

Parker Series URE USE Unloading Valve Service Manual

General Description

Series UR*E unloading valves consist of a mechanical pilot stage and a slip-in cartridge main stage. These 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 15%.

In addition, Series US*E is vented by electrical operation. The UR*E/US*E model codes embrace the pilot valves, covers and cartridges that are also offered as separate items. See combination examples for details.

Features

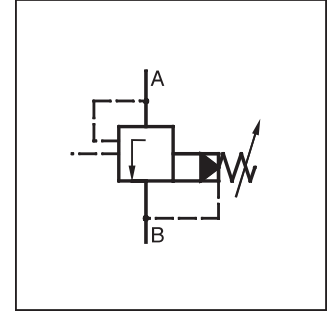
- Pilot operated unloading valve.
- Cavity and mounting pattern according to ISO 7368.
- 4 pressure ranges.
- 2 adjustment modes:
 - Hand knob
 - Key lock
- 6 sizes, NG16 to NG63.

Note: Port X only usable for remote vent function.

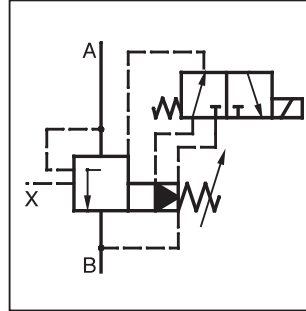
UR*E



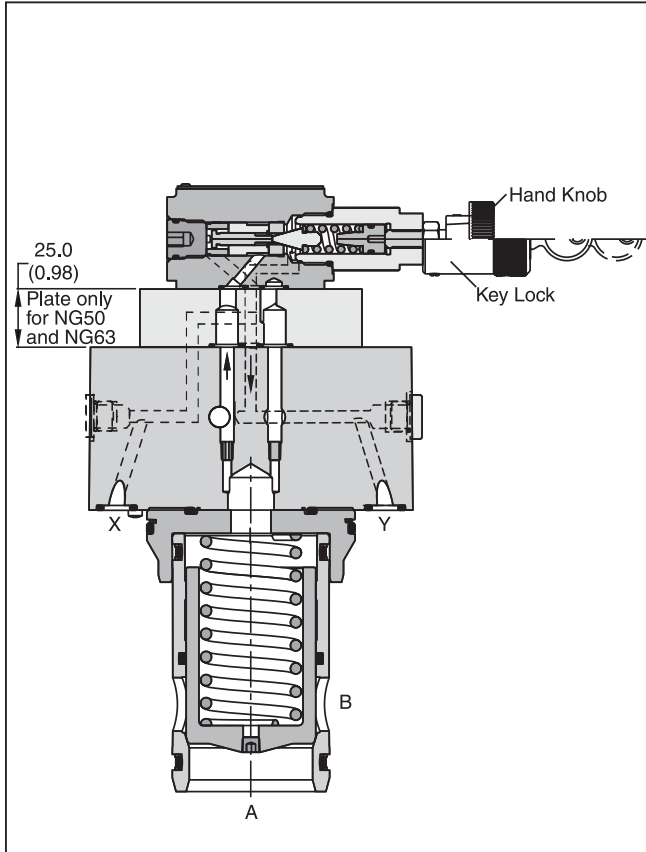
US25E



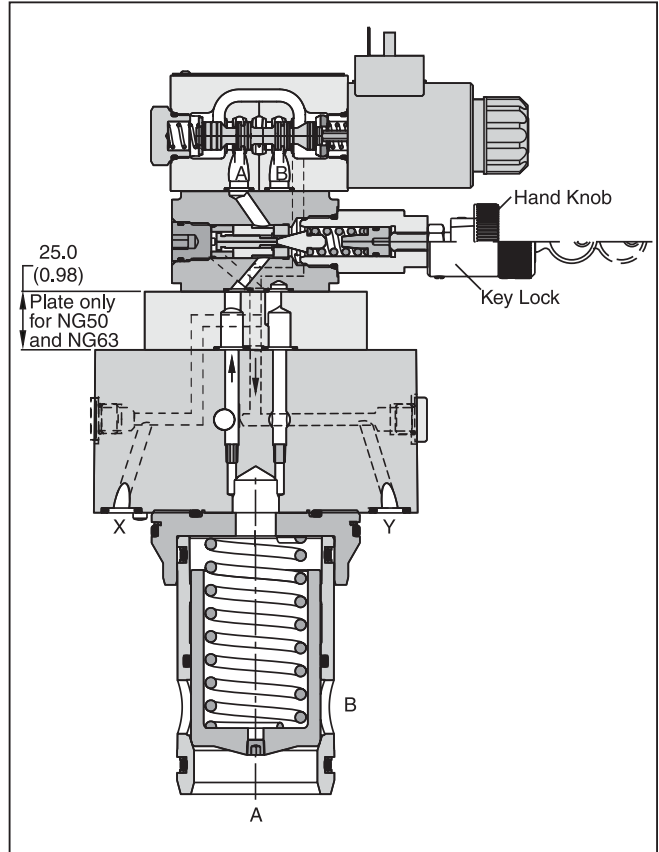
UR*E



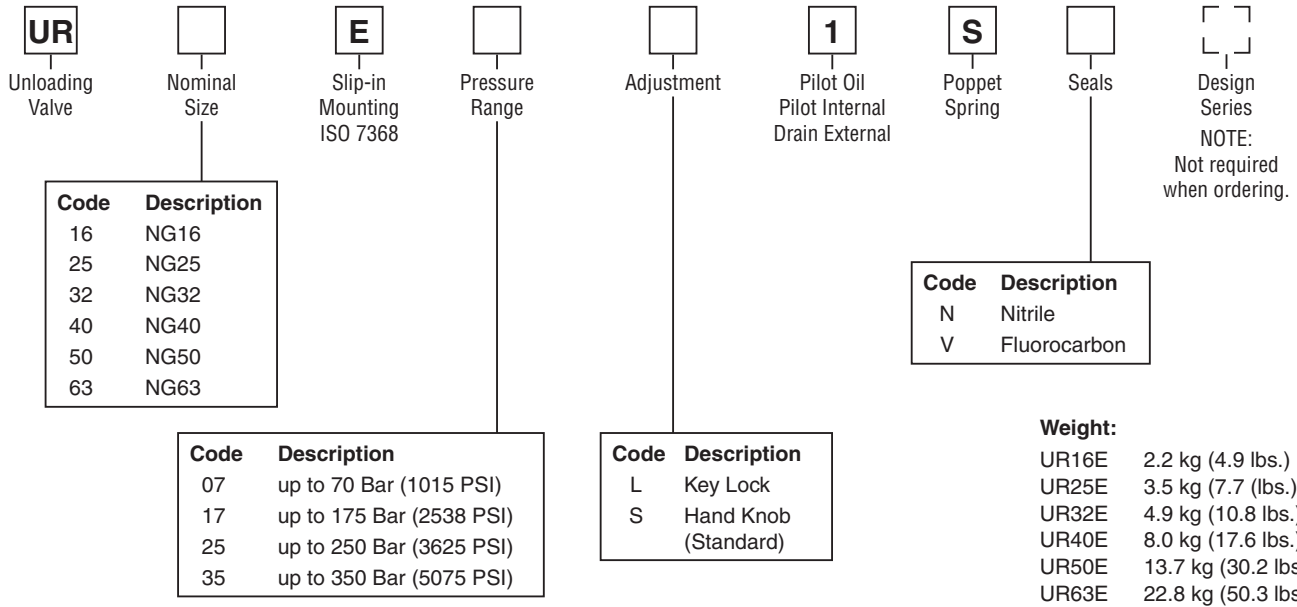
US*E



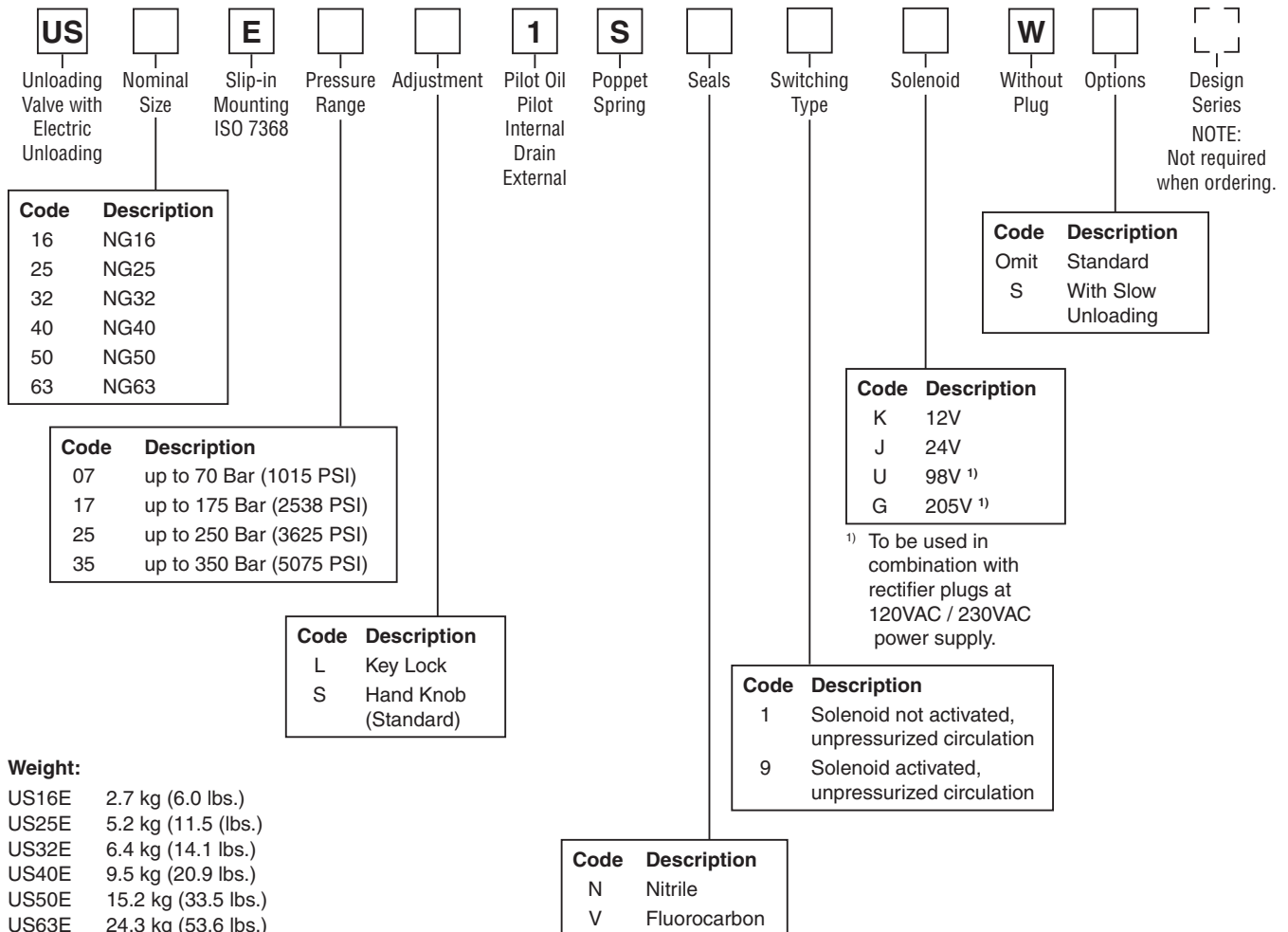
US*E



UR*E



US*E



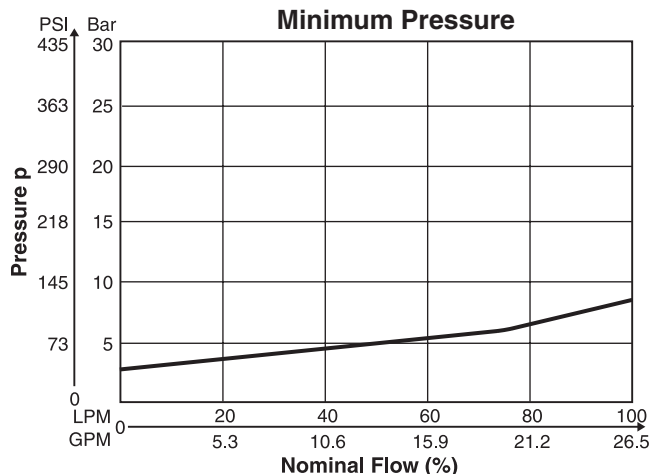
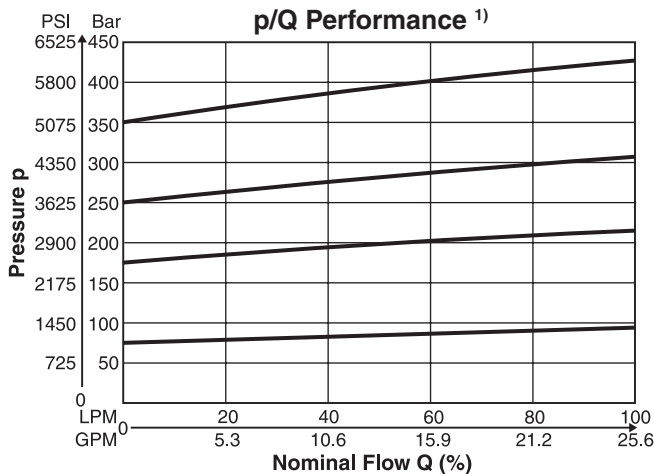
Specifications — UR*E / US*E

General						
Size	NG16	NG25	NG32	NG40	NG50	NG63
Interface	Slip-in mounting according to ISO 7368					
