

# Parker Series R4VR6V (TÜEV) Pilot Operated Pressure Relief Valves Service Manual

Pilot operated pressure relief valves series R4V (TÜV) (DIN 24340 Form D) and R6V (TÜV) (DIN 24340 Form E) include a certification according to directive 2014/68/EU for the usage for safety-related applications.

The valve is set and sealed by the German technical inspection association TÜV. The valve delivery includes the TÜV certificate of conformity.

For series R6V a vent function with a solenoid operated directional valve is available for circulation at minimum pressure.

## Features

- TÜV certificate
- Pilot operated with manual adjustment
- 2 interfaces:
  - R4V subplate ISO 6264 (DIN 24340 Form D)
  - R6V subplate ISO 6264 (DIN 24340 Form E) with CETOP 03 vent valve
- Adjustment leaded (code W)
- Adjustment leaded to maximum pressure, lower pressure possible (code V)



R4V06



R6V06 with vent valve



R4V06



## Name plate data

Example R4V06

415 mm<sup>2</sup> : minimum opening width

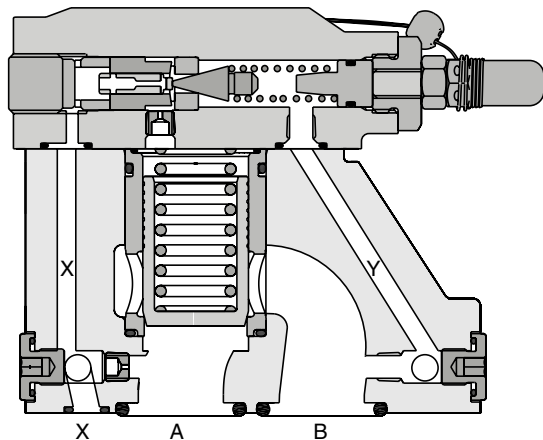
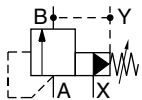
L220 l/min : max. flow

70 bar : set pressure (compare p/Q curves)

