

General Description

Series R4U subplate mounted unloading valves are used to unload a circuit at low pressure. The mechanically adjustable pressure signal to unload the main stage has to be applied to port X. The pressure differential between opening and closing is nominal 15% or 28% of the setting pressure:

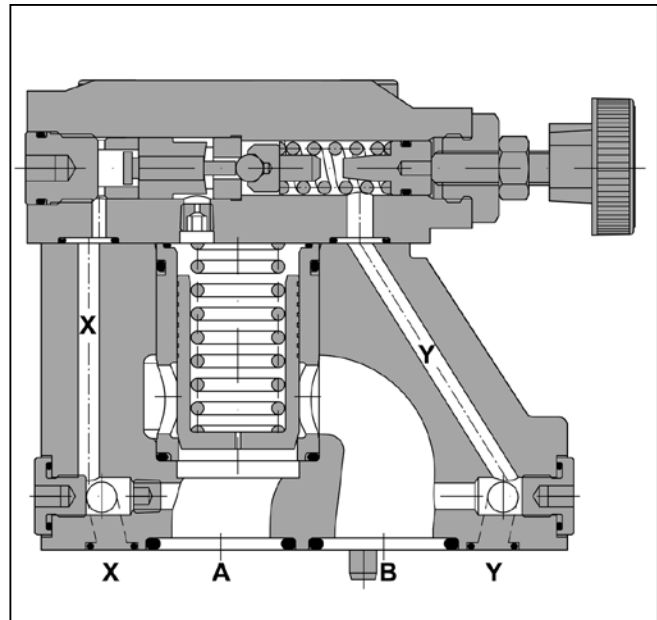
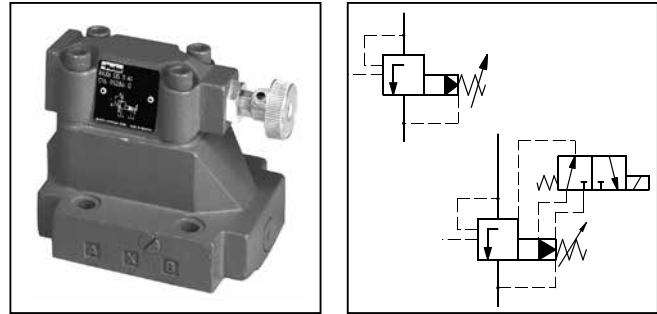
15% for pressure ranges 350 Bar (5075 PSI) and 28% for 105 Bar (1523 PSI) and 210 Bar (3045 PSI).

Typical applications are to unload the pumps in an accumulator circuit and to unload the low pressure stage of a double pump.

In addition, Series R4U with vent function is vented by electrical operation.

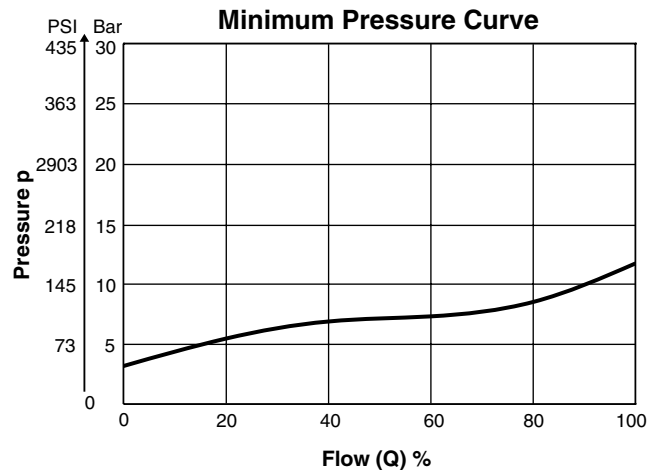
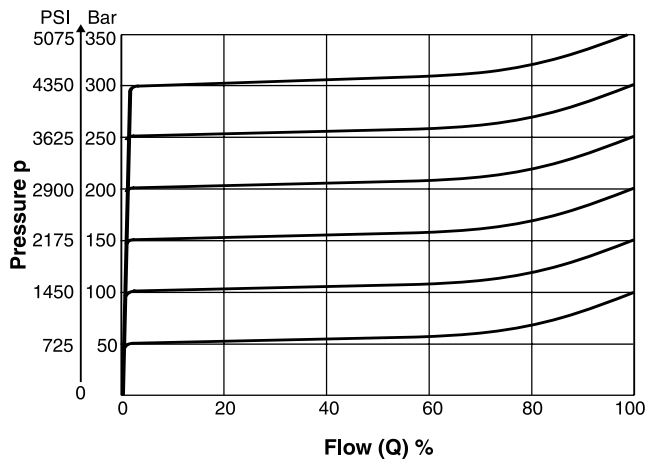
Features

