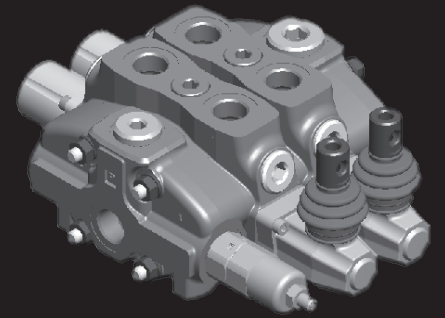
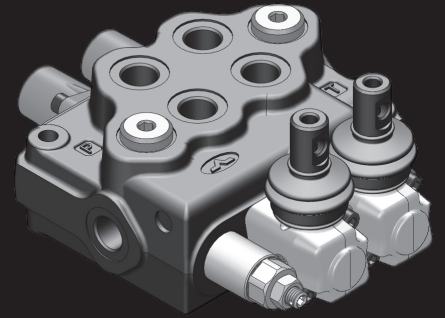




SDH Series

Monoblock and Sectional directional valves

Additional information

This catalogue shows the product in the most standard configurations.
Please contact Sales Dpt. for more detailed information or special request.

WARNING!

All specifications of this catalogue refer to the standard product at this date.
Walvoil, oriented to a continuous improvement, reserves the right to
discontinue, modify or revise the specifications, without notice.

WALVOIL IS NOT RESPONSIBLE FOR ANY DAMAGE CAUSED BY AN
INCORRECT USE OF THE PRODUCT.

1st edition December 2013

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General Working Conditions

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

Hydraulic fluid: mineral based oil

Fluid temperature with NBR (BUNA-M) seals: -20° C/+80° C (-4 °F/+176° F)

Ambient temperature for working conditions with mech.devices: -40° C/+60° C (-40 °F/+140° F)

Viscosity operating range from 15 to 75 mm²/s: min.12 - max.400 mm² /s (cSt)

Max level of contamination: - /19/16 - ISO 4406 (NAS 1638 - class 10)

ATTENTION!

All Walvoil components must be used within the parameters shown in this catalog.

The use exceeding these limits is dangerous and must be avoided because it may cause incorrect working and limit the product life.

The standard valves are supplied with main relief valves set at 120 bar (1750 psi), 10 l/min (2.64 US gpm) flow, with adjustment range up to 200 bar (2900 psi).

Walvoil is not responsible for any damage caused by an incorrect use of the product.

All specifications of this catalog refers to the standard product at this date.

Walvoil, oriented to a continuous improvement, reserves the right to discontinue, modify or revise the specifications, without notice.

NOTE - For different conditions please contact Sales Dpt.

Contents

Content

Monoblock valves

Main Characteristics

Type	Nominal Flow		Nominal Pressure		Nr of spools	Circuit	Spool diameter		Spool stroke	
	l/min	US gpm	bar	psi			mm	in	mm	in
SDH4	45	12	250	3600	1	Parallel	16	0.63	± 5.5	± 0.21
SD5/1-HBN	45	12	250	3600	1	Parallel	16	0.63	± 5.5	± 0.21
SD5/1-HBD			315	4600	2-4					
SDH5/..-P										
SDH14	120	32	250	3600	1	Parallel	20	0.79	± 7	± 0.27

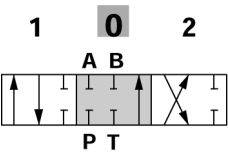
Sectional valves

Main Characteristics

Type	Nominal Flow		Nominal Pressure		Number of spools	Circuit	Spool diameter		Spool stroke	
	l/min	US gpm	bar	psi			mm	in	mm	in
SDH6	45	12	315	4600	1 - 12	Parallel	16	0.63	± 5.5	± 0.21
SDH8	80	21	315	4600	1 - 12	Parallel	18	0.71	± 7	± 0.27
SDH180	140	37	315	4600	1 - 10	Parallel	20	0.79	± 7	± 0.27

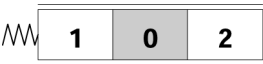
Spools And Main Relief valves

Spools



1 Double acting, 3 positions, with A and B closed in neutral position.

Spool Control kits

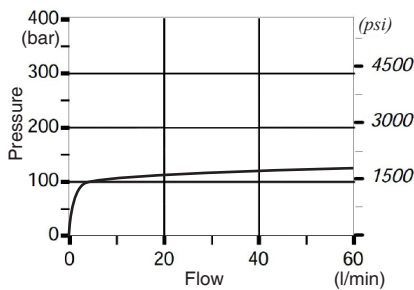


8 Spring centered in neutral position.

Main Relief Valves

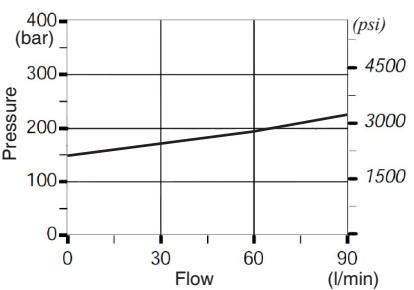
VMD5 (JG)
(SDH4 & SDH5)

Spring nr.3 (blue band)



VMD10 (YG)
(SDH14)

Spring nr.3 (blue band)

