

# Parker Series R4VR6V R4VR6V Proportional Pilot Operated Pressure Relief Valve, Subplate Mounting Service Manual

Pilot operated proportional pressure relief valves series R4V (DIN 24340 Form D) and R6V (DIN 24340 Form E) consist of a proportionally adjusted pilot stage and a seated type main stage.

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

## Features

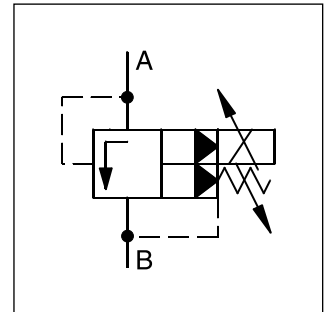
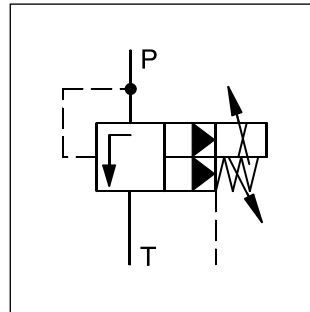
- Pilot operated with proportional solenoid
- 2 interfaces:
  - R4V subplate ISO 6264 (DIN 24340 Form D)
  - R6V subplate ISO 6264 (DIN 24340 Form E)
- 3 pressure stages
- Mechanical maximum pressure adjustment (optional for R6V)