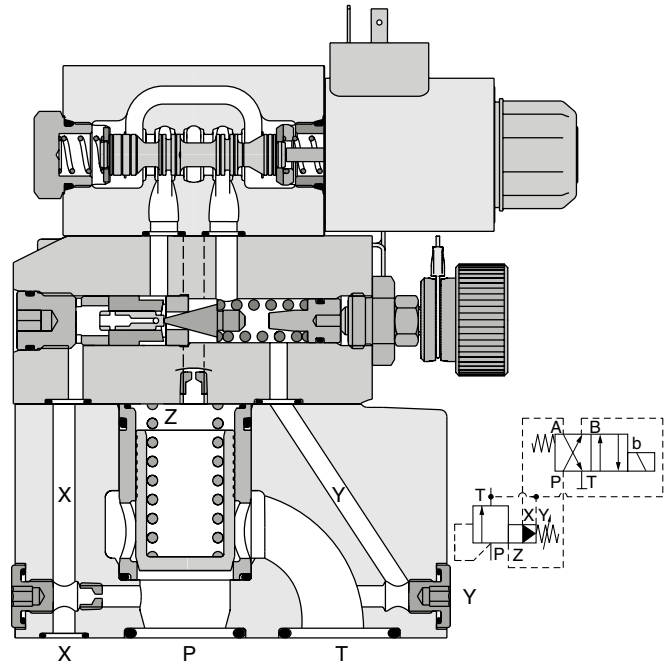
7,3 mm : cartridge stroke

10 % : permitted pressure increase of the flow range

R4V06



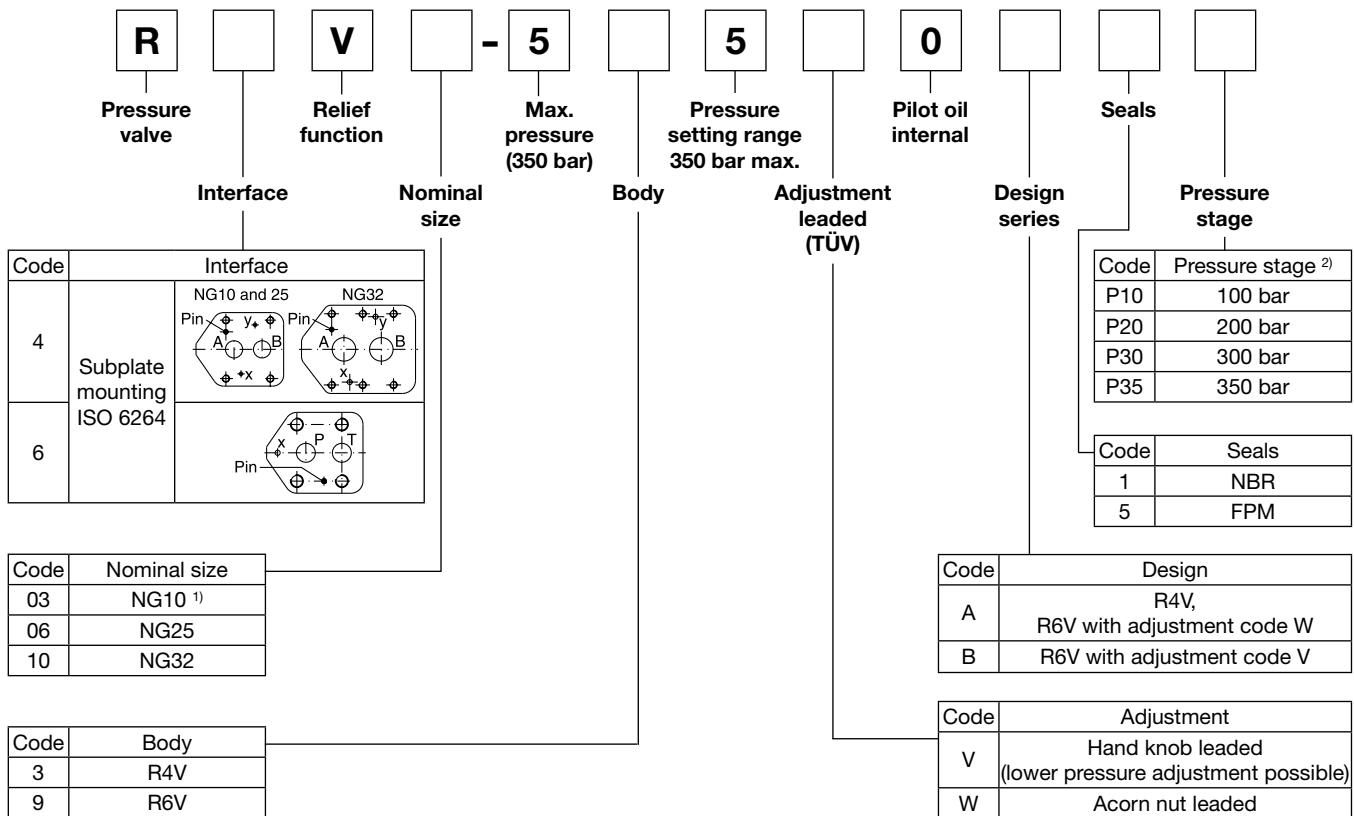
R6V06 with vent valve



### Ordering Code

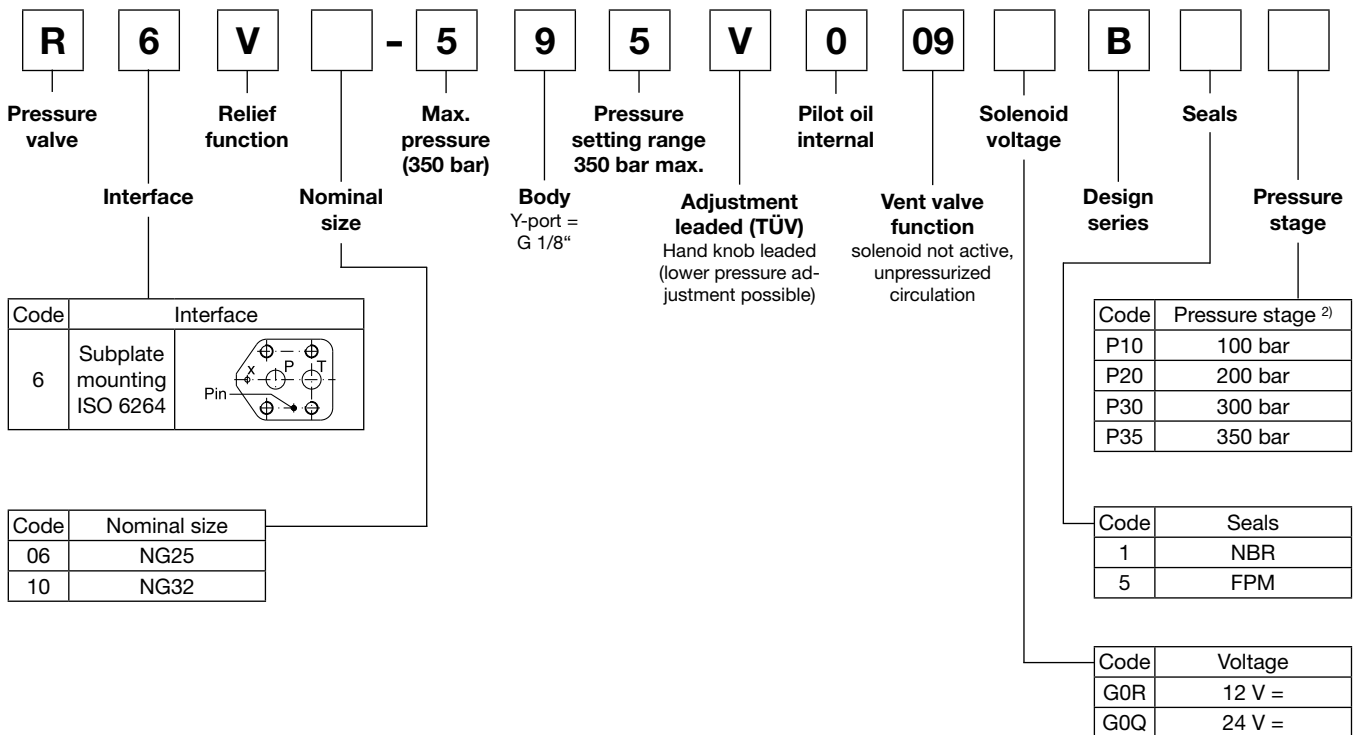
### Pilot Operated Pressure Relief Valves Series R4V / R6V (TÜV)

