

Unloading valves series UR*E 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 nominal pressure differential between opening and closing is 15 %.

In addition the 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

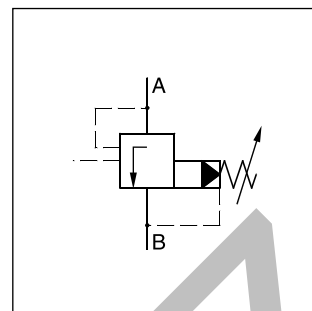
- Pilot operated unloading valve
- Cavity and mounting pattern according to ISO 7368
- 4 pressure stages
- 2 switching types (series US*E)
- 3 adjustment modes
 - Hand knob
 - Acorn nut with lead seal
 - Cylinder lock
- 6 sizes NG16 to NG63

Note

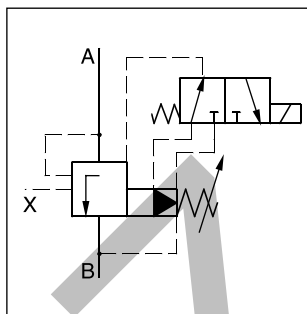
Port X only usable for remote vent function



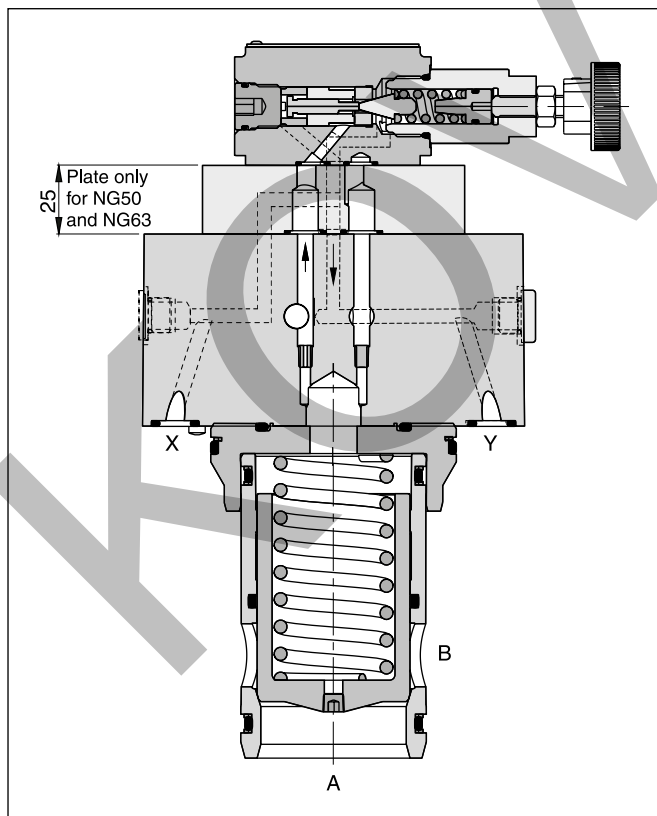
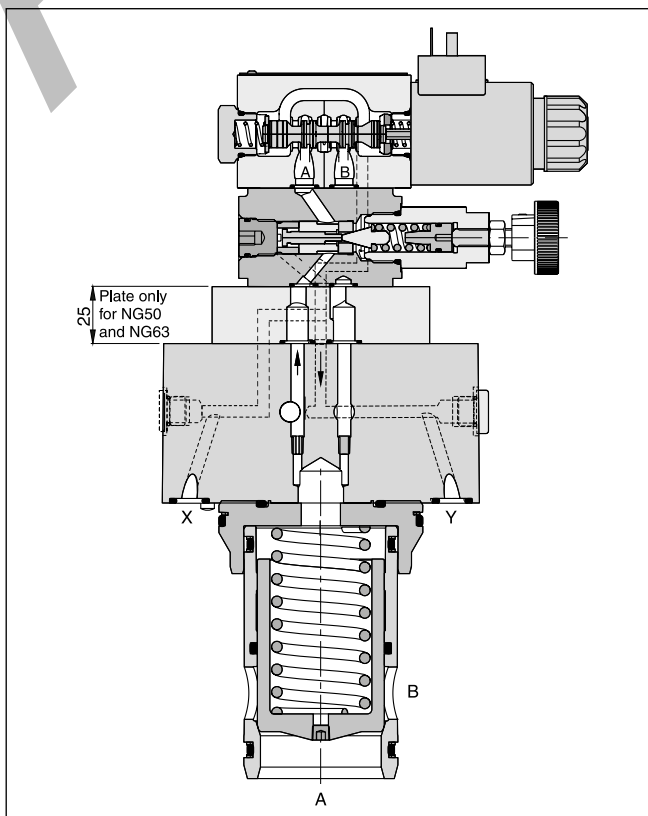
US25E