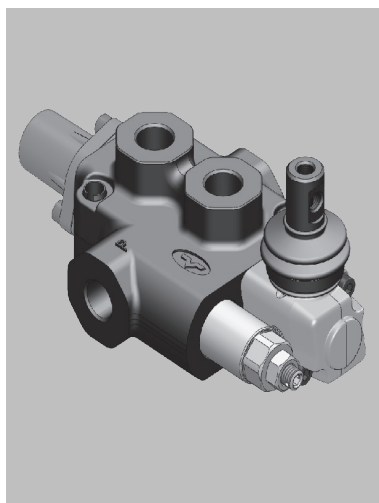


Codes Available

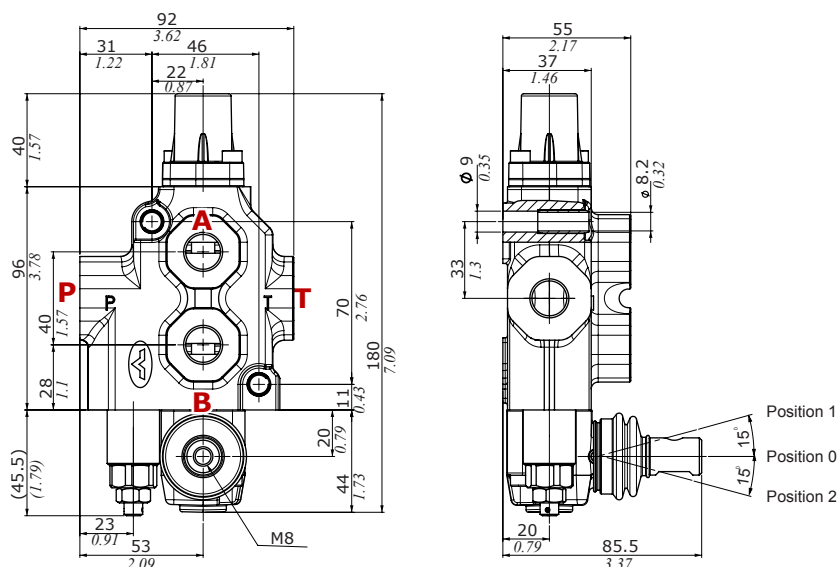
Part Number	Description
201100169	SDH4/1(JG3-120)/1CP8L
2021D0022	SD5/1-HBN(JG3-120)/18L
2021D0012	SD5/1-HBD(JG3-120)/18L
202200409	SDH5/2-P(JG3-120)/18L/18L/AET
202300381	SDH5/3-P(JG3-120)/18L/18L/18L/AET
202400069	SDH5/4-P(JG3-120)/18L/18L/18L/18L/AET
205111001	SDH14/1(YG3-120)/1CP8L

SDH4

Dimensional Data



SDH4 valve is without load check valve. Standard configuration is with positive spool.



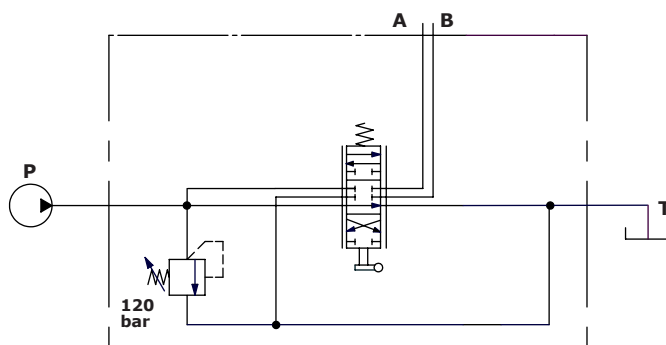
NOTE: Drawings and dimensions are referred to BSP thread configuration.

Nominal Flow		Nominal Pressure		Max back pressure		Internal leakage at 100 bar (1450 psi)		Weight	
l/min	US gpm	bar	psi	bar	psi	cm ³ /min	in ³ /min	kg	lb
45	12	250	3600	25	360	5	0.19	3	4.4

STANDARD THREADS

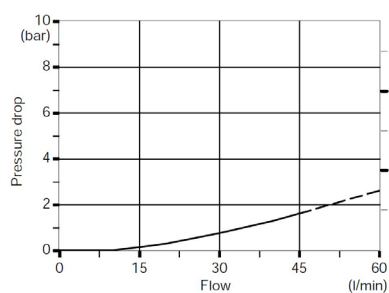
Ports	BSP
P-T	G3/8
A-B	G3/8

Hydraulic circuit

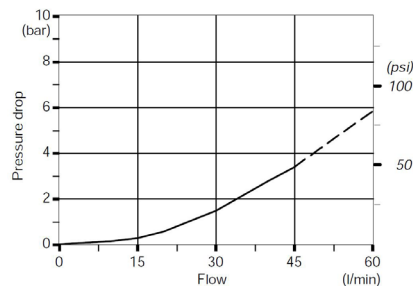


Pressure drops

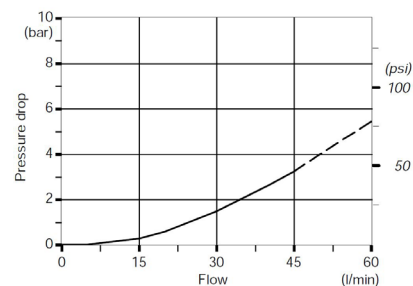
P ⇒ T pressure drop



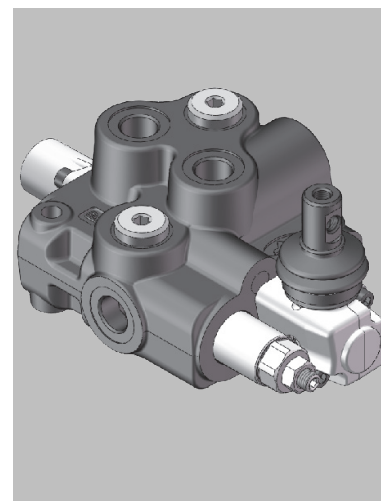
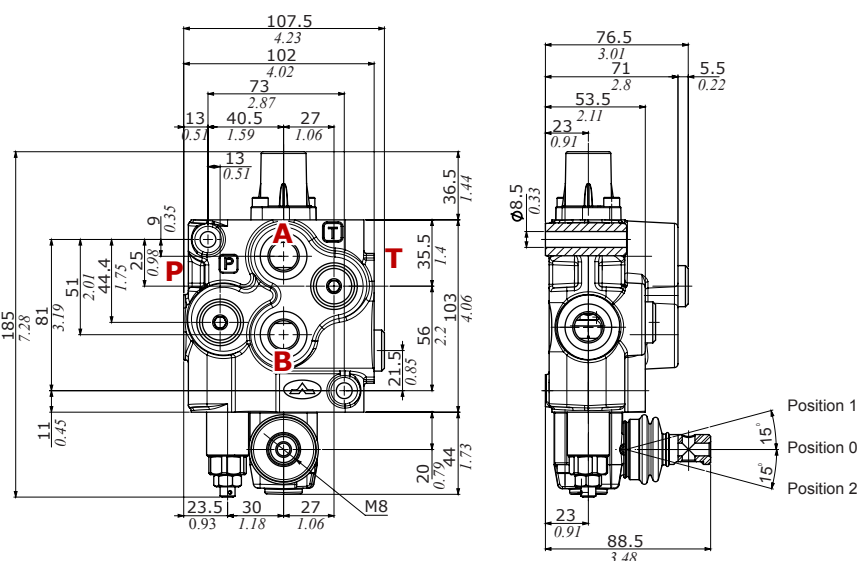
P ⇒ A(B) pressure drop