Mounting Position	As desired, horizontal mounting preferred					
Ambient Temperature	-20°C to +80°C (-4°F to +176°F)					
Hydraulic						
Maximum Operating Pressure	Ports A and X: up to 350 Bar (5075 PSI), Ports B and Y: depressurized					
Pressure Range	70, 175, 250, 350 Bar (1015, 2538, 3625, 5075 PSI)					
Pressure Differential	15%					
Nominal Flow	220 LPM (58 GPM)	500 LPM (132 GPM)	950 LPM (251 GPM)	1400 LPM (370 GPM)	2300 LPM (609 GPM)	4000 LPM (1058 GPM)
Fluid	Hydraulic oil according to DIN 51524 ... 525					
Viscosity Recommended	30 to 50 cSt (mm ² /s)					
Viscosity Permitted	20 to 380 cSt (mm ² /s)					
Fluid Temperature	-20°C to +70°C (-4°F to +158°F)					
Filtration	ISO 4406 (1999); 18/16/13 (meet NAS 1638:7)					

Specifications — US*E

Electrical (Solenoid)					
Duty Ratio	100% ED; CAUTION: coil temperature up to 180°C (356°F) possible				
Maximum Switching Frequency	16000 switchings per hour				
Protection Class	IP65 in accordance with EN 60529 (plugged and mounted)				
Direct Current	Code	K	J	U	G
Supply Voltage		12V	24V	98V	205V
Power		31W	31W	31W	31W
Current		2.5A	1.25A	0.31A	0.15A
Solenoid Connection	Connector as per EN 175301-803				
Wiring	3 x 1.5 mm ² minimum, recommended				
Wiring Length	50m (164 ft.) maximum, recommended				