UR*E



US*E

UR*E**US*E**

Ordering Code

Unloading Valves
Series UR*E / US*E

UR*E

UR		E			1	S		
Unloading valve	Nominal size	Slip-in mounting ISO 7368	Pressure stages	Adjustment	Pilot oil (pilot internal, drain external)	Poppet spring	Seal	Design series (not required for ordering)

Code	Nominal size
16	NG16
25	NG25
32	NG32
40	NG40
50	NG50
63	NG63

Code	Pressure stages
07	up to 70 bar
17	up to 175 bar
25	up to 250 bar
35	up to 350 bar

Code	Seal
N	NBR
V	FPM

Code	Adjustment
S	Hand knob (standard)
A	Acorn nut with lead seal
L	Cylinder lock

US*E

US		E			1	S					W		
Unloading valve with elec. unloading	Nominal size	Slip-in mounting ISO 7368	Pressure stages	Adjustment	Pilot oil (pilot int., drain ext.)	Poppet spring	Seal	Switching type	Solenoid	Without plug	Options	Design series (not required for ordering)	

Code	Nominal size
16	NG16
25	NG25
32	NG32
40	NG40
50	NG50
63	NG63

Code	Pressure stages
07	up to 70 bar
17	up to 175 bar
25	up to 250 bar
35	up to 350 bar

Code	Adjustment
S	Hand knob (standard)
A	Acorn nut with lead seal
L	Cylinder lock

Code	Spool type
omit	Standard
S	with slow unloading

Code	Solenoid
K	12 V
J	24 V
U ¹⁾	98 V
G ¹⁾	205 V

Code	Switching type
1	Solenoid not activated, unpress. circulation
9	Solenoid activated, unpress. circulation

Code	Seal
N	NBR
V	FPM

¹⁾ To be used in combination with rectifier plugs at 120 VAC / 230 VAC power supply.

