

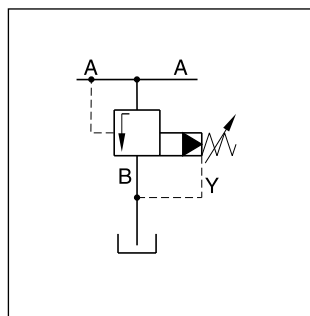
Characteristics

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.

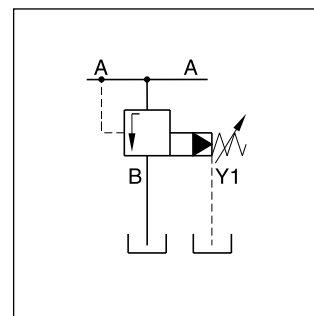
A typical application is the unloading of a pump in an accumulator circuit. The combination of an R5U, C5V and R5V on a double pump generates a high pressure / low pressure pump system without the need of a manifold block or piping between the valves.

Features

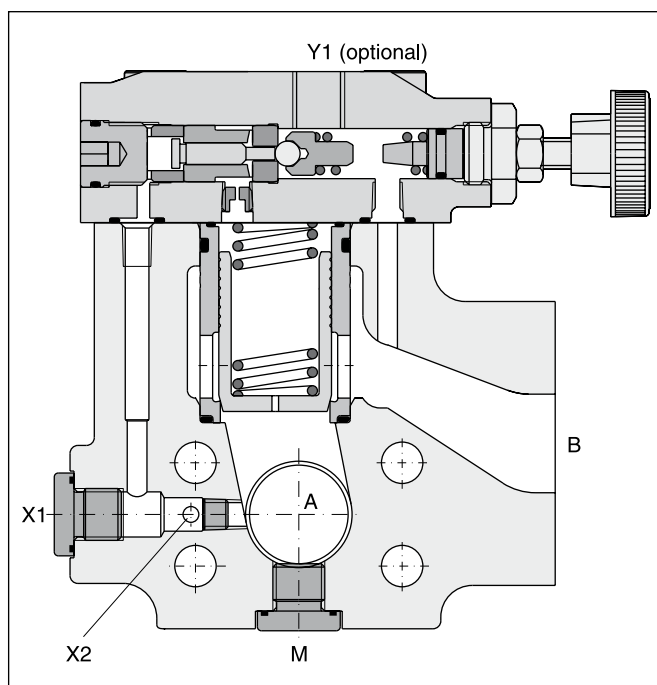
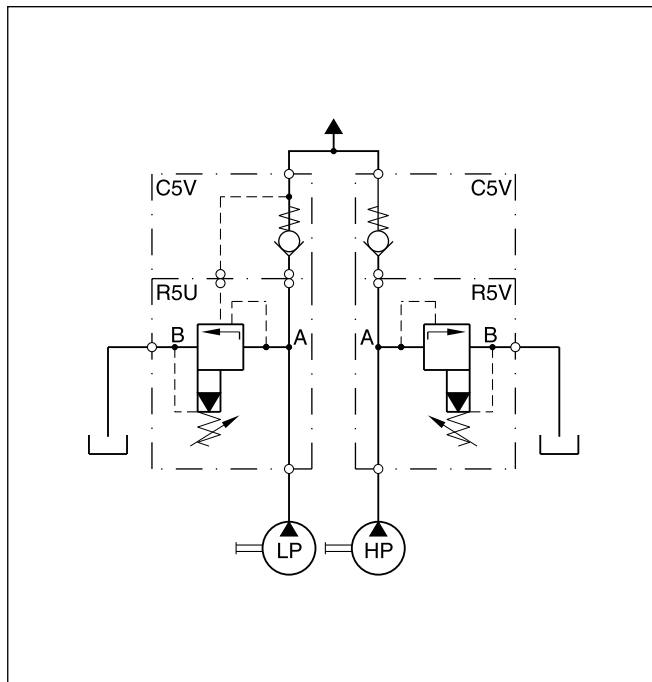
- Pilot operated unloading valve
- 3-port body with SAE61 flange
- 4 sizes (SAE $\frac{3}{4}$ ", 1", 1 $\frac{1}{4}$ ", 1 $\frac{1}{2}$ ")
- 3 pressure stages
- 3 adjustment modes
 - Hand knob
 - Acorn nut with lead seal
 - Key lock
- With optional vent function