R6V06

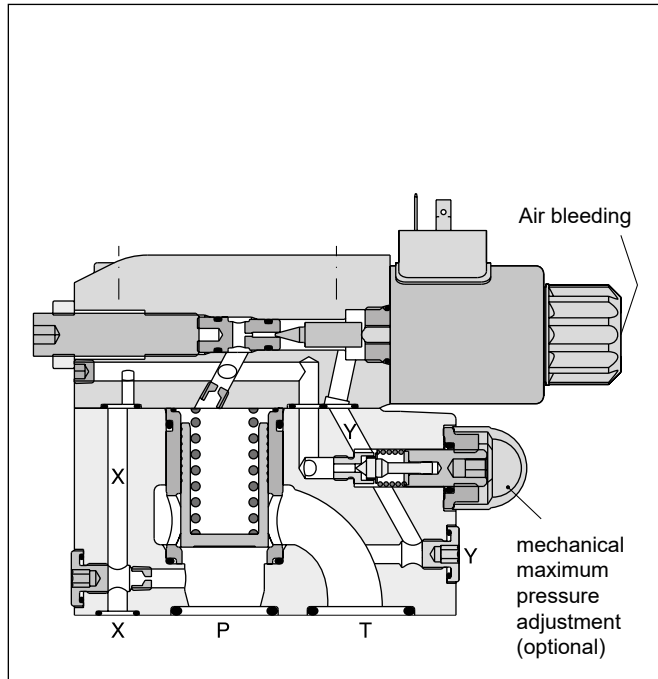


R4V06

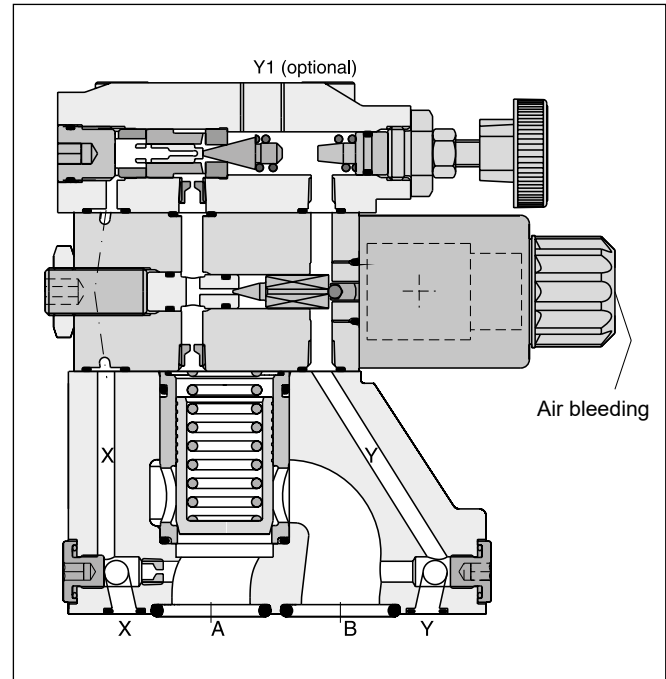


4

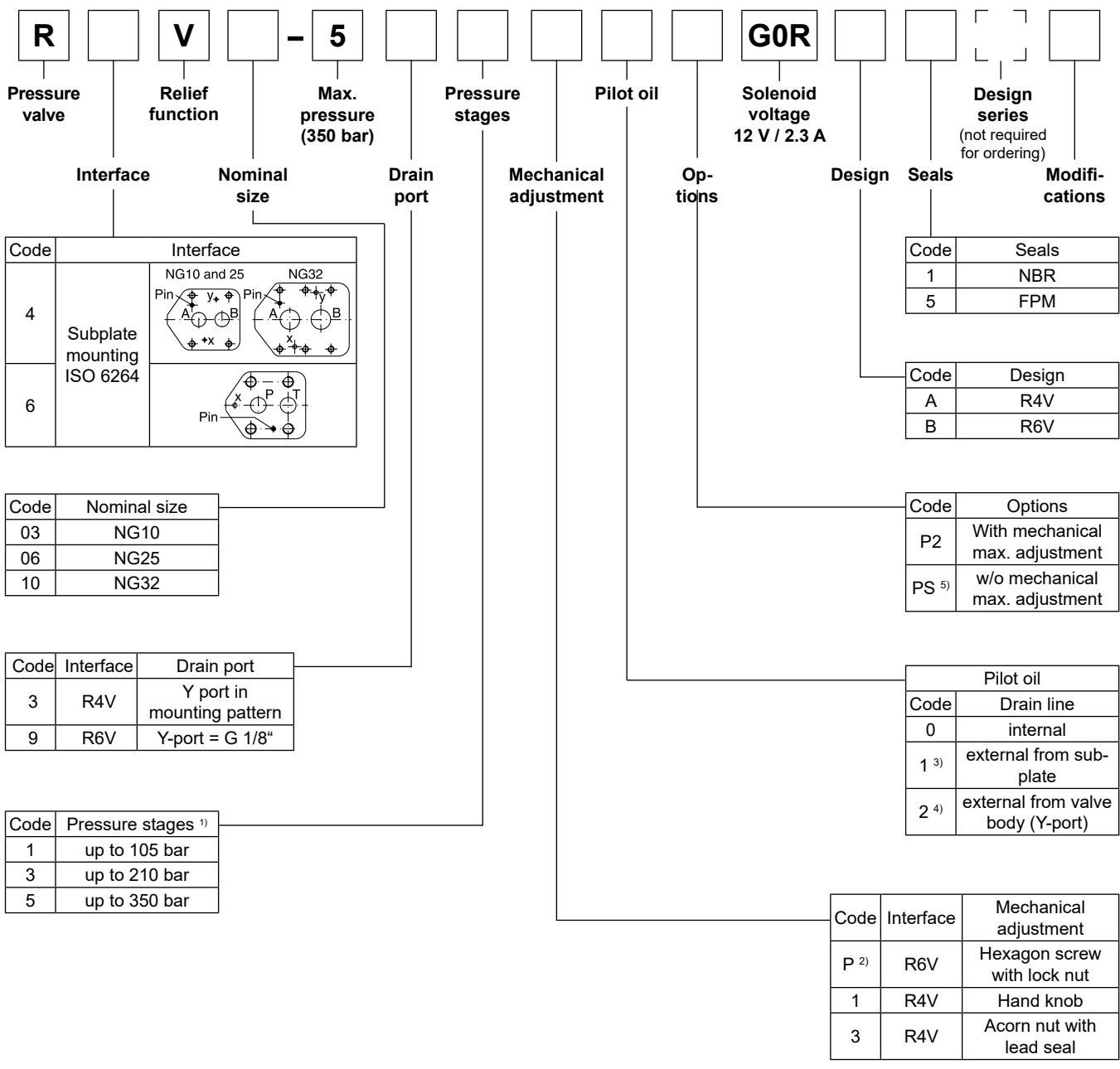
**R6V06**



**R4V06**



**4**



<sup>1)</sup> Other pressure stages on request.