A(B) ⇒ T pressure drop



Dimensional Data



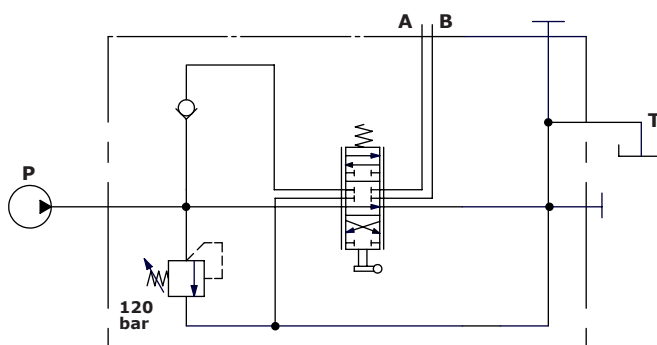
NOTE: Carry-over not available for this configuration.

NOTE: Drawings and dimensions are referred to BSP thread configuration.

Nominal Flow		Nominal Pressure		Max back pressure		Internal leakage at 100 bar (1450 psi)		Weight	
l/min	US gpm	bar	psi	bar	psi	cm ³ /min	in ³ /min	kg	lb
45	12	250	3600	25	360	5	0.19	3.4	7.5

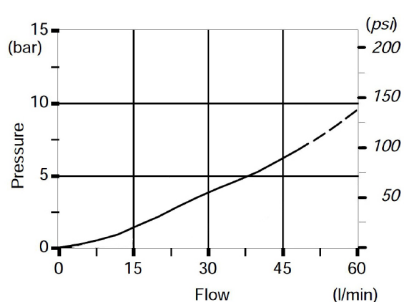
STANDARD THREADS	
Ports	BSP
P-T	G3/8
A-B	G3/8

Hydraulic circuit

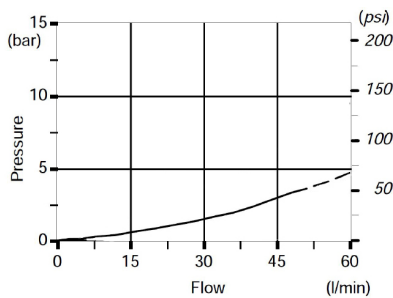


Pressure drops

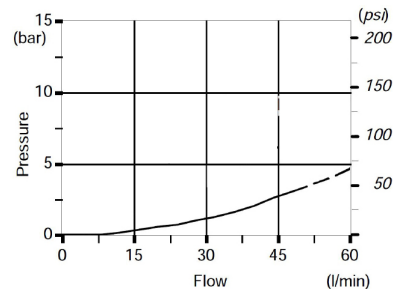
P ⇒ T pressure drop



P ⇒ A(B) pressure drop

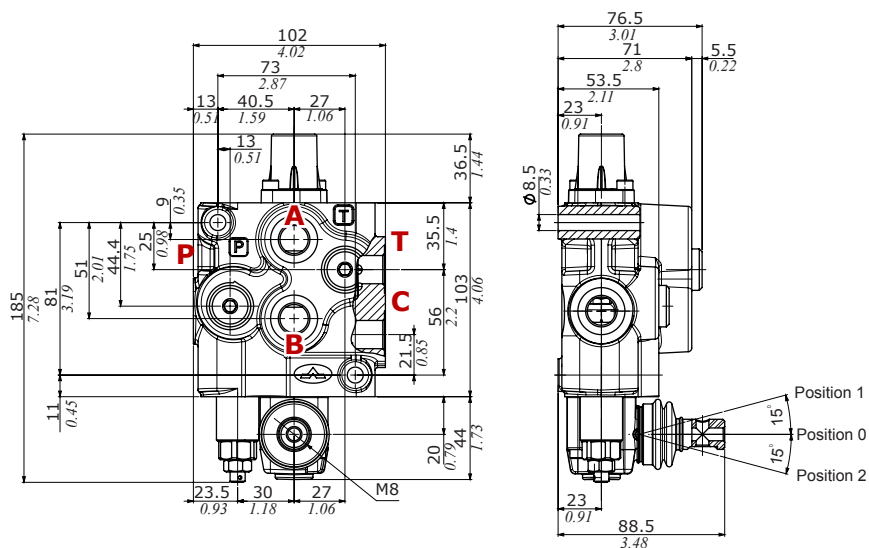
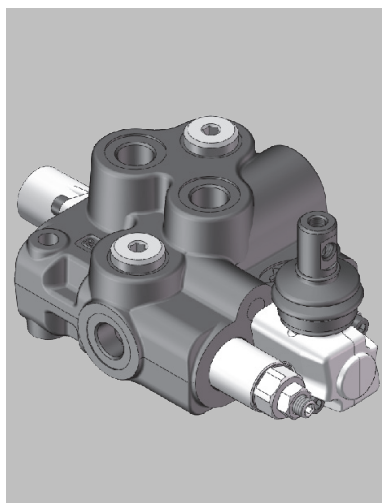


A(B) ⇒ T pressure drop



SD5/1 HBD

Dimensional Data



NOTE: No carry-over joint admitted in this configuration.

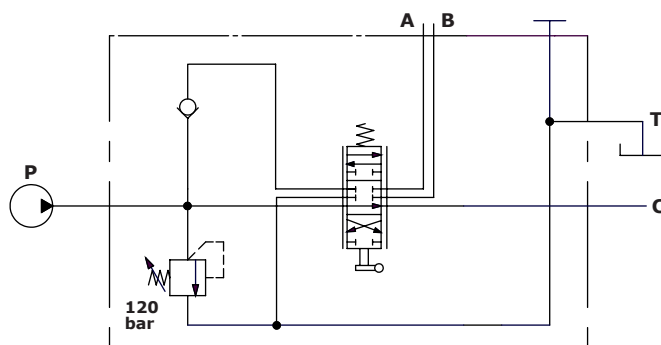
NOTE: Drawings and dimensions are referred to BSP thread configuration.

