

Series	Description	Size				Mounting		Configuration		Page
		DIN / ISO	3/4	1	1 1/4	1 1/2	SAE61	SAE62	2-port	
Pressure valves, manual operation										
R5V	Pressure relief function	•	•	•	•	•	•	•	•	9-2
R5U	Pressure unloading function	•	•	•		•			•	9-7
R5S	Pressure sequence function	•	•	•		•		•	•	9-12
Pressure valves, proportional operation										
R5V*P2	Pressure relief function	•	•	•	•	•	•	•	•	9-15
Directional seat valves										
D5S		•	•	•	•	•		•	•	9-20
Flow valves										
F5C	Throttle valves, proportional	•	•	•		•		•		9-30
R5P	3-way pressure compensator	•	•	•		•			•	9-34
Check valves										
C5V	Direct operated	•	•	•	•	•	•	•		9-41
Accessories										
	Bolt kits, flanges, plugs									9-45

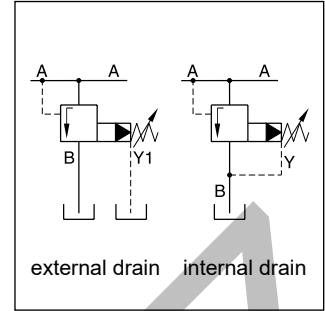
Characteristics

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.

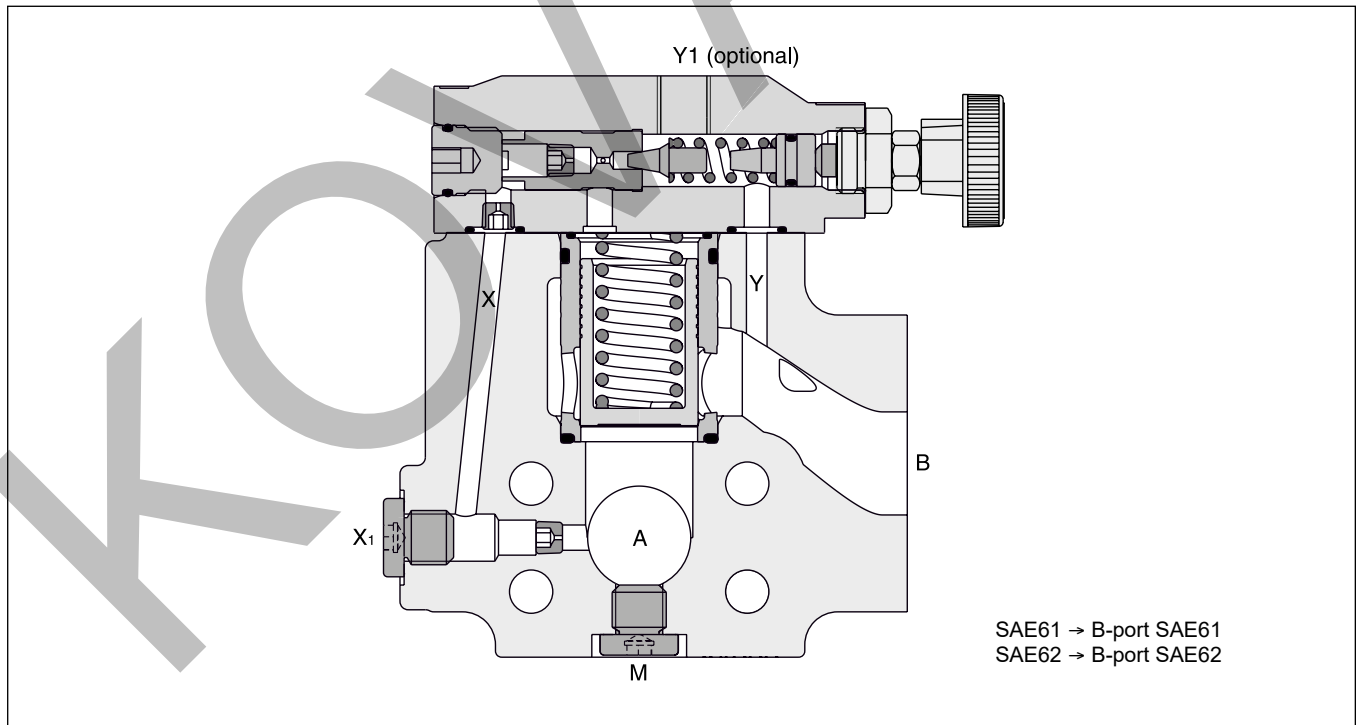
Valves with SAE flanges can also be bolted together to combine functions without the need of a manifold block.

Features

- Pilot operated with manual adjustment
- Body with 3-ports
 - 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



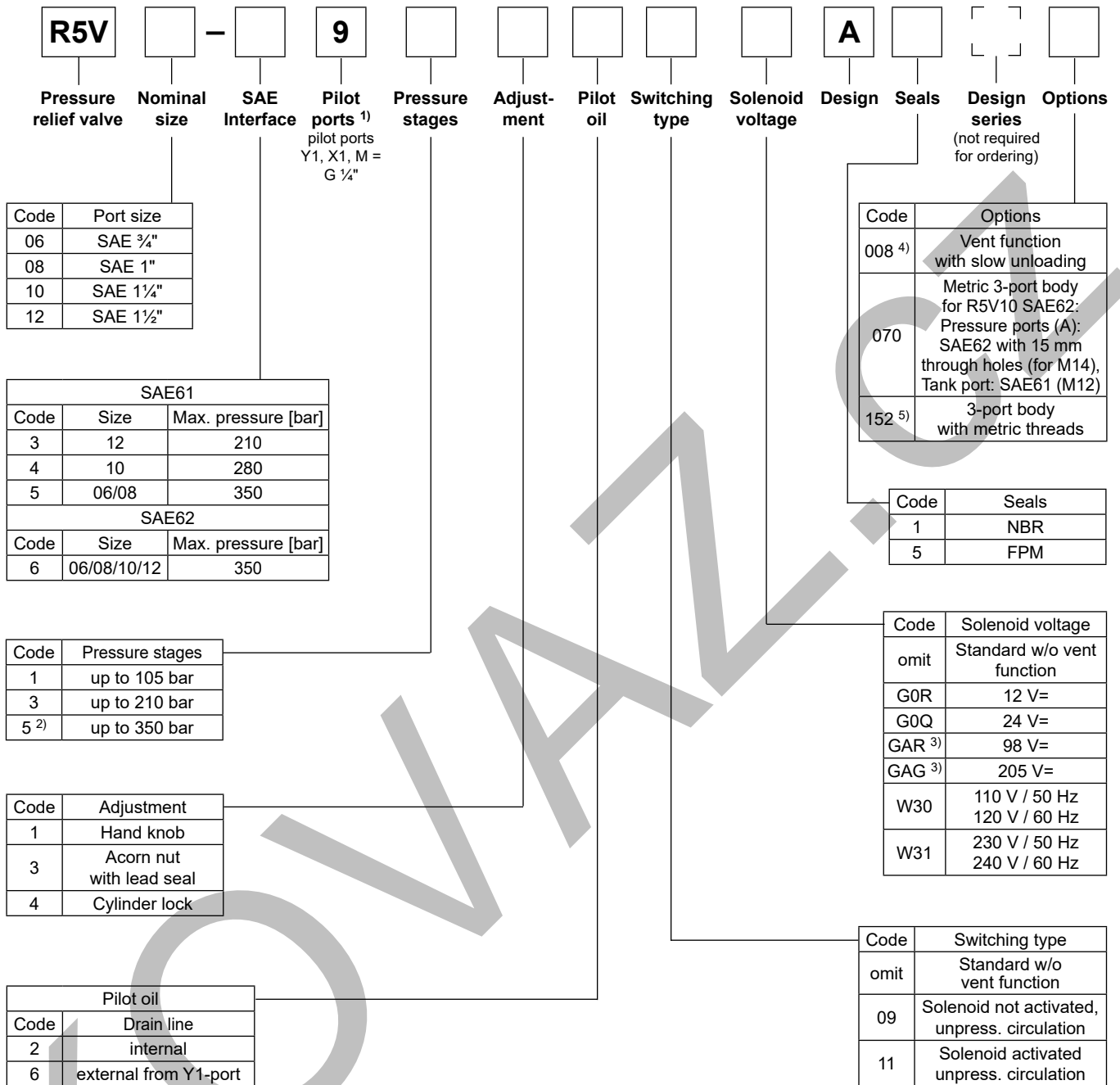
R5V



SAE61 → B-port SAE61
SAE62 → B-port SAE62

9

Ordering Code



Further options on request

¹⁾ Y1 only available at external drain (pilot oil code 6).
²⁾ R5V10-495 up to 280 bar.
³⁾ To be used in combination with rectifier plugs at 120 VAC / 230 VAC power supply.
⁴⁾ Only for vent valve function code 09.
⁵⁾ R5V08 SAE62: Tank port SAE61 (M10).



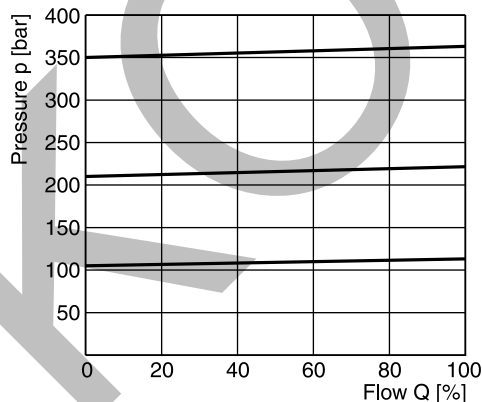
Technical Data / Characteristic Curves

Technical data

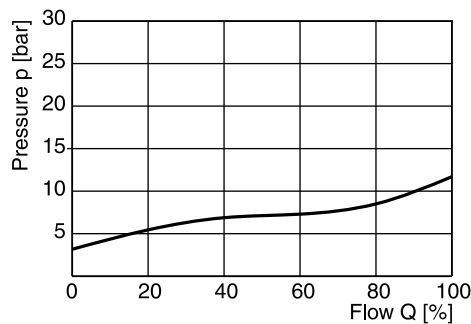
General							
Size			06 (¾")	08 (1")	10 (1¼")	12 (1½")	
Mounting	Flanged according to SAE61 and SAE62						
Mounting position	unrestricted						
Ambient temperature	[°C]	-20...+60					
MTTF _D value	[years]	75					
Weight	[kg]	3.6	4.6	5.2	8.0		
Hydraulic							
Max. operating pressure	[bar]						
SAE61 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					
Viscosity, 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)						
	Code	G0R	G0Q	GAR	GAG	W30	W31
Supply voltage	[V]	12 V =	24 V =	98 V =	205 V =	110 at 50 Hz	230 at 50 Hz
	[V]					120 at 60 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

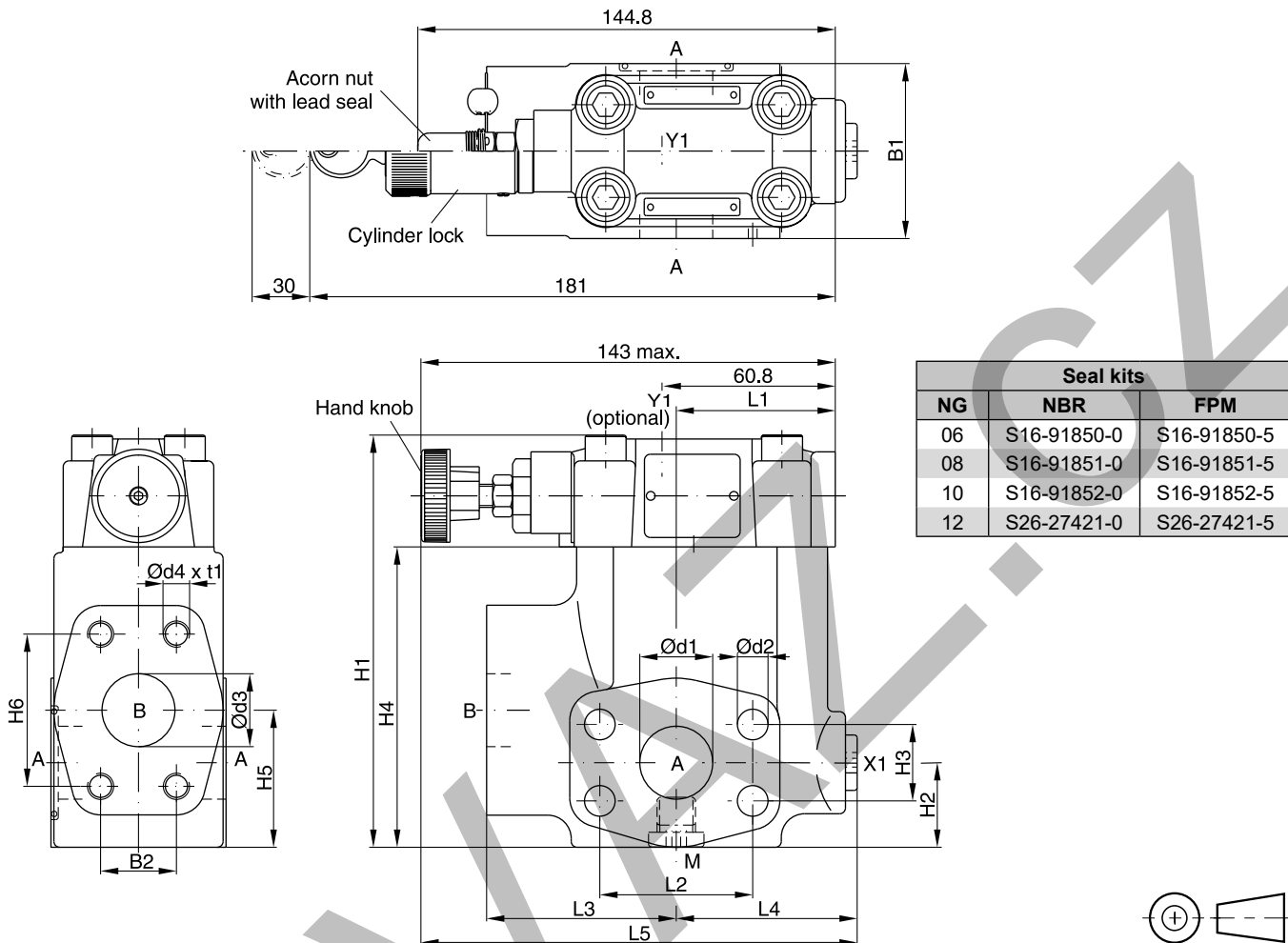


Minimum pressure curve



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.



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

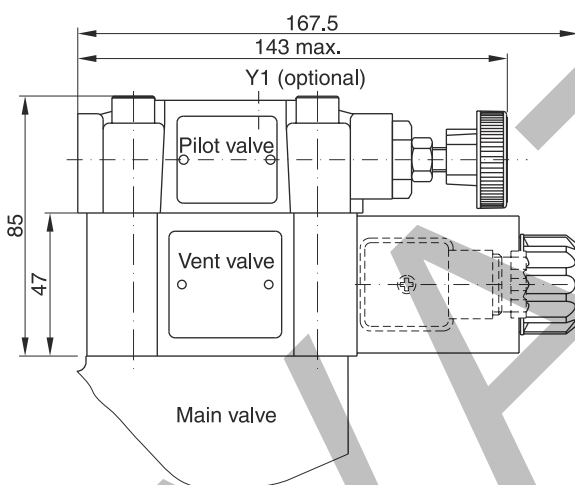
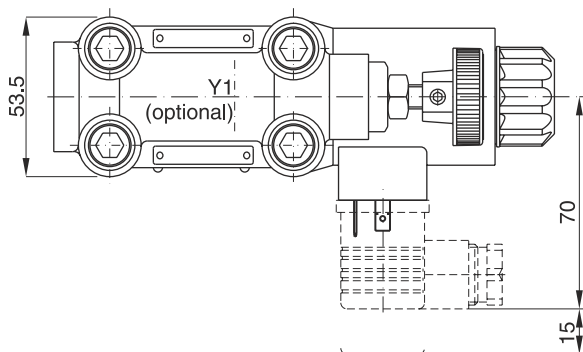
Port	Function	Port size			
		R5V06	R5V08	R5V10	R5V12
A (2)	Pressure	3/4" SAE61/62	1" SAE61/62	1 1/4" SAE61/62	1 1/2" SAE61/62
B	Tank	3/4" SAE61/62	1" SAE61/62	1 1/4" SAE61/62	1 1/2" SAE61/62
X1	External pilot port ²⁾	G 1/4"	G 1/4"	G 1/4"	G 1/4"
Y1	External drain	G 1/4"	G 1/4"	G 1/4"	G 1/4"
M	Pressure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



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Code	Internal drain	External drain
11		
09		

Characteristics

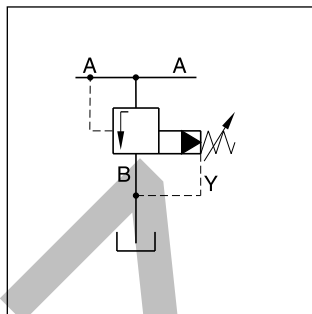
Pilot operated pressure unloading valves series R5U have a similar design to the subplate mounted R4U series. The SAE flanges allow to mount the valve directly on the outlet flanges of pumps.

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.