- Pilot operated unloading valve.
- 3 pressure ranges.
- 2 switching types (series R4U with vent function).
- 3 adjustment modes:
 - Hand knob
 - Screw with locknut
 - Key lock

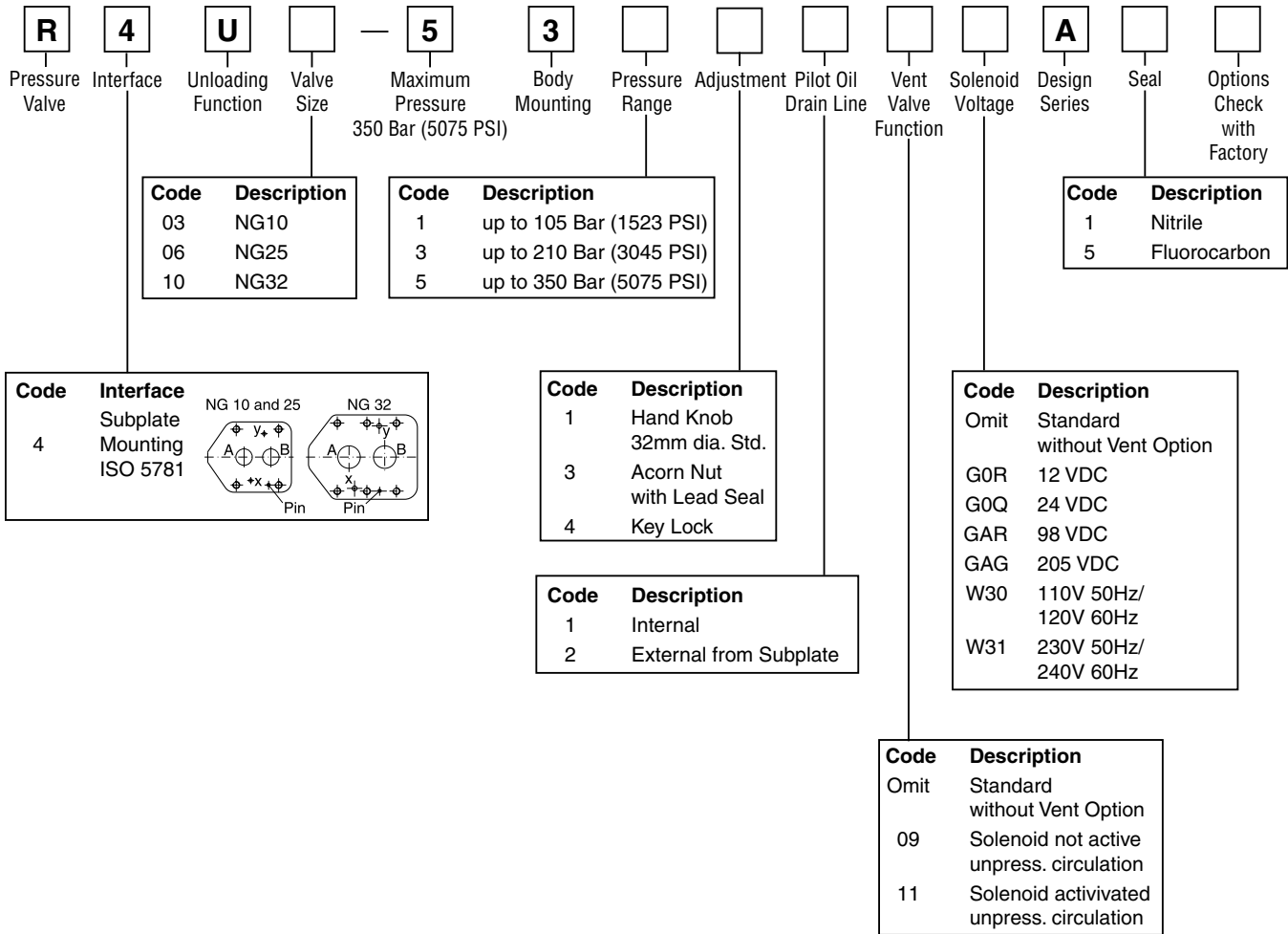


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Performance Curves



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



Weight:

- R4U03: 2.7 kg (6.0 lbs.)
- R4U06: 4.5 kg (9.9 lbs.)
- R4U10: 6.0 kg (13.2 lbs.)

Weight: with Vent

- R4U03: 4.4 kg (9.7 lbs.)
- R4U06: 6.2 kg (13.7 lbs.)
- R4U10: 7.7 kg (17.0 lbs.)

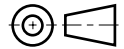
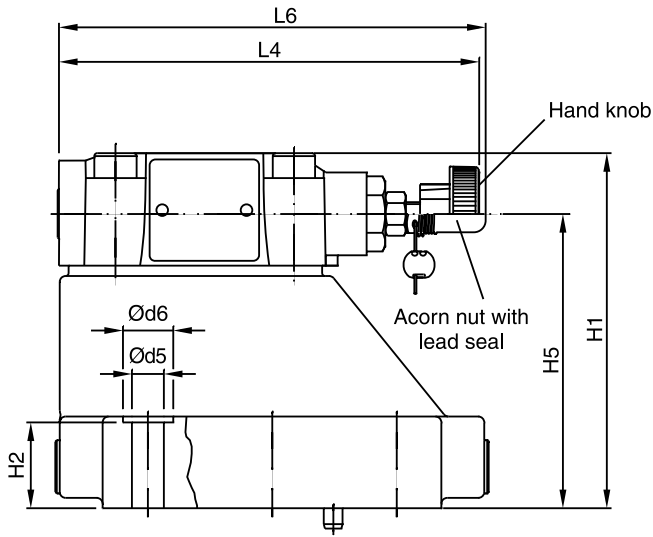
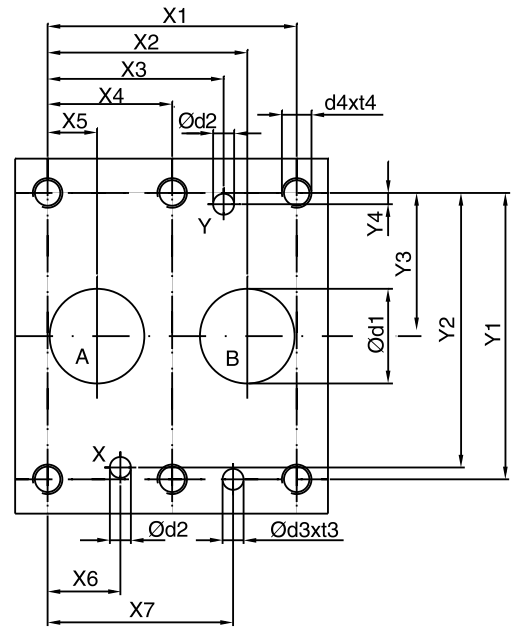
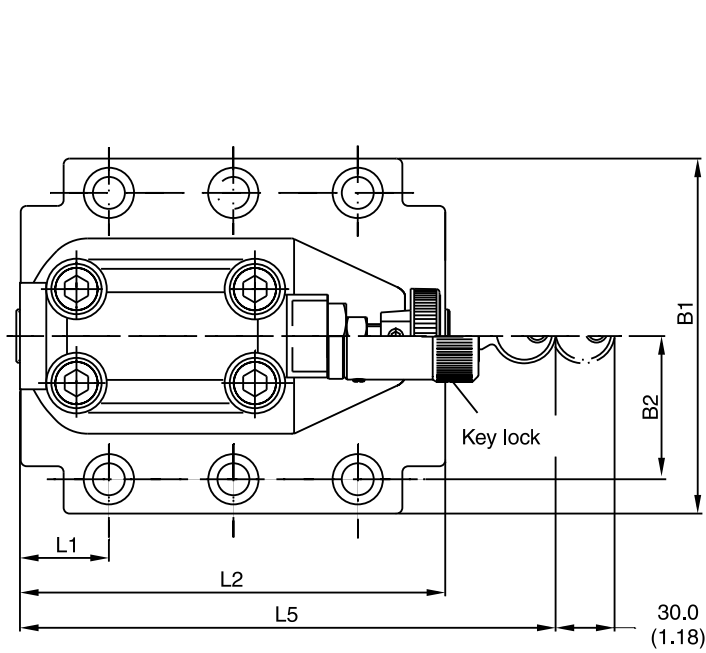
General		NG10	NG25	NG32
Size				
Interface	Subplate mounting acc. ISO 5781			
Mounting Position	As desired, horizontal mounting preferred			
Ambient Temperature	-20°C to +80°C (-4°F to +176°F)			
Hydraulic				
Operating Pressure	Ports A and X up to 350 Bar (5075 PSI), Ports B and Y depressurized			
Pressure Range	105, 210, 350 Bar (1523, 3045, 5075 PSI)			
Pressure Differential	15% for pressure range 350 Bar (2538 PSI) 28% for pressure ranges 105 Bar (1523 PSI) and 250 Bar (3625 PSI)			
Nominal Flow	150 LPM (39.7 GPM)	350 LPM (92.6 GPM)	650 LPM (172.0 GPM)	
Pressure Fluid	Hydraulic oil according to DIN 51524 ... 525			
Viscosity Recommended Maximum	30 to 50 cSt / mm ² /s (139 to 232 SSU) 20 to 380 cSt / mm ² /s (93 to 1761 SSU)			
Pressure Fluid Temperature Recommended Maximum	+30°C to +50°C (+86°F to +122°F) -20°C to +70°C (-4°F to +158°F)			
Filtration	ISO 4406 (1999), 18/16/13			