<sup>2)</sup> Use code P also for valve w/o mechanical adjustment.

<sup>3)</sup> R4V only.

<sup>4)</sup> R6V only.

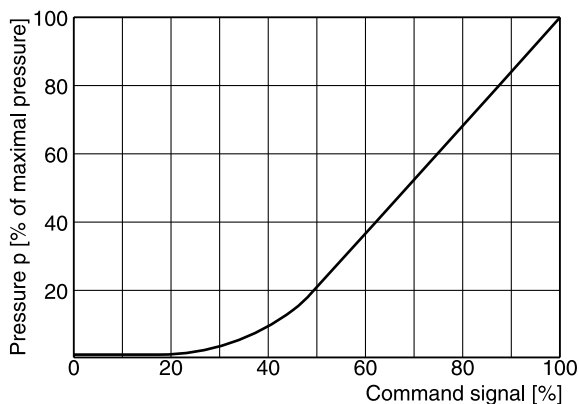
<sup>5)</sup> Not for R4V.

## Technical Data

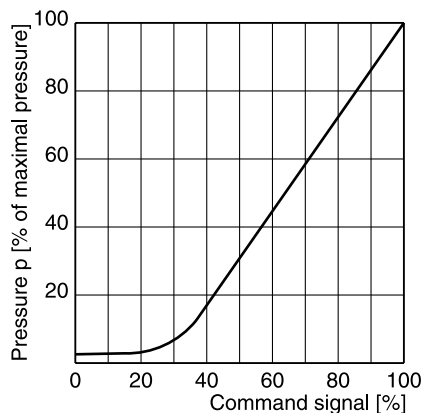
General			
Nominal size			<b>10</b> <b>25</b> <b>32</b>
Interface	Subplate mounting acc. ISO 6264		
Mounting position	Unrestricted, horizontal mounting preferred		
Ambient temperature	[°C]	-20...+60	
MTTF <sub>D</sub> value	[years]	75	
Weight	Series R4V	[kg]	4.5                      6.3                      7.8
	Series R6V	[kg]	5.2                      6.4                      8.3
Hydraulic			
Max. operating pressure	[bar]	Ports P (or A) and X up to 350, port T (or B) and Y 30	
Pressure stages	[bar]	105, 210, 350	
Nominal flow	Series R4V	[l/min]	90                      300                      600
	Series R6V	[l/min]	250                      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]	-20...+70 (NBR: -25...+70)	
Filtration	ISO 4406 (1999); 18/16/13		
Electrical (prop. solenoid)			
Duty ratio	[%]	100 ED; CAUTION: coil temperature up to 150 °C possible	
Protection class	IP65 in accordance with EN 60529 (with correctly mounted plug-in connector)		
Supply voltage	[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		