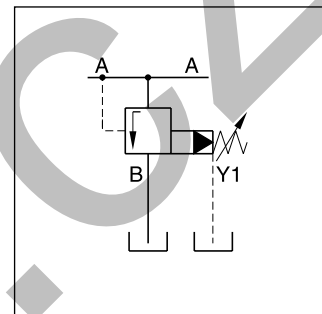
Features

- 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

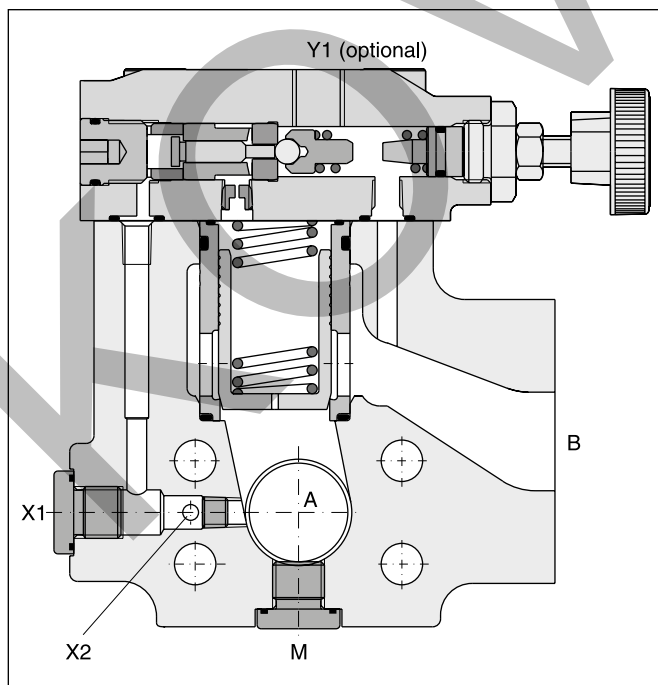
Pilot Operated Pressure Unloading Valve Series R5U



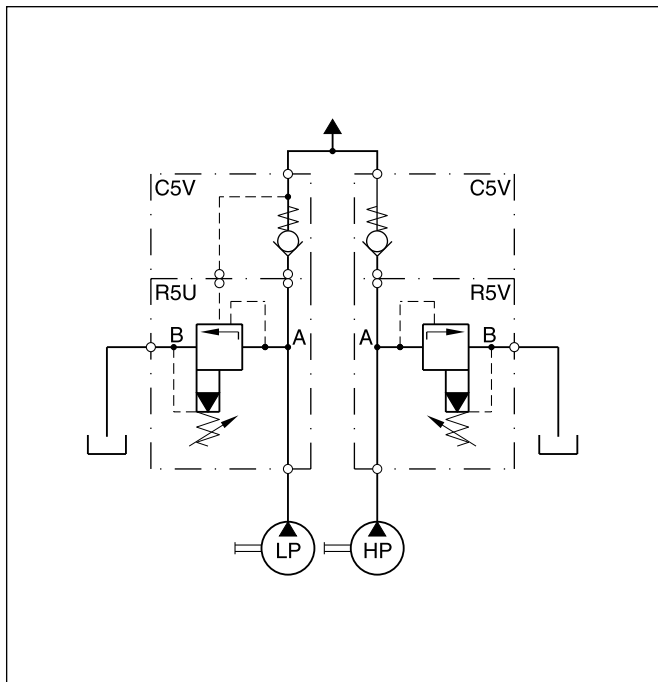
R5U 3-port internal drain



R5U 3-port external drain

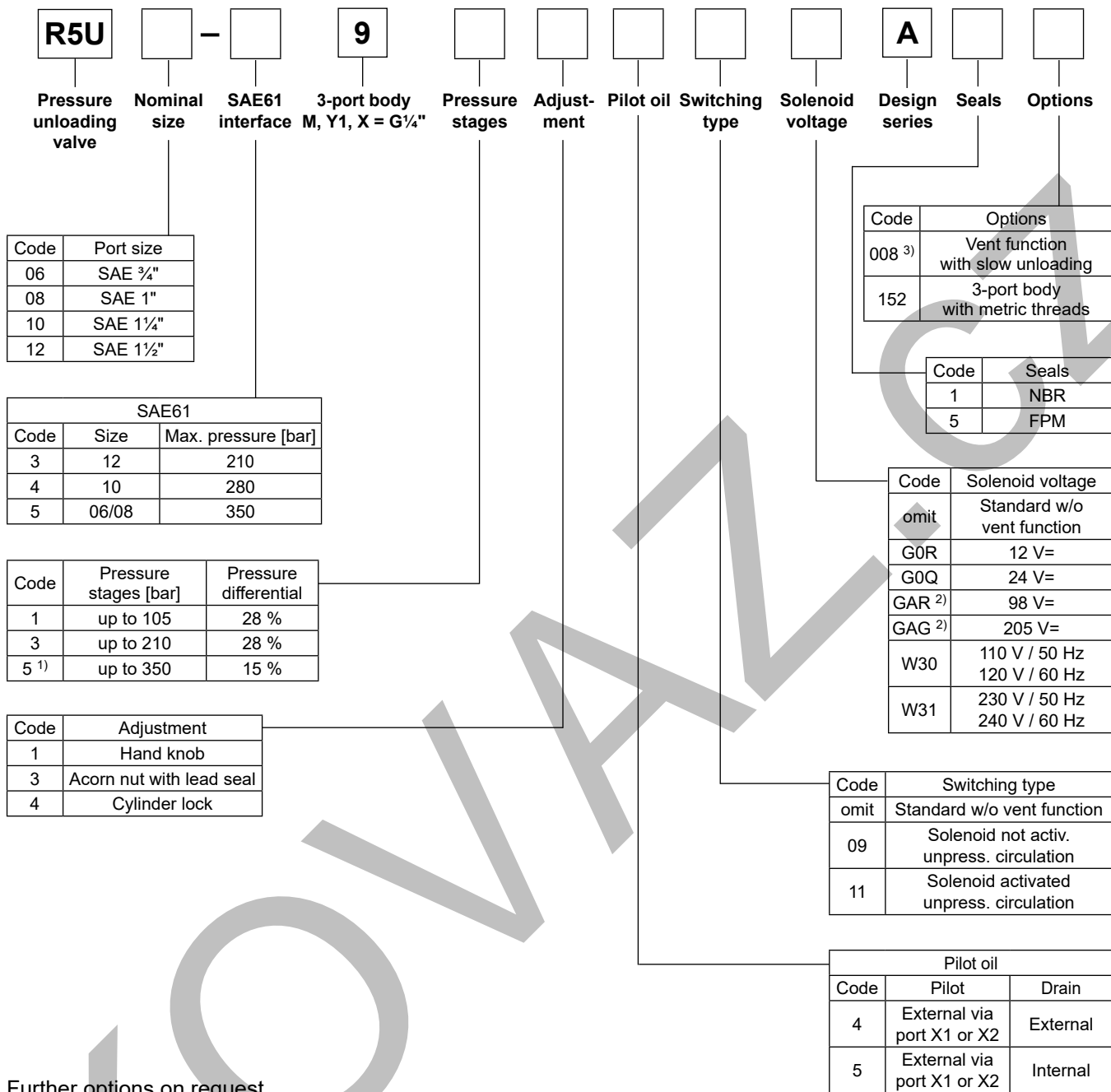


High pressure / low pressure system



Pilot Operated Pressure Unloading Valve Series R5U

Ordering Code



Further options on request

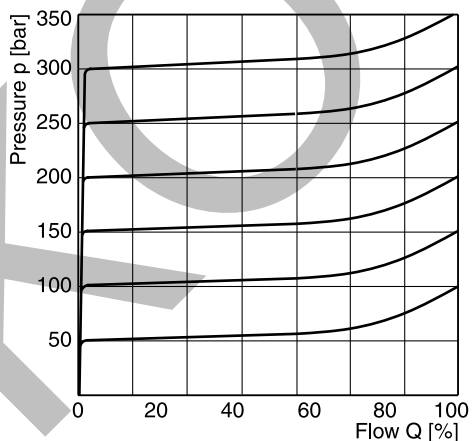
¹⁾ R5U10-495 up to 280 bar.
²⁾ To be used in combination with rectifier plugs at 120 VAC / 230 VAC power supply.
³⁾ Only for vent valve function code 09.

Technical Data / Characteristic Curves

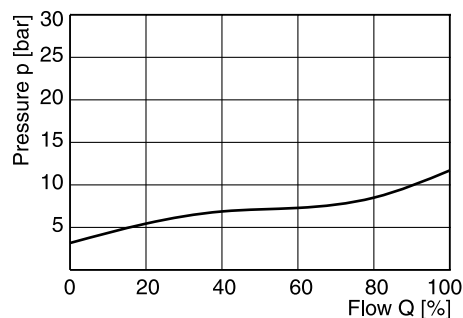
Technical data

General			06 (¼")	08 (1")	10 (1¼")	12 (1½")
Size			06 (¼")	08 (1")	10 (1¼")	12 (1½")
Mounting		Flanged according to SAE61				
Mounting position		unrestricted				
Ambient temperature	[°C]	-20...+60				
MTTF _D value	[years]	75				
Weight	[kg]	3.6	4.6	5.2	8.0	
Hydraulic						
Max. operating pressure	[bar]	Ports A, B, X 350 30		Ports Y, Y1 350 30		280 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] / [mm²/s]	20 ... 400				
	recommended [cSt] / [mm²/s]	30...80				
Filtration		ISO 4406 (1999); 18/16/13				
Electrical						
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
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
	in rush [A]	2.72	1.29	0.33	0.13	2.5 / 2.4
Power consumption	hold [W]	32.7	31	31.9	28.2	70/70 VA
	in rush [W]	32.7	31	31.9	28.2	280/290 VA
Solenoid connection		Connector as per EN175301-803, solenoid identification as per ISO 9461				
Wiring min.	[mm²]	3 x 1.5 recommended				
Wiring length max.	[m]	50 recommended				

p/Q performance curve



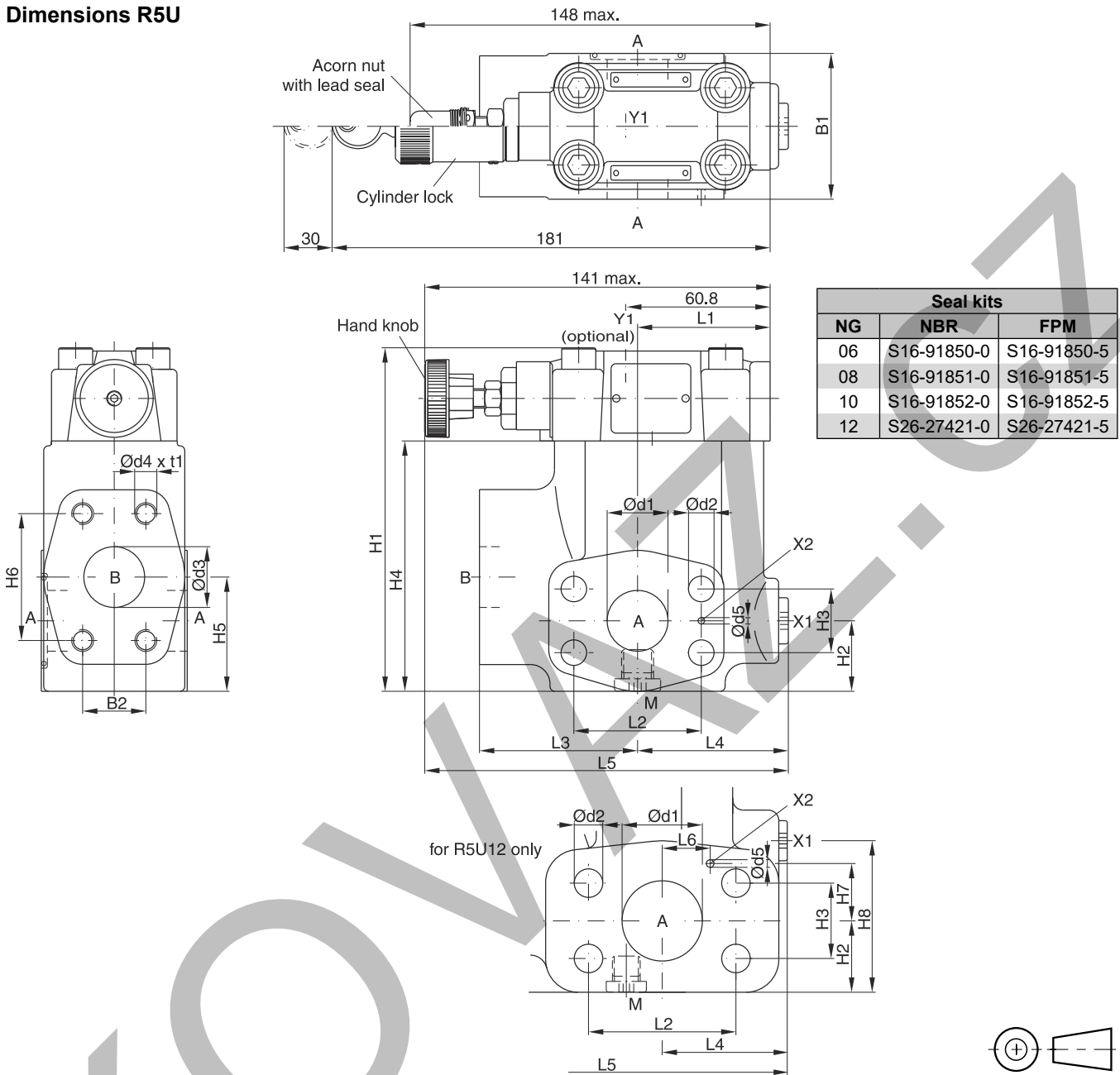
Minimum pressure curve



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



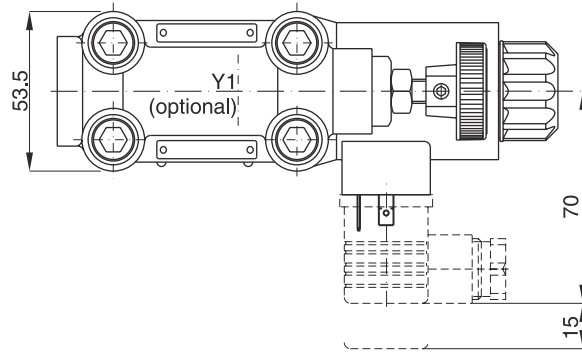
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NG	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	d1	d2	d3	d4	t1	d5	L6	H7	H8
06	60	22.2	119	29.5	22.2	81	41	47.6	50.3	47.6	63	60	152	19	10.5	19	3/8"-16 UNC	20	3.0	-	-	-
08	60	26.2	141	30.5	26.2	103	47	52.4	55.8	52.4	65	62	149	25	10.5	25	3/8"-16 UNC	23	3.0	-	-	-
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

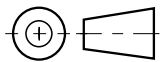
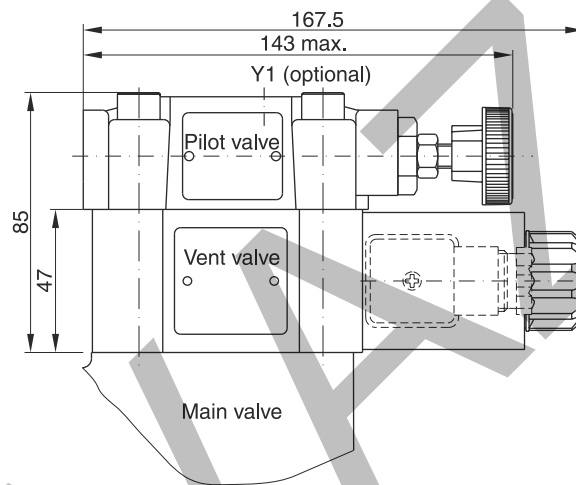
Port	Function	Port size			
		R5U06	R5U08	R5U10	R5U12
A (2)	Pressure	3/4" SAE61	1" SAE61	1 1/4" SAE61	1 1/2" SAE61
B	Tank	3/4" SAE61	1" SAE61	1 1/4" SAE61	1 1/2" SAE61
X1	External pilot port ¹⁾	G 1/4"	G 1/4"	G 1/4"	G 1/4"
Y1	External drain	G 1/4"	G 1/4"	G 1/4"	G 1/4"
M	Pressure gauge	G 1/4"	G 1/4"	G 1/4"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

¹⁾ Closed when supplied.

Dimensions R5U with vent function



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



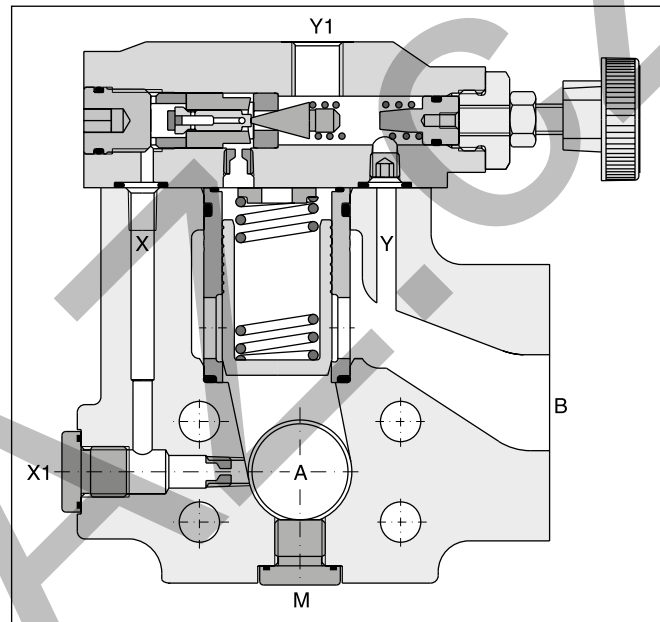
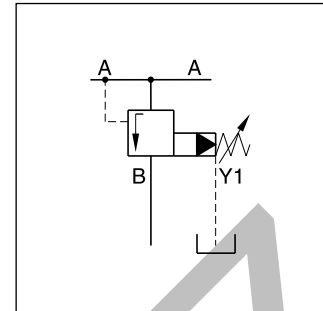
Code	Internal drain	External drain
11		
09		

Characteristics / Ordering Code

Pilot operated sequence valves series R5S have a similar design to the subplate mounted R4S series. The SAE flanges allow to mount the valve directly on the inlet flanges of actuators or outlet flanges of pumps to achieve a very compact design.

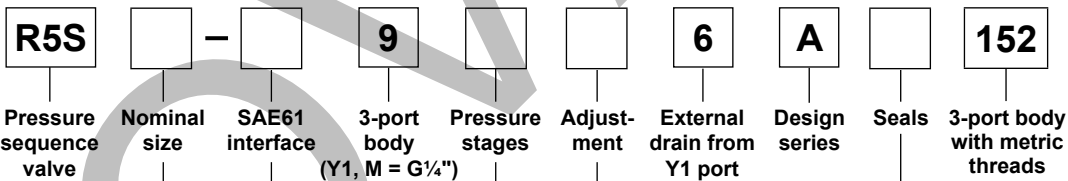
Features

- Pilot operated with manual adjustment
- 3-port body with SAE61 flange
- 3 sizes (SAE ¾", 1", 1¼")
- 3 pressure stages
- 2 adjustment modes
 - Hand knob
 - Acorn nut with lead seal
- Optional with vent function (on request)



Ordering code

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Code	Port size
06	SAE ¾"
08	SAE 1"
10	SAE 1¼"

SAE 61		
Code	Size	Max. pressure [bar]
4	10	280
5	06/08	350

Code	Pressure stages
1	up to 105 bar
3	up to 210 bar
5 ¹⁾	up to 350 bar

Code	Seals
1	NBR
5	FPM

Code	Adjustment
1	Hand knob
3	Acorn nut with lead seal

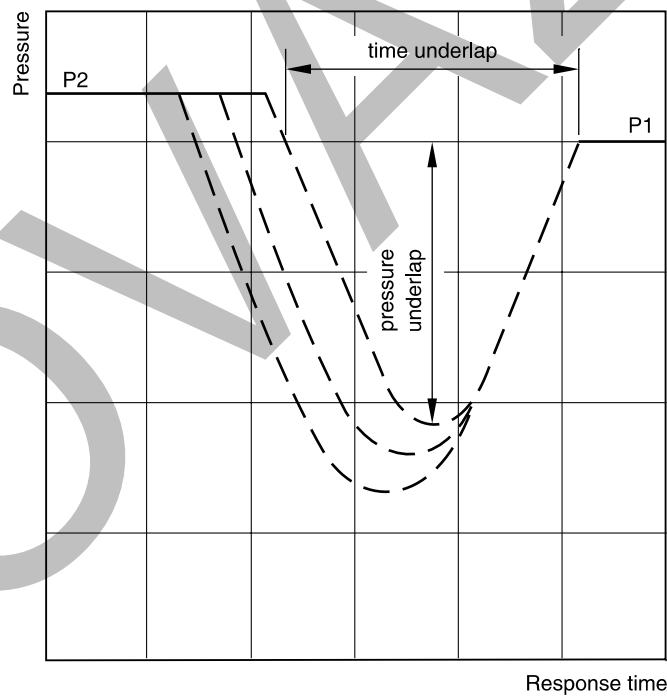
Further options on request

Technical Data / Characteristic Curves

Technical data

General				
Size		06 (3/4")	08 (1")	10 (1 1/4")
Mounting	Flanged according to SAE61			
Mounting position	unrestricted			
Ambient temperature	[°C]	-20...+60		
MTTF _D value	[years]	75		
Weight	[kg]	3.6	4.6	5.2
Hydraulic				
Max. operating pressure	[bar]	Ports A, B Ports Y, Y1		
		350	350	280
		30	30	30
Pressure stages	[bar]	105, 210, 350		
Nominal flow	[l/min]	90	300	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			

Typical pressure characteristics at closing point

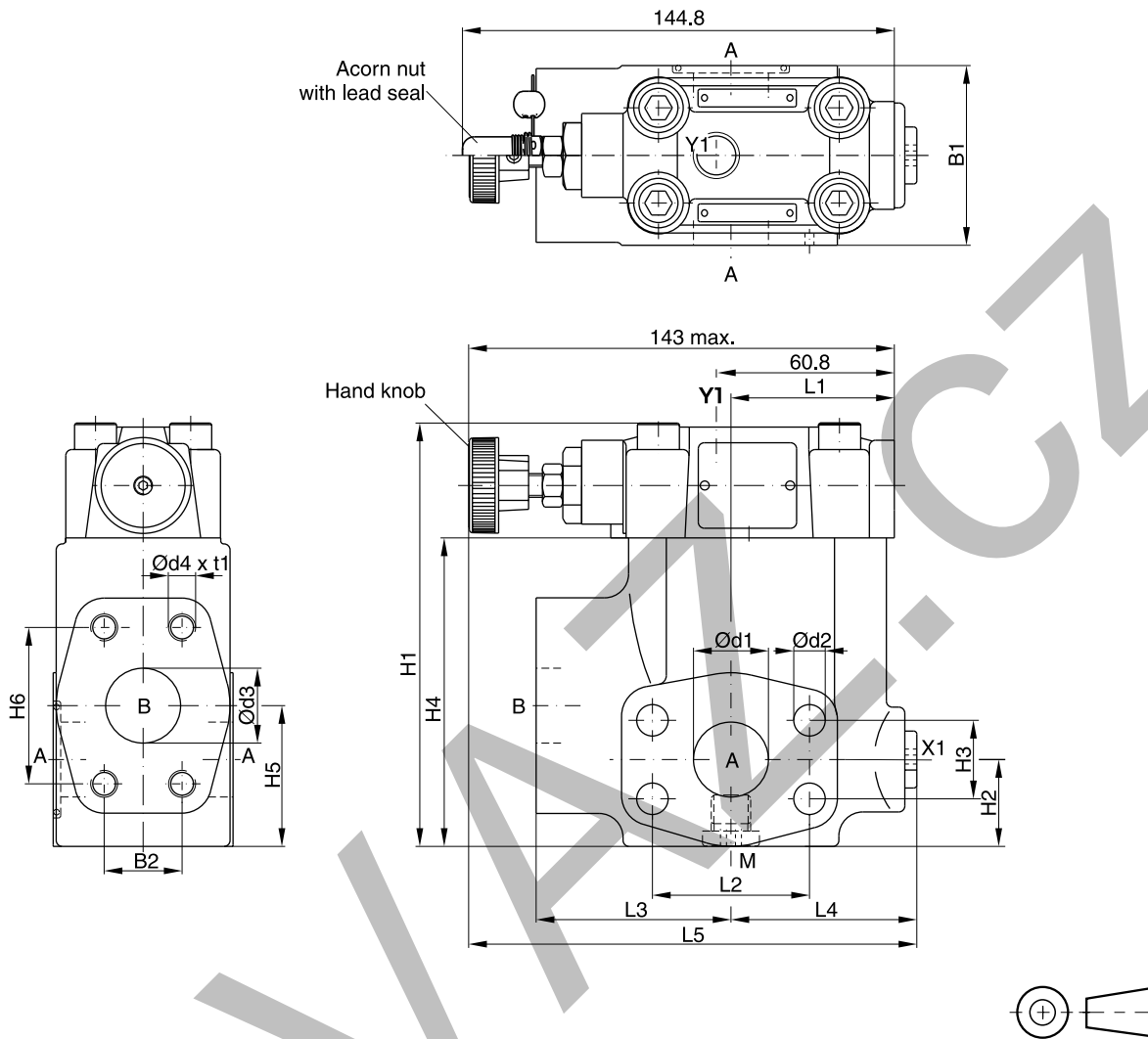


P1 = setting pressure
P2 = operating pressure

Time and pressure underlap depend on the characteristics of the specific system.