With Vent Function

General		NG10	NG25	NG32			
Size							
Interface	Subplate mounting acc. ISO 5781						
Mounting Position	As desired, horizontal mounting preferred						
Ambient Temperature	-20°C to +80°C (-4°F to +176°F)						
Hydraulic							
Operating Pressure	Ports A and X up to 350 Bar (5075 PSI), Ports B and Y depressurized						
Pressure Range	105, 210, 350 Bar (1523, 3045, 5075 PSI)						
Pressure Differential	15% for pressure range 350 Bar (5075 PSI) 28% for pressure ranges 105 Bar (1523 PSI) and 250 Bar (3625 PSI)						
Nominal Flow	150 LPM (39.7 GPM)	350 LPM (92.6 GPM)	650 LPM (172.0 GPM)				
Pressure Fluid	Hydraulic oil according to DIN 51524 ... 525						
Viscosity Recommended Maximum	30 to 50 cSt / mm ² /s (139 to 232 SSU) 20 to 380 cSt / mm ² /s (93 to 1761 SSU)						
Pressure Fluid Temperature Recommended Maximum	+30°C to +50°C (+86°F to +122°F) -20°C to +70°C (-4°F to +158°F)						
Filtration	ISO 4406 (1999), 18/16/13						
Electrical (solenoid)							
Duty Cycle	100% ED CAUTION: Coil temperature up to 180°C (356°F) possible						
Max. Switching Frequency	16,000 (DC), 7200 (AC)						
Protection Class	IP65 in accordance with EN 60529 (plugged and mounted)						
	Code	G0R	G0Q	GAR	GAG	W30	W31
Supply Voltage		12V	24V	98V	205V	110 at 50Hz 120 at 60Hz	230 at 50Hz 240 at 60Hz
Supply Tolerance		+5...-10	+5...-10	+5...-10	+5...-10	+5...-10	+5...-10
Power Consumption	Hold	31W	31W	31W	31W	78W	78W
	In Rush	31W	31W	31W	31W	264W	264W
Solenoid Connection	Connector as per EN 175301-803						
Wiring Minimum	3 x 1.5 mm ² recommended						
Wiring Length Maximum	50 m (164 ft.) recommended						