4

**R4V Signal/pressure curve**

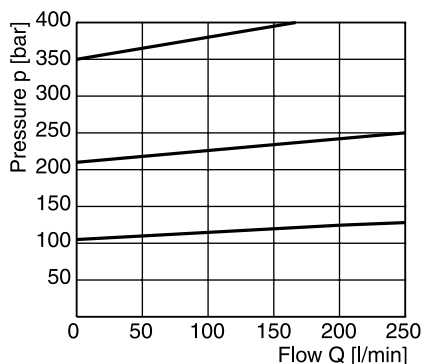


**R6V Signal/pressure curve**

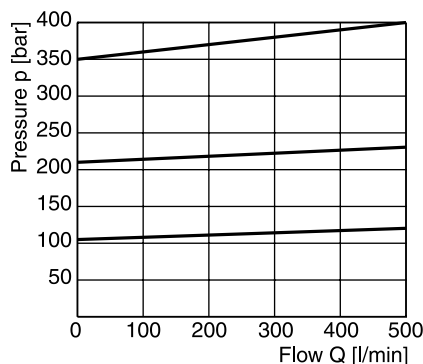


**p/Q performance curves <sup>1)</sup>**

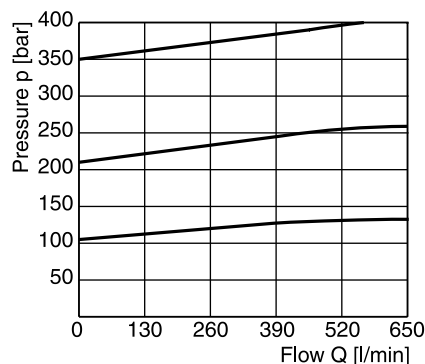
**R4V / R6V03**



**R4V / R6V06**

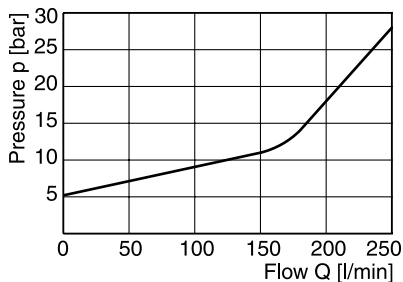


**R4V / R6V10**

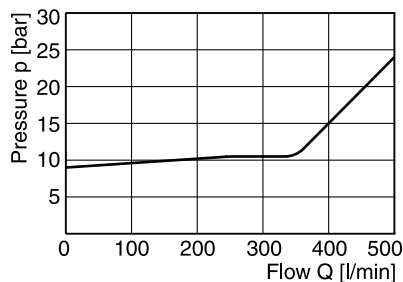


**Minimum pressure curves <sup>1)</sup>**

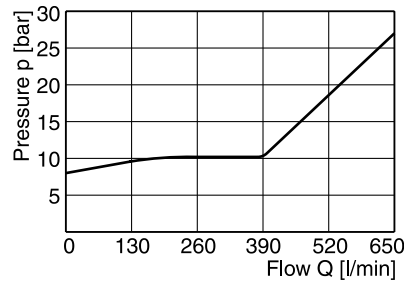
**R4V / R6V03**



**R4V / R6V06**



**R4V / R6V10**

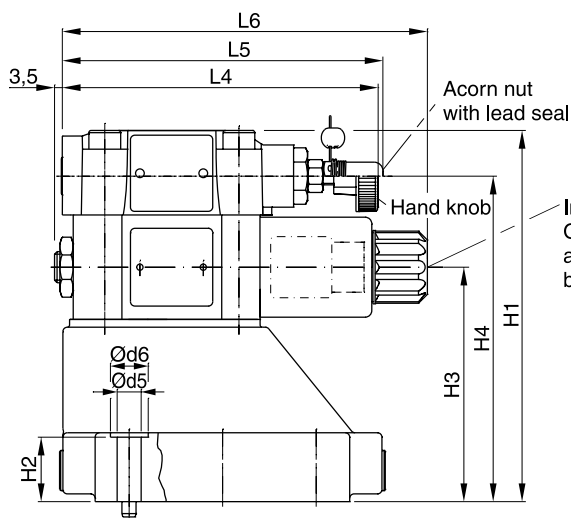
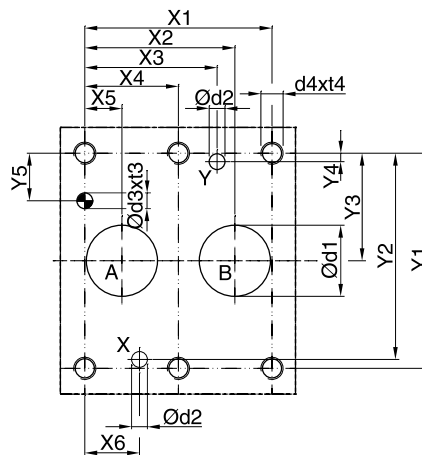
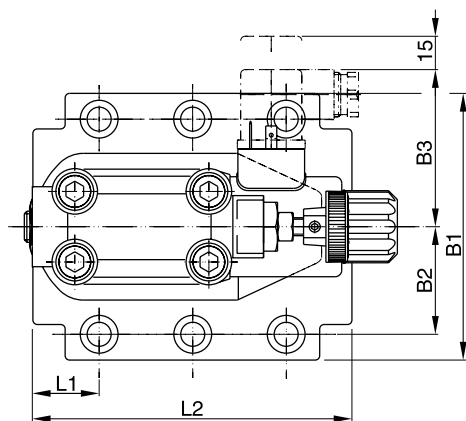


All characteristic curves measured with HLP46 at 50 °C.