#### R4V / R6V



4

#### R6V with vent valve



<sup>1)</sup> Not for R6V.

<sup>2)</sup> Further pressure stages on request (in 10 bar steps).

# Technical Data / Characteristic Curves

## R4V / R6V

General			NG10	NG25	NG32
Nominal size					
Interface			Subplate mounting acc. ISO 6264		
Mounting position			Unrestricted, horizontal mounting preferred		
Ambient temperature	[°C]		-20...+60		
MTTF <sub>D</sub> value	[years]		75		
Weight	Series R4V [kg]		2.7	4.5	6.0
	Series R6V [kg]		—	5.8	7.8
Hydraulic					
Max. operating pressure	[bar]		Ports P (or A) up to 350, Port T (or B) and Y 30		
Pressure stages	[bar]		350 (pressure setting see ordering code)		
Max. flow	Series R4V [l/min]		90	300	600
	Series R6V [l/min]		250	500	650
Fluid			Hydraulic oil according to DIN 51524		
Fluid temperature	[°C]		-10...+70		
Viscosity, permitted	[cSt] / [mm <sup>2</sup> /s]		20 ... 400		
recommended	[cSt] / [mm <sup>2</sup> /s]		30 ... 80		
Filtration			ISO 4406; 18/16/13		

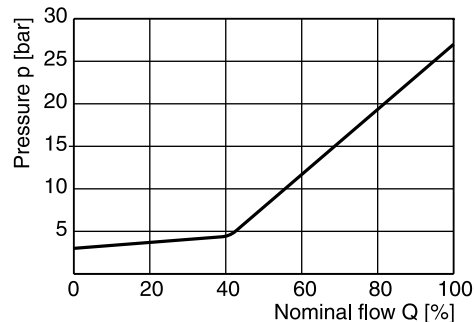
## R6V with vent function

General			NG25	NG32
Nominal size				
Interface			Subplate mounting acc. ISO 6264	
Mounting position			Unrestricted, horizontal mounting preferred	
Ambient temperature	[°C]		-20...+60	
MTTF <sub>D</sub> value	[years]		75	
Weight	[kg]		7.2	9.2
Hydraulic				
Max. operating pressure	[bar]		Ports P up to 350, port T and Y 30	
Pressure stages	[bar]		350 (pressure setting see ordering code)	
Max. flow	[l/min]		500	650
Fluid			Hydraulic oil according to DIN 51524	
Viscosity, permitted	[cSt] / [mm <sup>2</sup> /s]		20 ... 400	
recommended	[cSt] / [mm <sup>2</sup> /s]		30 ... 80	
Fluid temperature	[°C]		-10 ... +70	
Filtration			ISO 4406; 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
Supply voltage	[V]		12 V =	24 V =
Tolerance supply voltage	[%]		±10	±10
Power consumption	hold [W]		32.7	31
	in rush [W]		32.7	31
Solenoid connection			Connector as per EN 175301-803	
Wiring min.	[mm <sup>2</sup> ]		3 x 1.5 recommended	
Wiring length max.	[m]		50 recommended	

## R4V/ R6V minimum pressure curve <sup>1)</sup>

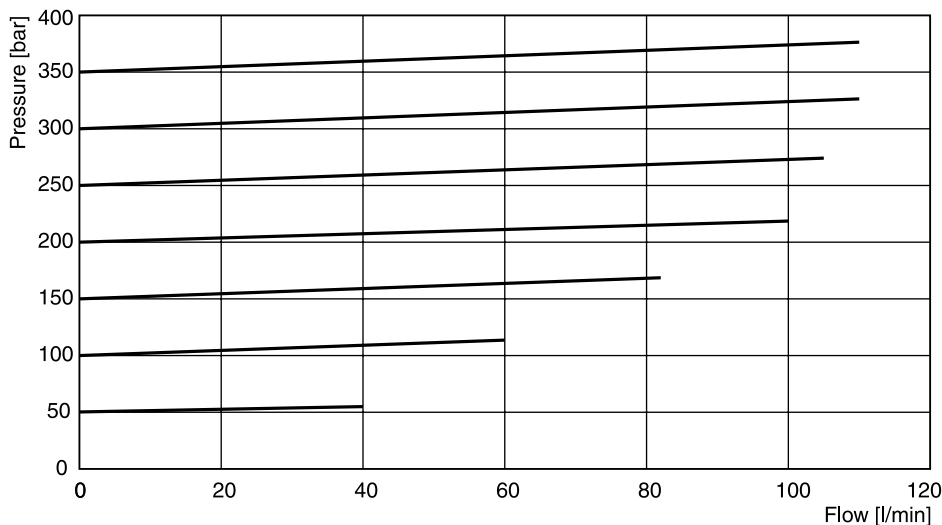
All characteristic curves measured with HLP46 at 50 °C.