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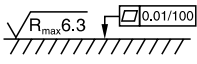
Inch equivalents for millimeter dimensions are shown in (**)

NG	ISO-code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
10	5781-06-07-0-00	42.9 (1.69)	35.8 (1.41)	21.5 (0.85)	–	7.2 (0.28)	21.5 (0.85)	31.8 (1.25)	66.7 (2.63)	58.8 (2.31)	33.4 (1.31)	7.9 (0.31)	–	–
25	5781-08-10-0-00	60.3 (2.37)	49.2 (1.94)	39.7 (1.56)	–	11.1 (0.44)	20.6 (0.81)	44.5 (1.75)	79.4 (3.13)	73.0 (2.87)	39.7 (1.56)	6.4 (0.25)	–	–
32	5781-10-13-0-00	84.2 (3.31)	67.5 (2.66)	59.5 (2.34)	42.1 (1.66)	16.7 (0.66)	24.6 (0.97)	62.7 (2.47)	96.8 (3.81)	92.8 (3.65)	48.4 (1.91)	3.8 (0.15)	–	–

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

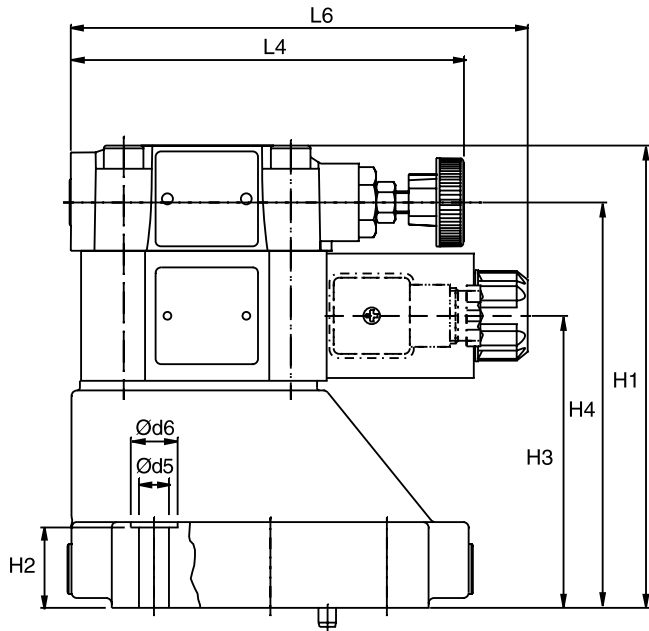
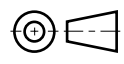
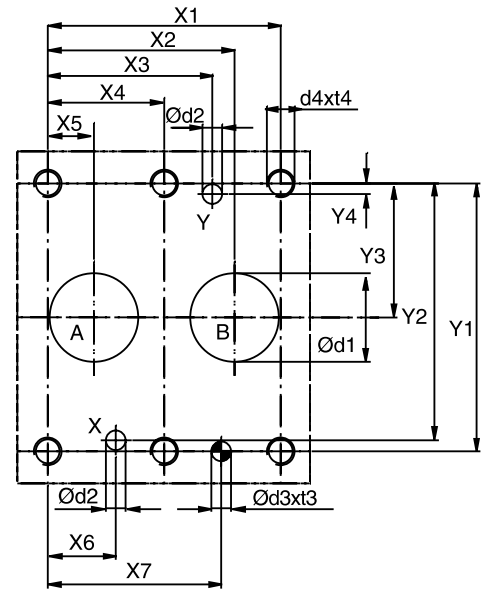
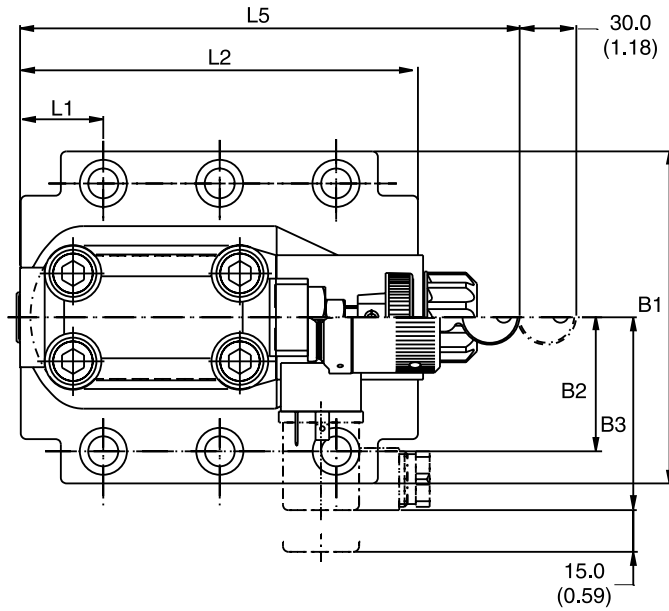
NG	ISO-code	B1	B2	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	L6
10	5781-06-07-0-00	87.3 (3.44)	33.4 (1.31)	83.0 (3.27)	21.0 (0.83)	62.5 (2.46)	–	–	–	29.0 (1.14)	94.8 (3.73)	–	141.0 (5.55)	181.0 (7.13)	–
25	5781-08-10-0-00	105.0 (4.13)	39.7 (1.56)	109.5 (4.31)	29.0 (1.14)	89.0 (3.50)	–	–	–	34.7 (1.37)	126.8 (4.99)	–	141.0 (5.55)	181.0 (7.13)	–