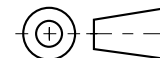
<sup>1)</sup> The performance curves are measured with external drain.  
 For internal drain the tank pressure has to be added to curve.

# Dimensions

## R4V



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

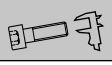
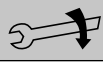
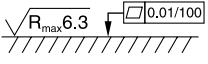


NG	ISO-code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
10	6264-06-07-*-97	42.9	35.8	21.5	–	7.2	21.5	0	66.7	58.8	33.4	7.9	14.3	–
25	6264-08-11-*-97	60.3	49.2	39.7	–	11.1	20.6	0	79.4	73	39.7	6.4	15.9	–
32	6264-10-15-*-97	84.2	67.5	59.5	42.1	16.7	24.6	0	96.8	92.8	48.4	3.8	21.4	–

Tolerance at X and Y pin holes and screw holes  $\pm 0.1$ , at port holes  $\pm 0.2$ .

NG	ISO-code	B1	B2	B3	H1	H2	H3	H4	H6	L1	L2	L3	L4	L5	L6
10	6264-06-07-*-97	87.3	33.35	71	130	21	68.5	109.5	–	25	90.8	–	143	144.8	164.8
25	6264-08-11-*-97	105	39.7	71	154.5	29	93	134	–	30.9	123	–	143	144.8	164.8
32	6264-10-15-*-97	120	48.4	71	167	30	105.5	146.5	–	29.8	143.5	–	143	144.8	164.8