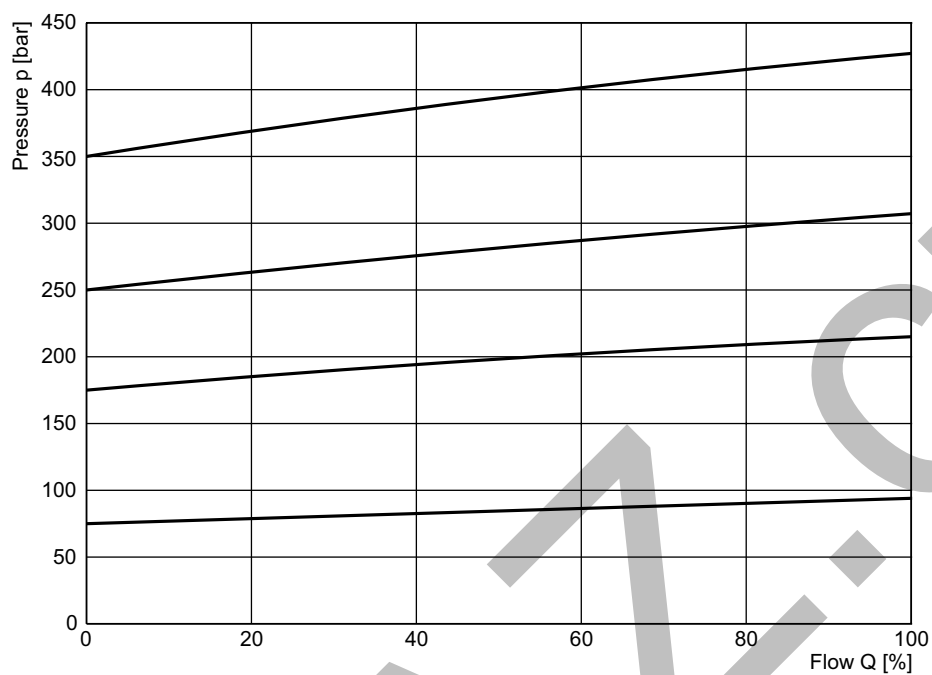
UR*E

General						
Nominal size		NG16	NG25	NG32	NG40	NG50 NG63
Interface		Slip-in mounting acc. ISO 7368				
Mounting position		as desired, horizontal mounting preferred				
Ambient temperature	[°C]	-20...+60				
MTTF _D value	[years]	75				
Weight	[kg]	2.2	3.5	4.9	8.0	13.7 22.8
Hydraulic						
Max. operating pressure	[bar]	Ports A and X up to 350, Ports B and Y 30				
Pressure stages	[bar]	75, 175, 250, 350				
Pressure differential, nominal	[%]	15				
Nominal flow	[l/min]	220	500	950	1400	2300 4000
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				

US*E

General							
Nominal size		NG16	NG25	NG32	NG40	NG50	NG63
Interface		Slip-in mounting acc. ISO 7368					
Mounting position		as desired, horizontal mounting preferred					
Ambient temperature	[°C]	-20...+60					
MTTF _D value	[years]	75					
Weight	[kg]	2.7	5.2	6.4	9.5	15.2	24.3
Hydraulic							
Max. operating pressure	[bar]	Ports A and X 350, ports B and Y 30					
Pressure stages	[bar]	75, 175, 250, 350					
Pressure differential, nominal	[%]	15					
Nominal flow	[l/min]	220	500	950	1400	2300	4000
Fluid		Hydraulic oil according to DIN 51524					
Fluid temperature	[°C]	-20...+70 (NBR: -25...+70)					
Viscosity, permitted recommended	[cSt] / [mm²/s]	20...400					
	[cSt] / [mm²/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						
Supply voltage	[V]	K	J	U	G		
Tolerance supply voltage	[%]	12 V =	24 V =	98 V =	205 V =		
Current consumption	[A]	±10	±10	±10	±10		
Power consumption	[W]	2.72	1.29	0.33	0.13		
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 ¹⁾

