

Characteristics

Pilot operated pressure relief valves series R5V have a similar design to the subplate mounted R4V series. The SAE flanges allow to mount the valves directly on the outlet flanges of pumps or inlet flanges of actuators to achieve a very compact design.

Valves with SAE flanges can also be bolted together to combine functions without the need of a manifold block.

Features

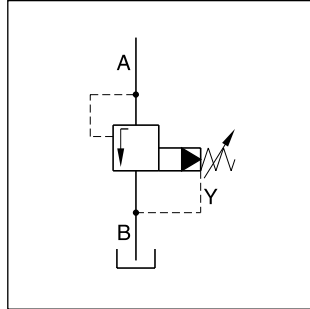
- Pilot operated with manual adjustment
- R5V with 2-port body
 - 3 sizes (SAE 3/4", 1", 1 1/4")
 - SAE61 flange
- R5V with 3-port body
 - 4 sizes (SAE 3/4", 1", 1 1/4", 1 1/2")
 - SAE61 and SAE62 flange
- 3 pressure stages
- 3 adjustment modes
 - Hand knob
 - Acorn nut with lead seal
 - Cylinder lock
- With optional vent function



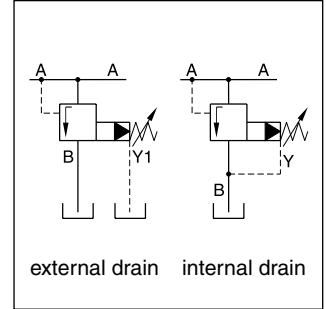
R5V 2-port



R5V 3-port

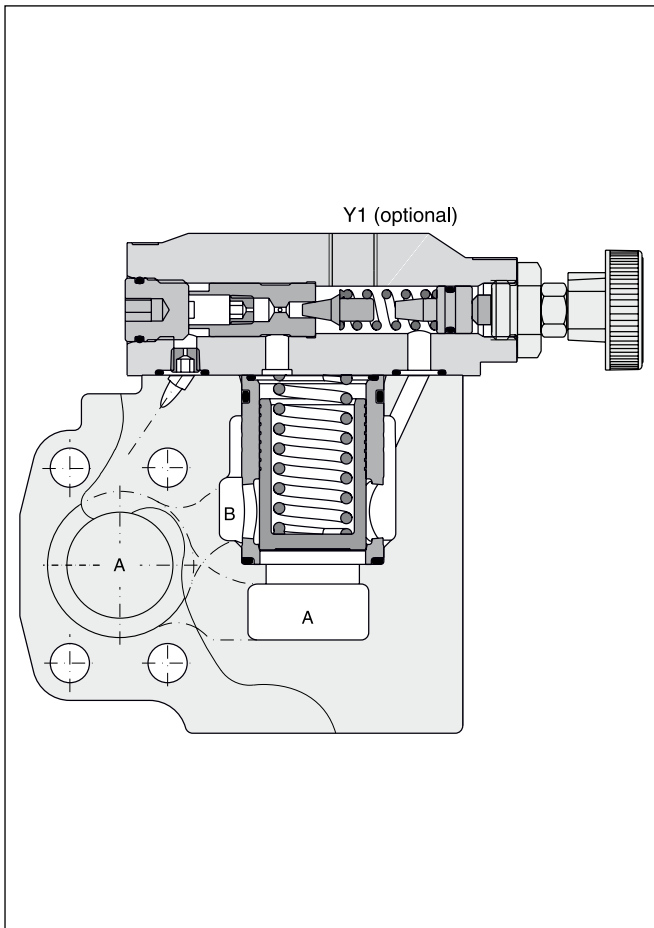


R5V 2-port

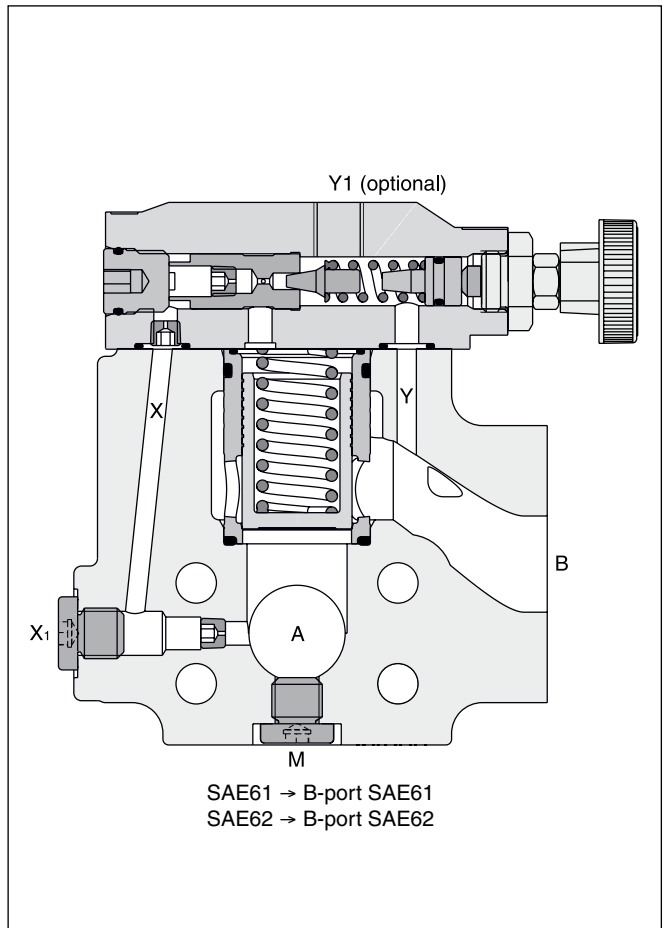


R5V 3-port

R5V 2-port

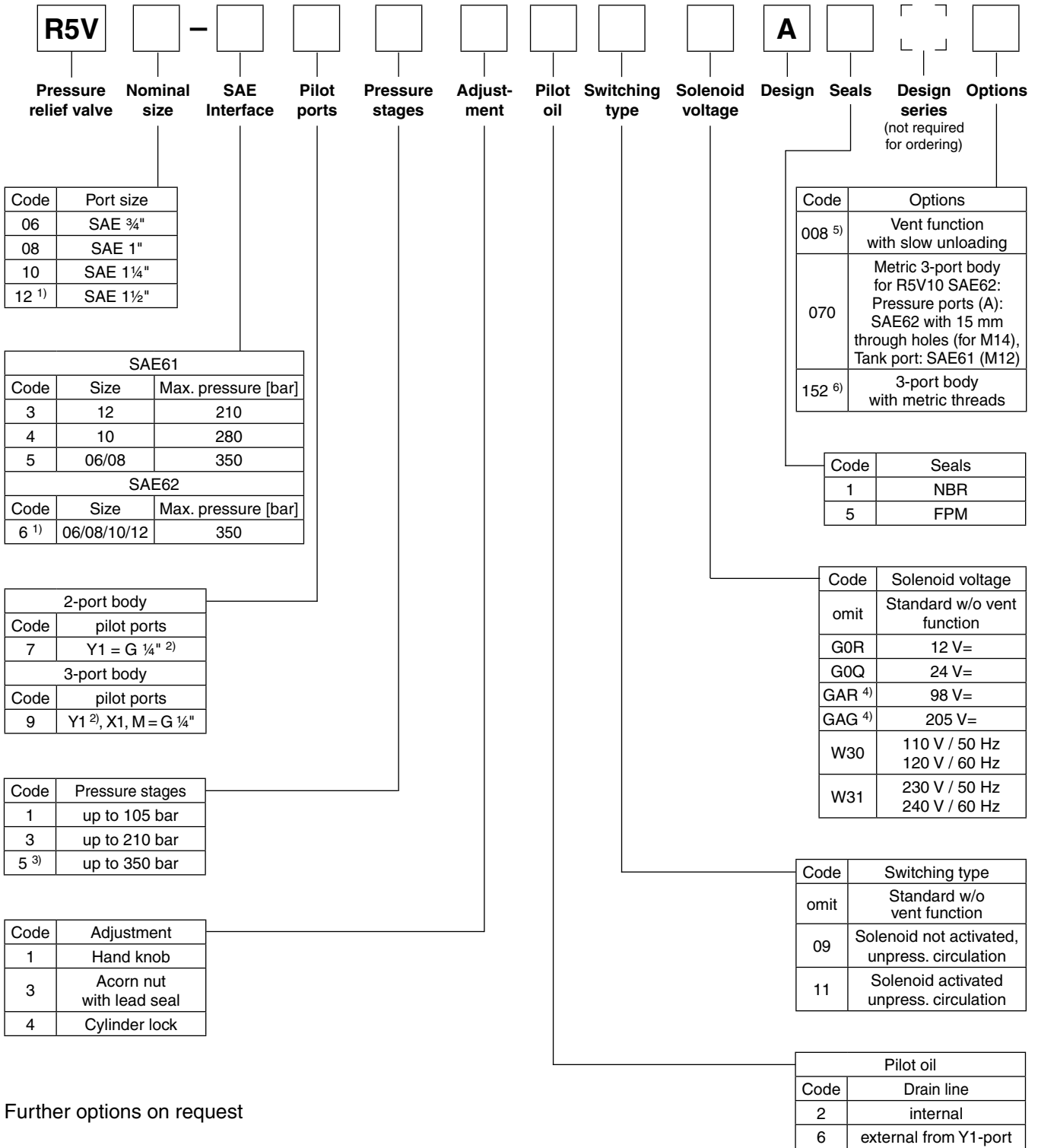


R5V 3-port