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



**p/Q performance curves <sup>1)</sup>**

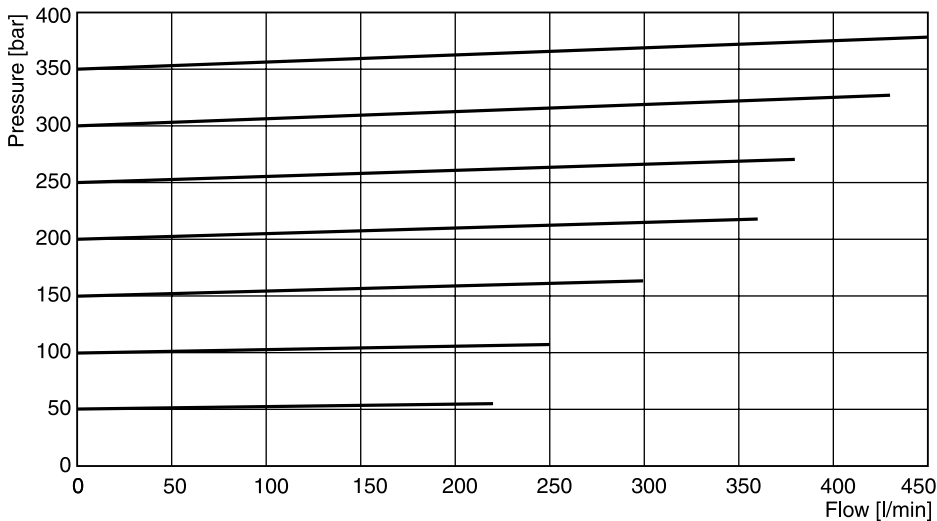
**R4V03**



**R4V03 nameplate data**

Pressure stage	Q <sub>max</sub>	min. opening width	Cartridge stroke	Permitted pressure increase
50 - 70 bar	40 l/min	154 mm <sup>2</sup>	4.4 mm	10 %
80 - 120 bar	60 l/min	154 mm <sup>2</sup>	4.4 mm	10 %
130 - 170 bar	82 l/min	154 mm <sup>2</sup>	4.4 mm	10 %
180 - 200 bar	100 l/min	154 mm <sup>2</sup>	4.4 mm	10 %
210 - 250 bar	105 l/min	154 mm <sup>2</sup>	4.4 mm	10 %
260 - 300 bar	110 l/min	154 mm <sup>2</sup>	4.4 mm	10 %
310 - 350 bar	110 l/min	154 mm <sup>2</sup>	4.4 mm	10 %

**R4V06**



**R4V06 nameplate data**

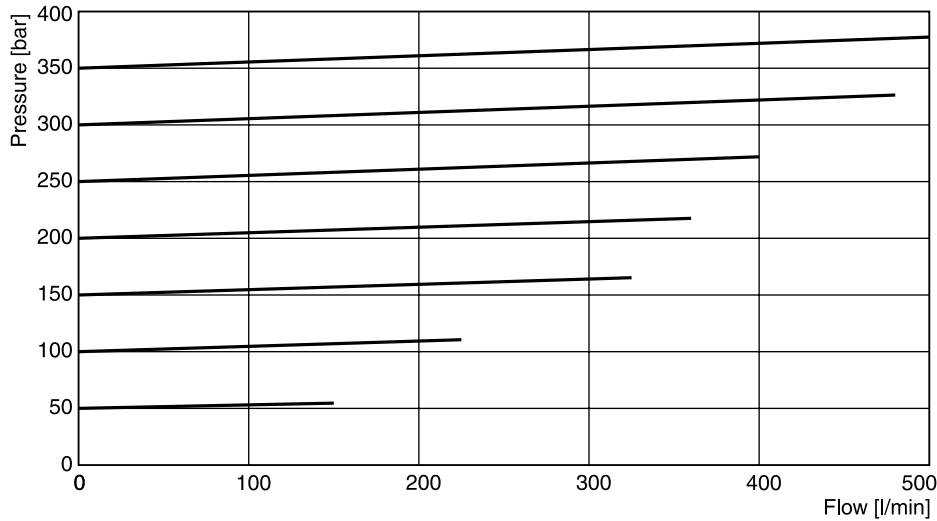
Pressure stage	Q <sub>max</sub>	min. opening width	Cartridge stroke	Permitted pressure increase
50 - 70 bar	220 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
80 - 120 bar	250 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
130 - 170 bar	300 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
180 - 200 bar	360 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
210 - 250 bar	380 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
260 - 300 bar	430 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
310 - 350 bar	450 l/min	415 mm <sup>2</sup>	7.3 mm	10 %