Nominal Flow		Nominal Pressure		Max back pressure		Internal leakage at 100 bar (1450 psi)		Weight	
l/min	US gpm	bar	psi	bar	psi	cm ³ /min	in ³ /min	kg	lb
45	12	250	3600	25	360	5	0.19	3.6	4.4

STANDARD THREADS

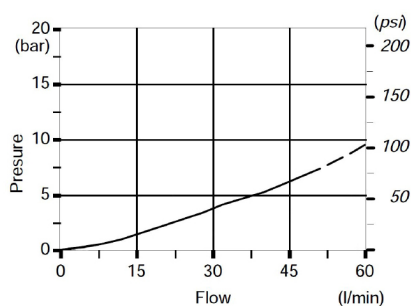
Ports	BSP
P-T-C	G3/8
A-B	G3/8

Hydraulic circuit

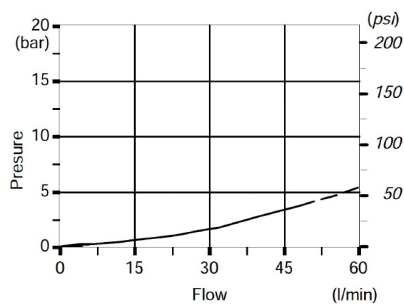


Pressure drops

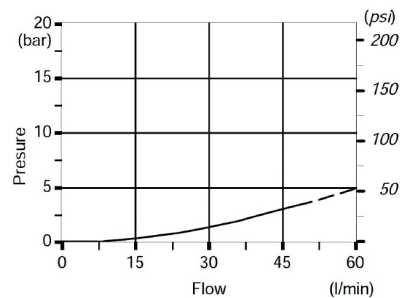
P ⇒ T pressure drop



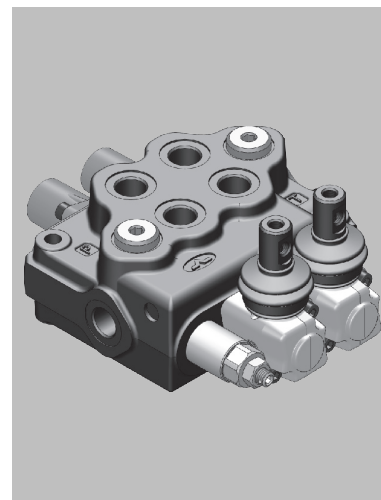
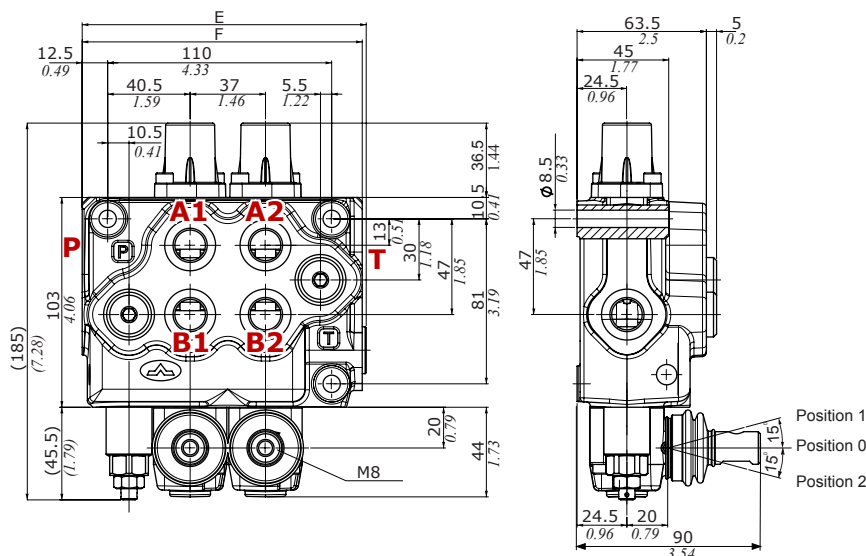
P ⇒ A(B) pressure drop



A(B) ⇒ T pressure drop



Dimensional Data



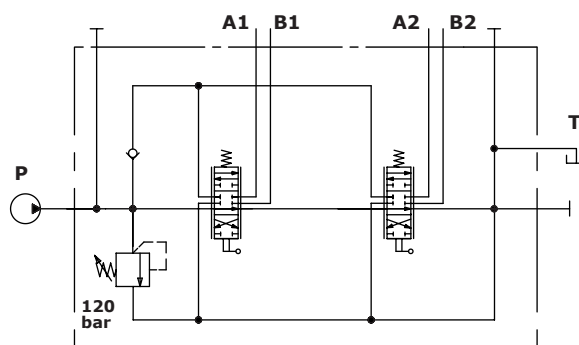
NOTE: Drawings and dimensions are referred to BSP thread configuration.

Nominal Flow		Nominal Pressure		Max back pressure		Internal leakage at 100 bar (1450 psi)	
l/min	US gpm	bar	psi	bar	psi	cm ³ /min	in ³ /min
45	12	315	4600	25	360	5	0.19

STANDARD THREADS	
Ports	BSP
P-T	G3/8
A-B	G3/8

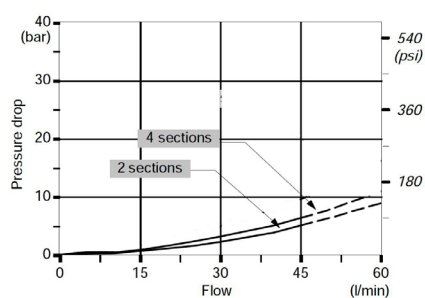
Type	E		F		Weight	
	mm	in	mm	in	kg	lb
SDH5/2	139.5	5.49	110	4.33	5.2	11.5
SDH5/3	176.5	6.95	147	5.79	6.9	15.2
SDH5/4	213.5	8.41	184	7.24	8.1	17.9