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Ordering Code



Further options on request

1) Only R5V 3-port.
 2) Y1 only available at external drain (pilot oil code 6).
 3) R5V10-4*5 up to 280 bar.
 4) To be used in combination with rectifier plugs at 120 VAC / 230 VAC power supply.
 5) Only for vent valve function code 09.
 6) R5V08 SAE62: Tank port SAE61 (M10).

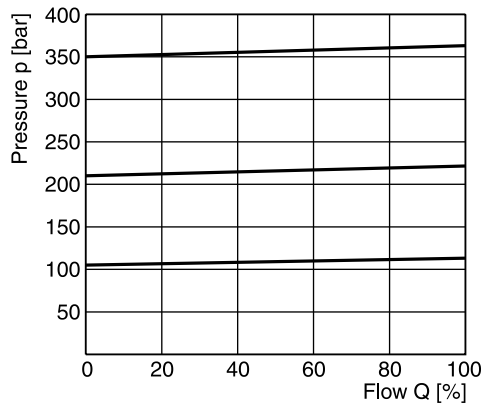
Technical Data / Characteristic Curves

Technical data

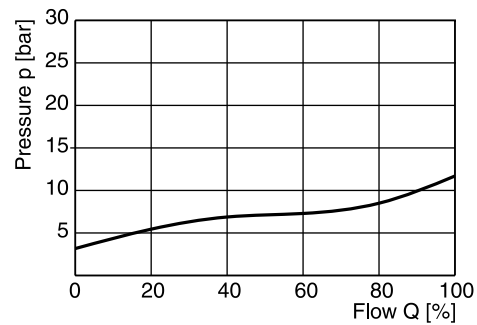
General								
Size			06 (3/4")	08 (1")	10 (1 1/4")	12 (1 1/2")		
Mounting	Flanged according to SAE61 and SAE62							
Mounting position	unrestricted							
Ambient temperature	[°C]	-20...+60						
MTTF _D value	[years]	75						
Weight	R5V 2-port	[kg]	4.0	4.6	5.9	—		
	R5V 3-port	[kg]	3.6	4.6	5.2	8.0		
Hydraulic								
Max. operating pressure	[bar]							
	SAE61 Ports A, B		350	350	280	210		
	Port Y1		30	30	30	30		
	SAE62 Ports A, B		350	350	350	350		
	Port Y1		30	30	30	30		
Pressure stages	[bar]	105, 210, 350						
Nominal flow	[l/min]		90	300	600	600		
