

## Characteristics

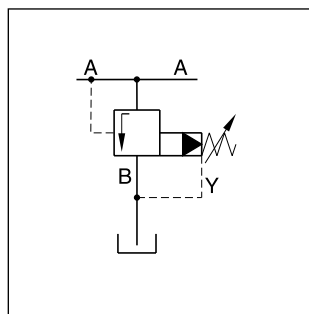
Pilot operated pressure unloading valves series R5U have a similar design to the subplate mounted R4U series. The SAE flanges allow to mount the valve directly on the outlet flanges of pumps.

A typical application is the unloading of a pump in an accumulator circuit. The combination of an R5U, C5V and R5V on a double pump generates a high pressure / low pressure pump system without the need of a manifold block or piping between the valves.

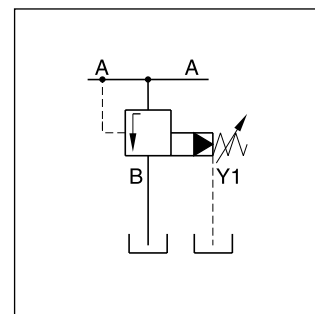
## Features

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

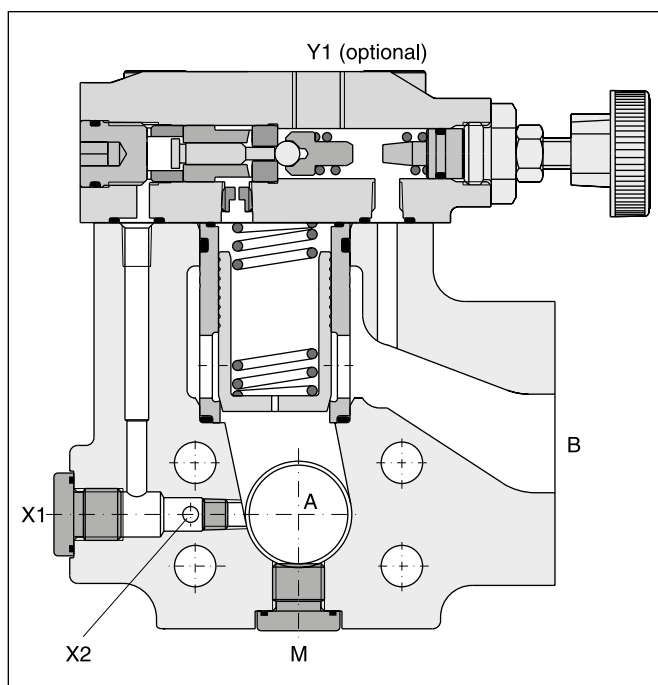
## Pilot Operated Pressure Unloading Valve Series R5U