¹⁾ R5S10-495 up to 280 bar.

Dimensions



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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	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

Port	Function	Port size		
		R5S06	R5S08	R5S10
A (2)	Pressure	3/4" SAE61	1" SAE61	1 1/4" SAE61
B	Secondary port	3/4" SAE61	1" SAE61	1 1/4" SAE61
X1	External pilot port ¹⁾	G 1/4"	G 1/4"	G 1/4"
Y1	External drain	G 1/4"	G 1/4"	G 1/4"
M	Pressure gauge	G 1/4"	G 1/4"	G 1/4"

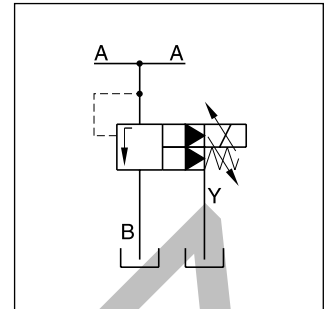
¹⁾ Closed when supplied.

Proportional pressure relief valves series R5V*P2 are based on the mechanically adjusted series R5V. The additional proportional unit between the mechanical pilot valve and the main stage allows continuous pressure adjustment.

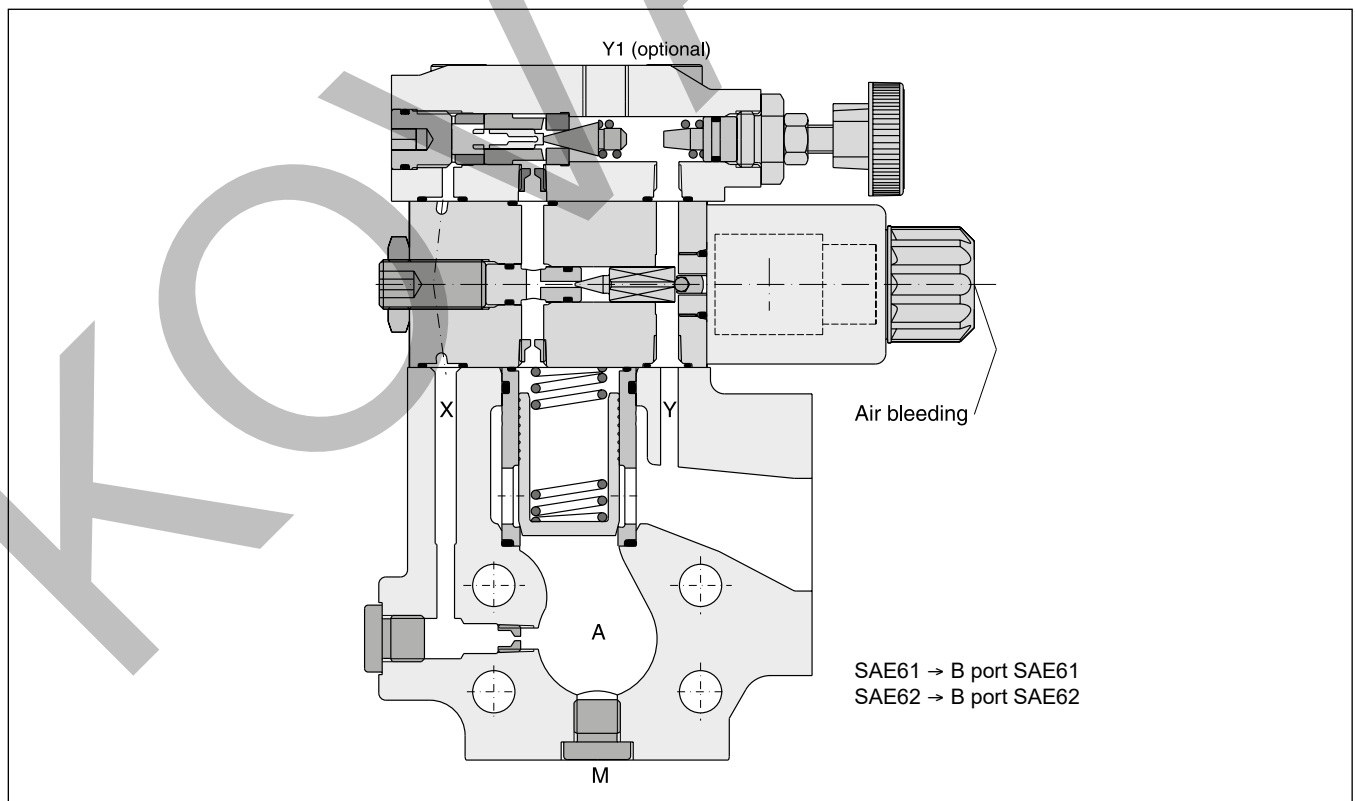
The optimum performance can be achieved in combination with the digital amplifier module PCD00A-400.

Features

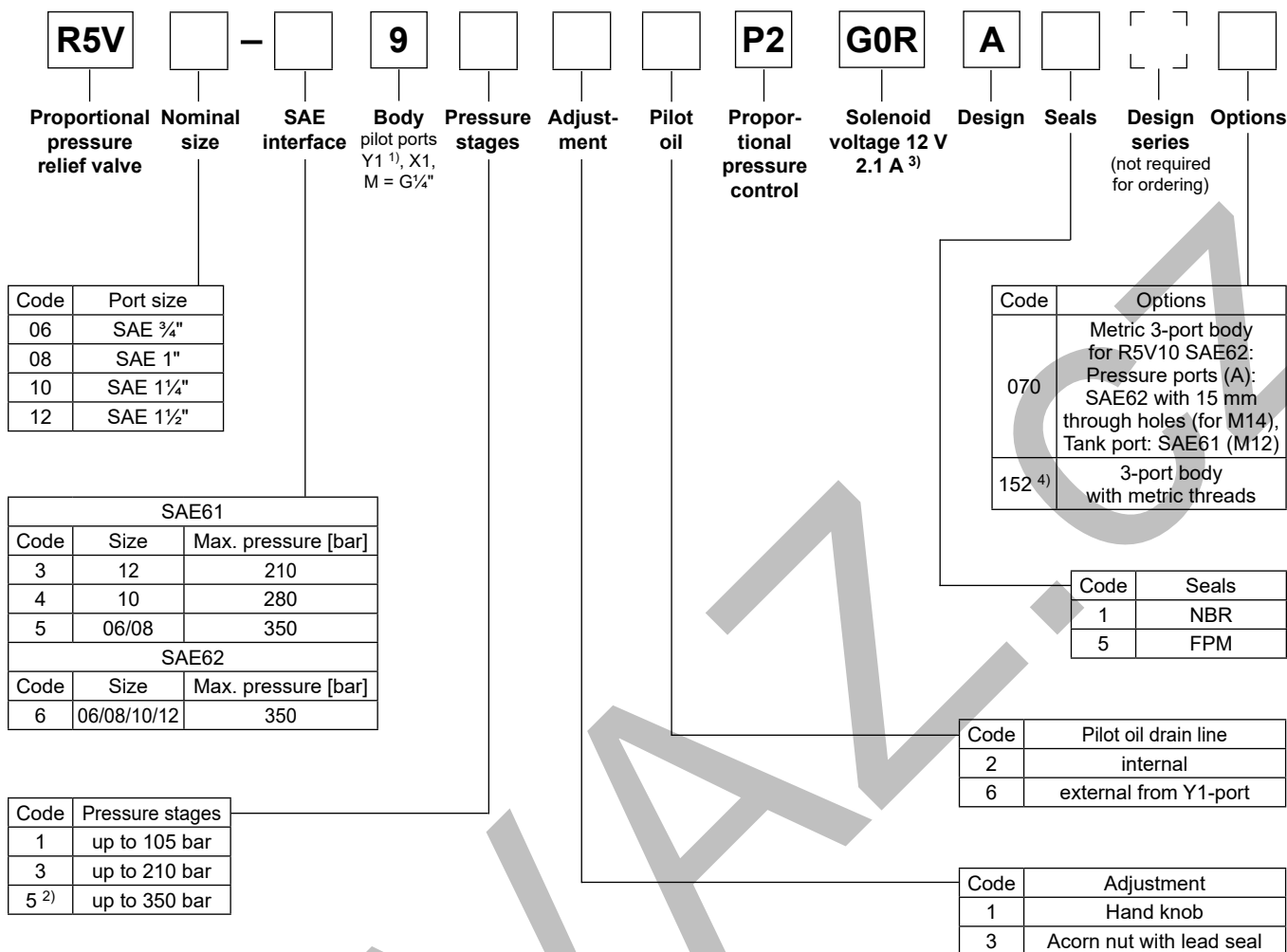
- Continuous adjustment by proportional solenoid
- R5V with 3-port body
 - 4 sizes (SAE 3/4", 1", 1 1/4", 1 1/2")
 - SAE61 and SAE62 flange
- 3 pressure stages
- With mechanical maximum pressure adjustment



R5V*P2



Ordering Code



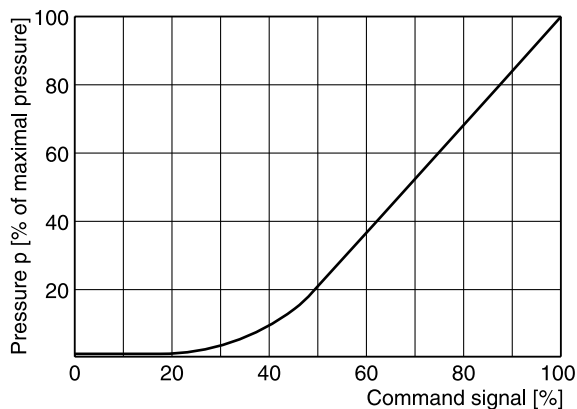
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¹⁾ Y1 only available at external drain (pilot oil code 6).
²⁾ R5V10-495 up to 280 bar.
³⁾ Onboard electronics on request.
⁴⁾ R5V08 SAE62: Tank port SAE61 (M10).

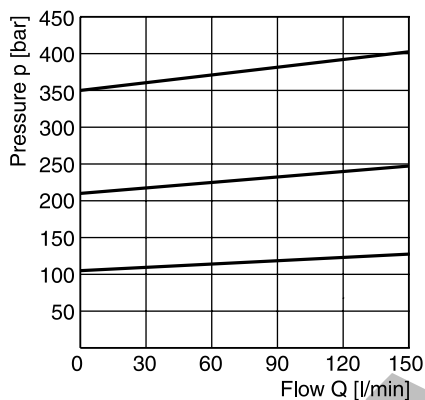


General					
Size		06 (¾")	08 (1")	10 (1¼")	12 (1½")
Mounting		Flanged according to SAE61 (size 12 = SAE62)			
Mounting position		unrestricted			
Ambient temperature	[°C]	-20...+60			
MTTF _D value	[years]	75			
Weight	[kg]	5.4	6.4	7.0	9.8
Hydraulic					
Max. operating pressure	[bar]				
	SAE61 Ports 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			
Viscosity recommended	[cSt] / [mm ² /s]	30...80			
Filtration		ISO 4406 (1999); 18/16/13			
Electrical (proportional 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)			
Code		G0R			
Supply voltage	[V]	12 V =			
Max. current	[A]	2.1			
Coil resistance at 20 °C	[Ohm]	4.28			
Solenoid connection		Connector as per EN 175301-803			
Power amplifier, recommended		PCD00A-400			

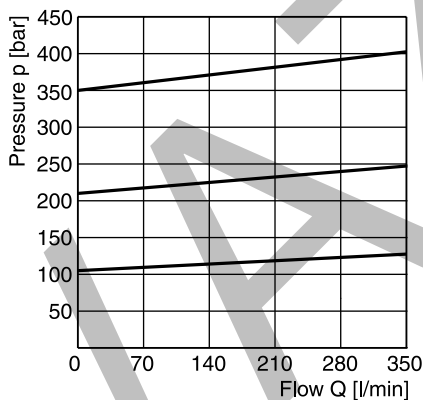
Signal/pressure curve R5V*P2



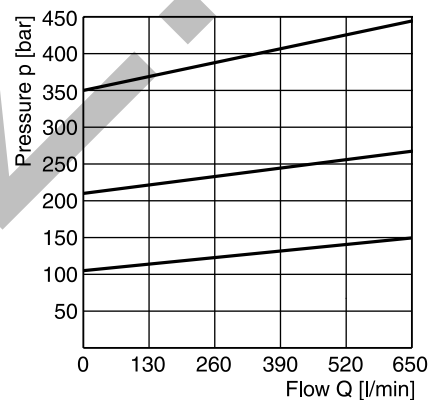
**p/Q performance curve ¹⁾
R5V06*P2**



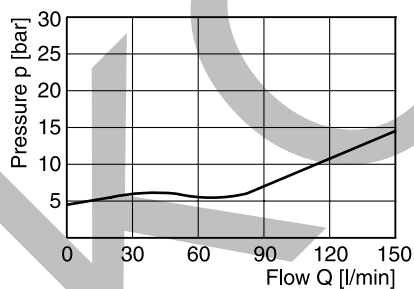
R5V08*P2



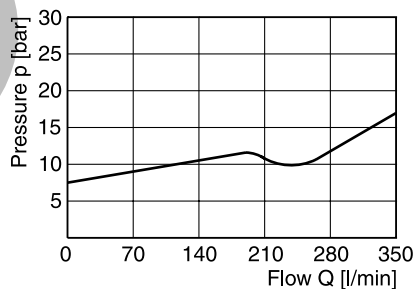
R5V10*P2



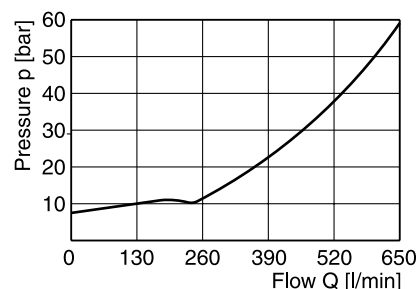
**Minimum pressure curve ¹⁾
R5V06*P2**



R5V08*P2



R5V10*P2



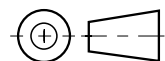
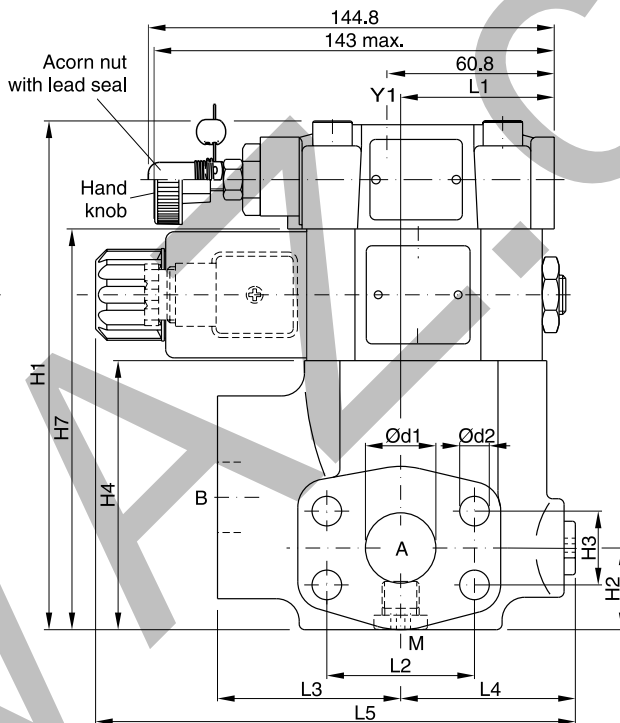
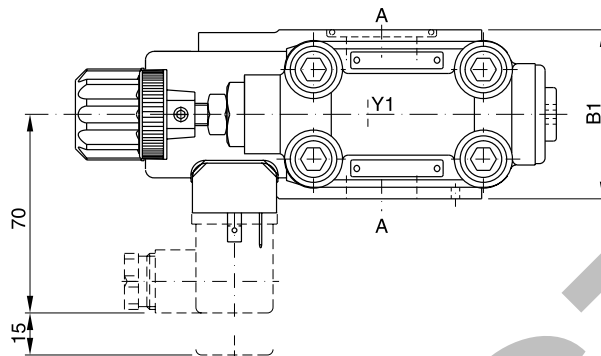
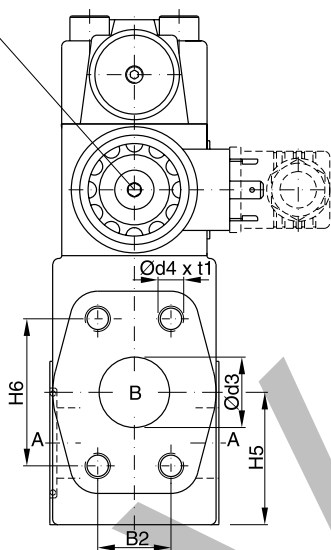
All characteristic curves measured with HLP46 at 50 °C.

¹⁾The performance curves are measured with external drain. For internal drain the tank pressure has to be added to curve.

R5V*P2 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
Prop. section P2 *	S26-58473-0	S26-58473-5

Important:
 On initial start up and
 after long shut down periods
 bleed air from this plug.



