RSAP2V - RSAP3V

High pressure ball type valves

- 2 - 3 ways configuration
- Galvanized body

This catalogue shows technical specifications and diagrams measured with mineral oil of 46 mm²/s - *46 cSt* viscosity at 40°C - *104°F* temperature.

WORKING CONDITIONS		RSAP2V				RSAP3V*			
N. of available ways		2				3			
	TYPE	**01**	**015**	**02**	**03**	**04**	**05**	**06**	**07**
Max. flow rating	**RSAP2V**	30 l/min *(7.92 US gpm)*	30 l/min *(7.92 US gpm)*	50 l/min *(13.2 US gpm)*	80 l/min *(21.1 US gpm)*	120 l/min *(31.7 US gpm)*	160 l/min *(42.2 US gpm)*	160 l/min *(42.2 US gpm)*	180 l/min *(47.5 US gpm)*
	RSAP3V	30 l/min *(7.92 US gpm)*	30 l/min *(7.92 US gpm)*	50 l/min *(13.2 US gpm)*	80 l/min *(21.1 US gpm)*	120 l/min *(31.7 US gpm)*	160 l/min *(42.2 US gpm)*	160 l/min *(42.2 US gpm)*	-
Max. pressure	**RSAP2V**	500 bar *(7250 psi)*	500 bar *(7250 psi)*	500 bar *(7250 psi)*	500 bar *(7250 psi)*	350 bar *(5050 psi)*	350 bar *(5050 psi)*	280 bar *(4050 psi)*	220 bar *(3200 psi)*
	RSAP3V	380 bar *(5500 psi)*	380 bar *(5500 psi)*	380 bar *(5500 psi)*	320 bar *(4600 psi)*	300 bar *(4350 psi)*	280 bar *(4050 psi)*	240 bar *(3500 psi)*	-
Nominal diameter	**RSAP2V**	6 mm *(0.23 in)*	6 mm *(0.23 in)*	10 mm *(0.39 in)*	13 mm *(0.51 in)*	20 mm *(0.78 in)*	25 mm *(0.98 in)*	25 mm *(0.98 in)*	25 mm *(0.98 in)*
	RSAP3V	6 mm *(0.23 in)*	6 mm *(0.23 in)*	10 mm *(0.39 in)*	13 mm *(0.51 in)*	20 mm *(0.78 in)*	25 mm *(0.98 in)*	25 mm *(0.98 in)*	-
Internal leakage A(B)⇒T	Δp = 100 bar *(1450 psi)*	5 cm³/min *(0.30 in³/min)*							
Fluid		Mineral based oil							
Fluid temperature	with NBR seals	from -20°C to 80°C *(from -4°F to 176°F)*							
	with FPM seals	from -20°C to 100°C *(from -4°F to 212°F)*							
Viscosity	operating range	da 15 a 75 mm²/s *(from 15 to 75 cSt)*							
	min.	12 mm²/s *(12 cSt)*							
	max.	400 mm²/s *(400 cSt)*							
Level of contamination	max.	18/16/13 - ISO 4406							
Ambient temperature for working conditions		from -40°C to 60°C *(from -40°F to 140°F)*							

NOTE - For different working conditions please contact Sales Dept.
RSAP3V*: no back pressure admitted on the closed port

Available threads

PORTS THREAD						
Dimensions	RSAP2V			RSAP3V		
	BSP	NPT (N)	UN-UNF (S)	BSP	NPT (N)	UN-UNF (S)
01	G 1/4	1/4	-	G 1/4	1/4	-
015	-	-	9/16-18 (SAE 6)	-	-	9/16-18 (SAE 6)
02	G 3/8	3/8	3/4-16 (SAE 8)	G 3/8	3/8	3/4-16 (SAE 8)
03	G 1/2	1/2	7/8-14 (SAE 10)	G 1/2	1/2	7/8-14 (SAE 10)
04	G 3/4	3/4	1" 1/16-12 (SAE 12)	G 3/4	3/4	1" 1/16-12 (SAE 12)
05	G 1	1	1" 5/16-12 (SAE 16)	G 1	1	1" 5/16-12 (SAE 16)
06	G 1" 1/4	1" 1/4	1" 5/8-12 (SAE 20)	G 1" 1/4	1" 1/4	1" 5/8-12 (SAE 20)
07	G 1" 1/2	1" 1/2	1" 7/8-12 (SAE 24)	-	-	-