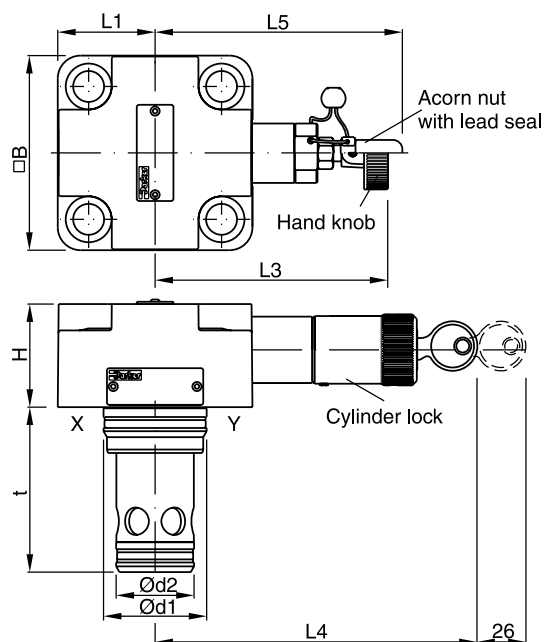
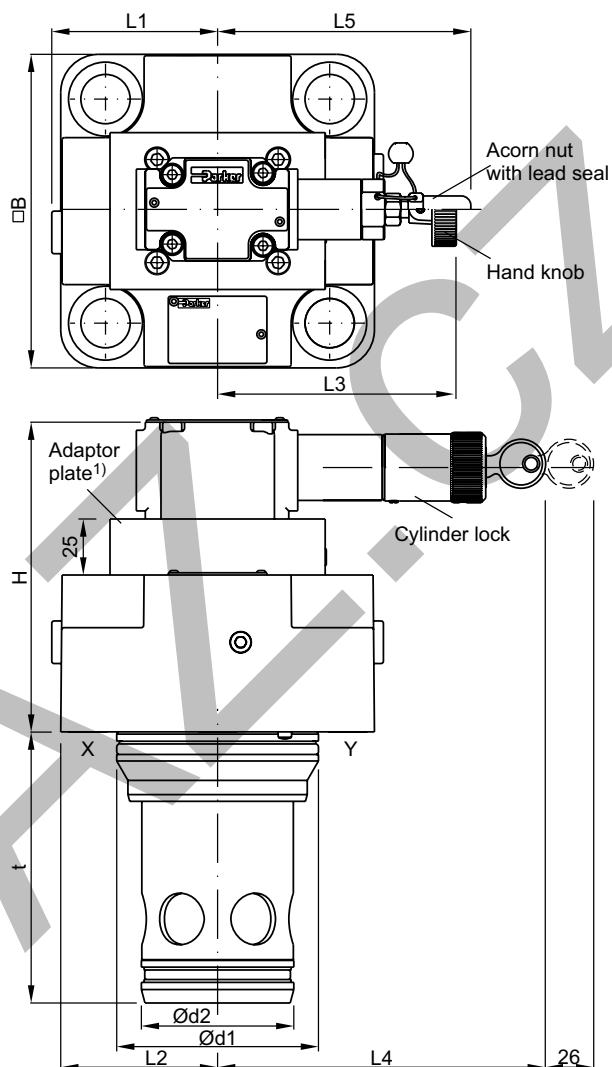


All characteristic curves measured with HLP46 at 50 °C.

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

Dimensions UR*E

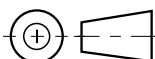
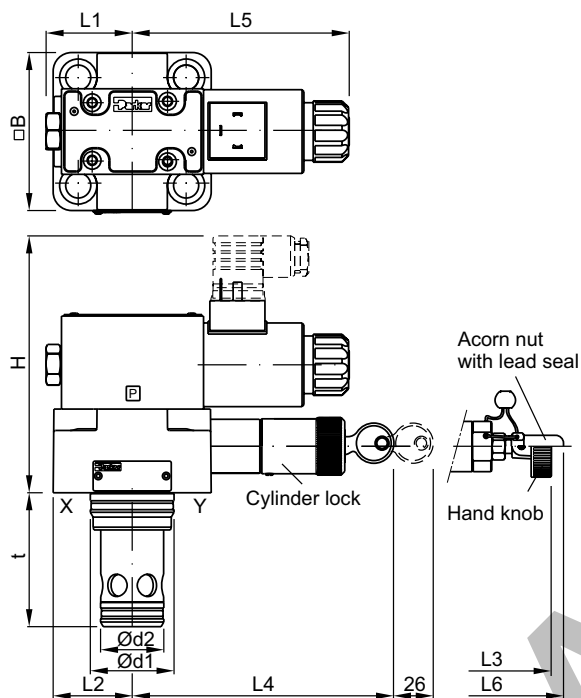
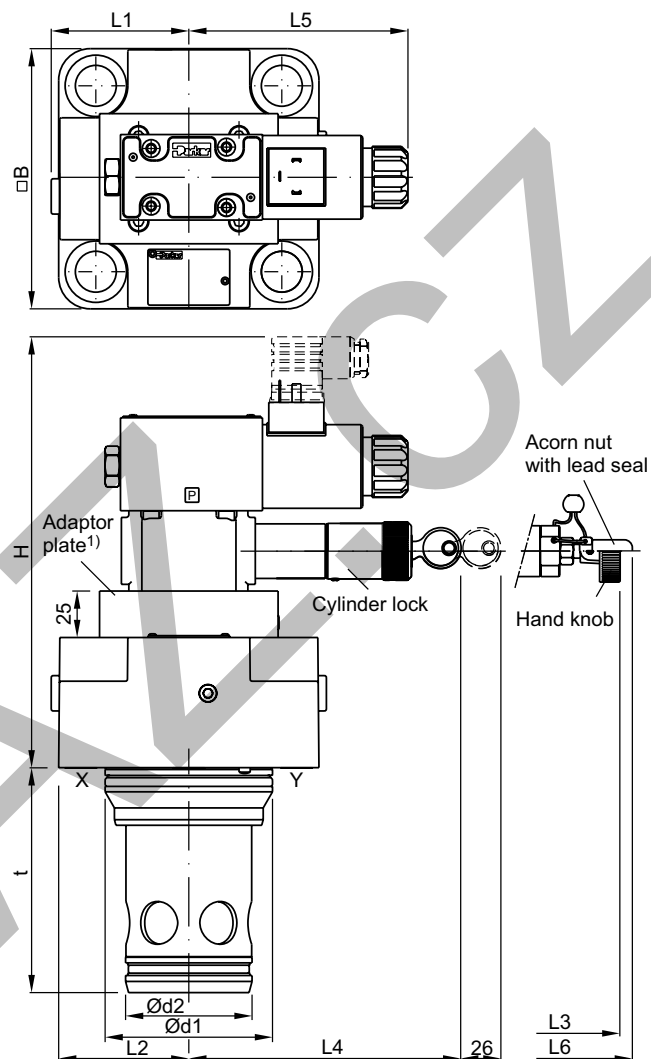
NG16 to NG32