Fluid	Hydraulic oil according to DIN 51524							
Fluid temperature	[°C]	-20...+70 (NBR: -25...+70)						
Viscosity,	permitted	[cSt] / [mm ² /s]	20 ... 400					
	recommended	[cSt] / [mm ² /s]	30...80					
Filtration	ISO 4406 (1999); 18/16/13							
Electrical (solenoid)								
Duty ratio	100 % ED; CAUTION: coil temperature up to 150 °C possible							
Protection class	IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)							
Supply voltage	Code		G0R	G0Q	GAR	GAG	W30	W31
	[V]		12 V =	24 V =	98 V =	205 V =	110 at 50 Hz 120 at 60 Hz	230 at 50 Hz 240 at 60 Hz
Tolerance supply voltage	[%]		±10	±10	±10	±10	±5	±5
Current consumption	hold	[A]	2.72	1.29	0.33	0.13	0.6 / 0.55	0.3 / 0.27
	in rush	[A]	2.72	1.29	0.33	0.13	2.5 / 2.4	1.25 / 1.2
Power consumption	hold	[W]	32.7	31	31.9	28.2	70/70 VA	70/70 VA
	in rush	[W]	32.7	31	31.9	28.2	280/290 VA	280/290 VA
Solenoid connection	Connector as per EN175301-803, solenoid identification as per ISO 9461							
Wiring min.	[mm ²]	3 x 1.5 recommended						
Wiring length max.	[m]	50 recommended						