Performance Curves

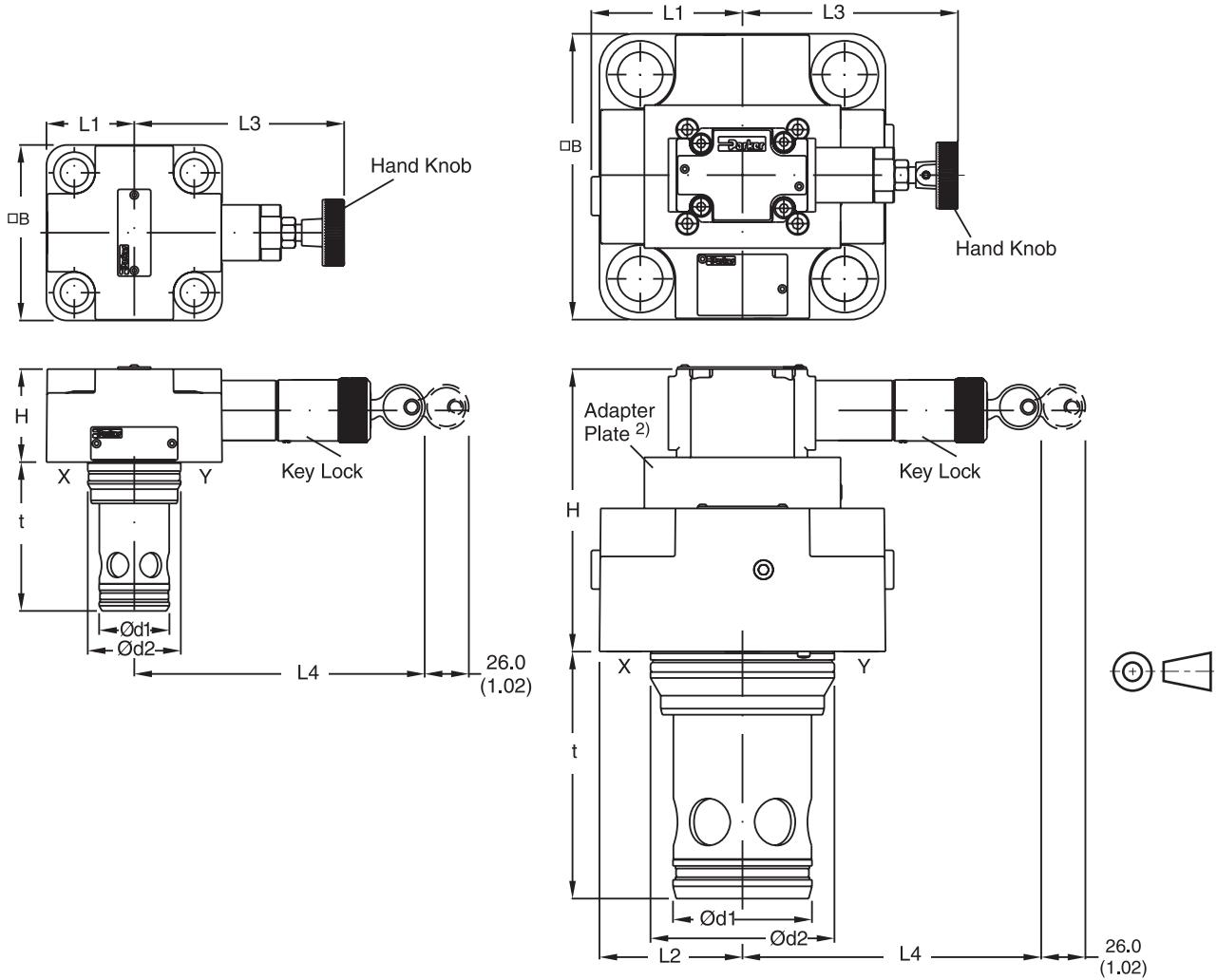


¹⁾ The performance curves are measured with external drain.
 For internal drain, the tank pressure has to be added to curve.

