of operative, permanently open and permanently closed ports in any of the four positions, plus a spindle with one flat, two adjacent, two opposite, or three flats, the number of permutations in just one bank is clearly enormous.

Ordering Chart

Weatherproof Enclosure (for electric switch only)
Yes W
No **No code required**

Electric Switch Code
See Electric Switch Page

No. of Positions: 2,3,4
(No code required if unrestricted)

Mounting Panel (No code required)
Base Mounting Plate 1

Connections
3/8" NPT Female F7
1/2" NPT Female F8 SS only

Operators
Lever D
Key Lock T Type F

Port Code

No. of Banks
(2 Banks Maximum) 1 or 2

Class (See Below)

Class P:
Brass Body
Stainless Steel Spindle
Acetal Resin Stems
Fluoro Elastomer Seals

Class R:
Brass Body
Stainless Steel Spindle
PTFE Stems
Fluoro Elastomer Seals

Class S:
Stainless Steel Body
Stainless Steel Spindle
Acetal Resin Stems
Fluoro Elastomer Seals

Class T:
Stainless Steel Body
Stainless Steel Spindle
PTFE Stems
Fluoro Elastomer Seals

EXAMPLE T 1 02 D F8 1

Series 70 Port Coding

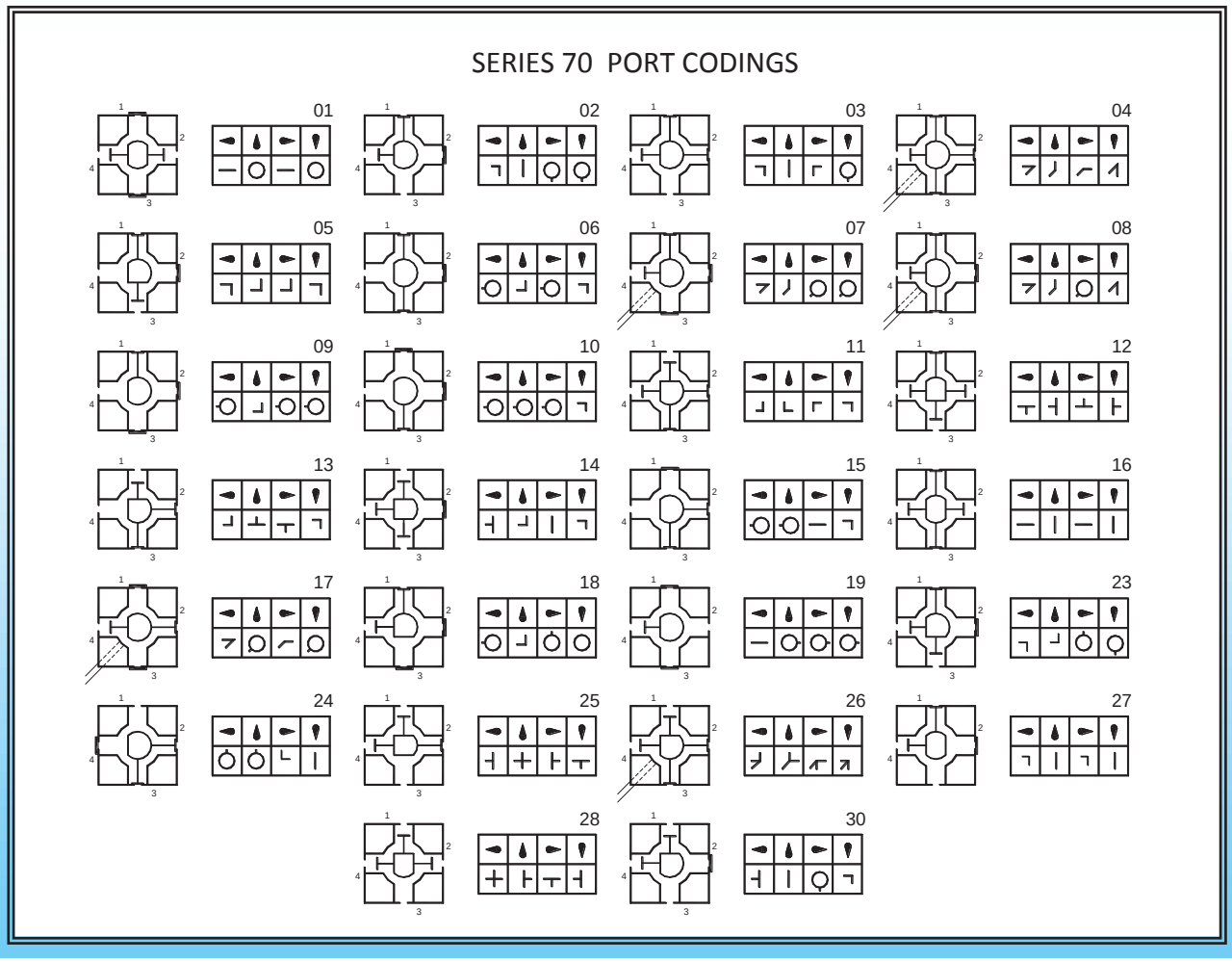
With a choice of operative, permanently open and permanently closed ports in any of the four positions, plus a spindle with one flat, two adjacent, two opposite, or three flats, the number of permutations in just one bank is clearly enormous.