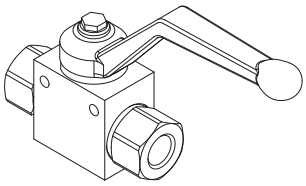
Dimensional data and hydraulic circuit

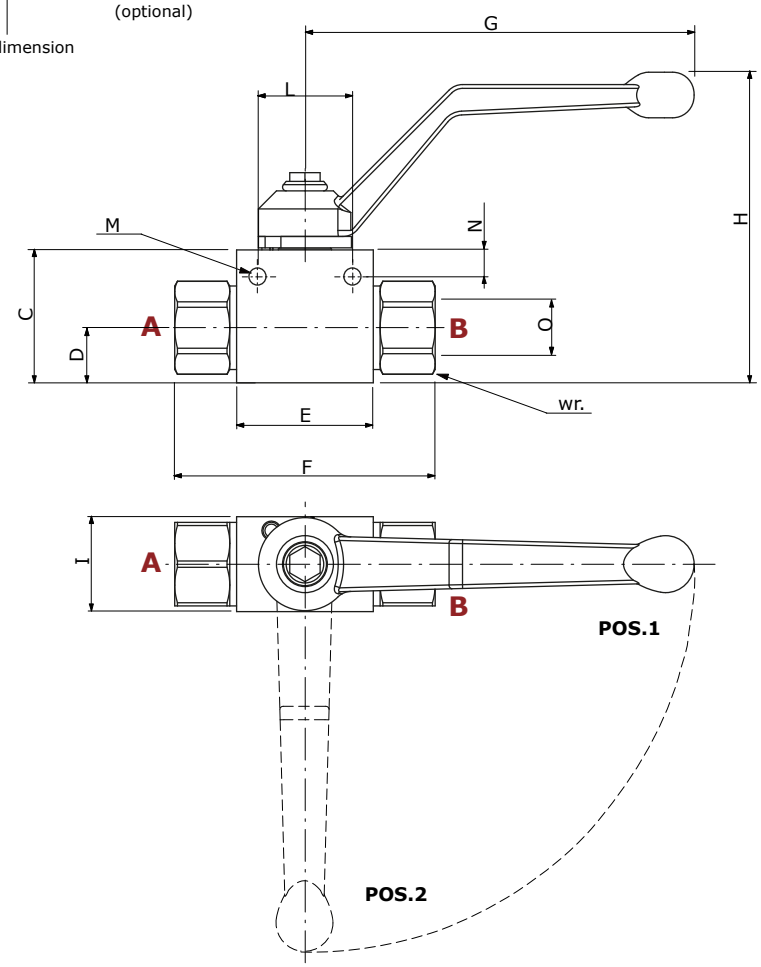
2 ways - RSAP2V

Example:

RSAP2V **01** **FF** **SAE** — Port type (is different from BSP)

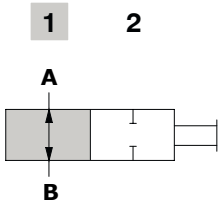
- **RSAP2V**: 2 way HP valve
- **01**: Type - dimension
- **FF**: Mounting holes (optional)