SAE61

NG	B1	B2	H1	H2	H3	H4	H5	H6	H7	L1	L2	L3	L4	L5	d1	d2	d3	d4 (option 152)	t1
06	60	22.2	166	29.5	22.2	81	41	47.6	128	50.3	47.6	63	60	174.6	19	10.5	19	3/8"-16 UNC (M10)	20
08	60	26.2	188	30.5	26.2	103	47	52.4	150	55.8	52.4	65	62	177	25	10.5	25	3/8"-16 UNC (M10)	23
10	75	30.2	198	37.5	30.2	113	65	58.7	160	57.8	58.7	61	68	179.1	32	12.5	30	7/16"-14 UNC (M12)	22
12	80	35.7	225	72	35.7	140	73	69.8	187	37.3	69.8	92.5	59.2	186.8	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 UNF (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
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"

* Please combine seal kit of one size with seal kit of Prop. section P2 for complete seal kit.

¹⁾ T-port SAE61.

Characteristics

Seat valves series D5S are designed for directional control functions. They enable individual hydraulic solutions for nominal flow up to 800 l/min due to a large variety of poppets, springs and covers, including shuttle valves, stroke limiters, solenoid valves (VV01) and position control.

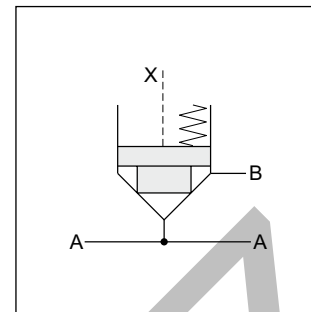
A complete program is offered under the Parker brand:

Subplate mounted valves (Series D4S - chapter 6)

SAE flange valves (Series D5S - chapter 9)

Pipe mounted valves (Series D4S - chapter 10)

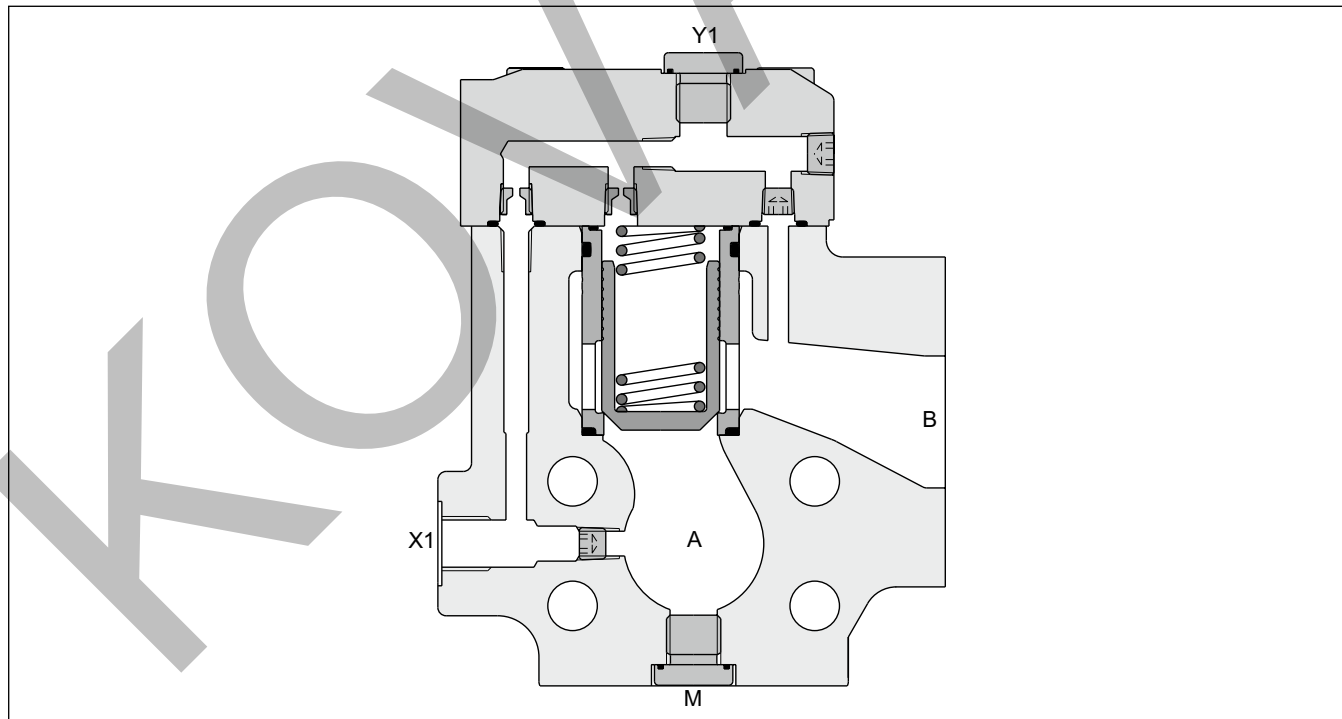
Slip-in cartridges (Series CAR - on request)



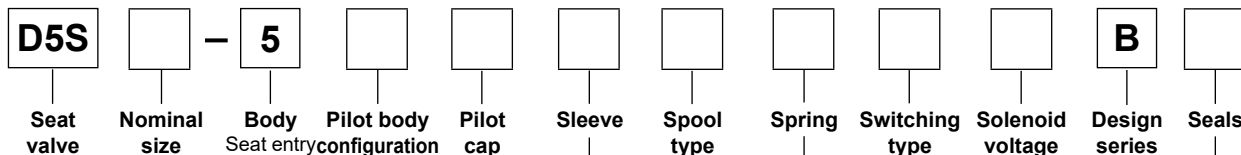
Features

- Leak-free seat valve design
- SAE61 flange with 3-port body
- Numerous pilot options
- 4 sizes, SAE 3/4", 1", 1 1/4", 1 1/2"
- 6 poppet types

D5S



9



Code	Port size
06	SAE 3/4"
08	SAE 1"
10	SAE 1 1/4"
12	SAE 1 1/2"

Code	Seals
1	NBR
5	FPM

Code	Pilot oil line in body
1	internal from A
2	internal from B
3	internal from A and B
4	external from X1
5	internal from B, external from X1

Code	Solenoid voltage
omit	Standard w/o vent function
G0R	12 V=
G0Q	24 V=
GAR ³⁾	98 V=
GAG ³⁾	205 V=
W30	110 V / 50 Hz ; 120 V / 60 Hz
W31	230 V / 50 Hz ; 240 V / 60 Hz

Code	Ports	X	Y	Z	X-Y	X1	Y1	VV01
Standard								
1	Pilot oil = pilot drain	●	●	●	○	—	●	—
2	Pilot oil = pilot drain	●	●	●	○	—	●	—
With solenoid valve (VV01)								
4	Internal to B	●	○	●	●	—	●	○
6	Ext. out of cap	●	○	●	●	—	○	●
With stroke limiter (not for D5S06)								
A	Pilot oil = pilot drain	●	●	●	—	●	—	—
B	Pilot oil = pilot drain	●	●	—	—	●	—	—

○ open bore ● closed bore ◐ orifice Ø 1.2

Code	Sleeve
1	AA = 95 %, AB = 5 %
3	AA = 60 %, AB = 40 %

Code	Size	Poppet type	Sleeve
1	06, 08,10,12	With closed bottom and 15° chamfer (pz max. = p _A +20 bar)	1
2	06	With 0.8 dia. orifice at the bottom and 15° chamfer	1
	08, 10	With 1.2 dia. orifice at the bottom and 15° chamfer	1
4	06, 08,10,12	With closed bottom and 45° chamfer	1, 3
A ¹⁾	08, 10, 12	Safety spool (for end position control only)	3
B ¹⁾	08, 10, 12	Throttle spool, 10° chamfer	3
C ¹⁾	08, 10, 12	Throttle spool, 3° chamfer	3

Code	Spring (approx. cracking pressure [bar])					
	Sleeve Code 1		Sleeve Code 3			
	A -> B	D5S08/12	A -> B	D5S08/12	B -> A	D5S08/12
1	2.8	3.5	6.5	6.5	9.5	11.0
2	0.5	0.5	1.0	1.0	1.5	1.7
3	0.3	0.3	0.6	0.6	0.9	1.0
4	2.2	2.2	4.0	3.5	5.5	6.0
5	—	9.0	—	16.0	—	28.0
6	1.2	1.2	2.0	2.2	3.0	3.8
7	3.0	—	8.0	—	12.0	—

Code	Switching type	
omit	Standard w/o vent function	
09	VV01 with manual override	de-energized: open
10	VV01 without manual override	de-energized: open
11	VV01 with manual override	de-energized: closed
12	VV01 without manual override	de-energized: closed
CA	Shuttle valve	
DA	Shuttle valve	
CB	VV01 code 09 and shuttle valve code CA	
CD	VV01 code 11 and shuttle valve code CA	
DB	VV01 code 09 and shuttle valve code DA	
DD	VV01 code 11 and shuttle valve code DA	
EH	VV01 code 10 and shuttle valve code CA and position control ²⁾ with amplifier	
EK	VV01 code 12 and shuttle valve code CA and position control ²⁾ with amplifier	
EN	VV01 code 10 and shuttle valve code DA and position control ²⁾ with amplifier	
EQ	VV01 code 12 and shuttle valve code DA and position control ²⁾ with amplifier	
EC	VV01 code 10 and position control ²⁾ with amplifier	
EE	VV01 code 12 and position control ²⁾ with amplifier	
EA	Position control ²⁾ with amplifier	
EF	Position control ²⁾ with amplifier and shuttle valve code CA	
EL	Position control ²⁾ with amplifier and shuttle valve code DA	

Examples see end of chapter.

¹⁾ Springs 2, 3 and 6 only.

²⁾ Position control for D5S08/10 only. Spring 2 or 4. Spool A and sleeve 3.

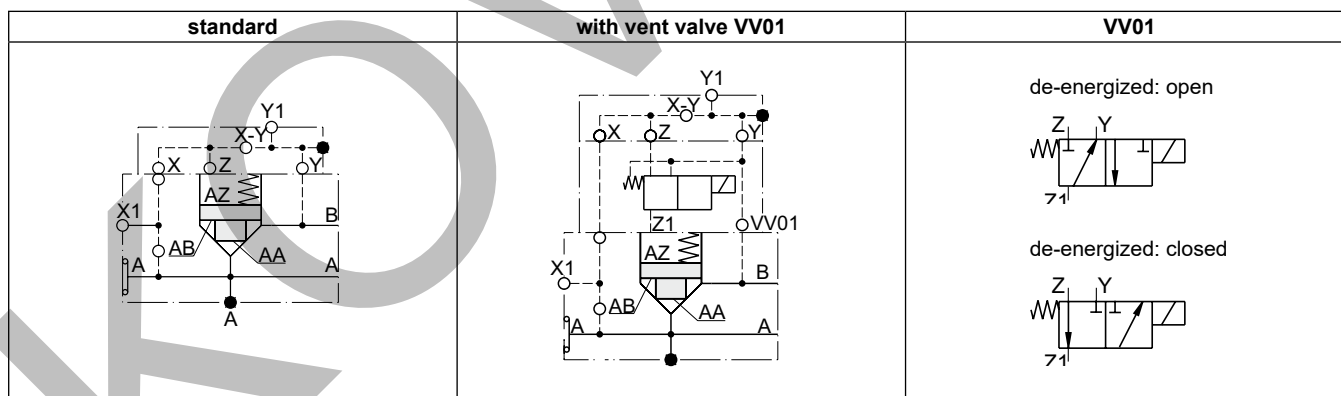
³⁾ To be used in combination with rectifier plugs at 120 VAC / 230 VAC power supply.

Technical data

General		06 (¾")	08 (1")	10 (1¼")	12 (1½")
Size					
Mounting		Flanged according to SAE61			
Mounting position		unrestricted			
Ambient temperature	[°C]	-20...+60			
MTTF _D value	[years]	150			
Weight	[kg]	3.4	4.4	5.0	7.8
Hydraulic					
Max. operating pressure	[bar]				
	SAE61 Ports A, B	350	350	280	210
	Port Y1	30	30	30	30
Nominal flow	[l/min]	180	360	600	800
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; 18/16/13			

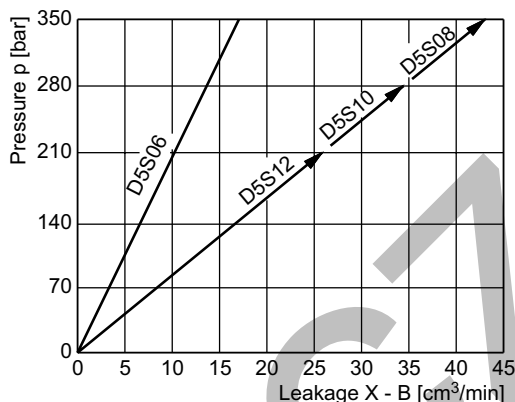
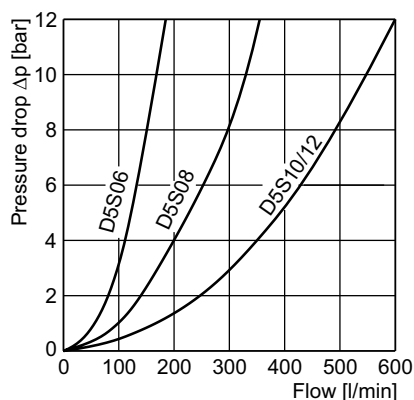
Electrical (solenoid)		100 % ED; CAUTION: coil temperature up to 150 °C possible					
Protection class		IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)					
Code		G0R	G0Q	GAR	GAG	W30	W31
Supply voltage	[V]	12 V =	24 V =	98 V =	205 V =	110 at 50 Hz 120 at 60 Hz	230 at 50 Hz 240 at 60 Hz
Tolerance supply voltage	[%]	±10	±10	±10	±10	±5	±5
Current consumption	hold [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					

D5S pilot configuration



D5S

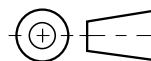
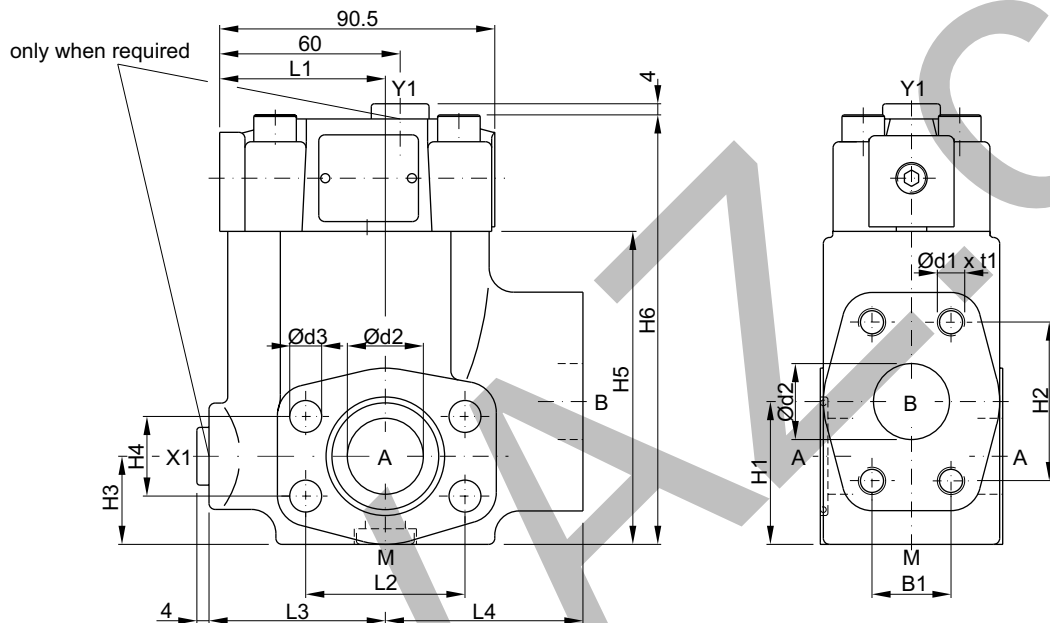
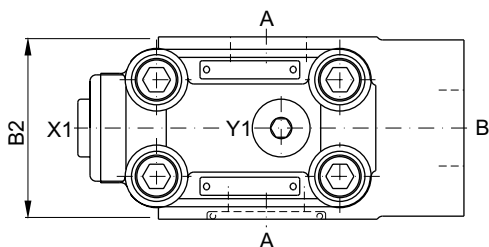
Leakage



All characteristic curves measured with HLP46 at 50 °C.

Selection of cartridges

Sleeve 1, poppet 1	Sleeve 1, poppet 2	Sleeve 1, poppet 4	Sleeve 3, poppet 4	Sleeve 3, poppet A	Sleeve 3, poppet B/C
1 : 1.05 $A_A = 0.95 A_C$ $A_B = 0.05 A_C$ 15° chamfer	1 : 1.05 $A_A = 0.95 A_C$ $A_B = 0.05 A_C$ 15° chamfer orifice	1 : 1.05 $A_A = 0.95 A_C$ $A_B = 0.05 A_C$ 45° chamfer	1 : 1.67 $A_A = 0.6 A_C$ $A_B = 0.4 A_C$ 45° chamfer	1 : 1.67 $A_A = 0.6 A_C$ $A_B = 0.4 A_C$ 45° chamfer safety spool	1 : 1.67 $A_A = 0.6 A_C$ $A_B = 0.4 A_C$ 45° chamfer throttle spool



Seal kits

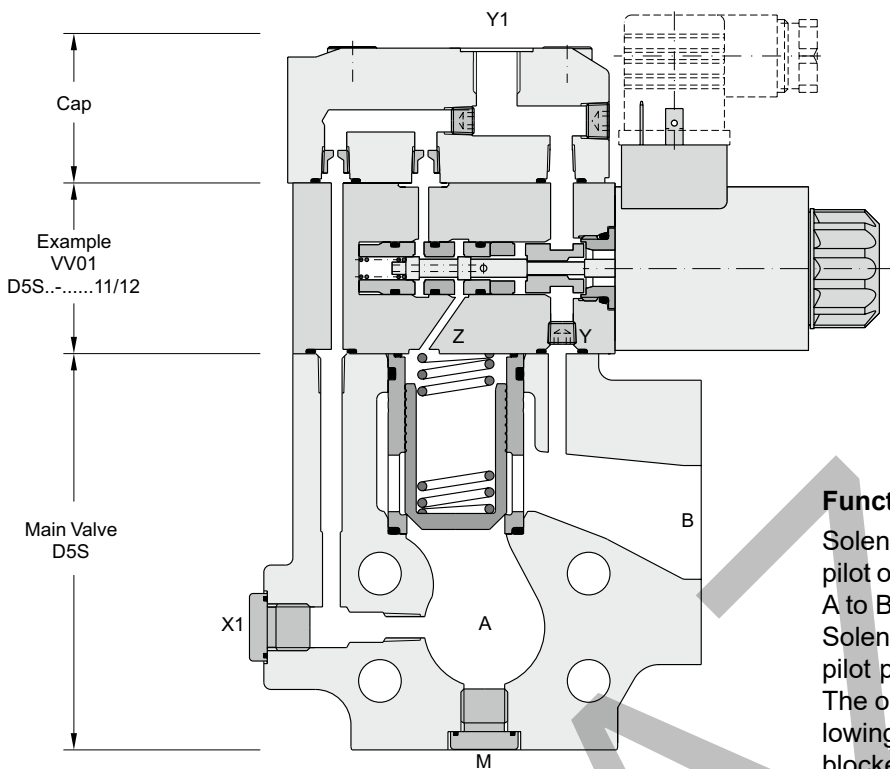
NG	NBR	FPM
06	S16-91850-0	S16-91850-5
08	S16-91851-0	S16-91851-5
10	S16-91852-0	S16-91852-5
12	S26-27421-0	S26-27421-5

NG	I1	I2	I3	I4	b1	b2	h1	h2	h3	h4	h5	h6	d1	t1	d2	d3
06	49	47.6	56	63	22.2	60	41	47.6	29.5	22.2	82	119	3/8" UNC	20	19	10.5
08	55	52.4	58	65	26.2	60	47	52.4	30.5	26.2	103	141	3/8" UNC	23	25	10.5
10	57	58.7	64	61	30.2	75	65	58.7	37.5	30.2	113	150	7/16" UNC	22	30	12.5
12	37	69.8	55	93	35.7	80	73	69.8	72	35.7	140	178	1/2" UNC	27	38	13.5

Ports	Function	Port size			
		D5S06	D5S08	D5S10	D5S12
A (2x)	Inlet or outlet	3/4" SAE61	1" SAE61	1 1/4" SAE61	1 1/2" SAE61
B	Outlet or inlet	3/4" SAE61	1" SAE61	1 1/4" SAE61	1 1/2" SAE61
X1 ¹⁾	External pilot port	G 1/4"	G 1/4"	G 1/4"	G 1/4"
Y1	External pilot 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⁾ Closed when supplied.