Hydraulic circuit

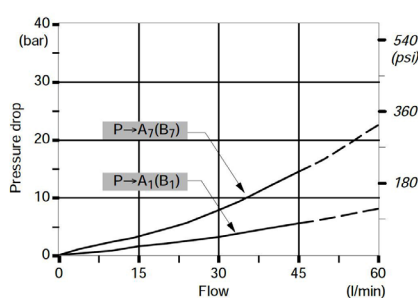


Pressure drops

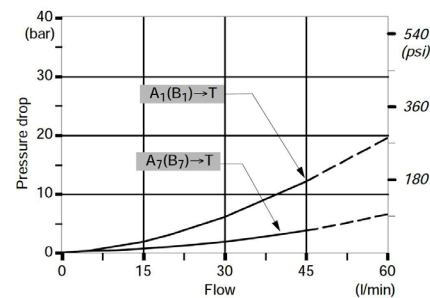
P ⇒ T pressure drop



P ⇒ A(B) pressure drop

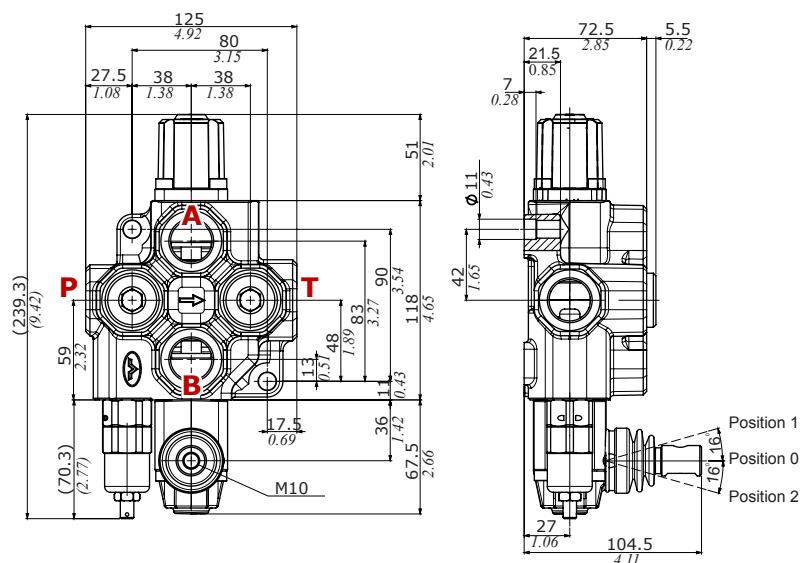
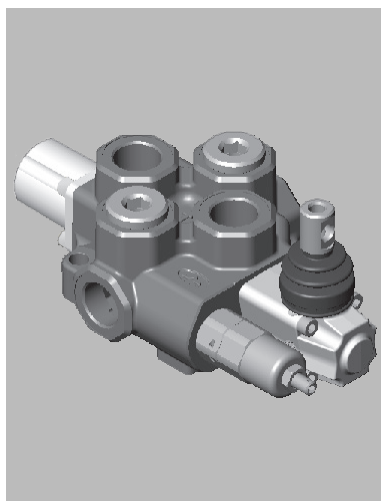


A(B) ⇒ T pressure drop



SDH14

Dimensional Data



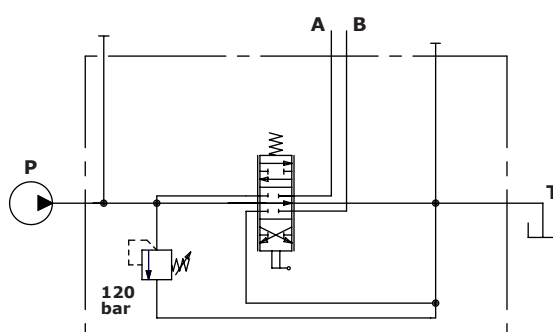
SDH14 valve is without load check valve. Standard configuration is with positive spool.

NOTE: Drawings and dimensions are referred to BSP thread configuration.

Nominal Flow		Nominal Pressure		Max back pressure		Internal leakage at 100 bar (1450 psi)		Weight	
l/min	US gpm	bar	psi	bar	psi	cm ³ /min	in ³ /min	kg	lb
120	32	250	3600	25	360	5	0.19	4.3	9.5

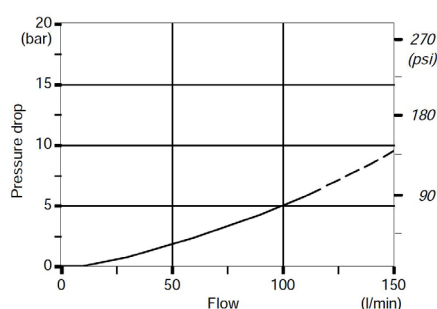
STANDARD THREADS	
Ports	BSP
P-T	G3/4
A-B	G3/4