**Pilot Operated Pressure Unloading Valve
Series R5U (Denison)**

R5U 3-port internal drain



R5U 3-port external drain

**High pressure / low pressure system**

Ordering Code

Ordering code

R5U		—		9		—			—			—	A		—	
Pressure unloading valve	Nominal size	SAE61 interface	3-port body M, Y1, X = G¼"	Pressure stages	Adjustment	Pilot oil	Switching type	Solenoid voltage	Design series	Seals	Options					

Code	Port size
06	SAE ¾"
08	SAE 1"
10	SAE 1¼"
12 ¹⁾	SAE 1½"

SAE 61		
Code	Size	Max. press. [bar]
3	12	210
4	10	280
5	06/08	350

Code	Pressure stages [bar]	Pressure differential
1	up to 105	28%
3	up to 210	28%
5	up to 350	15%

Code	Adjustment
1	Hand knob
3	Acorn nut with lead seal
4	Key lock

Code	Seals
1	NBR
5	FPM

Code	Solenoid voltage
omit	Standard w/o vent function
G0R	12V=
G0Q	24V=
GAR	98V=
GAG	205V=
W30	110V / 50Hz
	120V / 60Hz
W31	230V / 50Hz
	240V / 60Hz

Code	Switching type
omit	Standard w/o vent function
09	Solenoid not activ. unpress. circulation
11	Solenoid activated unpress. circulation

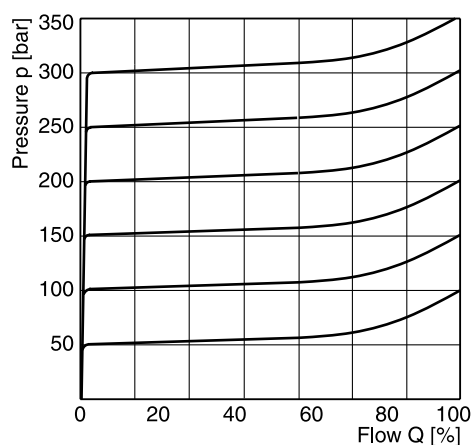
Pilot oil		
Code	Pilot	Drain
4	External via port X1 or X2	External
5	External via port X1 or X2	Internal