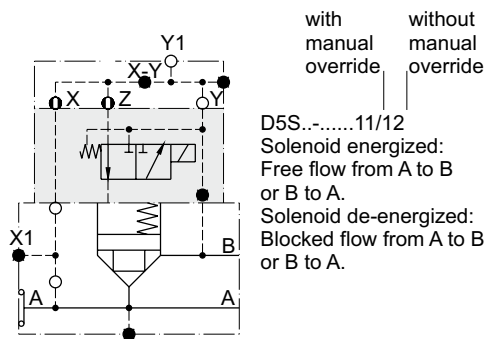
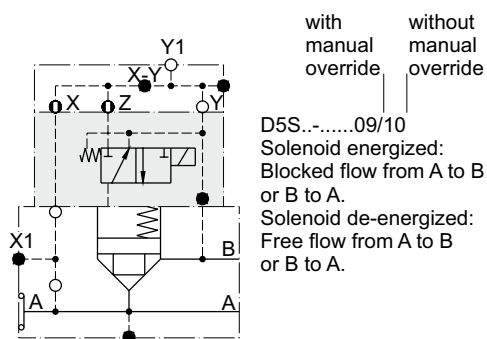
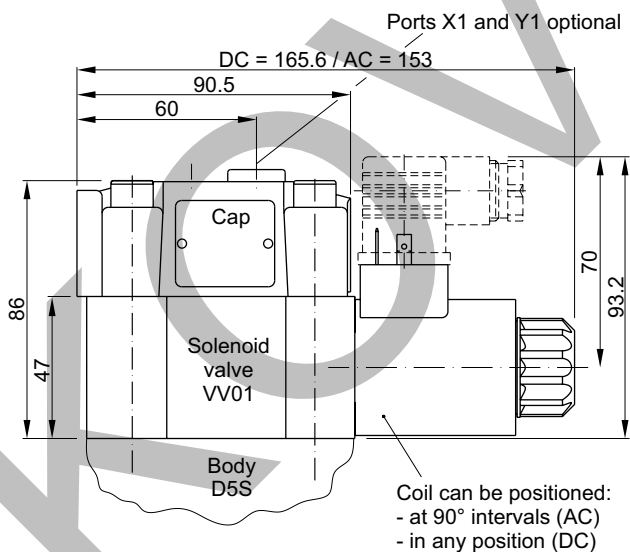
Example: pilot oil external from A, pilot drain internal out of Y1



Function

Solenoid de-energized:
 pilot oil from A to Z blocks the connection from A to B or B to A.
Solenoid energized:
 pilot pressure from A is blocked in the VV01. The oil in Z is internally drained to port Y1. Allowing flow from A to B, while B to A remains blocked.

D5S with VV01 dimensions



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

Position control as per IEC 61076-2-101 (M12x1)

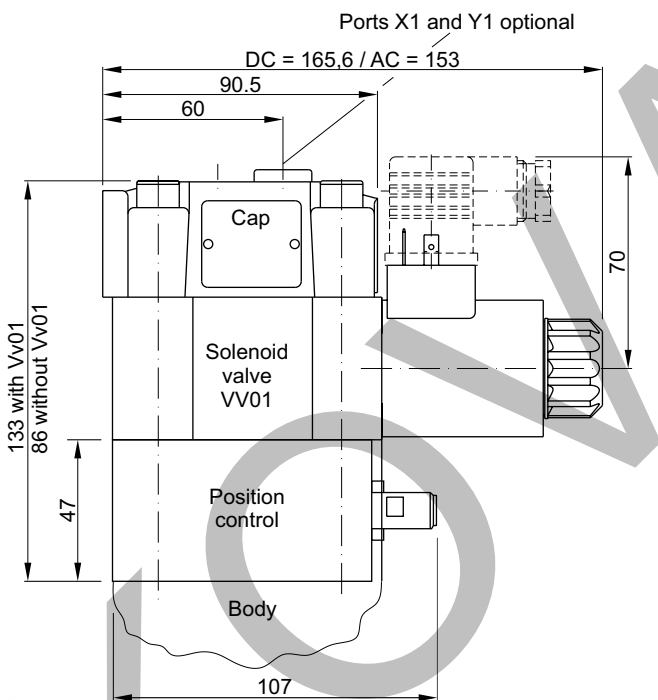
Protection class	IP65 in accordance with EN 60529
Ambient temperature	[°C] -20...+60
Supply voltage U_s / ripple	[V] 10...30 / $\pm 10\%$
Current consumption without load	[mA] ≤ 10
Max. output current per channel, ohmic	[mA] 200
Min. output load per channel, ohmic	[kOhm] 100
Max. output drop at 0.2 A	[V] ≤ 2
EMC	EN61000-6-4 / EN61000-6-2
Min. distance to next AC solenoid	[m] > 0.1
Interface	M12x1 acc. to IEC 61076-2-101
Wiring min.	[mm ²] 3 x 0.14 brad shield recommended
Wiring length max.	[m] 50 recommended

D5S with position control

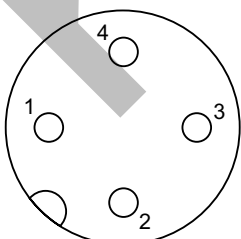
Position control by proximity switch (incl. amplifier). Valve open: proximity switch activated. This proximity switch is pressure proof and has no wearing parts.

Note: Position control for D5S08 and D5S10 only.

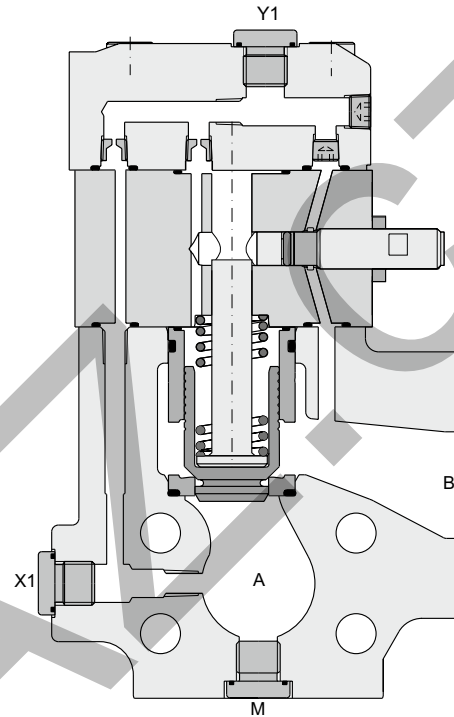
D5S with position control dimensions



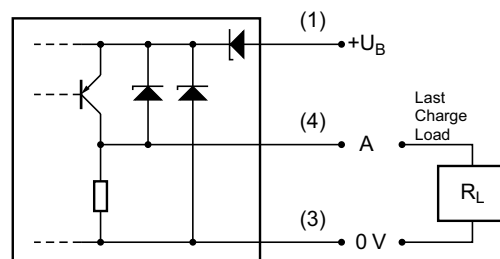
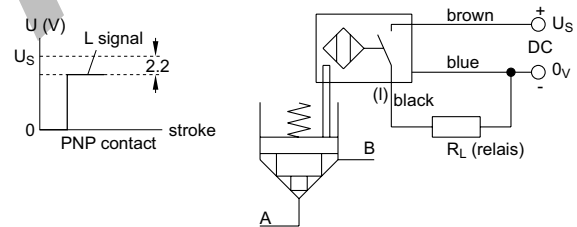
M12 pin assignment



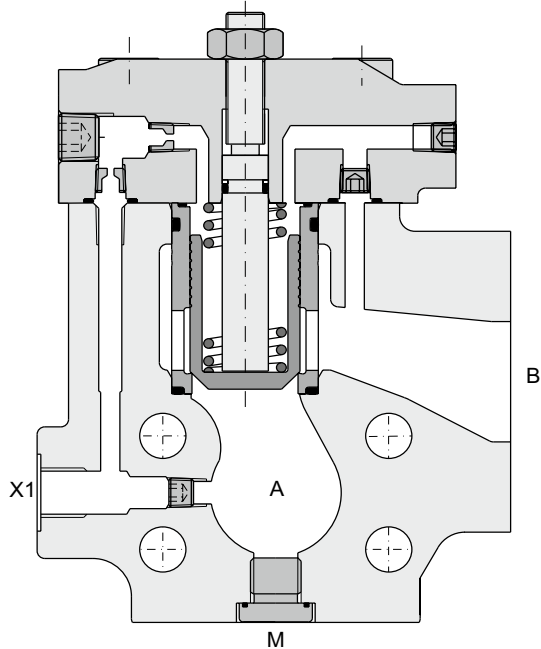
- 1 U_s 10...30 V
- 2 not connected
- 3 0 V
- 4 Out A: normally open



Example D5S 2 port



D5S stroke limiter

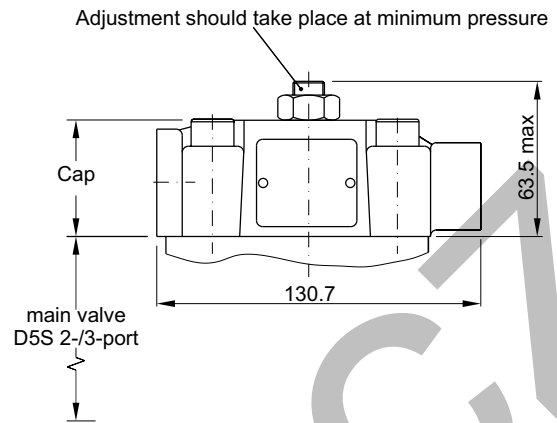


X1 = external pilot-oil (optional)

Note:

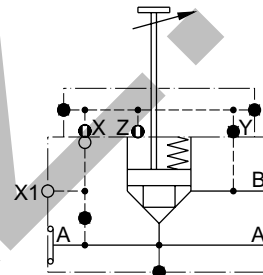
Stroke limiter not for use with D5S06, solenoid valve VV01, shuttle valve and position control.

Stroke limiter dimensions

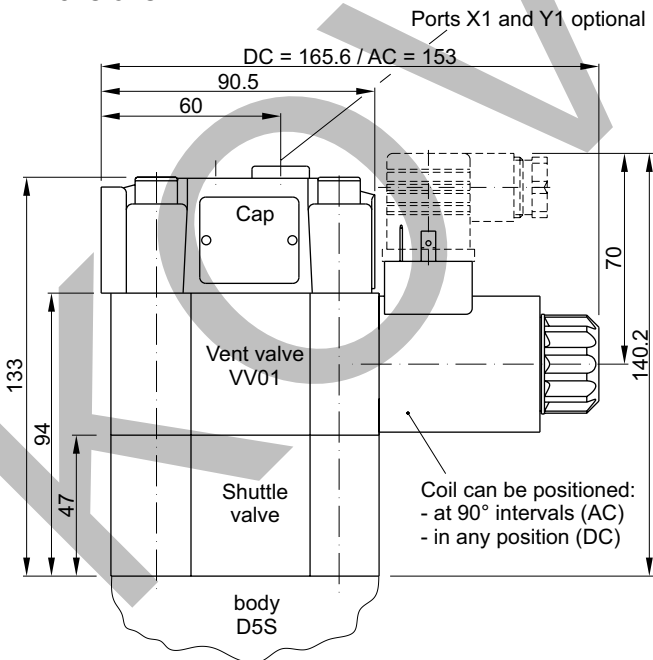


Example

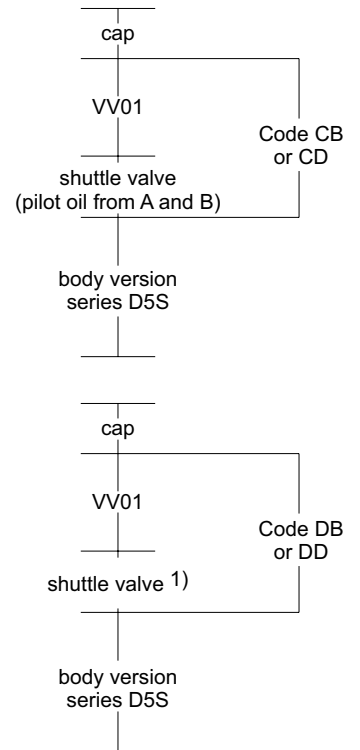
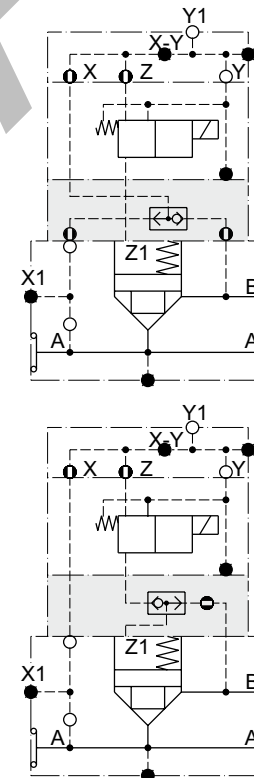
- D5S08-54A...
- D5S10-54A...
- D5S12-54A...



**D5S with shuttle valve
 Dimensions**



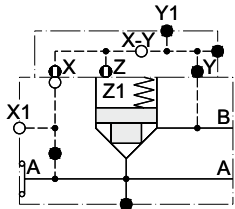
Shuttle valve only in connection with vent valve VV01.



1) Pilot oil from A and B, from B to A check valve function

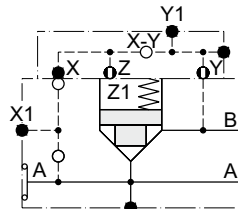
D5S

Stroke limiter D5S



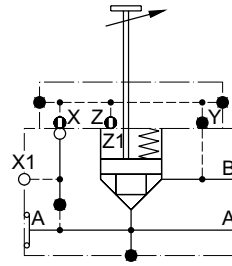
D5S ...-541

Pilot oil: external from X1



D5S ...-522

Pilot oil: internal from B

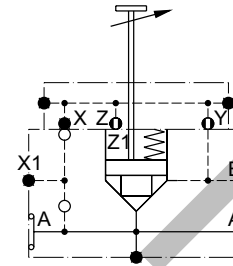


D5S08-54A

10

12

Pilot oil: external from X1



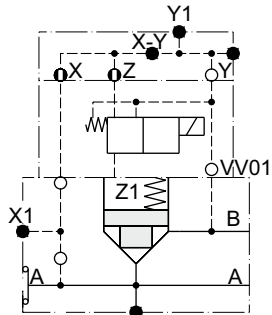
D5S08-52B

10

12

Pilot oil: internal from B

D5S with solenoid valve VV01



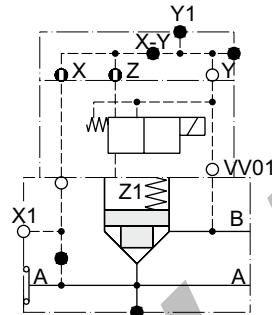
D5S ...-514...09

10

11

12

Pilot oil: internal from A
Pilot drain: internal to B



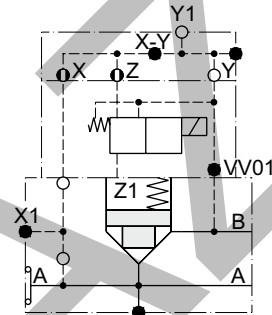
D5S ...-544...09

10

11

12

Pilot oil: external from X1
Pilot drain: internal to B



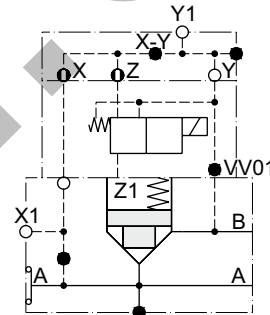
D5S ...-516...09

10

11

12

Pilot oil: internal from A
Pilot drain: external out of Y1



D5S ...-546...09

10

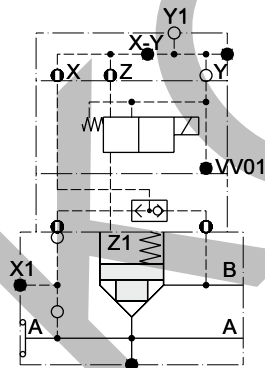
11

12

Pilot oil: external from X1
Pilot drain: external out of Y1

9

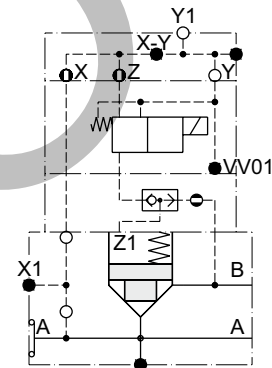
D5S with with solenoid valve VV01 and shuttle valve



D5S ...-536...CB

CD

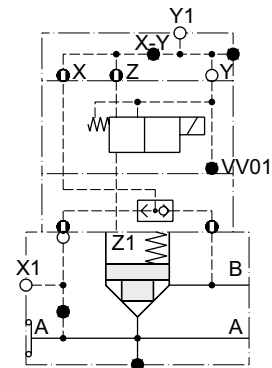
Pilot oil: internal from A +
internal from B
Pilot drain: external out of Y1



D5S ...-536...DB

DD

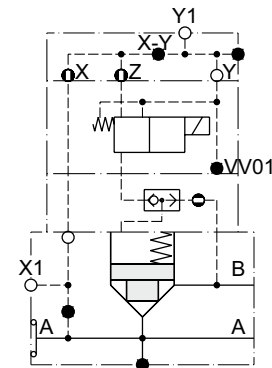
Pilot oil: internal from A +
internal from B
Pilot drain: external out of Y1



D5S ...-556...CB

CD

Pilot oil: internal from X1 +
internal from B
Pilot drain: external out of Y1



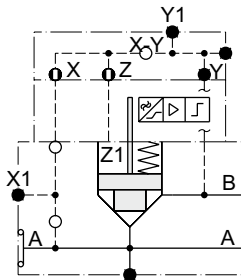
D5S ...-556...DB

DD

Pilot oil: external from X1 +
internal from B
Pilot drain: external out of Y1

D5S position control

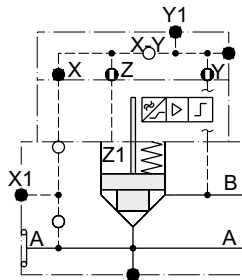
Seat entry



D5S08-5113A.EA

10
12

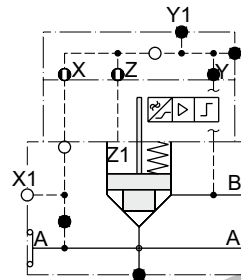
Pilot oil: internal from A



D5S08-5223A.EA

10
12

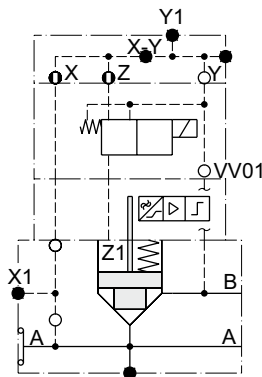
Pilot oil: internal from B



D5S08-5213A.EA

10
12

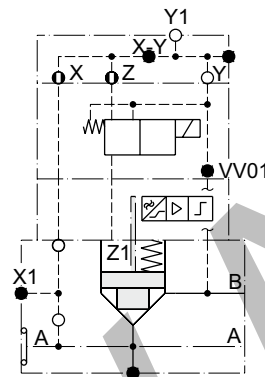
Pilot oil: internal from X1



D5S08-5143A.EC

10 EE
12

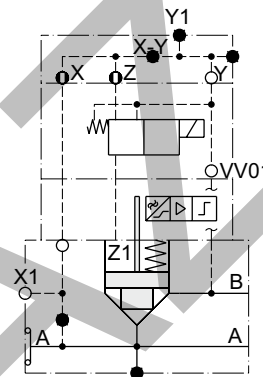
Pilot oil: internal from A
Pilot drain: internal to B