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

## Characteristic Curves

### p/Q performance curves <sup>1)</sup>

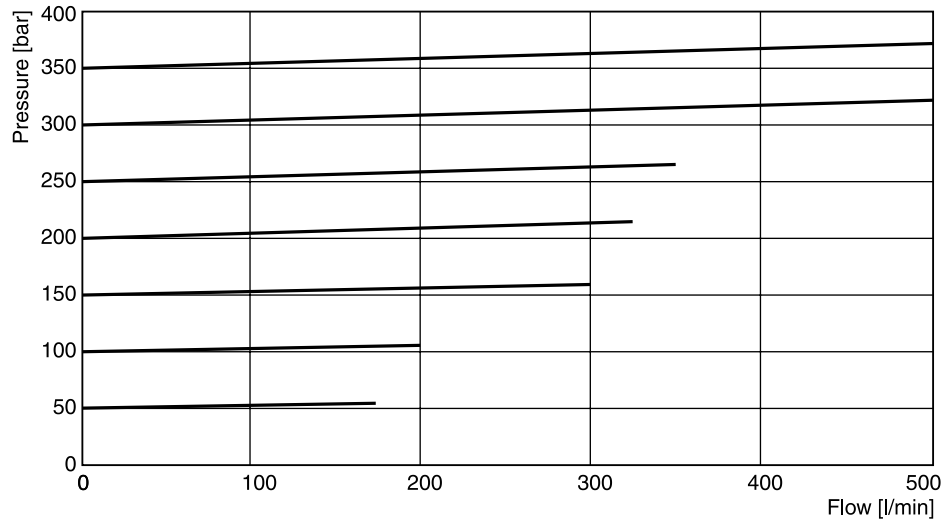
#### R4V10



#### R4V10 nameplate data

Pressure stage	Q <sub>max</sub>	min. opening width	Cartridge stroke	Permitted pressure increase
50 - 70 bar	150 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
80 - 120 bar	225 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
130 - 170 bar	325 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
180 - 200 bar	360 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
210 - 250 bar	400 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
260 - 300 bar	480 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
310 - 350 bar	500 l/min	607 mm <sup>2</sup>	7.3 mm	10 %

#### R6V06



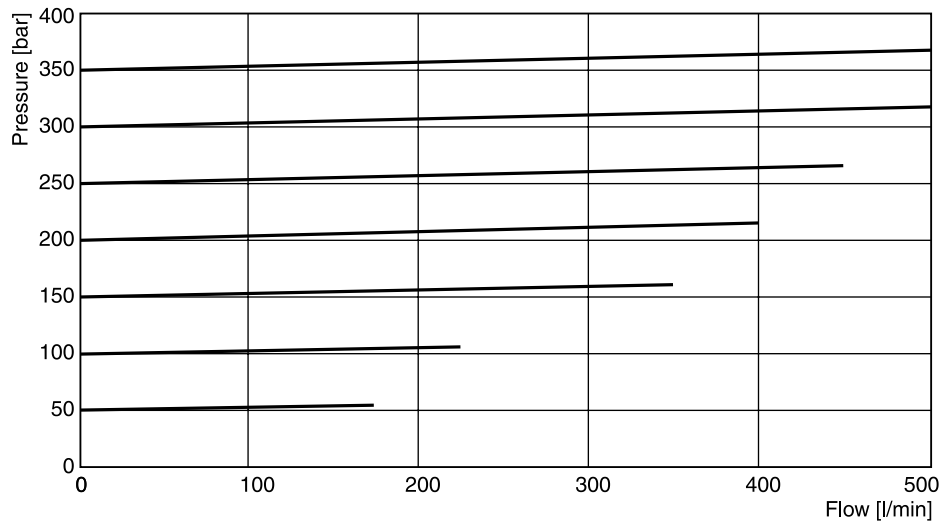
#### R6V06 nameplate data

Pressure stage	Q <sub>max</sub>	min. opening width	Cartridge stroke	Permitted pressure increase
50 - 70 bar	170 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
80 - 120 bar	200 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
130 - 170 bar	300 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
180 - 200 bar	325 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
210 - 250 bar	350 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
260 - 300 bar	500 l/min	415 mm <sup>2</sup>	7.3 mm	10 %
310 - 350 bar	500 l/min	415 mm <sup>2</sup>	7.3 mm	10 %