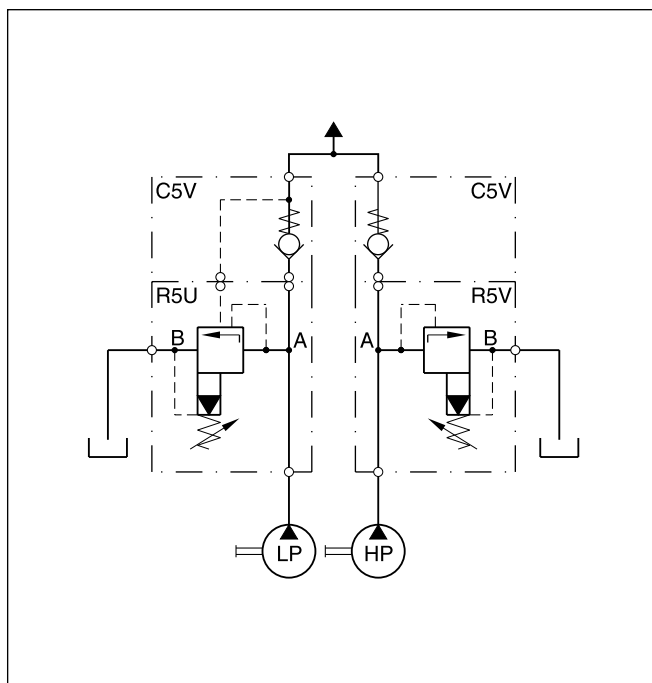
R5U 3-port internal drain



R5U 3-port external drain

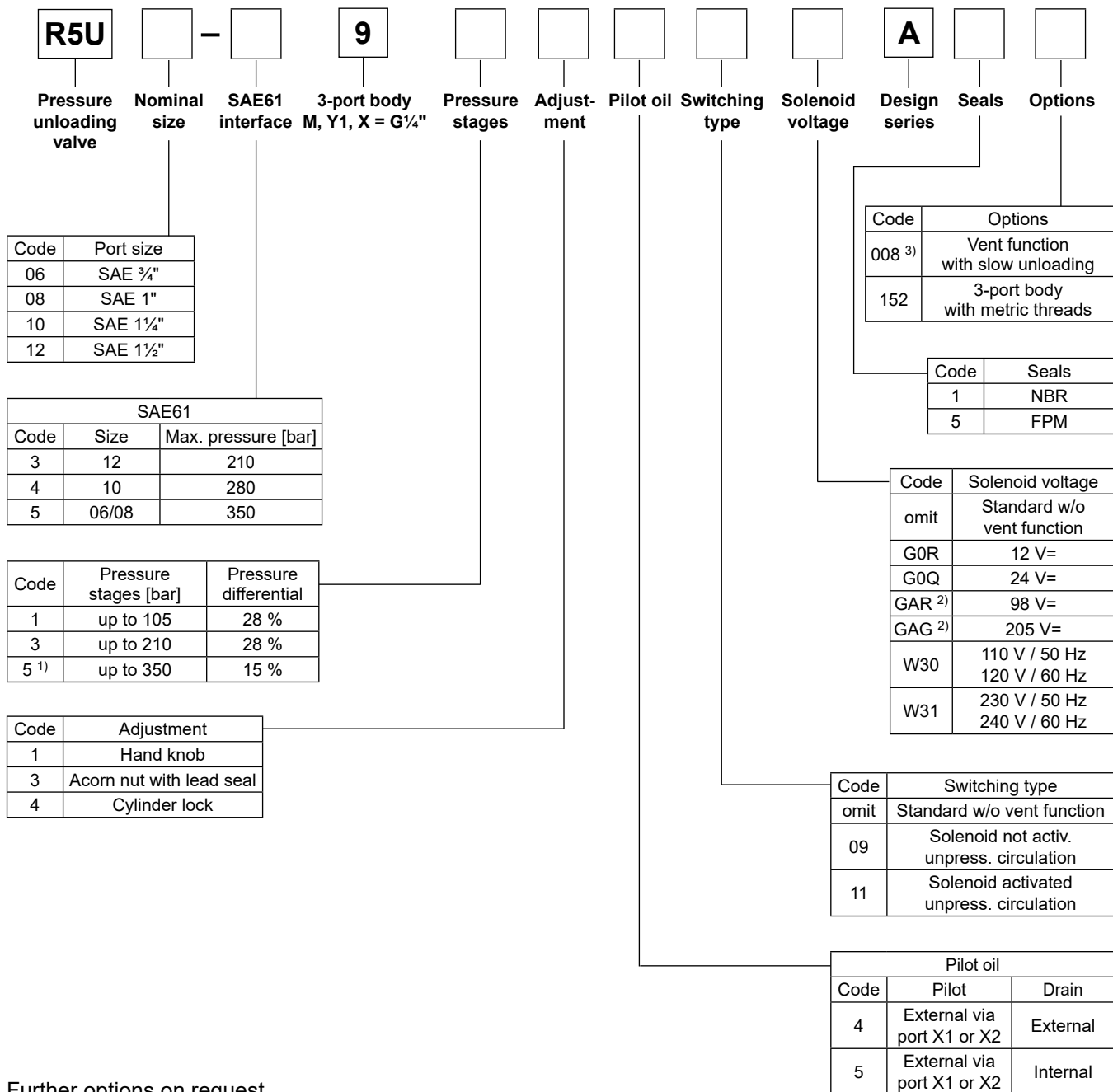


## High pressure / low pressure system



# Pilot Operated Pressure Unloading Valve Series R5U

## Ordering Code



Further options on request

<sup>1)</sup> R5U10-495 up to 280 bar.

<sup>2)</sup> To be used in combination with rectifier plugs at 120 VAC / 230 VAC power supply.

<sup>3)</sup> Only for vent valve function code 09.