D5S08-5163A.EC

10 EE
12

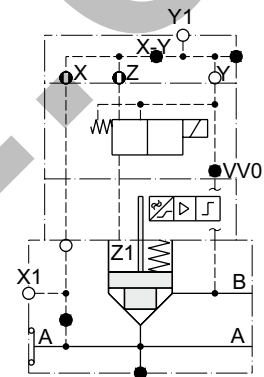
Pilot oil: internal from A
Pilot drain: external out of Y1



D5S08-5443A.EC

10 EE
12

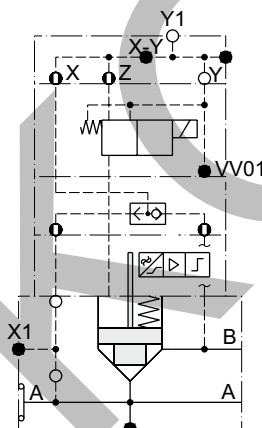
Pilot oil: external from X1
Pilot drain: internal to B



D5S08-5463A.EC

10 EE
12

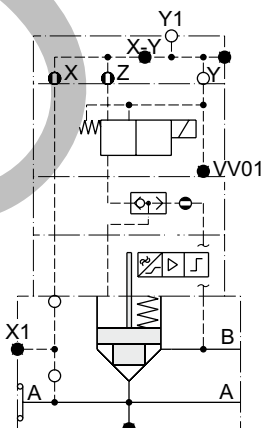
Pilot oil: external from X1
Pilot drain: external out of Y1



D5S08-5363A.EH

10 K
12

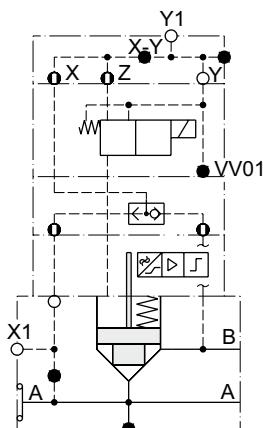
Pilot oil: internal from A +
internal from B
Pilot drain: external out of Y1



D5S08-5363A.EN

10 EQ
12

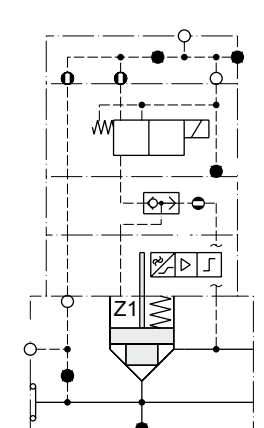
Pilot oil: internal from A +
internal from B
Pilot drain: external out of Y1



D5S08-5563A.EH

10 EK
12

Pilot oil: external from X1 +
internal from B
Pilot drain: external out of Y1



D5S08-5563A.EN

10 EQ
12

Pilot oil: external from X1 +
internal from B
Pilot drain: external out of Y1

Characteristics

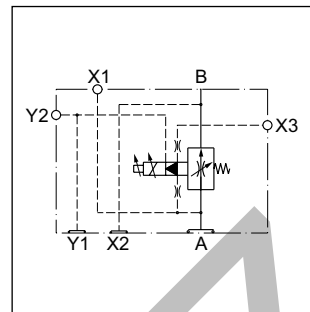
Proportional throttle valves series F5C allow to adjust the flow in proportion to the input signal. The combination of the F5C with pressure compensators R5A or R5P serves as a flow control valve - providing load compensated flow.

The F5C is offered with two types of response time:

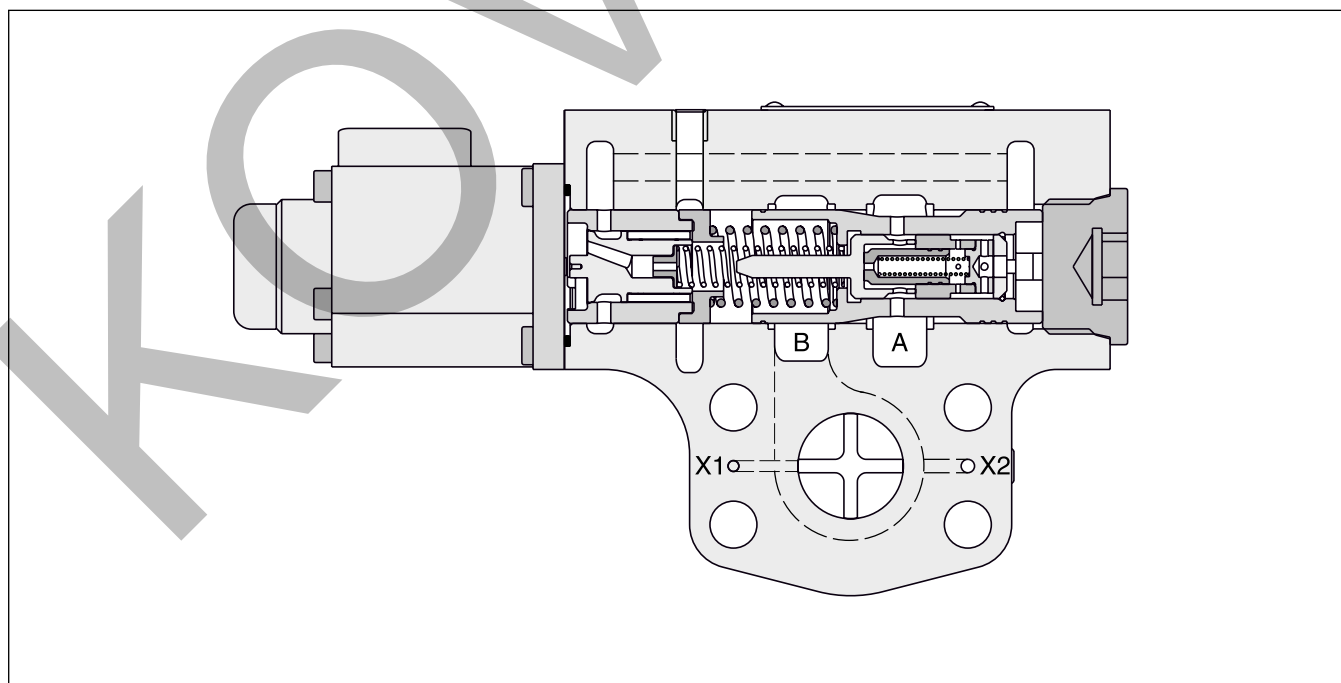
- standard 350 ms at 1 l/min pilot flow
- code A 250 ms at 2 l/min pilot flow

Features

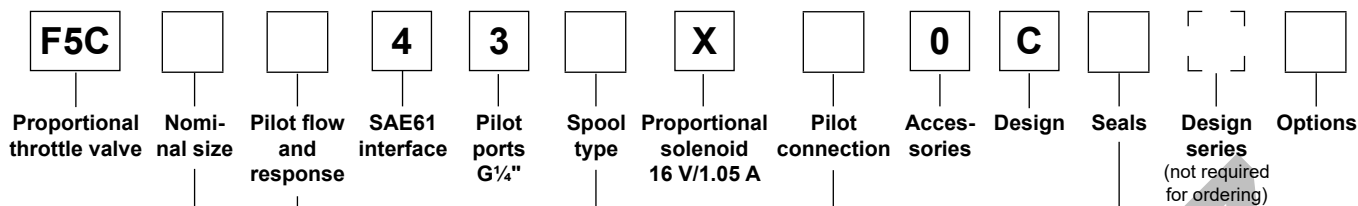
- Spool type proportional throttle valve
- SAE61 flange
- Maximum flow 380 l/min
- 3 sizes, SAE 3/4", 1", 1 1/4"
- Load compensated flow in combination with R5A/R5P



9



Ordering Code



Code	Nominal size
06	SAE 3/4"
08	SAE 1"
10	SAE 1 1/4"

Code	Pilot flow	Max. response
—	1 l/min	350 ms
A	2 l/min	250 ms

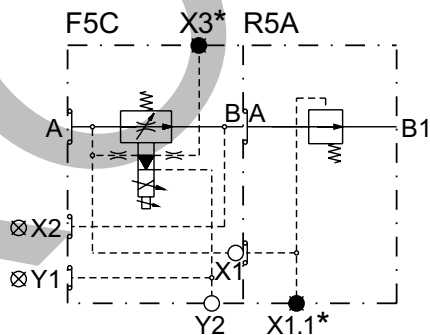
Spool type		
Code	Size	Max. flow ¹⁾
1	06/08/10	95 l/min
2	08/10	190 l/min
3	10	380 l/min

Code	Seals
1	NBR
5	FPM

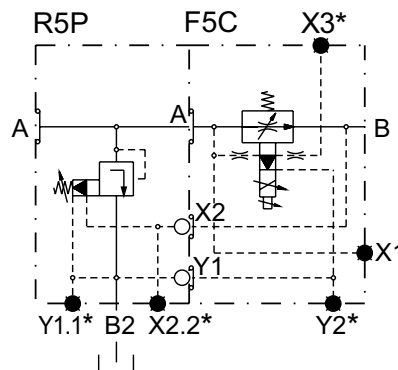
Code	Pilot connections	F5C without compensators R5A, R5P	F5C for combination with R5A	F5C for combination with R5P
2	internal PD (Y)	—	—	X1, X3, Y2 ● X2, Y1 ○
	internal PP (X)	—	—	X2, Y1 ○
3	external PD (Y)	—	X1, X3, Y2 ○ X2, Y1 ⊗	—
	external PP (X)	—	—	—
4	external PD (Y)	X3, Y2 ○	—	X2, X3, Y1, Y2 ○
	external PP (X)	X1 ● X2, Y1 ⊗	—	X1 ●
5	external PD (Y)	—	X1, Y2 ○ X3 ● X2, Y1 ⊗	—
	internal PP (X)	—	—	—
6	external PD (Y)	X1, X3 ● X2, Y1 ⊗ Y2 ○	—	X1, X3 ● X2, Y1, Y2 ○
	internal PP (X)	—	—	—

Pilot connection explanation

F5C mit R5A



F5C mit R5P



○ open ● closed ⊗ closed by counterpart

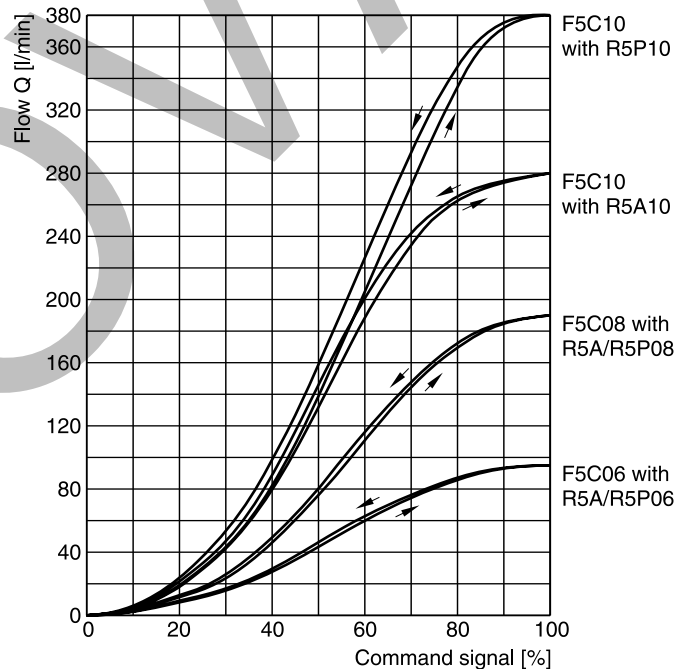
¹⁾ At nominal pressure drop ($\Delta p = 8.4 \text{ bar}$).
 * optional

Technical Data / Characteristic Curves

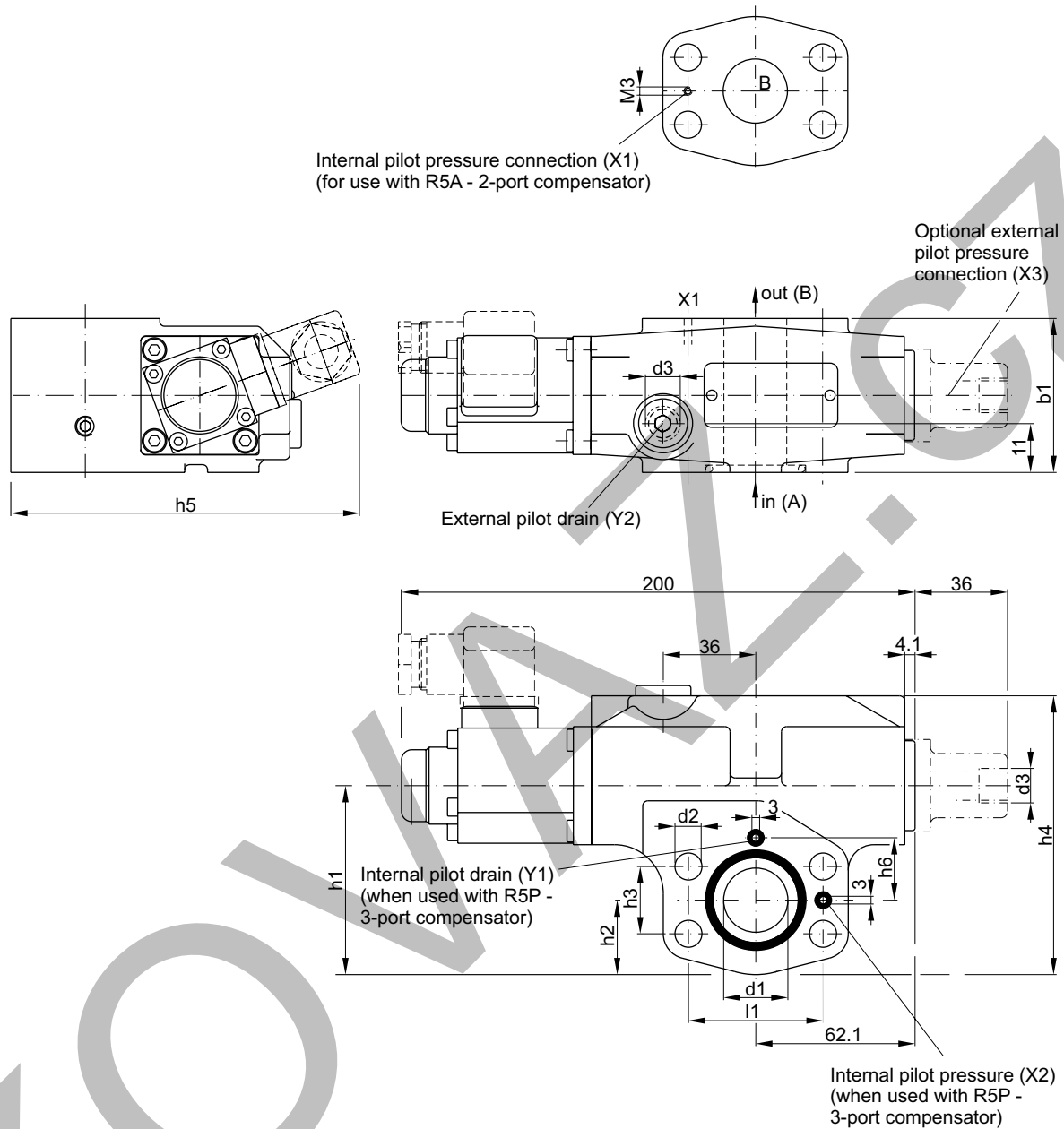
Technical data

General				
Size		06 (3/4")	08 (1")	10 (1 1/4")
Mounting	Flanged according to SAE61			
Mounting position	unrestricted			
Ambient temperature	[°C]	-20...+60		
Weight	[kg]	3.9	4.1	5.8
Hydraulic				
Max. operating pressure				
Ports A, B, X1, X2, X3	[bar]	350	300	280
Ports Y1, Y2	[bar]	70		
Max. pressure drop (from A to B)	[bar]	21		
Nominal flow	[l/min]	95	190	380
Fluid	Hydraulic oil according to DIN 51524			
Fluid temperature	[°C]	-20...+70 (NBR: -25...+70)		
Viscosity permitted	[cSt] / [mm ² /s]	20...400		
Viscosity recommended	[cSt] / [mm ² /s]	30...80		
Filtration	ISO 4406 (1999); 18/16/13			
Electrical characteristics				
Duty ratio	100 % ED; CAUTION: coil temperature up to 150 °C possible			
Solenoid connection	Connector as per EN175301-803, solenoid identification as per ISO 9461			
Protection class	IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)			
Supply voltage	[V]	16		
Current consumption	[A]	1.05		
Resistance	[Ohm]	11.3		
Response time	[ms]	see ordering code		

Characteristic curves



All characteristic curves measured with HLP46 at 50 °C.



Seal kits		
NG	NBR	FPM
06 / 08 / 10	S26-58484-0	S26-58484-5

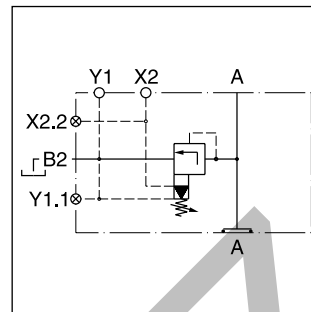
	l1	b1	h1	h2	h3	h4	h5	h6	d1	d2	d3
F5C06	47.6	60	68.2	26	22.2	103.2	183	20.8	19	10.5	G¼"
F5C08	52.4	60	73.6	29	26.2	108.6	187	24.3	25	10.5	G¼"
F5C10	58.7	75	83.5	36.5	30.2	118.5	198	29.3	32	12.5	G¼"

Characteristics

Direct operated 3-way pressure compensators series R5P can be combined with any type of fixed or adjustable flow resistor (throttle) to provide a load compensated flow.

The combination with the proportional throttle valve F5C serves as a compact 3-way flow control unit in SAE flange design. The R5P is typically used as meter-in compensator in front of the flow resistor.

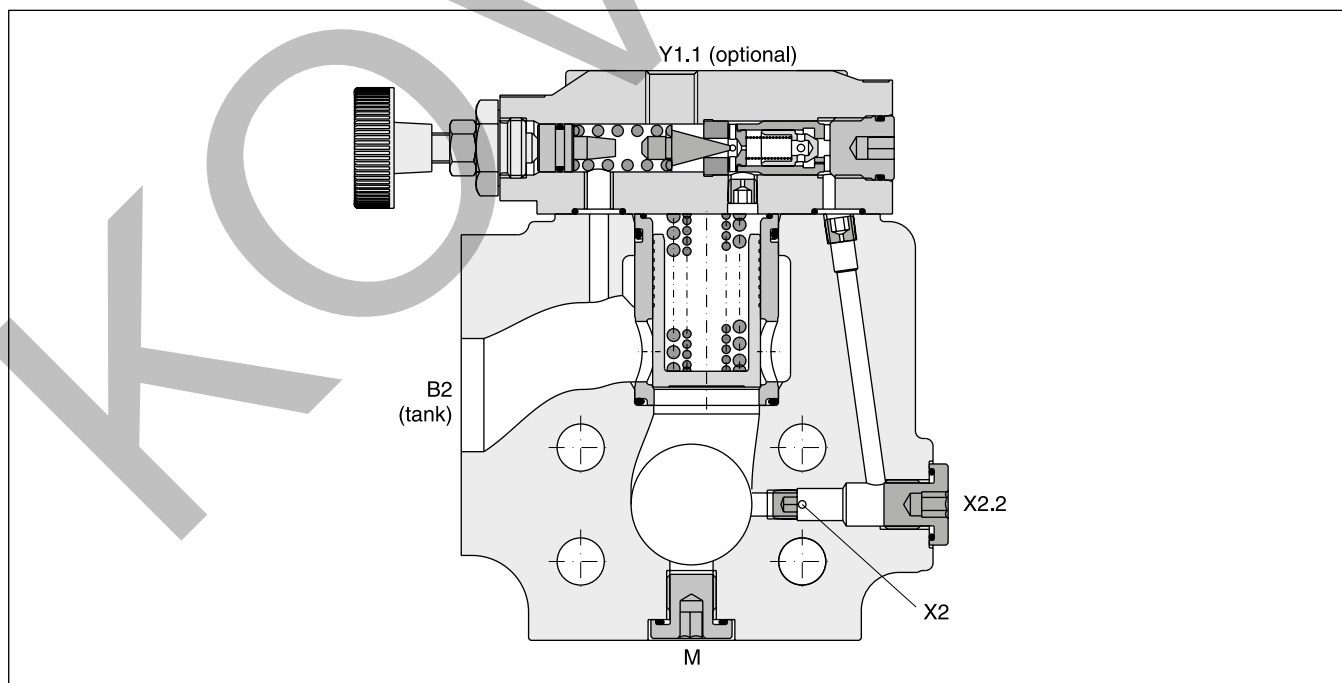
The R5P is additionally equipped with a pressure relief pilot, that controls the compensator cartridge and operates as system pressure relief valve. The R5P*P2 provides a proportional relief function.