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p/Q performance curve



Minimum pressure curve

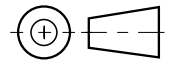
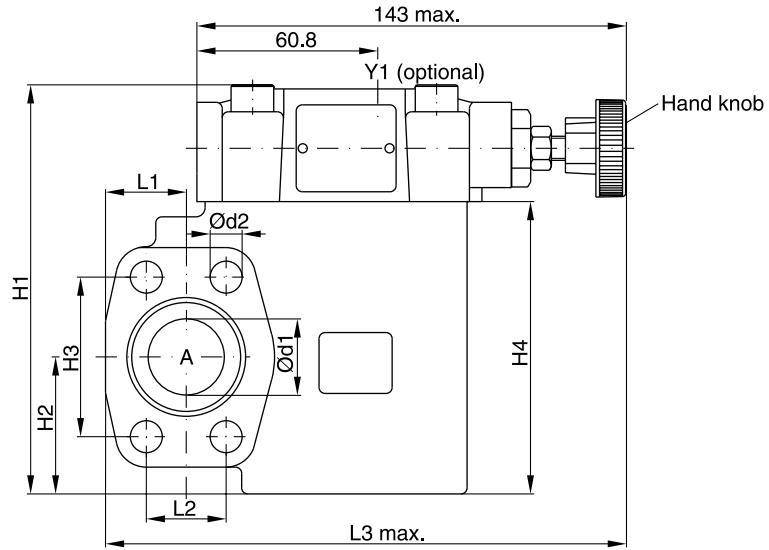
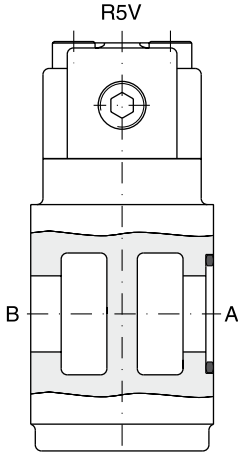
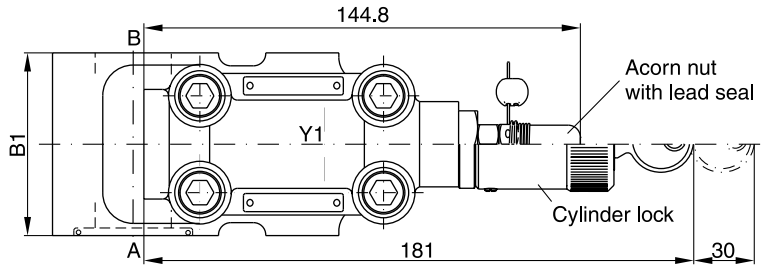


All characteristic curves measured with HLP46 at 50 °C.

The performance curves are measured with external drain.
For internal drain the tank pressure has to be added to curve.