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

**p/Q performance curves <sup>1)</sup>**

**R6V10**



**R6V10 nameplate data**

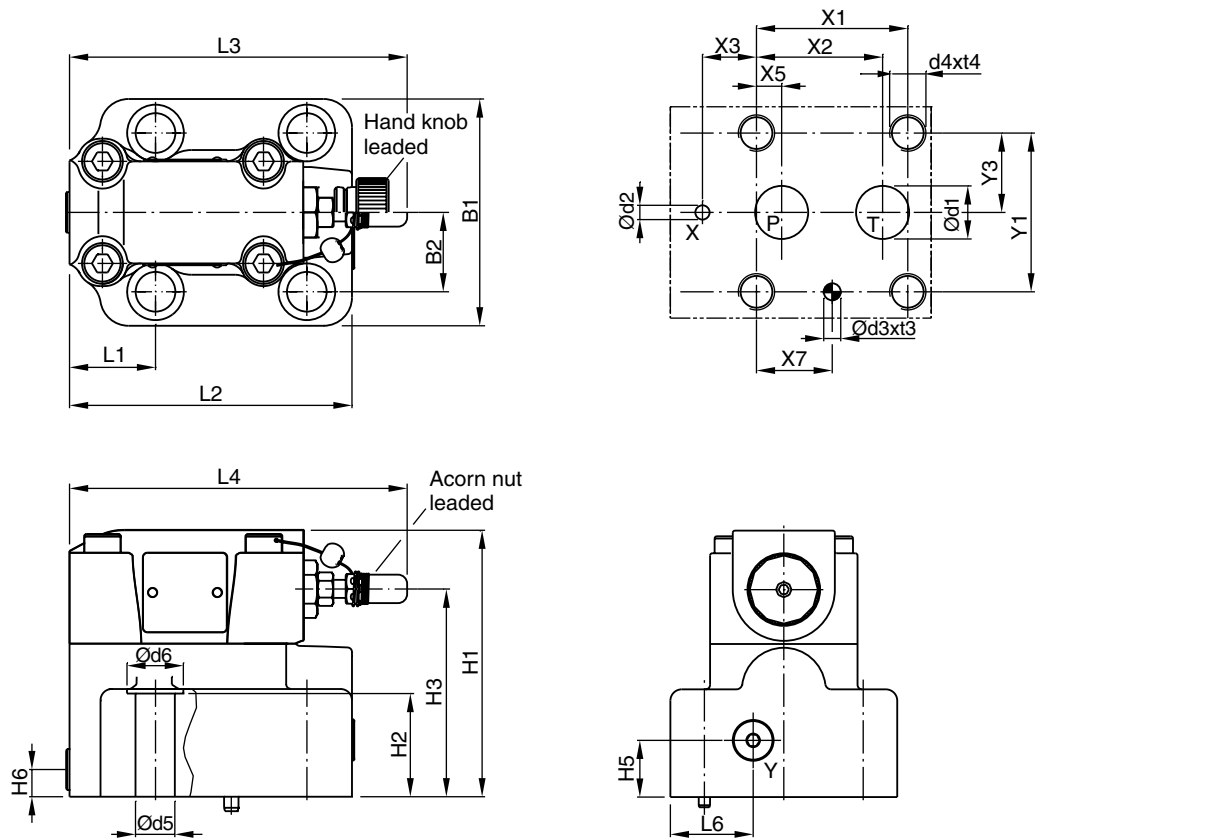
Pressure stage	Q <sub>max</sub>	min. opening width	Cartridge stroke	Permitted pressure increase
50 - 70 bar	170 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
80 - 120 bar	225 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
130 - 170 bar	350 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
180 - 200 bar	400 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
210 - 250 bar	450 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
260 - 300 bar	500 l/min	607 mm <sup>2</sup>	7.3 mm	10 %
310 - 350 bar	500 l/min	607 mm <sup>2</sup>	7.3 mm	10 %

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

# Dimensions

R6V

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Y: external drain port G 1/8"



NG	ISO-code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
25	6264-08-13-*-*97	66.7	55.6	23.8	-	11.1	-	33.4	70	-	35	-	-	-
32	6264-10-17-*-*97	88.9	76.2	31.8	-	12.7	-	44.5	82.6	-	41.3	-	-	-

Tolerance at X and Y pin holes and screw holes ±0.1, at port holes ±0.2.