Features

- Seated type 3-way pressure compensator
- SAE61 flange
- 8.4 bar control pressure
- Pressure relief function (optionally proportional)
- With optional vent function
- 3 sizes, SAE 3/4", 1", 1 1/4"
- Load compensated flow in combination with F5C

9



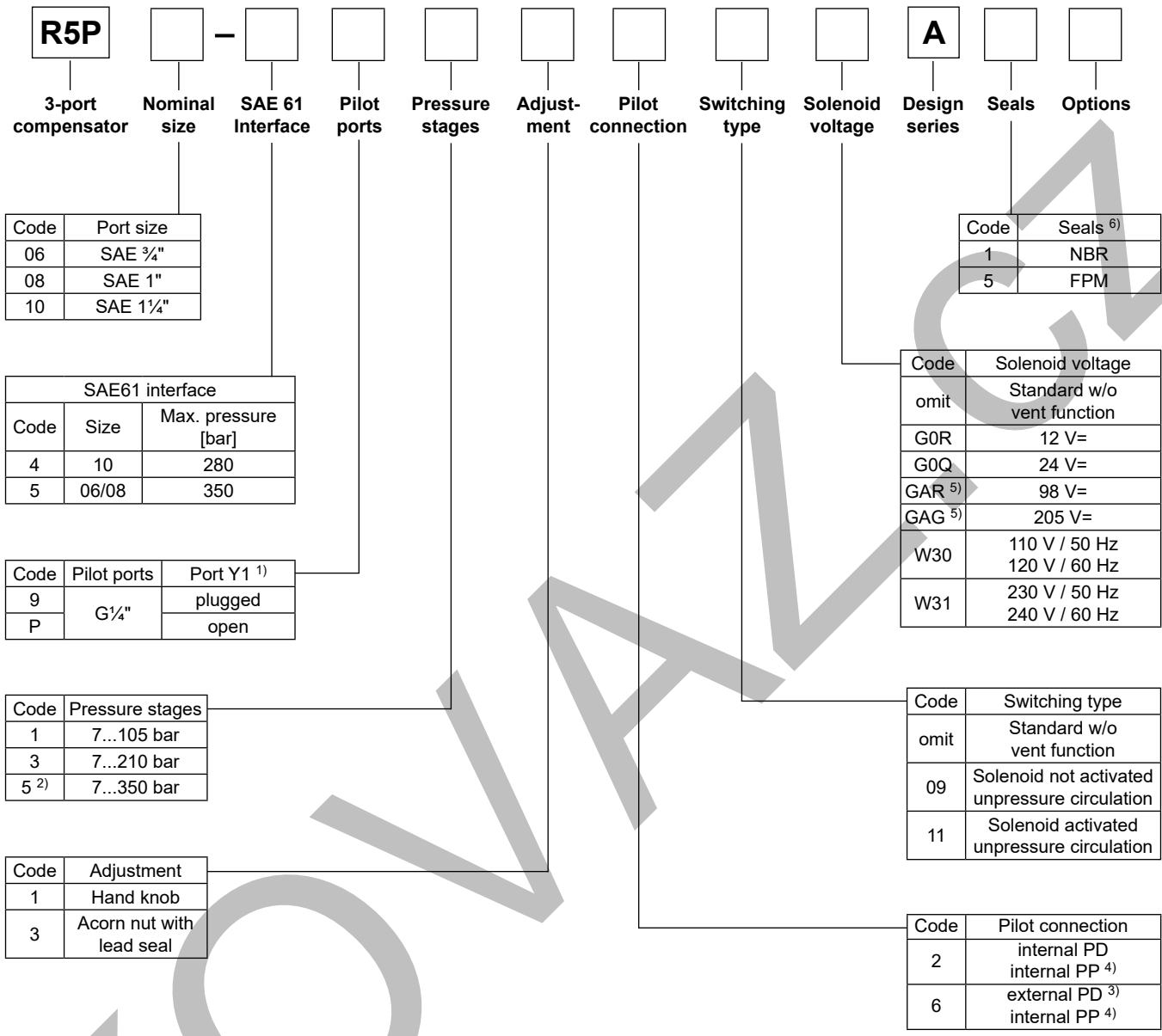
R5P

General			06 (3/4")		08 (1")		10 (1 1/4")	
Size								
Mounting			Flanged according to SAE61					
Mounting position			unrestricted					
Ambient temperature		[°C]	-20...+60					
MTTF _D value		[years]	150					
Weight	R5P	[kg]	3.7		4.4		5.3	
	R5P with VV01	[kg]	5.4		6.1		7.0	
Hydraulic								
Max. operating pressure	Ports A, B	[bar]	350		350		280	
Pressure stages		[bar]	105, 210, 350					
Nominal flow		[l/min]	90		300		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) R5P with VV01								
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	[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					

R5P*P2

General			06 (3/4")		08 (1")		10 (1 1/4")	
Size								
Mounting			Flanged according to SAE61					
Mounting position			unrestricted					
Ambient temperature		[°C]	-20...+60					
MTTF _D value		[years]	75					
Weight		[kg]	5.5		6.2		7.1	
Hydraulic								
Max. operating pressure	Ports A, B	[bar]	350		350		280	
Pressure stages		[bar]	105, 210, 350					
Nominal flow		[l/min]	90		300		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 (proportional 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)					
Code			G0R					
Supply voltage		[V]	12 V =					
Max. current		[A]	2.1					
Coil resistance at 20 °C		[Ohm]	4.28					
Solenoid connection			Connector as per EN 175301-803					
Power amplifier, recommended			PCD00A-400					

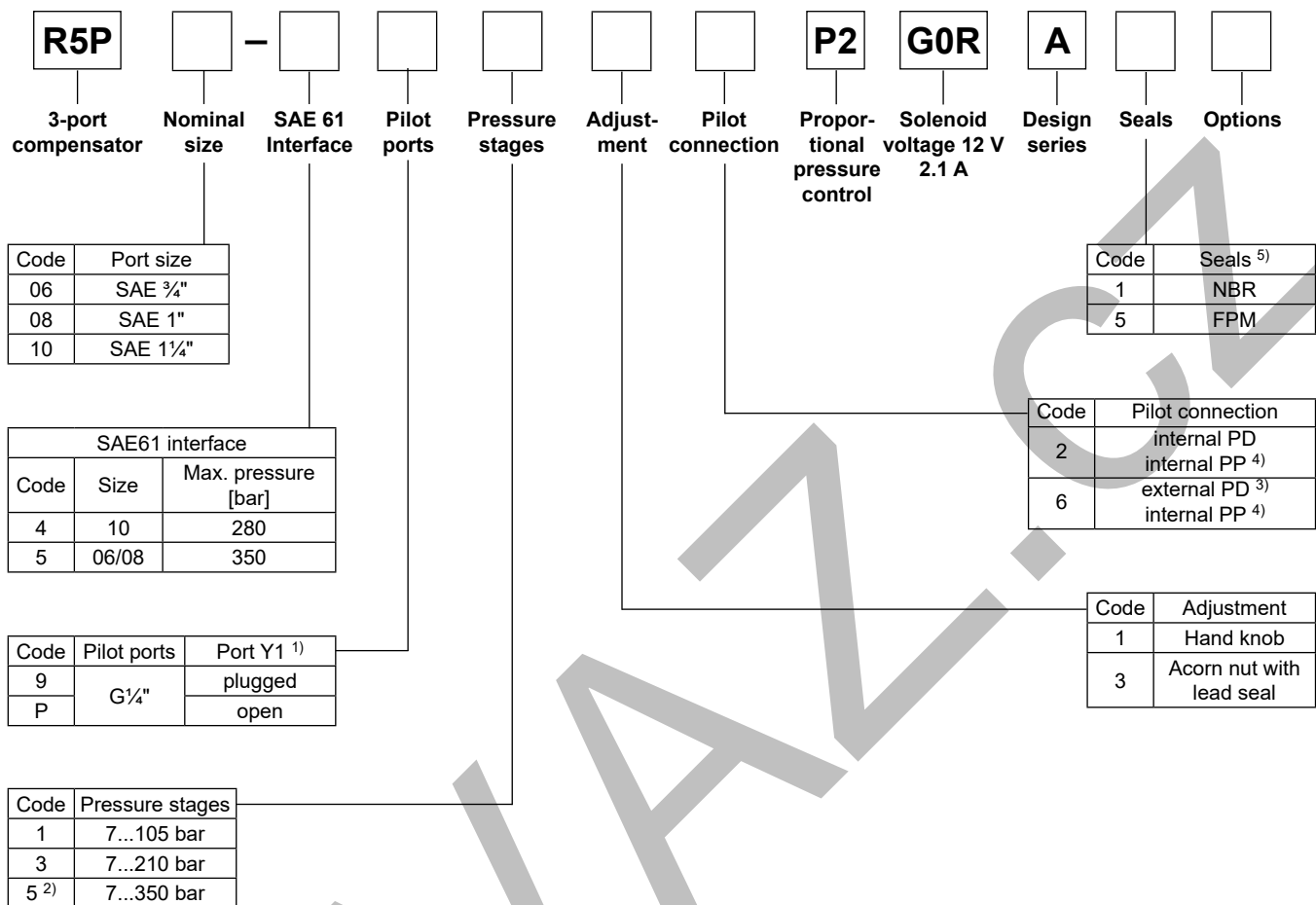
R5P



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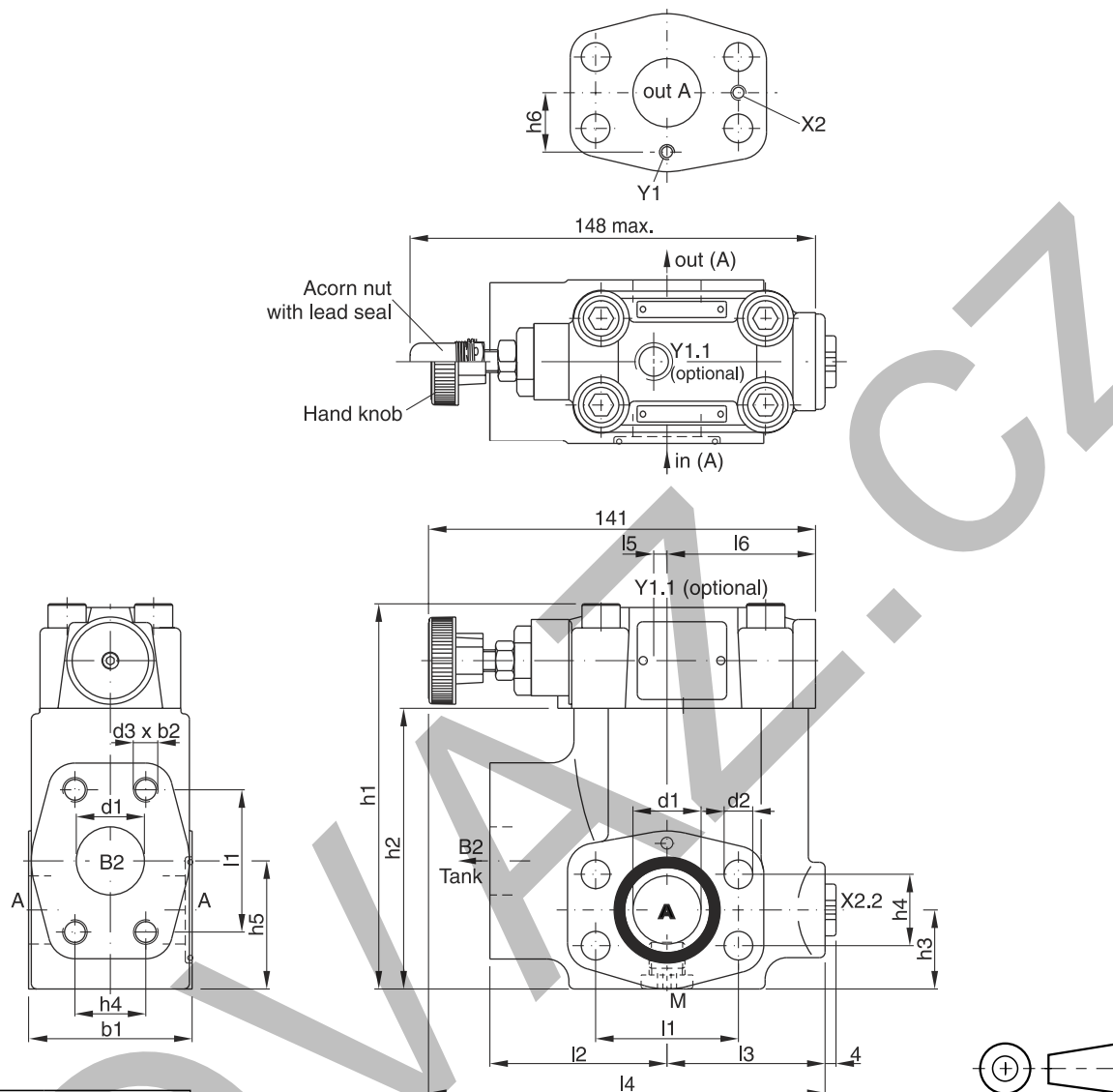
¹⁾ Y1 port is used in combination with F5C, when the F5C should be drained through the R5P (internal or external drain).
²⁾ R5P10-4*5 up to 280 bar.
³⁾ Through port Y1.1.
⁴⁾ PP through port X1 in outlet flange.
⁵⁾ To be used in combination with rectifier plugs at 120 VAC/230 VAC power supply.
⁶⁾ Further seals on request.

R5P*P2



¹⁾ Y1 port is used in combination with F5C, when the F5C should be drained through the R5P (internal or external drain).
²⁾ R5P10-4*5 up to 280 bar.
³⁾ Through port Y1.1.
⁴⁾ PP through port X1 in outlet flange.
⁵⁾ Further seals on request.

R5P



9

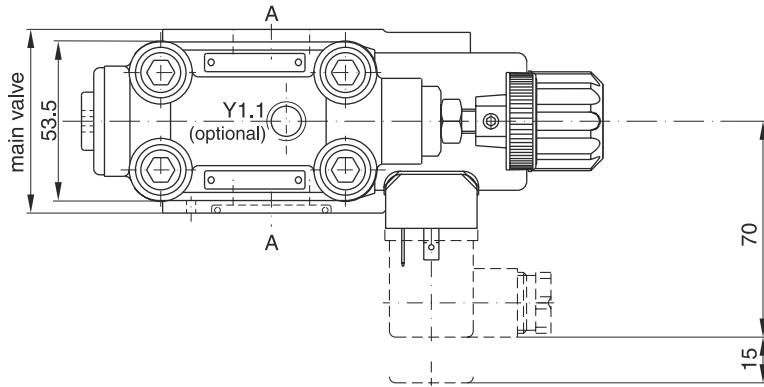
Seal kits		
NG	NBR	FPM
06	S16-91461-0	S16-91461-5
08	S16-91460-0	S16-91460-5
10	S16-91459-0	S16-91459-5

	l1	l2	l3	l4	l5	l6	b1	b2	h1	h2	h3	h4	h5	h6	d1	d2	d3
R5P06	47.6	63	56	148	1	49	60	20	119	81.6	29.5	22.2	41.6	20.8	19	10.5	3/8" UNC
R5P08	52.4	65	58	144.6	5	54.5	60	23	142	103	30.5	26.2	48.6	24.3	25	10.5	3/8" UNC
R5P10	58.7	61	64	146.6	3	56.5	75	22	149	113	37.5	30.2	64.1	29.3	32	12.5	7/16" UNC

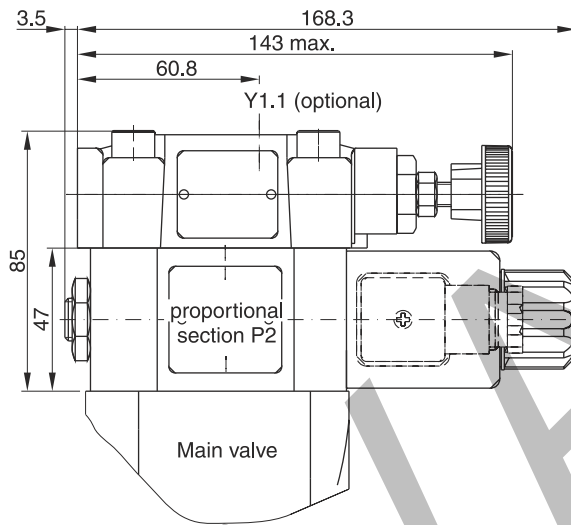
Ports

Port	Function	Port size		
		R5P06	R5P08	R5P10
A	Inlet/outlet	3/4"	1"	1 1/4"
B2	Tank	3/4"	1"	1 1/4"
X2	Internal pilot pressure	M3	M3	M3
X2.2	External pilot pressure	G 1/4"	G 1/4"	G 1/4"
Y1	Internal pilot drain	M3	M3	M3
Y1.1	External pilot drain	G 1/4"	G 1/4"	G 1/4"
M	Pressure gauge	G 1/4"	G 1/4"	G 1/4"

R5P*P2

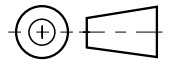


Drain line only external from the pilot head (Y1.1).
 The pilot drain port must be connected to a stable
 low pressure tank line. Pressure variations in the
 drain port should be avoided.

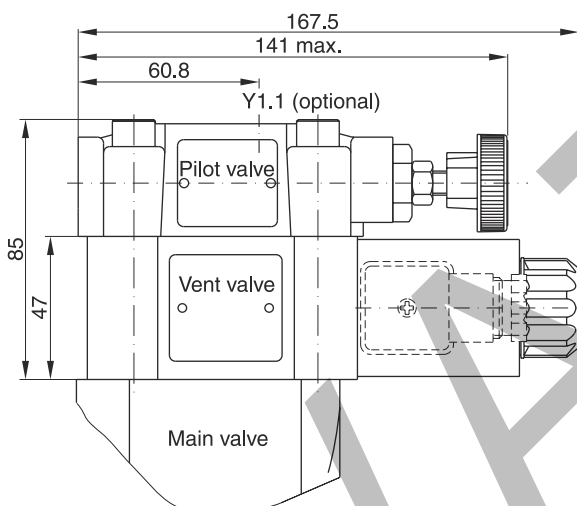
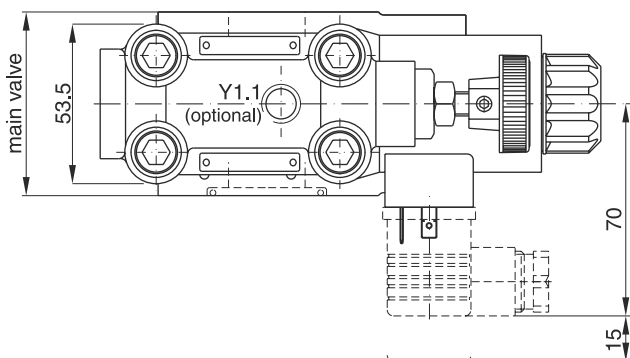


Prop. section P2	Kit	
	NBR	FPM
	S26-58473-0	S26-58473-5

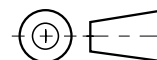
Note:
 On initial start up and after long shut down
 periods bleed air from this plug.