Dimensions

Dimensions R5V 2-port



SAE61

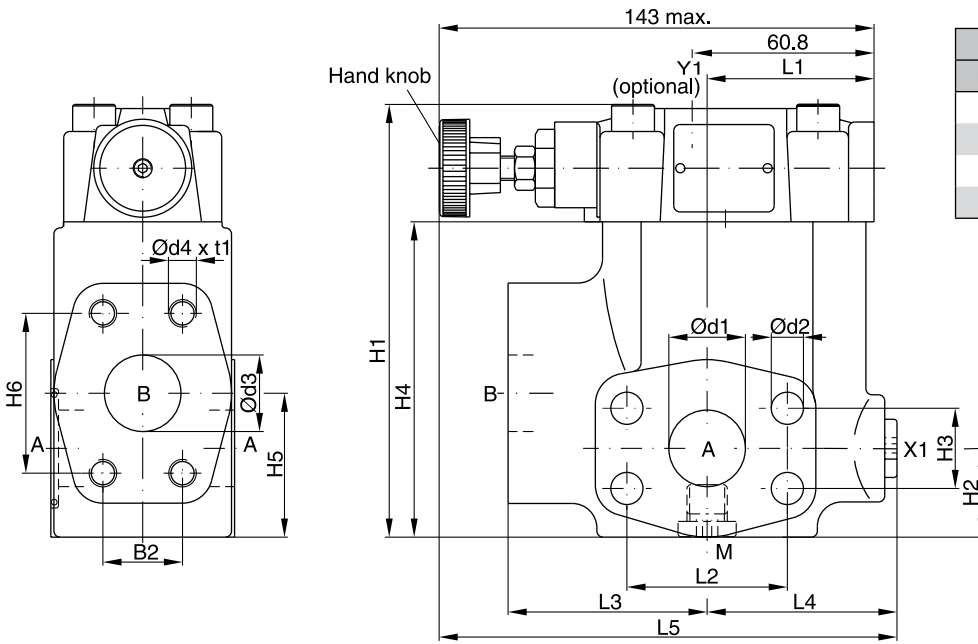
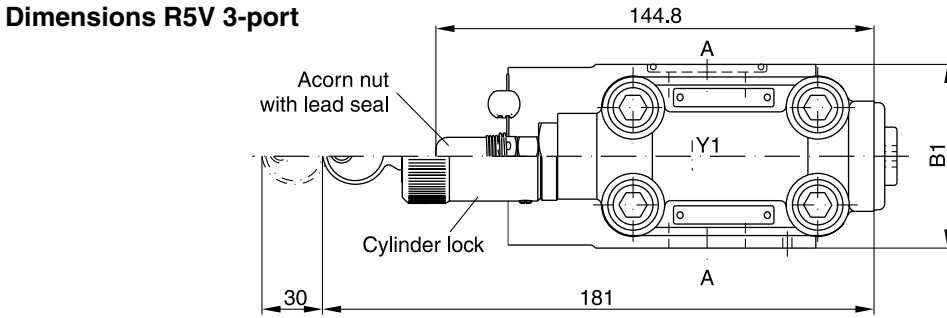
Seal kits		
NG	NBR	FPM
06	S16-91850-0	S16-91850-5
08	S16-91851-0	S16-91851-5
10	S16-91852-0	S16-91852-5

NG	B1	H1	H2	H3	H4	L1	L2	L3	d1	d2
06	60	131.6	37	47.6	90	24.6	22.2	152	19	10.5
08	60	137.6	45	52.4	96	26.5	26.2	171	25	10.5
10	75	150.6	48	58.7	109	34.0	30.2	179	32	12.5

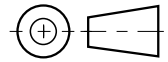
Port	Function	Port size		
		R5V06	R5V08	R5V10
A	Pressure	3/4" SAE61	1" SAE61	1 1/4" SAE61
B	Tank	3/4" SAE61	1" SAE61	1 1/4" SAE61
Y1	External drain	G 1/4"	G 1/4"	G 1/4"

Dimensions

Dimensions R5V 3-port



Seal kits		
NG	NBR	FPM
06	S16-91850-0	S16-91850-5
08	S16-91851-0	S16-91851-5
10	S16-91852-0	S16-91852-5
12	S26-27421-0	S26-27421-5