Further options on request

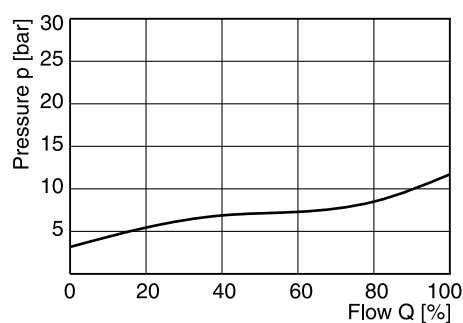
Technical data

General							
Size		06 (¾")	08 (1")	10 (1¼")	12 (1½")		
Mounting		Flanged according to SAE 61					
Mounting position		unrestricted					
Ambient temperature	[°C]	-20...+50					
Weight	[kg]	3.6	4.6	5.2	8.0		
Hydraulic							
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 as per DIN 51524...525					
Fluid temperature	[°C]	-20...+80					
Viscosity permitted	[cSt] [mm²/s]	10...650					
Viscosity recommended	[cSt] [mm²/s]	30					
Filtration		ISO 4406 (1999) 18/16/13 (acc. NAS 1638: 7)					
Electrical							
Duty ratio	[%]	100					
Solenoid connection		Connector as per EN175301-803					
Protection class		IP65 in accordance with EN 60529 (plugged and mounted)					
	Code	G0R	G0Q	GAR	GAG	W30	W31
Supply voltage	[V]	12V =	24V =	98V =	205V =	110 at 50Hz 120 at 60Hz	230 at 50Hz 240 at 60Hz
Tolerance supply voltage	[%]	+5...-10	+5...-10	+5...-10	+5...-10	+5...-10	+5...-10
Power consumption	[W]	31	31	31	31	78	78
	[W]	31	31	31	31	264	264
Response time	[ms]	Energized / De-energized AC: 20/18 , DC: 46/27					
Max. switching frequency		AC: up to 7200, DC: up to 16000 switchings/hour					
Coil insulation class		H (180 °C)					