Dimensions

**Pressure Unloading Valves
Series UR*E**

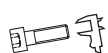


Inch equivalents for millimeter dimensions are shown in (**)



Size	H	B	L1	L2	L3	L4	d1	d2	t
NG16	40.0 (1.57)	65.0 ¹⁾ (2.56)	36.5 (1.44)	32.5 (1.28)	114.0 (4.49)	125.5 (4.94)	32.0 (1.26)	25.0 (0.98)	56.0 (2.20)
NG25	47.0 (1.85)	85.0 (33.5)	46.5 (1.83)	42.5 (1.67)	102.0 (4.02)	114.0 (4.49)	45.0 (1.77)	34.0 (1.34)	71.0 (2.80)
NG32	50.0 (1.97)	102.0 (4.02)	55.0 (2.17)	51.0 (2.01)	95.0 (3.74)	106.0 (4.17)	60.0 (2.36)	45.0 (1.77)	85.0 (3.35)
NG40 ²⁾	106.0 (4.17)	125.0 (4.92)	66.5 (2.62)	62.5 (2.46)	106.0 (4.17)	144.0 (5.67)	75.0 (2.95)	55.0 (2.17)	105.0 (4.13)
NG50	141.0 (5.55)	140.0 (5.51)	74.0 (2.91)	70.0 (2.76)	106.0 (4.17)	144.0 (5.67)	90.0 (3.54)	68.0 (2.68)	121.0 (4.76)
NG63	155.0 (6.10)	180.0 (7.09)	94.0 (3.70)	90.0 (3.54)	106.0 (4.17)	144.0 (5.67)	120.0 (4.72)	90.0 (3.54)	155.0 (6.10)

¹⁾ Width 79mm (3.11 in.)

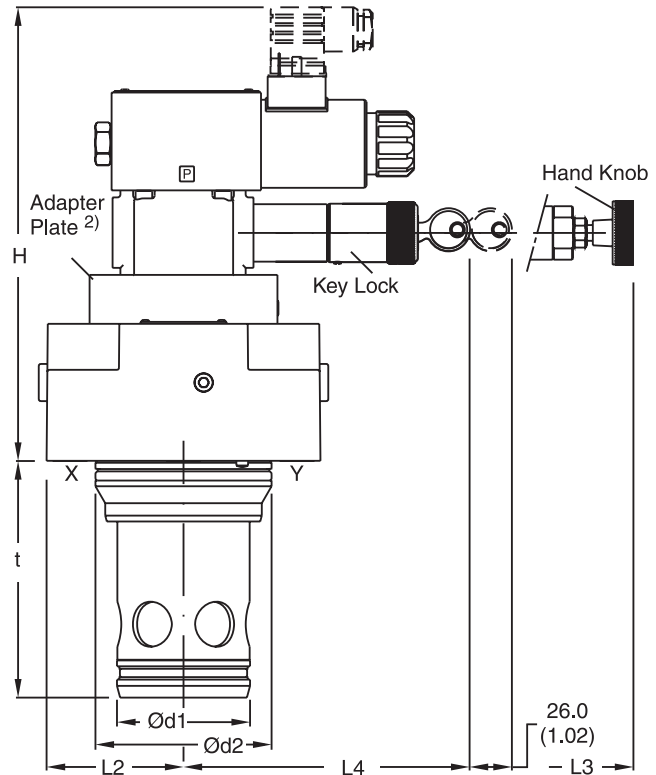
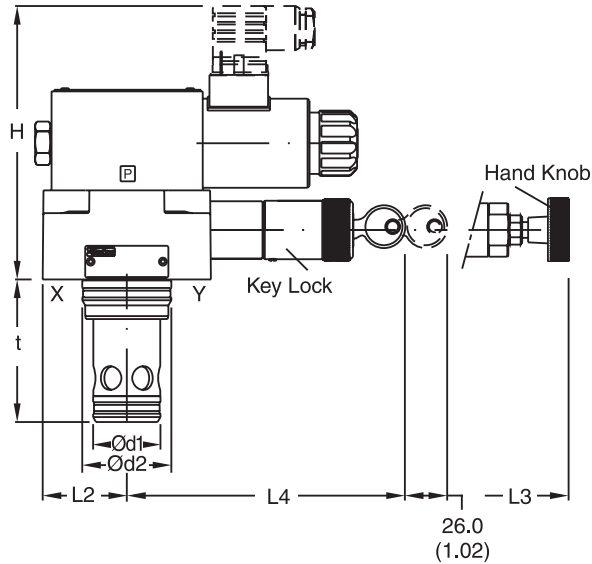
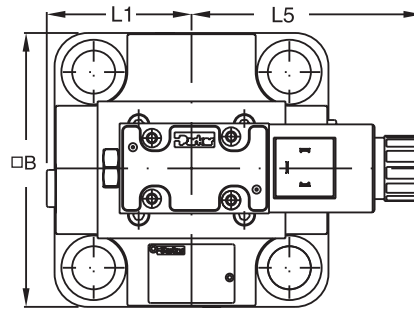
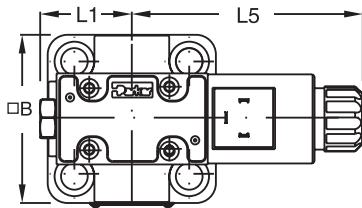
²⁾ NG40 without adapter plate