SAE61

NG	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	d1	d2	d3	d4 (option 152)	t1
06	60	22.2	119	29.5	22.2	81	41	47.6	50.3	47.6	63	60	152	19	10.5	19	3/8"-16 UNC (M10)	20
08	60	26.2	141	30.5	26.2	103	47	52.4	55.8	52.4	65	62	149	25	10.5	25	3/8"-16 UNC (M10)	23
10	75	30.2	151	37.5	30.2	113	65	58.7	57.8	58.7	61	68	150.5	32	12.5	30	7/16"-14 UNC (M12)	22
12	80	35.7	178	72	35.7	140	73	69.8	37.3	69.8	92.5	59.2	171.2	38	13.5	38	1/2"-13 UNC (M12)	27

SAE62

NG	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	d1	d2	d3	d4 (option 152)	t1
06	60	23.8	119	29.5	23.8	81	41	50.8	50.3	50.8	63	60	152	19	10.5	19	3/8"-16 UNC (M10)	20
08	60	27.8	141	30.5	27.8	103	47	57.2	55.8	57.2	65	62	149	25	12.5	25	7/16"-14 UNC (M10) ¹⁾	22
10	75	31.8	151	37.5	31.8	113	65	66.7	57.8	66.7	61	68	150.5	32	13.5	30	1/2"-13 UNC (M12)	24
12	80	36.5	178	72	36.5	140	73	79.4	37.3	79.4	92.5	59.2	171.2	38	17	38	5/8"-11 UNC (M16)	33

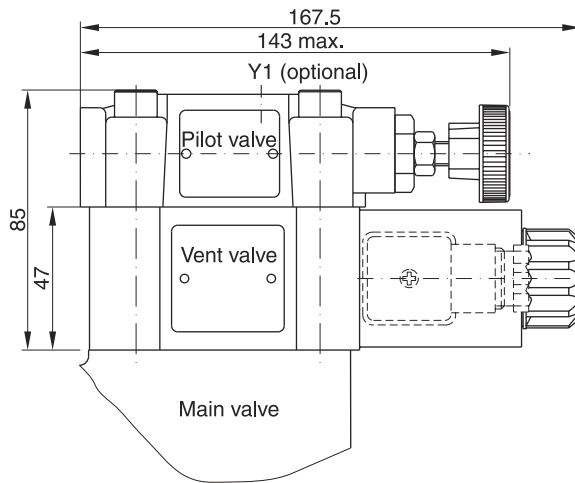
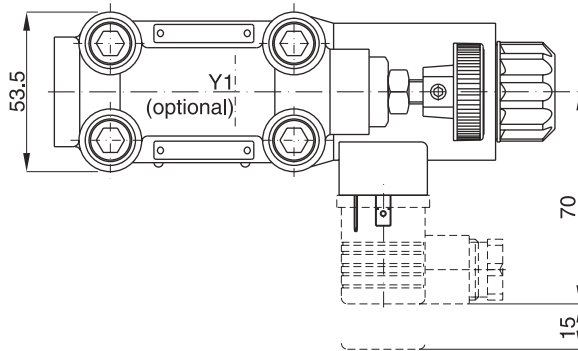
Port	Function	Port size			
		R5V06	R5V08	R5V10	R5V12
A (2)	Pressure	3/4" SAE61/62	1" SAE61/62	1 1/4" SAE61/62	1 1/2" SAE61/62
B	Tank	3/4" SAE61/62	1" SAE61/62	1 1/4" SAE61/62	1 1/2" SAE61/62
X1	External pilot port ²⁾	G 1/4"	G 1/4"	G 1/4"	G 1/4"
Y1	External drain	G 1/4"	G 1/4"	G 1/4"	G 1/4"
M	Pressure gauge	G 1/4"	G 1/4"	G 1/4"	G 1/4"

¹⁾ T-port SAE61.

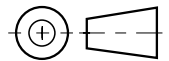
²⁾ Closed when supplied.

Dimensions

Dimensions R5V with vent function



Seal kits	
NBR	FPM
DC solenoid	
S56-40609-0	S56-40609-5
AC solenoid	
S26-35237-0	S26-35237-5



Code	R5V 2-port		R5V 3-port	
	Internal drain	External drain	Internal drain	External drain
11				
09				