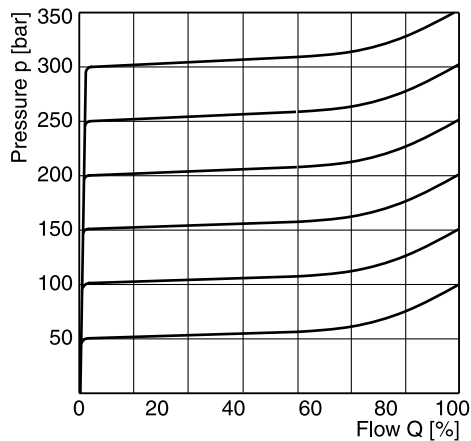
**Technical Data / Characteristic Curves**

**Technical data**

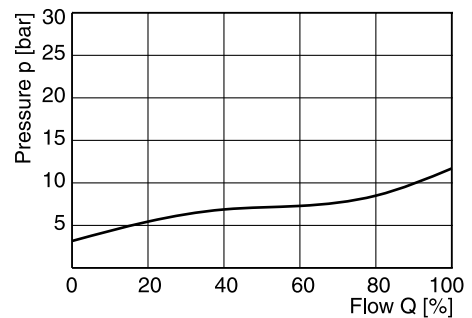
<b>General</b>		<b>06 (¾")</b>	<b>08 (1")</b>	<b>10 (1¼")</b>	<b>12 (1½")</b>		
Size							
Mounting	Flanged according to SAE61						
Mounting position	unrestricted						
Ambient temperature	[°C]	-20...+60					
MTTF <sub>D</sub> value	[years]	75					
Weight	[kg]	3.6	4.6	5.2	8.0		
<b>Hydraulic</b>							
Max. operating pressure	[bar]						
	Ports A, B, X	350	350	280	210		
	Ports Y, 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	20 ... 400					
	recommended	30...80					
Filtration		ISO 4406 (1999); 18/16/13					
<b>Electrical</b>							
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)						
	Code	G0R	G0Q	GAR	GAG	W30	W31
Supply voltage	[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	2.72	1.29	0.33	0.13	0.6 / 0.55	0.3 / 0.27
	in rush	2.72	1.29	0.33	0.13	2.5 / 2.4	1.25 / 1.2
Power consumption	hold	32.7	31	31.9	28.2	70/70 VA	70/70 VA
	in rush	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 <sup>2</sup> ]	3 x 1.5 recommended					
Wiring length max.	[m]	50 recommended					

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**p/Q performance curve**



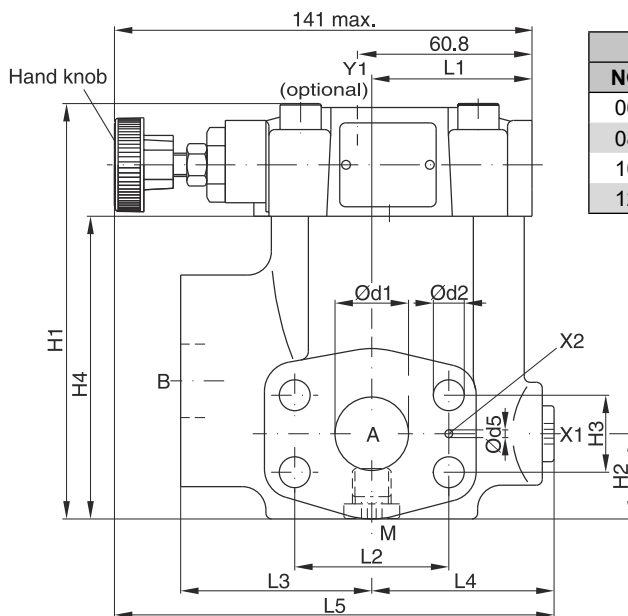
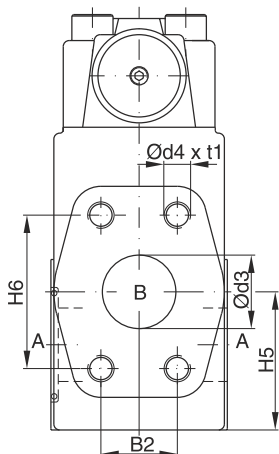
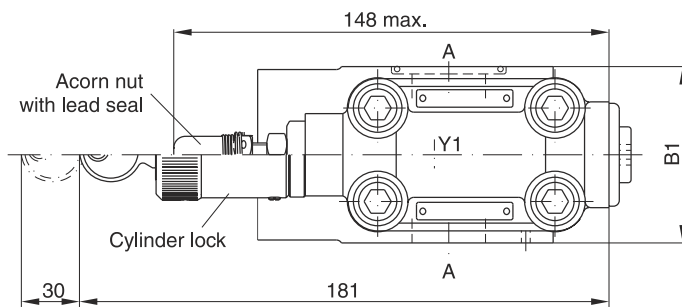
**Minimum pressure curve**