NG	Bolt Kit - 		Kit 	
			Nitrile	Fluorocarbon
16	BK414 (BK84)	33 Nm (24.3 lb.-ft.)	SK-R16E25	SK-R16EV25
25	BK391 (BK77)	115 Nm (84.8 lb.-ft.)	SK-R25E25	SK-R25EV25
32	BK415 (BK85)	281 Nm (207.2 lb.-ft.)	SK-R32E25	SK-R32EV25
40	BK416 (BK86)	553 Nm (407.8 lb.-ft.)	SK-R40E25	SK-R40EV25
50	BK417 (BK87)	553 Nm (407.8 lb.-ft.)	SK-R50E25	SK-R50EV25
63	BK418 (BK88)	1910 Nm (1408.6 lb.-ft.)	SK-R63E25	SK-R63EV25

Dimensions

**Pressure Unloading Valves
Series US*E**




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



Size	H	B	L1	L2	L3	L4	d1	d2	t
NG16	40.0 (1.57)	65.0 ¹⁾ (2.56)	36.5 (1.44)	32.5 (1.28)	114.0 (4.49)	125.5 (4.94)	32.0 (1.26)	25.0 (0.98)	56.0 (2.20)
NG25	47.0 (1.85)	85.0 (33.5)	46.5 (1.83)	42.5 (1.67)	102.0 (4.02)	114.0 (4.49)	45.0 (1.77)	34.0 (1.34)	71.0 (2.80)
NG32	50.0 (1.97)	102.0 (4.02)	55.0 (2.17)	51.0 (2.01)	95.0 (3.74)	106.0 (4.17)	60.0 (2.36)	45.0 (1.77)	85.0 (3.35)
NG40 ²⁾	106.0 (4.17)	125.0 (4.92)	66.5 (2.62)	62.5 (2.46)	106.0 (4.17)	144.0 (5.67)	75.0 (2.95)	55.0 (2.17)	105.0 (4.13)
NG50	141.0 (5.55)	140.0 (5.51)	74.0 (2.91)	70.0 (2.76)	106.0 (4.17)	144.0 (5.67)	90.0 (3.54)	68.0 (2.68)	121.0 (4.76)
NG63	155.0 (6.10)	180.0 (7.09)	94.0 (3.70)	90.0 (3.54)	106.0 (4.17)	144.0 (5.67)	120.0 (4.72)	90.0 (3.54)	155.0 (6.10)

¹⁾ Width 79mm (3.11 in.)

²⁾ NG40 without adapter plate

NG	Bolt Kit - 		Kit 	
			Nitrile	Fluorocarbon
16	BK414 (BK84)	33 Nm (24.3 lb.-ft.)	SK-RS16E25	SK-RS16EV25
25	BK391 (BK77)	115 Nm (84.8 lb.-ft.)	SK-RS25E25	SK-RS25EV25
32	BK415 (BK85)	281 Nm (207.2 lb.-ft.)	SK-RS32E25	SK-RS32EV25
40	BK416 (BK86)	553 Nm (407.8 lb.-ft.)	SK-RS40E25	SK-RS40EV25
50	BK417 (BK87)	553 Nm (407.8 lb.-ft.)	SK-RS50E25	SK-RS50EV25
63	BK418 (BK88)	1910 Nm (1408.6 lb.-ft.)	SK-RS63E25	SK-RS63EV25