In practice however the great majority of requirements are to be found from amongst the 26 bank configurations shown and coded below.

These show not only a cross-section through the banks in a highly simplified form but, alongside, a representation of how the flow paths change as the knob is turned.

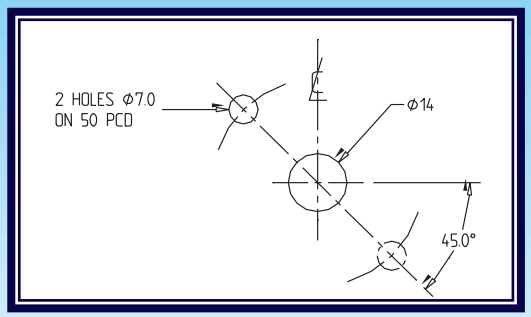
Permanently open and permanently closed ports are quite obvious, the way of showing the permanently-open base connection first appears in Code 04. Although the banks are sealed internally from one another, there is nothing to prevent an external connection between any two banks by tubing.

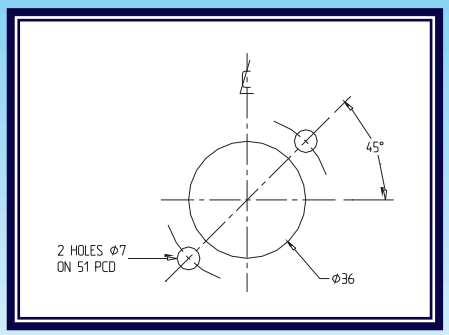
In ordering multibank valves the bank nearest the handle is coded first, and banks calling for a base connection can be used only in the last or lowermost position. A base-mounted electrical rotary switch precludes this option. Banks can be assembled together in any orientation required, but unless requested multibank RSVs will be supplied with all banks orientated as shown below.