Hydraulic circuit

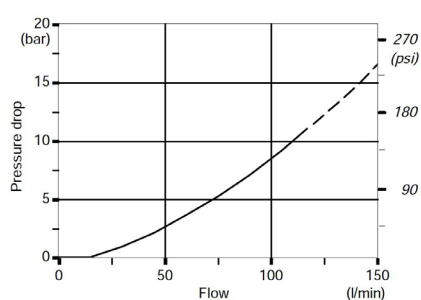


Pressure drops

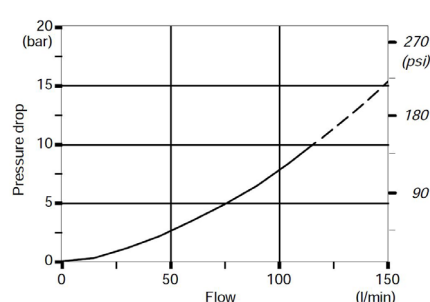
P ⇒ T pressure drop



P ⇒ A(B) pressure drop

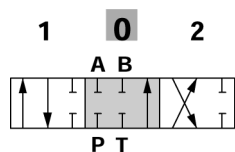


A(B) ⇒ T pressure drop



Spools And Main Relief valves

Spools



1
Double acting, 3 positions, with A and B closed in neutral position.

Spool Control kits

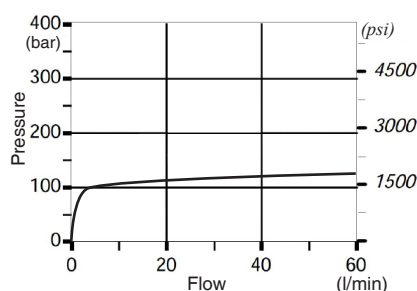


2
Spring centered in neutral position.

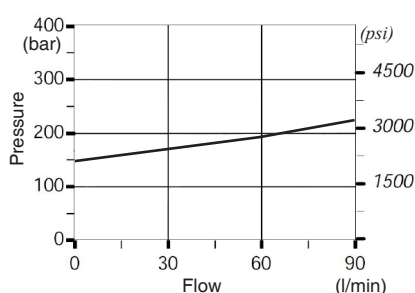
Main Relief Valves

VMD5 (JG)
(SDH6)

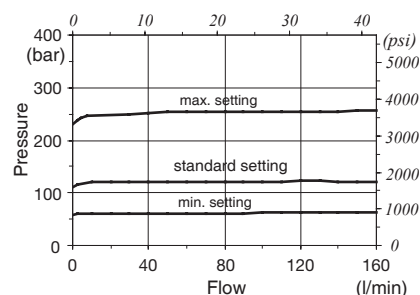
Spring nr.3 (blue band)


VMD10 (YG)
(SDH8)

Spring nr.3 (blue band)


VMP20 (XGN)
(SDH180)

From 60 to 250 bar / from 870 to 3600 psi

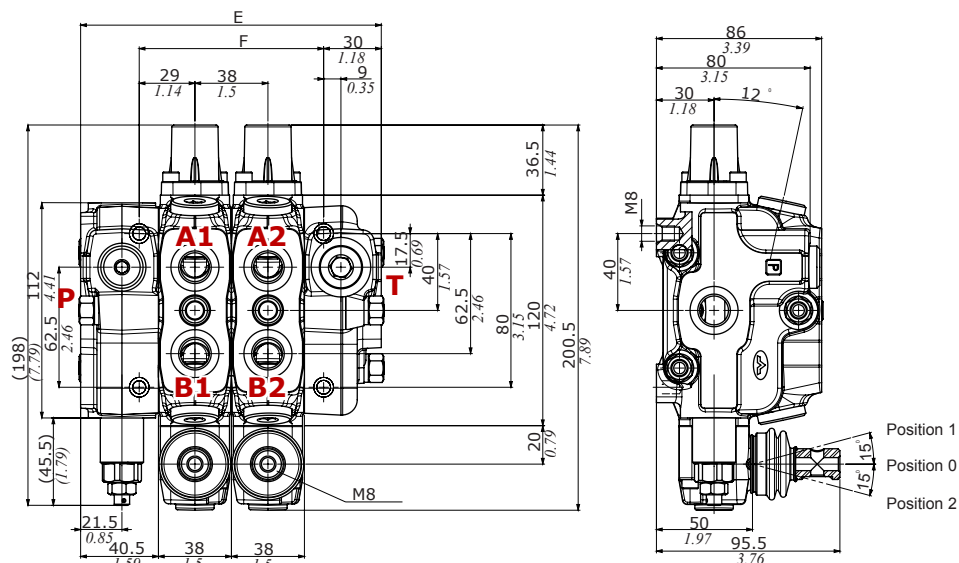
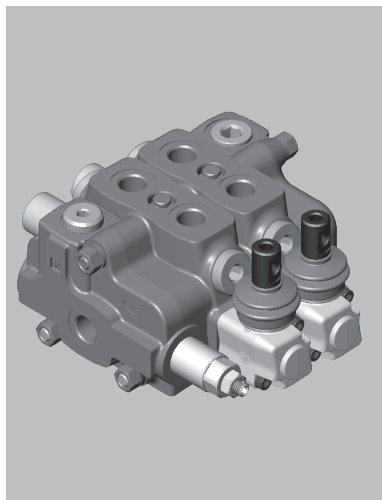


Codes Available

Part Number	Description
212200098	SDH6/2/AC(JG3-120)/18L/18L/RC
212300115	SDH6/3/AC(JG3-120)/18L/18L/18L/RC
212400106	SDH6/4/AC(JG3-120)/18L/18L/18L/18L/RC
212600116	SDH6/6/AC(JG3-120)/18L/18L/18L/18L/18L/RC
213200065	SDH8/2/AC(YG3-175)/18L/18L/RC
213300077	SDH8/3/AC(YG3-175)/18L/18L/18L/RC
213403047	SDH8/4/AC(YG3-175)/18L/18L/18L/18L/RC
218200152	SDH180/2/AC(XGN-210)/1D8L/1D8L/RC
218400072	SDH180/4/AC(XGN-175)/1D8L/1D8L/1D8L/18L/RC

SDH6

Dimensional Data



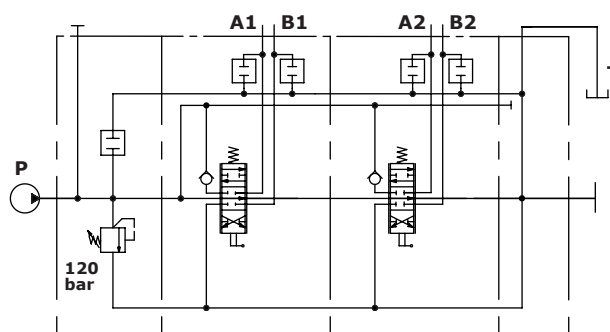
NOTE: Drawings and dimensions are referred to BSP thread configuration.