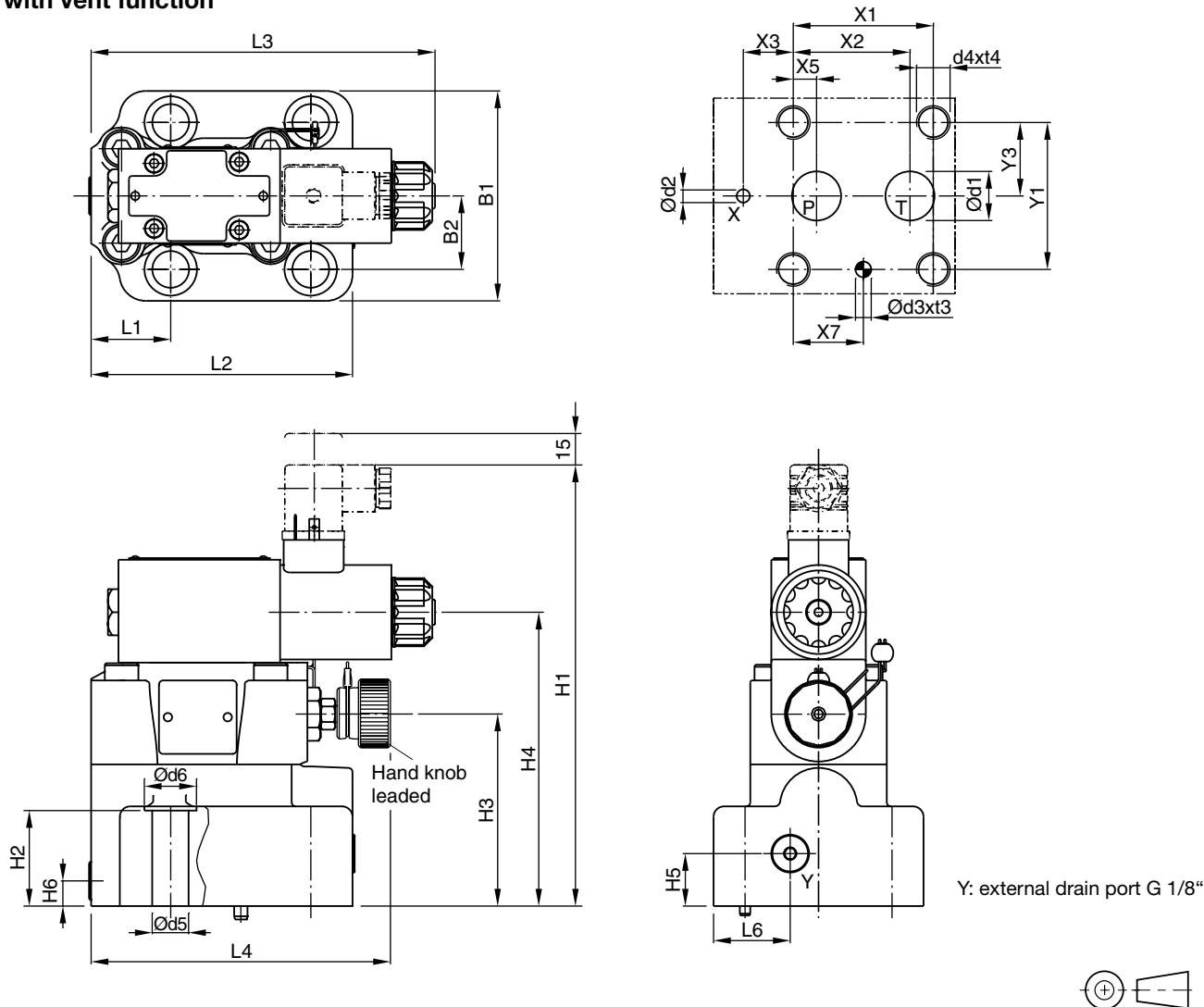
NG	ISO-code	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L6
25	6264-08-13-*-*97	100	35	117.5	46.5	91.5	-	25	12	37.9	124.5	141	144.8	36.5
32	6264-10-17-*-*97	120	41.3	124.5	51.3	98.5	-	26.5	13.5	44.3	153	141	144.8	46.5

NG	ISO-code	d1max	d2max	d3	t3	d4	t4	d5	d6	Subplate <sup>1)</sup>
25	6264-08-13-*-*97	23.4	6.3	7.5	10	M16	27	17.5	25	SPP 6R10B 910
32	6264-10-17-*-*97	32	6.3	7.5	10	M18	28	20	30	SPP 10R12B 910

NG	Bolt kit			Kit		Surface finish
				NBR	FPM	
25	BK366	4x M16x70 ISO 4762-12.9	264 Nm ±15 %	S26-96396-0	S26-96396-5	
32	BK507	4x M18x75 ISO 4762-12.9	398 Nm ±15 %	S26-96392-0	S26-96392-5	

<sup>1)</sup> Details see chapter 12, series SPP.

**R6V with vent function**



**4**

NG	ISO-code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
25	6264-08-13-*-97	66.7	55.6	23.8	-	11.1	-	33.4	70	-	35	-	-	-
32	6264-10-17-*-97	88.9	76.2	31.8	-	12.7	-	44.5	82.6	-	41.3	-	-	-

Tolerance at X and Y pin holes and screw holes ±0.1, at port holes ±0.2.