NG40 to NG63 ¹⁾

NG	H	B	L1	L2	L3	L4	L5	d1	d2	t
16	40	65 ²⁾	32.5	—	114	152	117	32	25	56
25	47	85	42.5	—	102	139	106	45	34	71
32	50	102	51	—	95	131	97.5	60	45	85
40	106	125	62.5	66.5	106	144	108	75	55	105
50	141	140	70	74	106	144	108	90	68	121
63	155	180	90	94	106	144	108	120	90	155

NG	Kit	ISO 4762-12.9	[Nm]	Kit	
				NBR	FPM
16	BK414	4 x M8x40	31.8	SK-R16EN	SK-R16EV
25	BK391	4 x M12x50	108	SK-R25EN	SK-R25EV
32	BK415	4 x M16x55	264	SK-R32EN	SK-R32EV
40	BK416	4 x M20x70	517	SK-R40EN	SK-R40EV
50	BK417	4 x M20x75	517	SK-R50EN	SK-R50EV
63	BK418	4x M30x100	1775	SK-R63EN	SK-R63EV

¹⁾ NG40 without adaptor plate.²⁾ Width 79 mm.

Dimensions**Unloading Valves
Series UR*E / US*E****Dimensions US*E****NG16 to NG32****NG40 to NG63 ¹⁾**

NG	H	B	L1	L2	L3	L4	L5	L6	d1	d2	t
16	40	65 ²⁾	32	32.5	114	152	127.5	117	32	25	56
25	47	85	46	42.5	102	139	117	106	45	34	71
32	50	102	51	51	95	131	112.5	97.5	60	45	85
40	106	125	66	62.5	106	144	114	108	75	55	105
50	141	140	74	70	106	144	114	108	90	68	121
63	155	180	94	90	106	144	114	108	120	90	155

NG	Kit	ISO 4762-12.9	[Nm]	Kit
16	BK414	4 x M8x40	31.8	NBR SK-RS16EN / FPM SK-RS16EV
25	BK391	4 x M12x50	108	NBR SK-RS25EN / FPM SK-RS25EV
32	BK415	4 x M16x55	264	NBR SK-RS32EN / FPM SK-RS32EV
40	BK416	4 x M20x70	517	NBR SK-RS40EN / FPM SK-RS40EV
50	BK417	4 x M20x75	517	NBR SK-RS50EN / FPM SK-RS50EV
63	BK418	4 x M30x100	1775	NBR SK-RS63EN / FPM SK-RS63EV

¹⁾ NG40 without adaptor plate.²⁾ Width 79 mm.