R5P with vent function



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



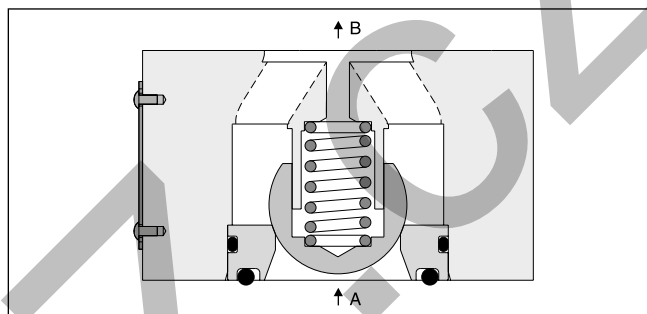
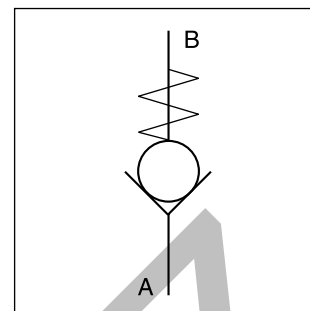
9

Code	Internal drain	External drain
11		
09		

Direct operated check valves series C5V provide free flow in one direction and block the flow in the counter direction. The SAE flanges allow to mount the C5V directly on the pressure port of pumps for protection against pressure shocks from the system.

Features

- Direct operated check valve
- SAE61 and SAE62 flange
- 4 sizes (SAE 3/4", 1", 1 1/4", 1 1/2")
- 3 springs
- 5 options for body sealing



Ordering Code

C5V		-				B		
Direct operated check valve	Nominal size		Flange	Body sealing	Cracking pressure	Design series	Seals	Options

Code	Port size
06	SAE 3/4"
08	SAE 1"
10	SAE 1 1/4"
12	SAE 1 1/2"

Code	Flange
3	SAE61
6	SAE62

Code	Body sealing
1	Sealing for port A
2 ¹⁾	Sealing for port A and X
3	Without sealing
4	Sealing for port B
5	Sealing for port A and B

Code	Options
omit	Standard
019 ²⁾	M14 mounting screws

Code	Seals
1	NBR
5	FPM

Code	Cracking pressure
0	0.5 bar
1	1.0 bar
2	2.0 bar

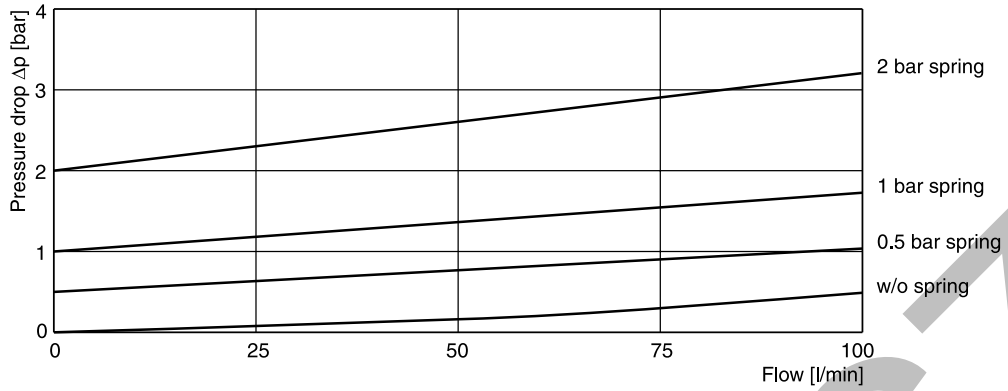
¹⁾ For combination with R5U unloading valve (SAE61 only)

²⁾ Only for C5V10-6 (SAE62)

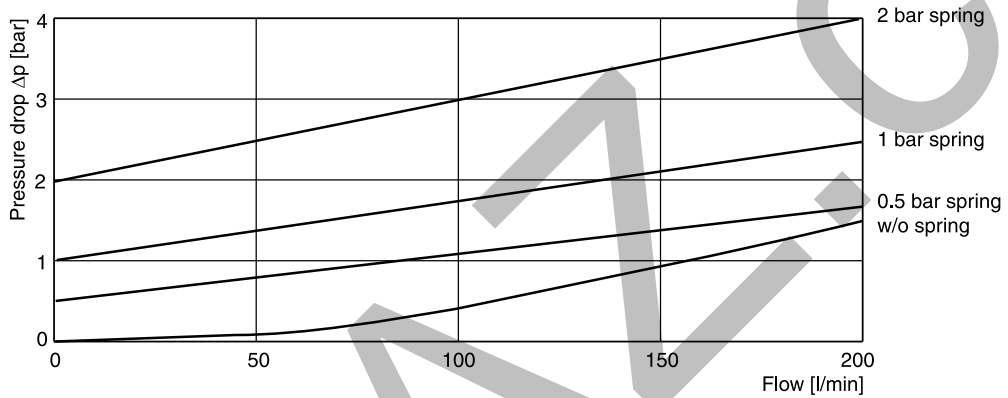
Technical Data

General				06 (¾")	08 (1")	10 (1¼")	12 (1½")
Size							
Mounting	2-port inline flange (SAE61 and 62)						
Mounting position	unrestricted						
Ambient temperature	[°C]	-20...+60					
MTTF _D value	[years]	150					
Weight	[kg]	0.6	0.9	1.3	1.8		
Hydraulic							
Max. operating pressure	SAE61	[bar]	350	350	280	210	
	SAE62	[bar]	420	420	420	420	
Nominal flow		[l/min]	100	200	400	750	
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						

C5V06



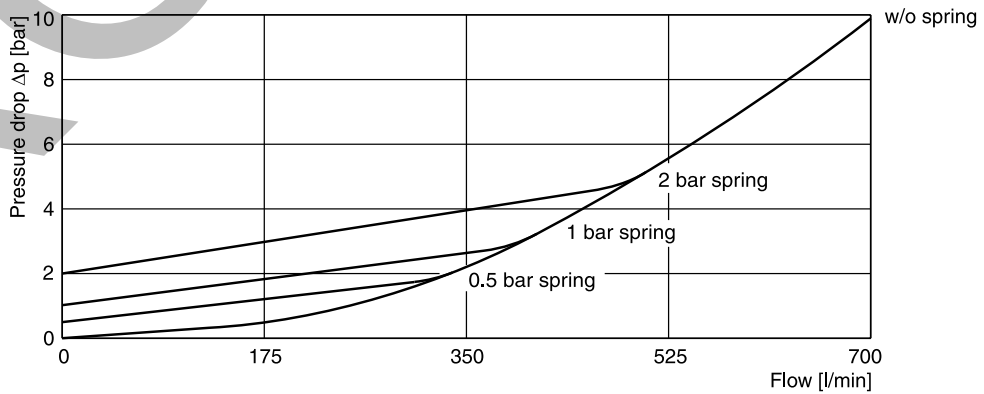
C5V08



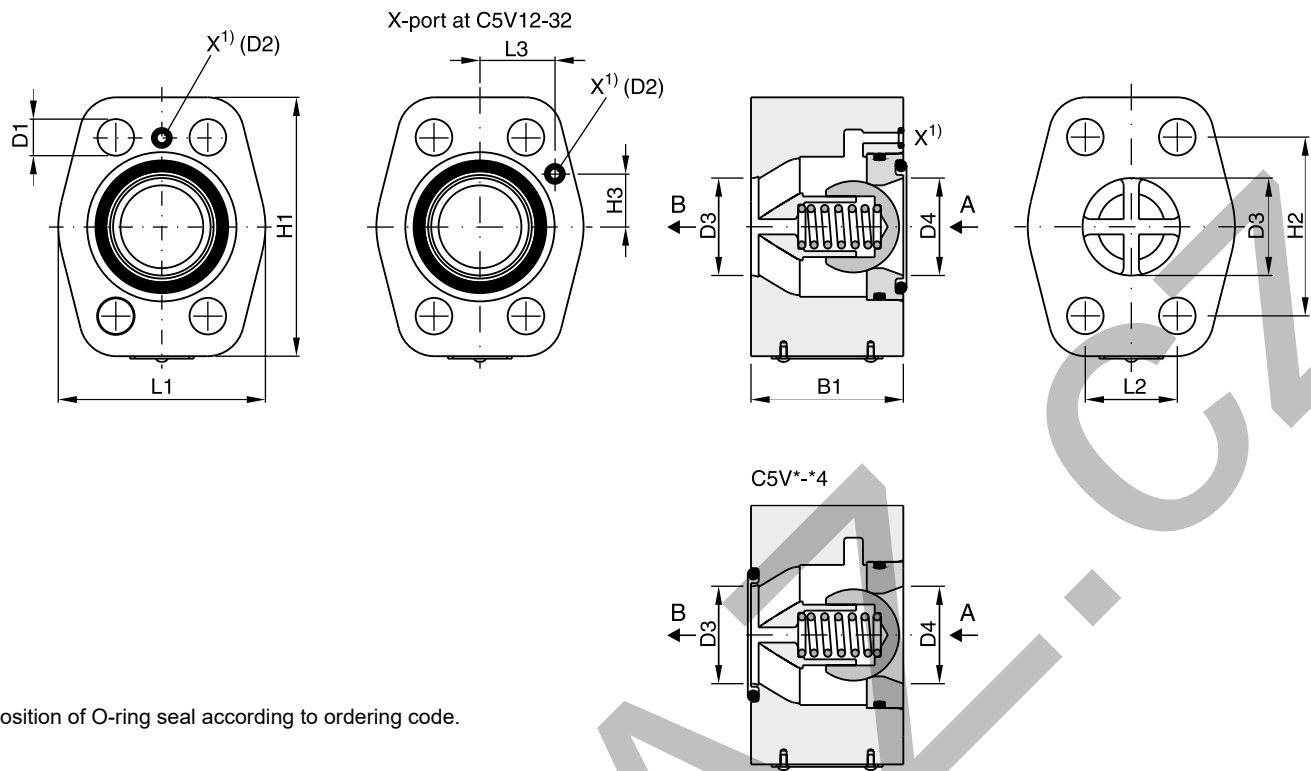
C5V10



C5V12



All characteristic curves measured with HLP46 at 50 °C.



Position of O-ring seal according to ordering code.

9

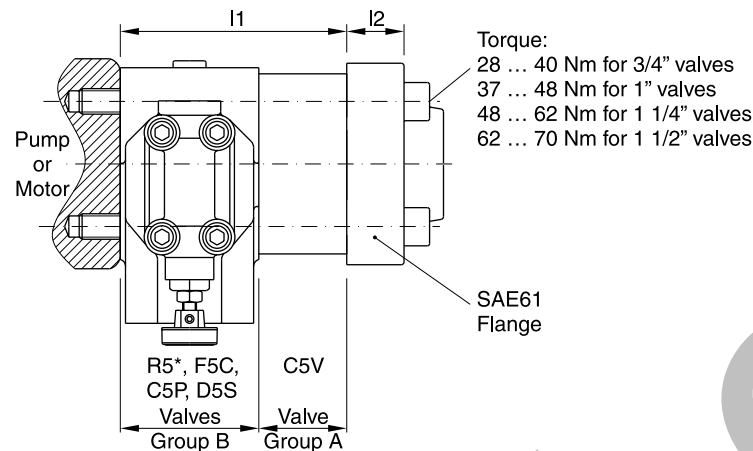
Seal kits		
NG	NBR	FPM
06	S26-75409-0	S26-75409-5
08	S26-75410-0	S26-75410-5
10	S26-75411-0	S26-75411-5
12	S26-75412-0	S26-75412-5

Series	Nominal Size		L1	L2	L3	H1	H2	H3	B1	D1	D2	D3 + 0.8	D4
C5V06	3/4"	SAE61	48	22.2	–	64	47.6	–	45	10.5	Ø3	19	19
		SAE62	48	23.8	–	64	50.8	–	45	10.5	–	19	19
C5V08	1"	SAE61	60	26.2	–	74	52.4	–	45	10.5	Ø3	25	25
		SAE62	60	27.8	–	74	57.2	–	45	12.5	–	25	25
C5V10	1 1/4"	SAE61	68	30.2	–	85	58.7	–	50	12.5	Ø3	32	32
		SAE62	68	31.8	–	85	66.7	–	50	13.5 ²⁾	–	32	32
C5V12	1 1/2"	SAE61	80	35.7	27.2	104	69.8	22.4	50	13.5	Ø3	42	38
		SAE62	80	36.5	27.2	104	79.4	22.4	50	17	–	42	38

¹⁾ X1 port for C5V*32* (for use with unloading valve R5U).

²⁾ D1 = 15 at option code 019 for M14 mounting screws.

BK bolt kits for SAE61 valves



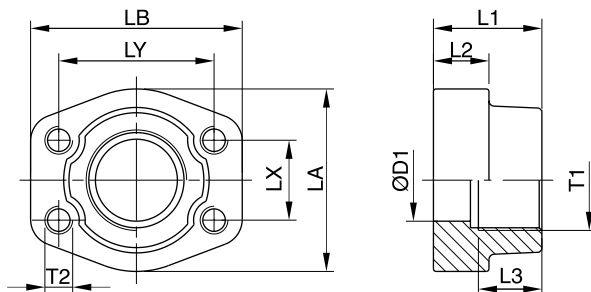
Port	Qty. of valves and group for each stack	I1	I2	UNC screws (12.9)	
				Dimension	Ordering code
3/4" SAE61	1 x A	45	16...22	3/8"-16 x 3/4"	BK-358-16330-0
	1 x B	60		3/8"-16 x 3/4"	BK-358-16350-0
	(1 x A) + (1 x B)	105		3/8"-16 x 5/2"	BK-358-16420-0
	2 x B	120		3/8"-16 x 6"	BK-358-16440-0
1" SAE61	1 x A	45	18...24	3/8"-16 x 3/4"	BK-358-16330-0
	1 x B	60		3/8"-16 x 3/4"	BK-358-16350-0
	(1 x A) + (1 x B)	105		3/8"-16 x 5/2"	BK-358-16430-0
	2 x B	120		3/8"-16 x 6/4"	BK-358-16450-0
1 1/4" SAE61	1 x A	50	21...25	7/16"-14 x 3/2"	BK-358-18340-0
	1 x B	75		7/16"-14 x 4/2"	BK-358-18380-0
	(1 x A) + (1 x B)	125		7/16"-14 x 6/2"	BK-358-18460-0
	2 x B	150		7/16"-14 x 7/2"	BK-358-18500-0
1 1/2" SAE61	1 x A	50	25...27	1/2"-13 x 3/4"	BK-358-20350-0
	1 x B	80		1/2"-13 x 5"	BK-358-20400-0
	(1 x A) + (1 x B)	130		1/2"-13 x 6/4"	BK-358-20470-0
	2 x B	160		1/2"-13 x 8"	BK-358-20520-0

1 bolt kit contains 4 screws.

BK bolt kits for SAE62 valves

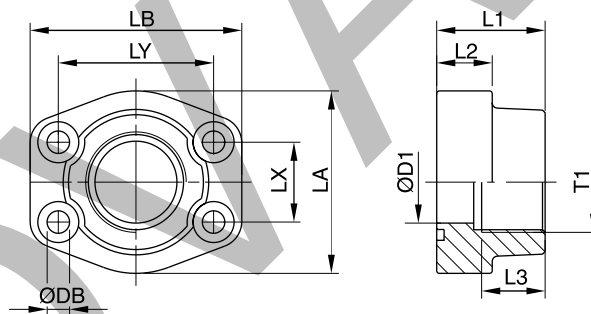
Series	Nominal size	I1	I2	UNC screws (12.9)	
				Dimension	Ordering code
C5V06	3/4"	45	21	3/8"-16 x 3/4"	BK-358-16330-0
C5V08	1"	45	25	7/16"-14 x 3/2"	BK-358-18340-0
C5V10	1 1/4"	50	27	1/2"-13 x 3/4"	BK-358-20350-0
R5V06-6	3/4"	60	21	3/8"-16 x 3/4"	BK-358-16350-0
R5V08-6	1"	60	25	7/16"-14 x 3/4"	BK-358-18350-0
R5V10-6	1 1/4"	75	27	1/2"-13 x 4/2"	BK-358-20380-0
R5V12-6	1 1/2"	80	30	5/8"-11 x 5/4"	BK-358-24410-0

Inlet flange



Port size	Order no. ¹⁾	Inlet flange								
		D1	L1	L2	L3	LA	LB	LX	LY	T2
SAE61										
G $\frac{3}{4}$ "	PCFF33GSU	19	36	18	19	49	66	22.3	47.6	3/8" UNC
G1"	PCFF34GSU	25	38	18	19	53	71	26.2	52.4	3/8" UNC
G1 $\frac{1}{4}$ "	PCFF35GSU	31	41	21	22	69	80	30.2	58.7	7/16" UNC
G1 $\frac{1}{2}$ "	PCFF36GSU	38	44	25	24	77	94	35.7	69.9	1/2" UNC
SAE62										
G $\frac{3}{4}$ "	PCFF63GSU	19	36	19	22	53	71	23.8	50.8	3/8" UNC
G1"	PCFF64GSU	25	44	24	24	69	80	27.8	57.2	7/16" UNC
G1 $\frac{1}{4}$ "	PCFF65GSU	31	44	27	25	77	94	31.8	66.6	1/2" UNC
G1 $\frac{1}{2}$ "	PCFF66GSU	38	51	30	28	89	106	36.5	79.3	5/8" UNC

Outlet and tank port flange

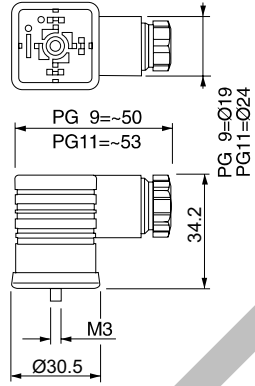


Port size	Order no. ²⁾	Outlet and tank port flange									Srews
		D1	L1	L2	L3	LA	LB	LX	LY	DB	
SAE61											
G $\frac{3}{4}$ "	PFF33GSU	19	36	18	18	49	66	22.3	47.6	10.5	3/8" x 1 1/2 UNC
G1"	PFF34GSU	25	38	18	20	53	71	26.2	52.4	10.5	3/8" x 1 1/2 UNC
G1 $\frac{1}{4}$ "	PFF35GSU	31	41	21	22	69	80	30.2	58.7	11.5	7/16" x 1 1/2 UNC
G1 $\frac{1}{2}$ "	PFF36GSU	38	44	25	24	77	94	35.7	69.9	13.5	1/2" x 1 3/4 UNC
SAE62											
G $\frac{3}{4}$ "	PFF63GSU	19	36	19	18	53	71	23.8	50.8	10.5	3/8" x 1 1/2 UNC
G1"	PFF64GSU	25	44	24	20	69	80	27,8	57,2	11.5	7/16" x 1 1/2 UNC
G1 $\frac{1}{4}$ "	PFF65GSU	31	44	27	22	77	94	31.8	66.6	15.0	1/2" x 1 3/4 UNC
G1 $\frac{1}{2}$ "	PFF66GSU	38	51	30	24	89	106	36.5	79.3	17.0	5/8" x 2 1/4 UNC

¹⁾ 4-bolt flange with UNC threads.

²⁾ 4-bolt flange including UNC screws and O-ring.

Description	Threaded cable joint	Body colour coding	Order no.
Plug EN 175301-803 ¹⁾ , design type AF, protection class IP65 Voltages up to 250 V	PG 9	black, B grey, A	5001710 5001711
	PG11	black, B grey, A	5001716 5001717



Other plugs on request

¹⁾ EN 175301-803 (new) corresponding with DIN 43650 (old).