2 ways

Open ports in pos. 1, closed in pos. 2



Type	C	D	E	F	G	H	I	L	Ø M	N	wr.	O sae
	mm* - *in**											
01	35 - *1.37*	14.5 - *0.57*	36 - *1.41*	69 - *2.71*	103 - *4.05*	81 - *3.18*	25 - *0.98*	25 - *0.98*	4.5 - *0.17*	7 - *0.27*	22 - *0.86*	-
015	35 - *1.37*	14.5 - *0.57*	36 - *1.41*	69 - *2.71*	103 - *4.05*	81 - *3.18*	25 - *0.98*	25 - *0.98*	4.5 - *0.17*	7 - *0.27*	24 - *0.94*	9/16-18
02	40 - *1.57*	18 - *0.70*	43 - *1.7*	73 - *2.87*	103 - *4.05*	85 - *3.34*	30 - *1.18*	36 - *1.41*	5.2 - *0.20*	4 - *0.15*	27 - *1.06*	3/4-16
03	45 - *1.77*	22 - *0.86*	47 - *1.85*	84 - *3.30*	103 - *4.05*	91 - *3.58*	35 - *1.37*	36 - *1.41*	5.2 - *0.20*	4 - *0.15*	30 - *1.18*	7/8-14
04	60 - *2.36*	27 - *1.06*	62 - *2.44*	97 - *3.81*	181 - *7.12*	108 - *4.25*	50 - *1.96*	45 - *1.77*	6.5 - *0.25*	6.5 - *0.25*	41 - *1.61*	1" 1/16-12
05	60 - *2.36*	25.5 - *1.00*	68 - *2.67*	114 - *4.48*	181 - *7.12*	108 - *4.25*	60 - *2.36*	45 - *1.77*	7 - *0.27*	6.5 - *0.25*	46 - *1.81*	1" 5/16-12
06	60 - *2.36*	25.5 - *1.00*	68 - *2.67*	124 - *4.88*	181 - *7.12*	108 - *4.25*	60 - *2.36*	45 - *1.77*	7 - *0.27*	6.5 - *0.25*	50 - *1.96*	1" 5/8-12
07	60 - *2.36*	25.5 - *1.00*	68 - *2.67*	132 - *5.19*	181 - *7.12*	108 - *4.25*	60 - *2.36*	45 - *1.77*	7 - *0.27*	6.5 - *0.25*	55 - *2.16*	1" 7/8-12

(*) - Codes are referred to **UN-UNF** thread

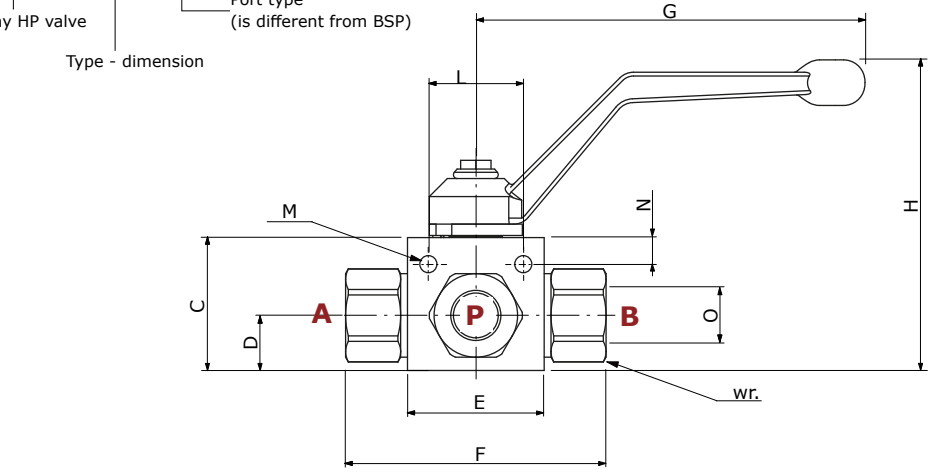
Dimensional data and hydraulic circuit

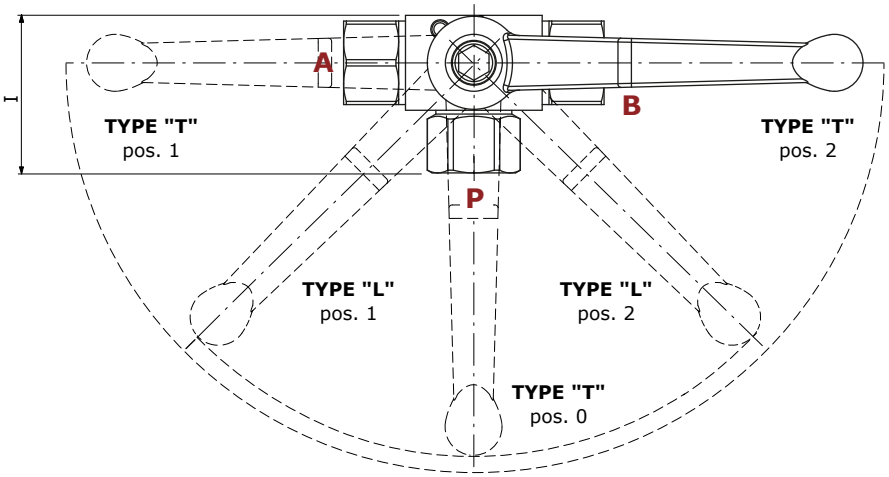
3 ways - RSAP3V

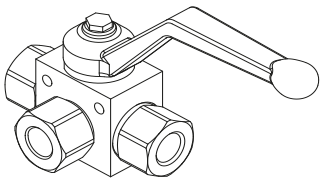
Example:

RSAP3V **01** **SAE** **T** — Hydraulic scheme

- RSAP3V: 3 way HP valve
- 01: Type - dimension
- SAE: Port type (is different from BSP)



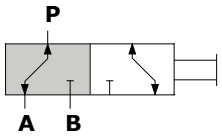




3 ways, type L

A B and P are partially closed in pos. 0. Hand lever turns 90° only

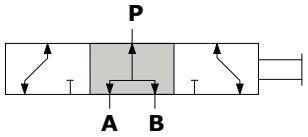
1 2



3 ways, type T

A B and P open in pos. 0. Hand lever turns 180°

1 0 2



Type	C	D	E	F	G	H	I	L	Ø M	N	wr.	O sae
	mm* - *in**											
01	35 - *1.37*	14.5 - *0.57*	36 - *1.41*	69 - *2.71*	103 - *4.05*	81 - *3.18*	41.5 - *1.63*	25 - *0.98*	4.5 - *0.17*	7 - *0.27*	22 - *0.86*	-
015	35 - *1.37*	14.5 - *0.57*	36 - *1.41*	69 - *2.71*	103 - *4.05*	81 - *3.18*	41.5 - *1.63*	25 - *0.98*	4.5 - *0.17*	7 - *0.27*	24 - *0.94*	9/16-18
02	40 - *1.57*	18 - *0.70*	43 - *1.7*	73 - *2.87*	103 - *4.05*	85 - *3.34*	45 - *1.77*	36 - *1.41*	5.2 - *0.20*	4 - *0.15*	27 - *1.06*	3/4-16
03	45 - *1.77*	22 - *0.86*	47 - *1.85*	84 - *3.30*	103 - *4.05*	91 - *3.58*	54 - *2.12*	36 - *1.41*	5.2 - *0.20*	4 - *0.15*	30 - *1.18*	7/8-14
04	60 - *2.36*	27 - *1.06*	62 - *2.44*	97 - *3.81*	181 - *7.12*	108 - *4.25*	68 - *2.47*	45 - *1.77*	6.5 - *0.25*	6.5 - *0.25*	41 - *1.61*	1" 1/16-12
05	60 - *2.36*	25.5 - *1.00*	68 - *2.67*	114 - *4.48*	181 - *7.12*	108 - *4.25*	84 - *3.30*	45 - *1.77*	7 - *0.27*	6.5 - *0.25*	46 - *1.81*	1" 5/16-12
06	60 - *2.36*	25.5 - *1.00*	68 - *2.67*	124 - *4.88*	181 - *7.12*	108 - *4.25*	89 - *3.50*	45 - *1.77*	7 - *0.27*	6.5 - *0.25*	50 - *1.96*	1" 5/8-12

(*) - Codes are referred to **UN-UNF** thread

Installation and maintenance

The diverter valves are assembled and tested as per the technical specification of this catalogue.
Before the final installation on your equipment, follow the below recommendations:

- the diverter valves can be assembled in any position, in order to prevent body deformation and spool stickingmount the product on a flat surface;
- in order to prevent the possibility ofwater entering the lever box and spool control kit, do not use high pressure wash down directly on the diverter valves;
- prior to painting, ensure plastic port plugs are tightly in place.

Fittings tightening torque - Nm / *lbft*

These torque are recommended. Assembly tightening torque depends on many factors, including lubrication, coating and surface finish. The manufacturer shall be consulted.