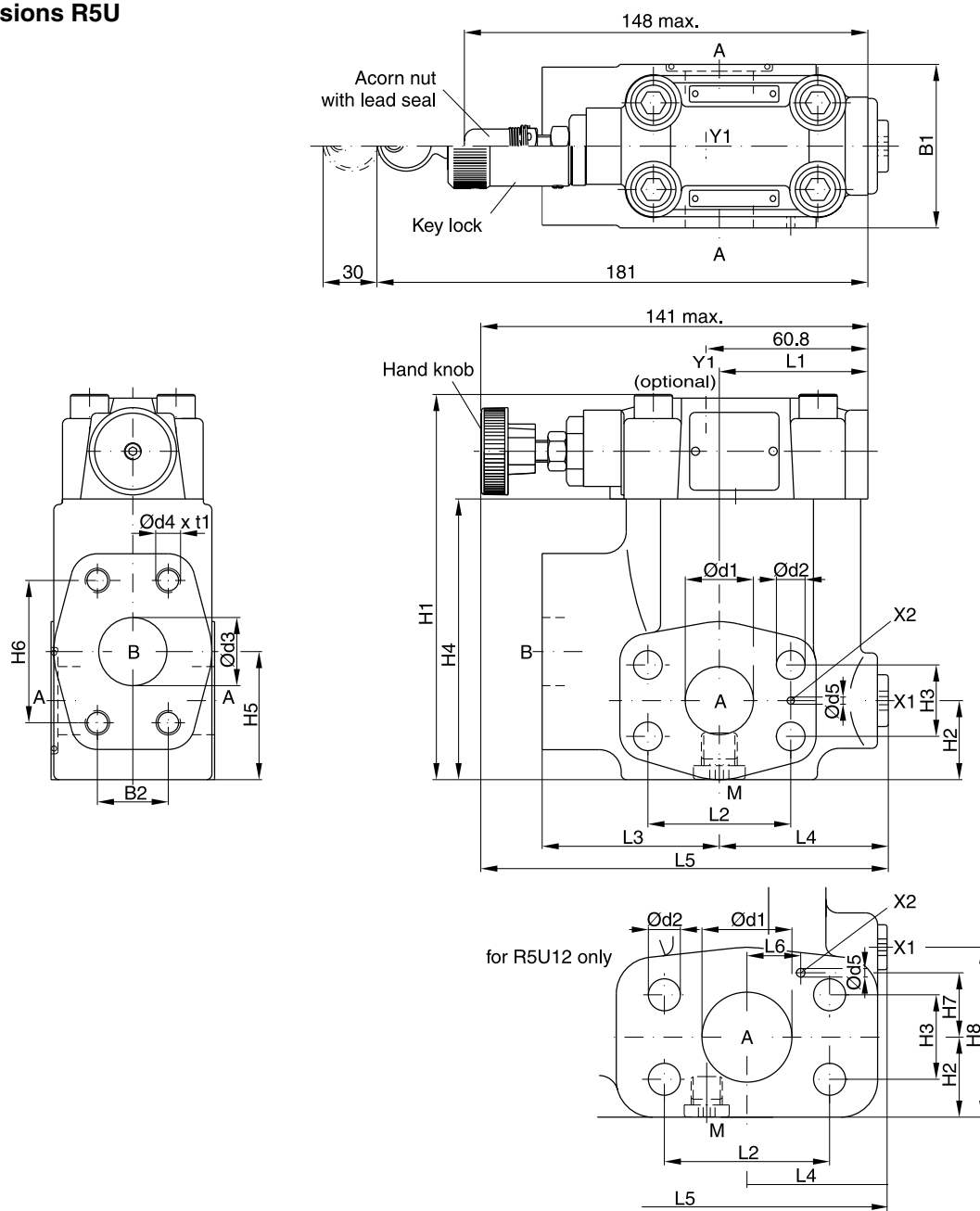
p/Q performance curve



Minimum pressure curve



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

Dimensions**Pilot Operated Pressure Unloading Valve
Series R5U (Denison)****Dimensions R5U**

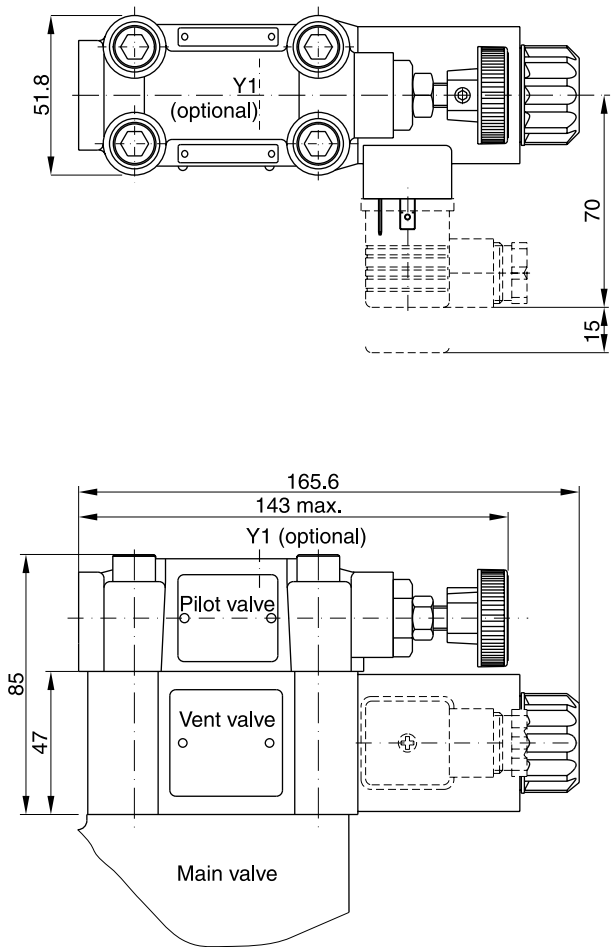
NG	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	d1	d2	d3	d4	t1	d5	L6	H7	H8
06	60	22.2	119	28	22.2	81	41.6	47.6	50.3	47.6	63	56	152	19	10.5	19	3/8"-16 UNC	20	3.0	-	-	-
08	60	26.2	141	29	26.2	103	47	52.4	55.8	52.4	65	58	149	25	10.5	25	3/8"-16 UNC	23	3.0	-	-	-
10	75	30.2	151	34.5	30.2	113	64	58.7	57.8	58.7	61	62	150.5	32	12.5	32	7/16"-14 UNC	22	3.0	-	-	-
12	80	35.7	178	34	35.7	140	73	69.8	37.3	69.8	92.5	55.2	171.2	38	13.5	38	1/2"-13 UNC	27	3.0	34.9	27.2	73

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 ¹⁾	G 1/4"			
Y1	External drain	G 1/4"			
M	Pressure gauge	G 1/4"			

¹⁾ closed when supplied

R5U_UK.INDD RH_19.12.07

Dimensions R5U with vent function



Code	Internal drain	External drain
11		
09		

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