Nominal Flow		Nominal Pressure		Max back pressure		Internal leakage at 100 bar (1450 psi)	
l/min	US gpm	bar	psi	bar	psi	cm³/min	in³/min
45	12	315	4600	25	360	7	0.27

STANDARD THREADS	
Ports	BSP
P	G3/8
A-B	G3/8
T	G1/2

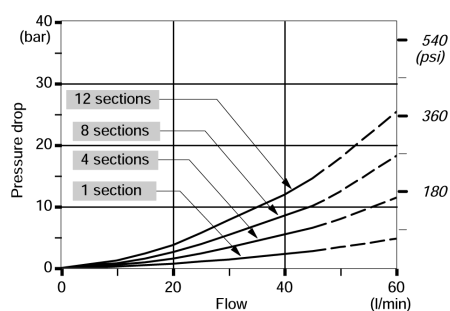
Type	E		F		Weight	
	mm	<i>in</i>	mm	<i>in</i>	kg	<i>lb</i>
SDH6/1	118.5	4.66	58	2.28	5.3	11.7
SDH6/2	156.5	6.16	96	3.78	7.6	16.6
SDH6/3	194.5	7.66	134	5.28	9.9	21.8
SDH6/4	232.5	9.15	172	6.77	12.2	26.9
SDH6/5	270.5	10.65	210	8.27	14.8	32.6
SDH6/6	308.5	12.15	248	9.76	17.1	37.7

Hydraulic circuit

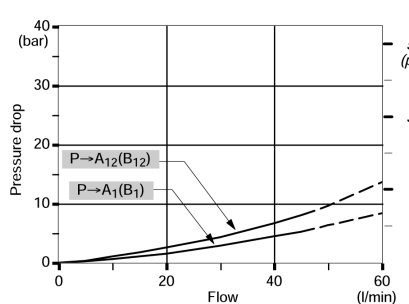


Pressure drops

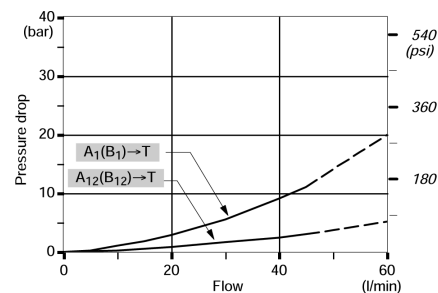
P $\Rightarrow$ T pressure drop



P $\Rightarrow$ A(B) pressure drop

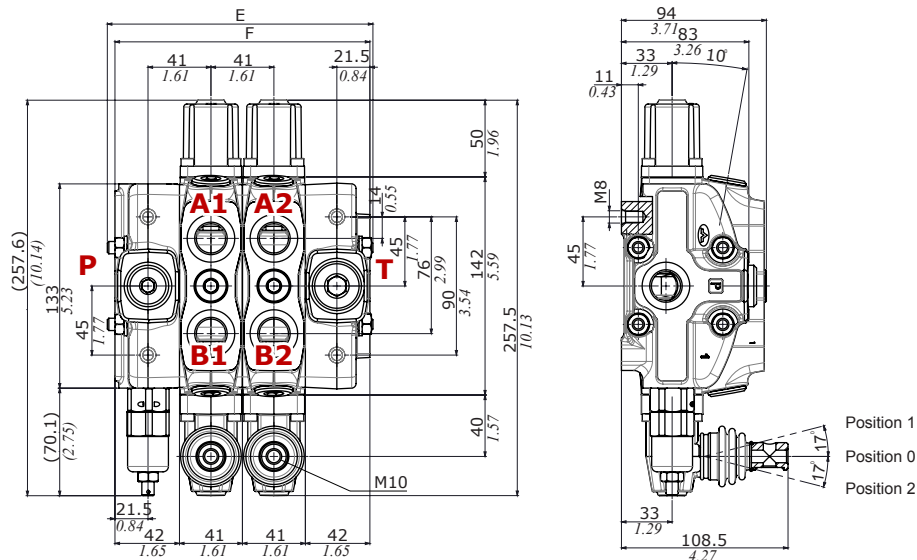


A(B) $\Rightarrow$ T pressure drop



SDH8

Dimensional Data



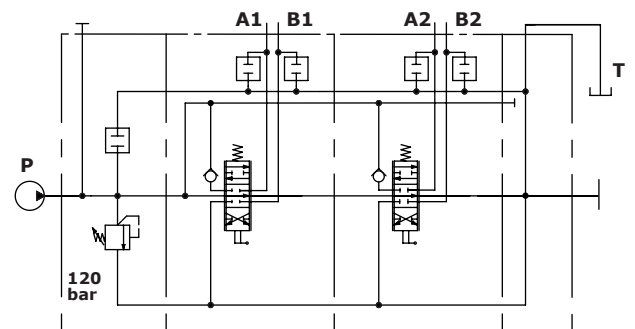
NOTE: Drawings and dimensions are referred to BSP thread configuration.

Nominal Flow		Nominal Pressure		Max back pressure		Internal leakage at 100 bar (1450 psi)	
l/min	US gpm	bar	psi	bar	psi	cm ³ /min	in ³ /min
80	21	315	4600	25	360	7	0.27

STANDARD THREADS	
Ports	BSP
P	G1/2
A-B	G1/2
T	G3/4

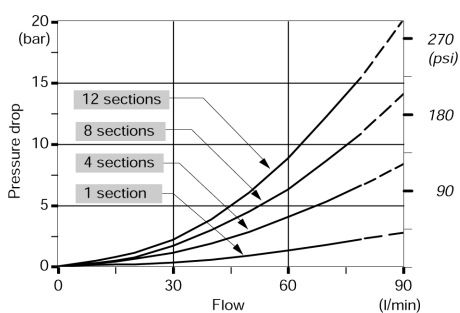
Type	E		F		Weight	
	mm	in	mm	in	kg	lb
SDH8/1	128	5.04	82	3.23	7.2	15.9
SDH8/2	169	6.65	123	4.84	10.5	23.1
SDH8/3	210	8.27	164	6.46	13.8	30.4
SDH8/4	251	9.88	205	8.07	17.1	37.7
SDH8/5	292	11.50	246	9.69	20.1	44.3
SDH8/6	333	13.11	287	11.3	23.4	51.6