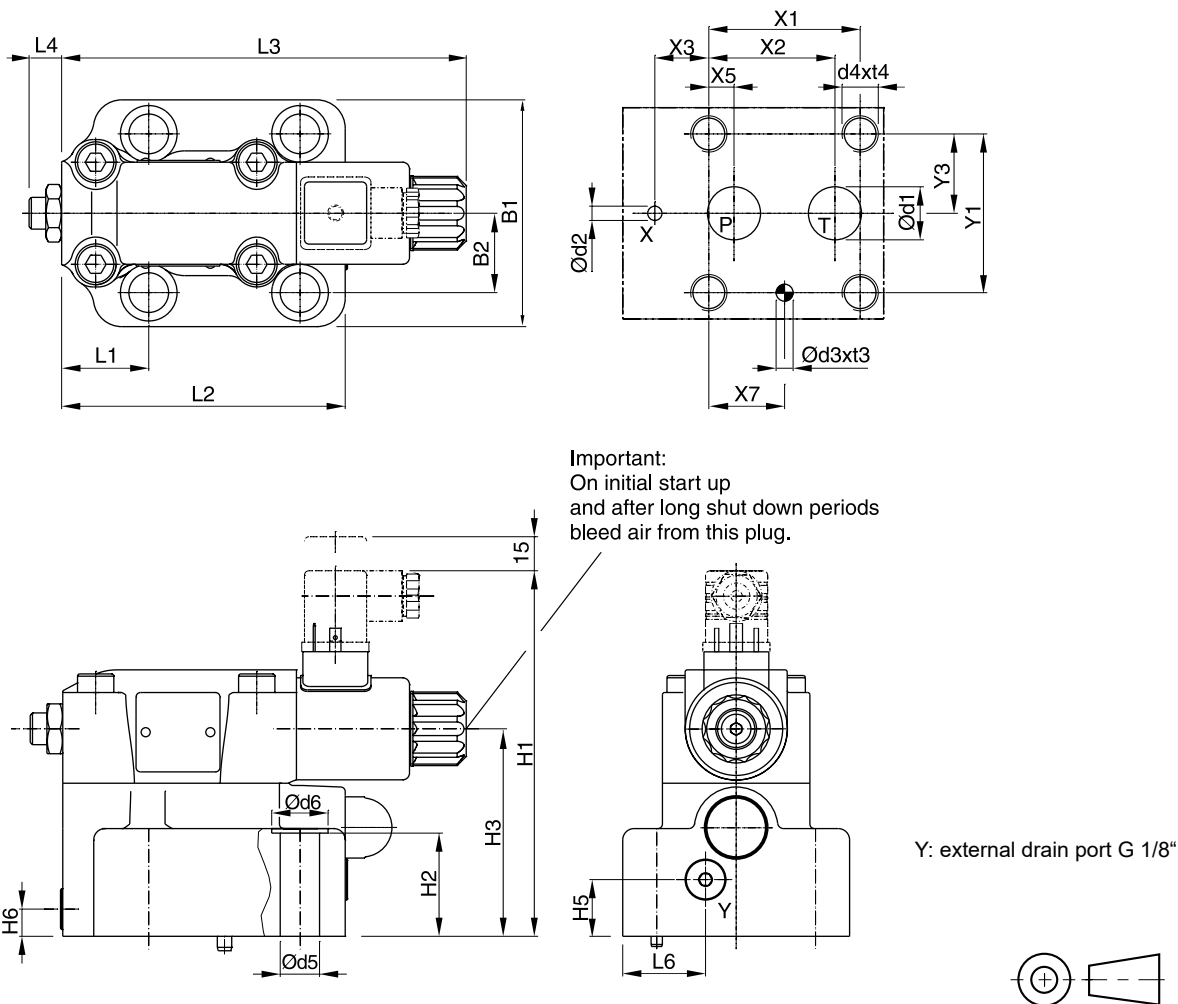
NG	ISO-code	d1max	d2max	d3	t3	d4	t4	d5	d6	Subplate <sup>1)</sup>
10	6264-06-07-*-97	15	7	7.1	8	M10	16	10.8	17	SPP 3M6B 910
25	6264-08-11-*-97	23.4	7.1	7.1	8	M10	18	10.8	17	SPP 6M8B 910
32	6264-10-15-*-97	32	7.1	7.1	8	M10	20	10.8	17	SPP 10M12B 910

NG	Bolt kit			Kit		Surface finish
				NBR	FPM	
10	BK505	4x M10x35 ISO 4762-12.9	63 Nm $\pm 15$ %	S26-58507-0 <sup>2)</sup>	S26-58507-5 <sup>2)</sup>	
25	BK485	4x M10x45 ISO 4762-12.9	63 Nm $\pm 15$ %	S26-58475-0 <sup>2)</sup>	S26-58475-5 <sup>2)</sup>	
32	BK506	4x M10x45 ISO 4762-12.9	63 Nm $\pm 15$ %	S26-58508-0 <sup>2)</sup>	S26-58508-5 <sup>2)</sup>	
Prop. section P2				S26-58473-0	S26-58473-5	

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

<sup>2)</sup> Please combine seal kit of one size with seal kit of prop. section P2 for complete seal kit.

**R6V**



NG	ISO-code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
10	6264-06-09-*-97	53.8	47.5	0	-	22.1	-	22.1	53.8	-	26.9	-	-	-
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	L5	L6
10	6264-06-09-*-97	80	26.9	158.7	27	88	-	20.5	25	52	117	182.3	14.4	-	29.5
25	6264-08-13-*-97	100	35	161.2	46.5	91.5	-	25	12	37.9	124.5	182.3	14.4	-	36.5
32	6264-10-17-*-97	120	41.3	166.7	51.3	98.5	-	26.5	13.5	44.3	153	182.3	14.4	-	46.5

NG	ISO-code	d1max	d2max	d3	t3	d4	t4	d5	d6	Subplate <sup>1)</sup>
10	6264-06-09-*-97	14.7	4.8	7.5	10	M12	20	13.5	20	SPP 3R6B 910
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	
10	BK494	4x M12x45 ISO 4762-12.9	108 Nm ±15 %	S26-98589-0	S26-98589-5	
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.