32	5781-10-13-0-00	120.0 (4.72)	48.4 (1.91)	120.0 (4.72)	29.0 (1.14)	99.5 (3.92)	–	–	–	30.6 (1.20)	144.3 (5.68)	–	141.0 (5.55)	181.0 (7.13)	–

NG	ISO-code	d1max	d2max	d3	t3	d4	t4	d5	d6
10	5781-06-07-0-00	15.0 (0.59)	7.0 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	16.0 (0.63)	10.8 (0.43)	17.0 (0.67)
25	5781-08-10-0-00	23.4 (0.92)	7.1 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	18.0 (0.71)	10.8 (0.43)	17.0 (0.67)
32	5781-10-13-0-00	32.0 (1.26)	7.1 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	20.0 (0.79)	10.8 (0.43)	17.0 (0.67)

NG	ISO-code	Bolt Kit			Seal Nitrile	Kit Fluorocarbon	Surface Finish
10	5781-06-07-0-00	BK505	4xM10 x 35-DIN 912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58507-0	S26-58507-5	
25	5781-08-10-0-00	BK485	4xM10 x 45-DIN 912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58475-0	S26-58475-5	
32	5781-10-13-0-00	BK506	6xM10 x 45-DIN 912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58508-0	S26-58508-5	

NG	ISO-code	Subplate	Size
10	5781-06-07-0-00	SPP3M6B910	A, B = 3/4" BSPP x, y = 1/4" BSPP
25	5781-08-10-0-00	SPP6M8B910	A, B = 1" BSPP x, y = 1/4" BSPP
32	5781-10-13-0-00	SPP10M12B910	A, B = 1 1/2" BSPP x, y = 1/4" BSPP

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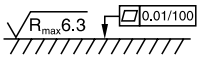
Inch equivalents for millimeter dimensions are shown in (**)