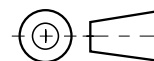
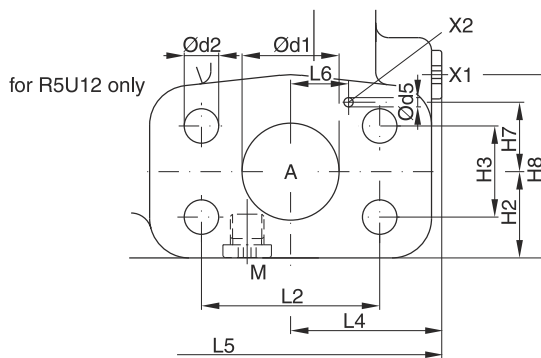
All characteristic curves measured with HLP46 at 50 °C.

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

**Dimensions R5U**



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

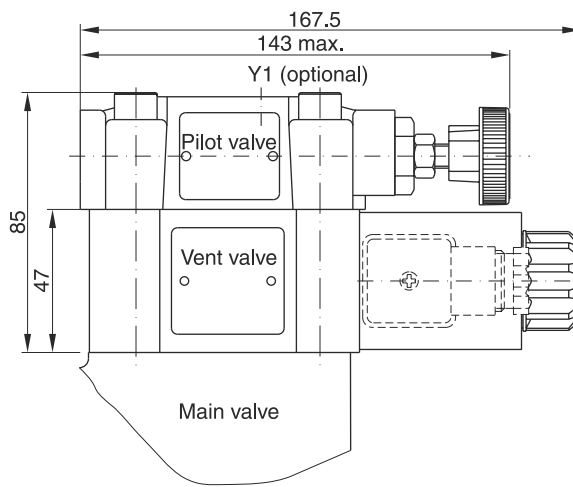
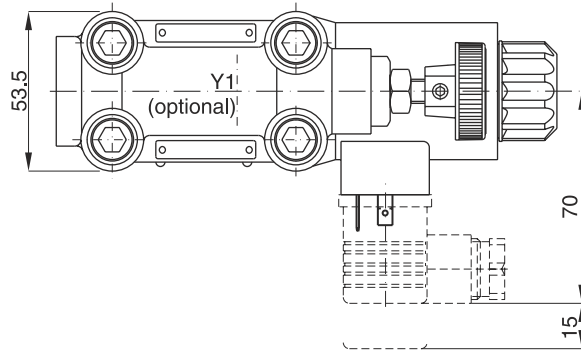


NG	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	d1	d2	d3	d4	t1	d5	L6	H7	H8
06	60	22.2	119	29.5	22.2	81	41	47.6	50.3	47.6	63	60	152	19	10.5	19	3/8"-16 UNC	20	3.0	-	-	-
08	60	26.2	141	30.5	26.2	103	47	52.4	55.8	52.4	65	62	149	25	10.5	25	3/8"-16 UNC	23	3.0	-	-	-
10	75	30.2	151	37.5	30.2	113	65	58.7	57.8	58.7	61	68	150.5	32	12.5	30	7/16"-14 UNC	22	3.0	-	-	-
12	80	35.7	178	35.5	35.7	140	73	69.8	37.3	69.8	92.5	59.2	171.2	38	13.5	38	1/2"-13 UNC	27	3.0	22.4	27.2	72

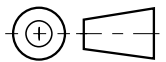
Port	Function	Port size			
		R5U06	R5U08	R5U10	R5U12
A (2)	Pressure	3/4" SAE61	1" SAE61	1 1/4" SAE61	1 1/2" SAE61
B	Tank	3/4" SAE61	1" SAE61	1 1/4" SAE61	1 1/2" SAE61
X1	External pilot port <sup>1)</sup>	G 1/4"	G 1/4"	G 1/4"	G 1/4"
Y1	External drain	G 1/4"	G 1/4"	G 1/4"	G 1/4"
M	Pressure gauge	G 1/4"	G 1/4"	G 1/4"	G 1/4"

<sup>1)</sup> Closed when supplied.

**Dimensions R5U with vent function**



Seal kits	
NBR	FPM
<b>DC solenoid</b>	
S56-40609-0	S56-40609-5
<b>AC solenoid</b>	
S26-35237-0	S26-35237-5



Code	Internal drain	External drain
11		
09		