Hydraulic circuit

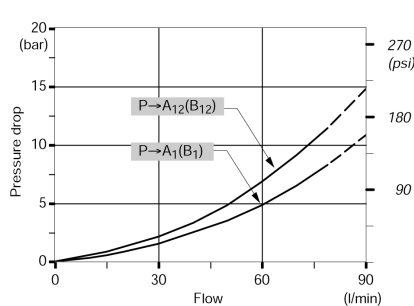


Pressure drops

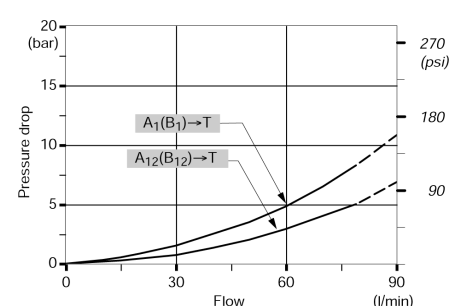
P ⇒ T pressure drop



P ⇒ A(B) pressure drop

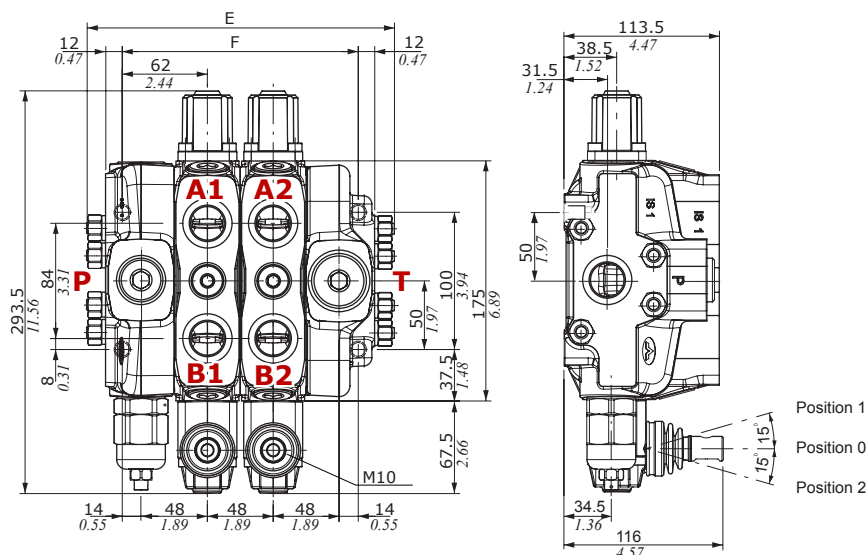
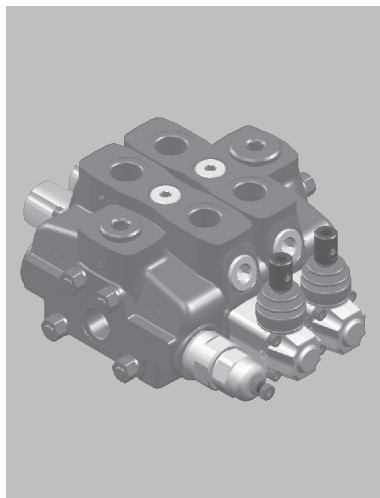


A(B) ⇒ T pressure drop



SDH180

Dimensional Data



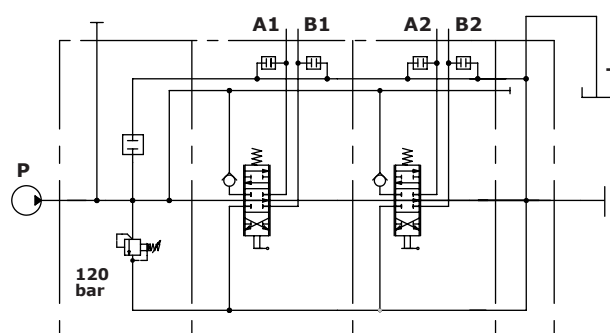
NOTE: Drawings and dimensions are referred to BSP thread configuration.

Nominal Flow		Nominal Pressure		Max back pressure		Internal leakage at 100 bar (1450 psi)	
l/min	US gpm	bar	psi	bar	psi	cm ³ /min	in ³ /min
140	37	315	4600	25	360	8	0.31

STANDARD THREADS	
Ports	BSP
P	G3/4
A-B	G3/4
T	G1

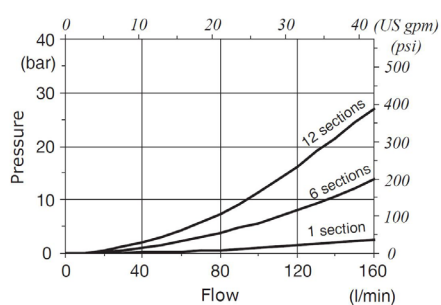
Type	E		F		Weight	
	mm	in	mm	in	kg	lb
SDH180/1	176	6.93	124	4.88	13.8	30.42
SDH180/2	224	8.82	172	6.77	19.2	42.33
SDH180/3	272	10.71	220	8.66	24.6	54.23
SDH180/4	320	12.60	268	10.55	30	66.14
SDH180/5	368	14.49	316	12.44	35.4	78.04
SDH180/6	416	16.38	364	14.33	40.8	89.95

Hydraulic circuit

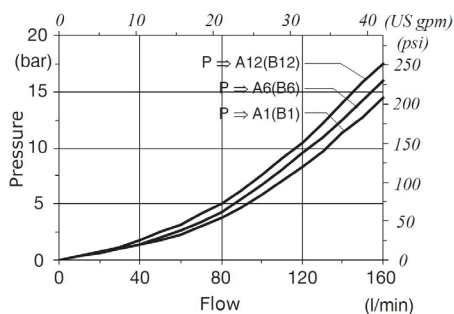


Pressure drops

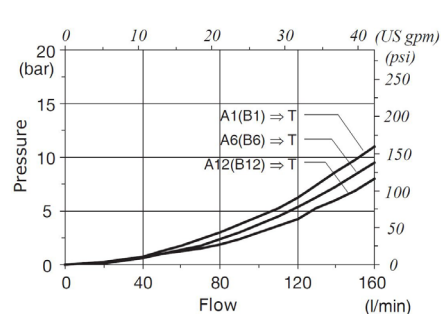
P ⇒ T pressure drop



P ⇒ A(B) pressure drop



A(B) ⇒ T pressure drop



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