MECHANICAL CONTROL MONOBLOCK DIVERTER VALVES

THREADS TYPE	DF5-DFC050	DF10-DFC100	DF20	DF25
BSP	G 3/8	G 1/2	G 3/4	G 1
With O-Ring seal	35/*25.8*	50/*37*	90/*66.4*	100/*73.8*
With copper washer	40/*29.5*	60/*44.3*	60/*44.3*	90/*66.4*
With steel and rubber washer	30/*22*	60/*44.3*	70/*51.6*	100/*73.8*
UN-UNF	3/4-16 (SAE 8)	7/8-14 (SAE 10)	1" 1/16-12 (SAE 12)	1" 5/16-12 (SAE 16)
With O-Ring seal	50/*37*	60/*44.3*	95/*70*	150/*111*

SOLENOID CONTROL MONOBLOCK DIVERTER VALVES

	DFE052			DFE102		DFE20		DFE085	DFE110		DFE141
THREADS TYPE	Ports	Drain	Drain*	Ports	Drain	Ports	Drain	Ports	Ports	Drain	Ports
BSP	G 3/8	G 1/4	G 1/4	G 1/2	G 1/4	G 3/4	G 1/4	G 3/8	G 1/2	G 1/4	G 1/2
With O-Ring seal	35/*25.8*	20/*14.8*	20/*14.8*	50/*37*	20/*14.8*	90/*66.4*	20/*14.8*	35/*25.8*	50/*37*	20/*14.8*	50/*37*
With copper washer	40/*29.5*	25/*18.4*	25/*18.4*	60/*44.3*	25/*18.4*	60/*44.3*	25/*18.4*	40/*29.5*	60/*44.3*	25/*18.4*	60/*44.3*
With steel and rubber washer	30/*22*	16/*11.8*	16/*11.8*	60/*44.3*	16/*11.8*	70/*51.6*	16/*11.8*	30/*22*	60/*44.3*	16/*11.8*	60/*44.3*
UN-UNF	3/4-16 (SAE 8)	9/16-18 (SAE 6)	7/16-20 (SAE 4)	7/8-14 (SAE 10)	9/16-18 (SAE 6)	1" 1/16-12 (SAE 12)	7/16-20 (SAE 4)	3/4-16 (SAE 8)	7/8-14 (SAE 10)	9/16-18 (SAE 6)	-
With O-Ring seal	50/*37*	30/*22*	15/*11*	60/*44.3*	30/*22*	95/*70*	15/*11*	50/*37*	60/*44.3*	30/*22*	

NOTE (*) - drain for DFE052/8

SOLENOID CONTROL SECTIONAL DIVERTER VALVES

	DFE080		DFE100		DFE140	
THREADS TYPE	Ports	Drain	Ports	Drain	Ports	Drain
BSP	G 1/4	G 1/4	G 3/8	G 1/4	G 1/2	G 1/4
With O-Ring seal	20/*14.8*	20/*14.8*	35/*25.8*	20/*14.8*	50/*37*	20/*14.8*
With copper washer	25/*18.4*	25/*18.4*	40/*29.5*	25/*18.4*	60/*44.3*	25/*18.4*
With steel and rubber washer	16/*11.8*	16/*11.8*	30/*22*	16/*11.8*	60/*44.3*	16/*11.8*
UN-UNF	7/16-20 (SAE 4)	7/16-20 (SAE 4)	7/8-14 (SAE 10)	9/16-18 (SAE 6)	7/8-14 (SAE 10)	9/16-18 (SAE 6)
With O-Ring seal	15/*11*	15/*11*	50/*37*	30/*22*	60/*44.3*	30/*22*

ROTARY CONTROL DIVERTER VALVES

THREADS TYPE	DHZ5	DHZ10	DHZ20	DH25	DH30
BSP	G 3/8	G 1/2	G 3/4	G 1	G 1" 1/2
With O-Ring seal	35/*25.8*	50/*37*	90/*66.4*	100/*73.8*	120/*44.3*
With copper washer	40/*29.5*	60/*44.3*	60/*44.3*	90/*66.4*	100/*73.8*
With steel and rubber washer	30/*22*	60/*44.3*	70/*51.6*	100/*73.8*	120/*44.3*
UN-UNF	3/4-16 (SAE 8)	7/8-14 (SAE 10)	1" 1/16-12 (SAE 12)	1" 5/16-12 (SAE 16)	1" 7/8-12 (SAE 24)
With O-Ring seal	50/*37*	60/*44.3*	95/*70*	150/*111*	210/*155*