NG	ISO-code	x1	x2	x3	x4	x5	x6	x7	y1	y2	y3	y4	y5	y6
10	5781-06-07-0-00	42.9 (1.69)	35.8 (1.41)	21.5 (0.85)	–	7.2 (0.28)	21.5 (0.85)	31.8 (1.25)	66.7 (2.63)	58.8 (2.31)	33.4 (1.31)	7.9 (0.31)	–	–
25	5781-08-10-0-00	60.3 (2.37)	49.2 (1.94)	39.7 (1.56)	–	11.1 (0.44)	20.6 (0.81)	44.5 (1.75)	79.4 (3.13)	73.0 (2.87)	39.7 (1.56)	6.4 (0.25)	–	–
32	5781-10-13-0-00	84.2 (3.31)	67.5 (2.66)	59.5 (2.34)	42.1 (1.66)	16.7 (0.66)	24.6 (0.97)	62.7 (2.47)	96.8 (3.81)	92.8 (3.65)	48.4 (1.91)	3.8 (0.15)	–	–

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

NG	ISO-code	B1	B2	B3	H1	H2	H3	H4	H5	H6	L1	L2	L3	L4	L5	L6
10	5781-06-07-0-00	87.3 (3.44)	33.4 (1.31)	70.0 (2.76)	130.0 (5.12)	21.0 (0.83)	68.5 (2.70)	109.5 (4.13)	–	–	29.0 (1.14)	94.8 (3.73)	–	141.0 (5.55)	181.0 (7.13)	165.6 (6.52)
25	5781-08-10-0-00	105.0 (4.13)	39.7 (1.56)	70.0 (2.76)	156.5 (6.16)	29.0 (1.14)	95.0 (3.74)	136.0 (5.35)	–	–	34.7 (1.37)	126.8 (4.99)	–	141.0 (5.55)	181.0 (7.13)	165.6 (6.52)
32	5781-10-13-0-00	120.0 (4.72)	48.4 (1.91)	70.0 (2.76)	167.0 (6.57)	29.0 (1.14)	105.5 (4.15)	146.5 (5.77)	–	–	30.6 (1.20)	144.3 (5.68)	–	141.0 (5.55)	181.0 (7.13)	165.6 (6.52)

NG	ISO-code	d1max	d2max	d3	t3	d4	t4	d5	d6
10	5781-06-07-0-00	15.0 (0.59)	7.0 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	16.0 (0.63)	10.8 (0.43)	17.0 (0.67)
25	5781-08-10-0-00	23.4 (0.92)	7.1 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	18.0 (0.71)	10.8 (0.43)	17.0 (0.67)
32	5781-10-13-0-00	32.0 (1.26)	7.1 (0.28)	7.1 (0.28)	8.0 (0.31)	M10	20.0 (0.79)	10.8 (0.43)	17.0 (0.67)

NG	ISO-code	Bolt Kit			Seal Nitrile	 Kii Fluorocarbon	Surface Finish
10	5781-06-07-0-00	BK505	4xM10 x 35-DIN 912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58507-0*	S26-58507-5*	
25	5781-08-10-0-00	BK485	4xM10 x 45-DIN 912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58475-0*	S26-58475-5*	
32	5781-10-13-0-00	BK506	6xM10 x 45-DIN 912 12.9	63 Nm (46.5 lb.-ft.) ±15%	S26-58508-0*	S26-58508-5*	
VV01					S56-40609-0	S56-40609-5	

*Please combine seal kit of one size with seal kit of VV01 DC / AC solenoid for complete seal kit.

NG	ISO-code	Subplate	Size
10	5781-06-07-0-00	SPP3M6B910	A, B = 3/4" BSPP x, y = 1/4" BSPP
25	5781-08-10-0-00	SPP6M8B910	A, B = 1" BSPP x, y = 1/4" BSPP
32	5781-10-13-0-00	SPP10M12B910	A, B = 1 1/2" BSPP x, y = 1/4" BSPP