NG	ISO-code	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L6
25	6264-08-13-*-97	100	35	206.9	46.5	91.5	139.8	25	12	37.9	124.5	163.8	141	36.5
32	6264-10-17-*-97	120	41.3	213.9	51.3	98.5	146.8	25	12	44.3	153	163.8	141	36.5

NG	ISO-code	d1max	d2max	d3	t3	d4	t4	d5	d6	Subplate <sup>1)</sup>
25	6264-08-13-*-97	23.4	6.3	7.5	10	M16	27	17.5	25	SPP 6R10B 910
32	6264-10-17-*-97	32	6.3	7.5	10	M18	28	20	30	SPP 10R12B 910

NG	Bolt kit			Kit		Surface finish
				NBR	FPM	
25	BK366	4x M16x70 ISO 4762-12.9	264 Nm ± 15 %	S26-96396-0	S26-96396-5	
32	BK507	4x M18x75 ISO 4762-12.9	398 Nm ± 15 %	S26-96392-0	S26-96392-5	

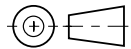
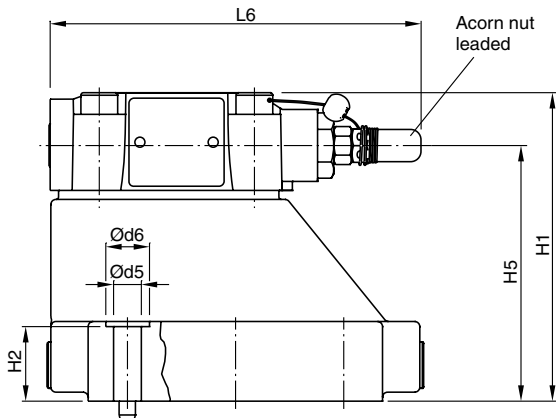
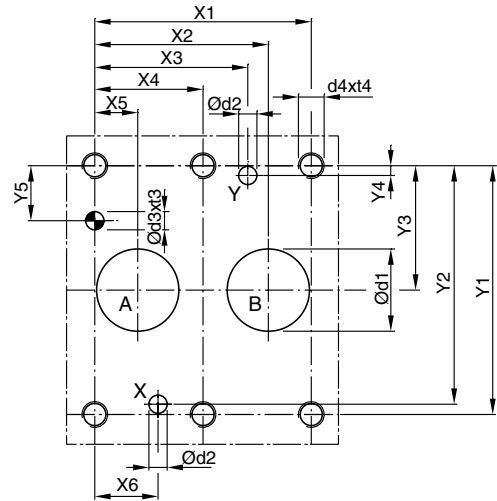
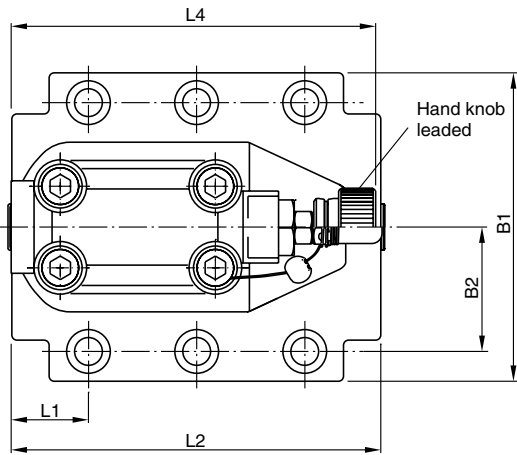
<sup>1)</sup> Details see chapter 12, series SPP.



# Dimensions

## R4V

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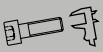

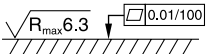


NG	ISO-code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
10	6264-06-07-*97	42.9	35.8	21.5	-	7.2	21.5	0	66.7	58.8	33.4	7.9	14.3	-
25	6264-08-11-*97	60.3	49.2	39.7	-	11.1	20.6	0	79.4	73	39.7	6.4	15.9	-
32	6264-10-15-*97	84.2	67.5	59.5	42.1	16.7	24.6	0	96.8	92.8	48.4	3.8	21.4	-

Tolerance at X and Y pin holes and screw holes ±0.1, at port holes ±0.2.

NG	ISO-code	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L4	L6
10	6264-06-07-*97	87.3	33.35	83	21	-	-	62.5	-	25	90.8	143	144.8
25	6264-08-11-*97	105	39.7	107.5	29	-	-	87	-	30.9	123	143	144.8
32	6264-10-15-*97	120	48.4	120	30	-	-	99.5	-	29.8	143.5	143	144.8

NG	ISO-code	d1max	d2max	d3	t3	d4	t4	d5	d6	Subplate <sup>1)</sup>
10	6264-06-07-*97	15	7	7.1	8	M10	16	10.8	17	SPP 3M6B 910
25	6264-08-11-*97	23.4	7.1	7.1	8	M10	18	10.8	17	SPP 6M8B 910
32	6264-10-15-*97	32	7.1	7.1	8	M10	20	10.8	17	SPP 10M12B 910

NG	Bolt kit			Kit		Surface finish
				NBR	FPM	
10	BK505	4x M10x35 ISO 4762-12.9	63 Nm ±15 %	S26-58507-0	S26-58507-5	
25	BK485	4x M10x45 ISO 4762-12.9	63 Nm ±15 %	S26-58475-0	S26-58475-5	
32	BK506	6x M10x45 ISO 4762-12.9	63 Nm ±15 %	S26-58508-0	S26-58508-5	

<sup>1)</sup> Details see chapter 12, series SPP.