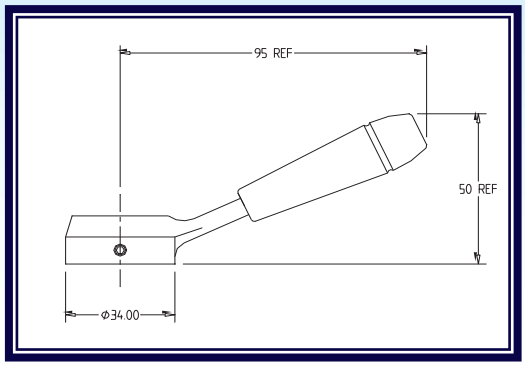
Series 70 Installation

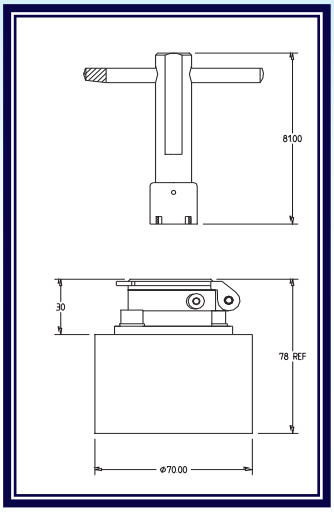
Panel Mounting Detail



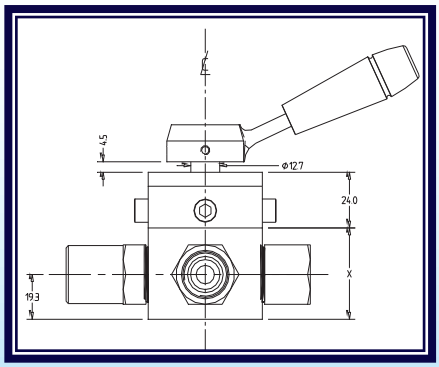


Handle Options



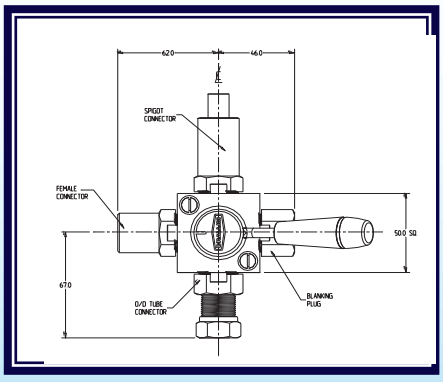


Body Dimensions

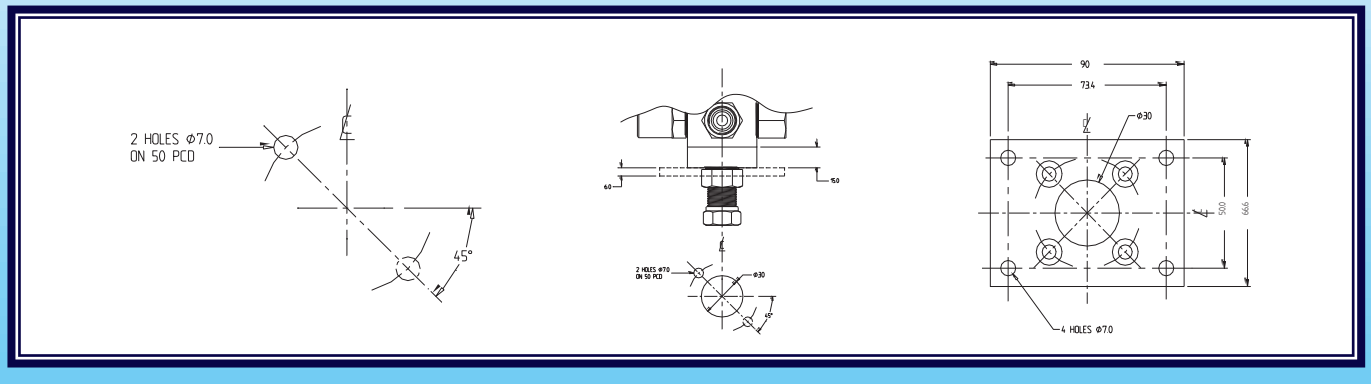


No Of Banks	Dimension X
1	39.5
2	79

All Dimensions In mm



Base Mounting Detail



Notes

Series 95

Ordering Chart

Weatherproof Enclosure
(for electric switch only)
Yes W
No **No code required**

Electric Switch Code
See Electric Switch Page

No. of Positions 2,3,4
(No code required if unrestricted)

Mounting Panel (No code required)
Base Mounting Plate 1

Connections
1/2“ NPT Female F8
1/2“ Spigot S8
3/8” Spigot S7

Operators
Lever
Key Lever Type

Port Code (As per Series 70)

No. of Banks 1 to 4

Class (See Below)

Class P:
Brass Body
Stainless Steel Spindle
Acetal Resin Stems
Fluoro Elastomer Seals

Class R:
Brass Body
Stainless Steel Spindle
PTFE Stems
Fluoro Elastomer Seals

Class S:
Stainless Steel Body
Stainless Steel Spindle
Acetal Resin Stems
Fluoro Elastomer Seals

Class T:
Stainless Steel Body
Stainless Steel Spindle
PTFE Stems
Fluoro Elastomer Seals

EXAMPLE 95 P 1 02 L F8 1

High Flow Capacity

Series 95 Valves offer a higher flow capacity than their sister products, 40 & 60 Series.

Versatility

Used in a wide variety of applications this robust product is particularly useful in emergency shut down applications.

Permutations

With the choice of operative, permanently open and permanently closed ports in any of the four positions, plus a spindle with one flat, two adjacent, two opposite, or three flats, the number of permutations in just one bank is clearly enormous.

Electric Switches

The combination of a multipole electric switch with the Drallim valves heralds a new era in process safety systems.

The introduction of an explosion category electric switch further enhances the applications to which these devices are applied.

Typical applications are feedback to DCS systems, remote and local actuation of fire prevention and damping systems, graduated loading and unloading of compressors, starting and stopping pumping systems.

The electric switches below can be fitted to the valves detailed within this catalogue with exception of those with a base entry connection.

4 & 6 Way EEx d IIB T4-T6 IP67 Single Pole

SPECIFICATIONS	
Explosion Protection Code	EEx d IIB T4-T6
Electrical Ratings	15A/250 VAC 10A/28 VDC 0.2A/125 VDC
Switch	V3 SPDT
Gland Entry (2 off)	M20 X 1.5
Ingress Protection	IP67
Enclosure Material	Aluminium

Order Code	WL

4 & 6 Way Non EEx d Multi Pole

SPECIFICATIONS	
Voltage (nominal)	690v
Current (rated)	20A
Weatherproof Enclosure (optional)	IP65

4 Way						
No. of Poles	1	2	3	4	5	6
No. of Stages	1	2	3	4	5	6
Order Code	2843	2844	2845	2846	2847	2848

6 Way						
No. of Poles	1	2	3	4		
No. of Stages	2	3	5	6		
Order Code	2853	2854	2855	2856		

BS EN ISO 9001 : 2008 - Quality Management System

AS9100 Rev C - Approved company

ISO 14001:2004 - Environmental

OHSAS 18001:2007 - Health and Safety

DRALLIM

GROUP

DRALLIM INDUSTRIAL

DRALLIM AEROSPACE

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