

# UF4/UFR4 RELIEF VALVES



## Application

To protect installations against excess pressure SPX FLOW is offering the APV UF4/UFR4 relief valve. The valve is designed in such a way that if the adjusted response pressure is exceeded, the valve opens.

## CHARACTERISTICS

The set pressure of the APV UF4/UFR4 spring loaded valve is adjusted, corrected or changed via the setting screw. This setting can and should be checked by means of a pressure gauge.

The modulating cone of the UFR4 valve provides for slower, smoother closing of the valve and the prevention of pressure hammers.

## CONTROL UNITS

The UF4/UFR4 valves can be delivered with a comprehensive range of CU4, CU4plus control units. The CU4, CU4plus are electrically provided to connect direct (DC) to a PLC system (CU4, CU4plus Direct connect) and to fieldbus protocols such as AS-i.

Additionally CU4plus also supports fieldbus protocol such as IO-link.

## FEATURES AND BENEFITS

- Ball shaped valve Housing with smooth passages, i.e. no sump and dome, making CIP-cleaning more efficient and more reliable.
- Seat lift actuator as a standard offering with feedback switches on top of the actuator.
- Open yoke design prevents heat transfer and provides visual leakage detection
- Max stroke is obtained by the seat lift actuator irrespective of set pressure and, thus, full opening cross section available during cleaning.
- Profile seals with identification.
- UF4 replacement insert fits into UF3/UFR3 housings making easy upgrades to next generation with improved features.
- UF4 maintenance free actuator minimizes maintenance costs and downtime

- The metal stop ensures defined compression of the seat seal, reducing material stress. Production downtime can be minimized. Furthermore, this arrangement ensures smooth product transition in this area.
- 3-A Authorized designs available
- Designed to EHEDG guidelines
- ATEX compliant versions
- CU4 capable- Control Unit can be mounted on top of the actuator.
- The extra wall thickness of the valve housing minimises stresses in the seat area.
- A comprehensive range of valve housings are available to cover any requests.
- Less friction elastomer/PTFE shaft seal and shaft bearing arrangement increases seal lifetime and consequently minimises maintenance costs and general downtime.

## INSTALLATION AND MAINTENANCE CONVENIENCE

A handy clamp closure system between housing and yoke provides quick and easy access to product-wetted parts. Valve insert can be lifted out by releasing this clamp.

The housings (DN25-100 and 1" - 4") may be orientated in various directions to ensure multiple installation possibilities.

Moulded elastomer profile seals with clear identification markings ensure prompt and failsafe identification of seals during maintenance.

Only one hexagonal nut outside the product area ensures quick and easy service of the valve.

Different actuator sizes are available, for DN25-100 and 1" - 4" and these are interchangeable. This means that DN25 set pressures can be handled using various actuator sizes.

Despite the thick-walled housing the valve is very low weight.



TECHNICAL DATA	
<b>SIZES</b>	<b>DN 25 – DN 100 AND ISO 1" – 4"</b>
<b>PRODUCT WETTED PARTS</b>	<b>316L, 1.4404 (DIN EN 10088)</b>
<b>NON-PRODUCT WETTED PARTS</b>	<b>304, 1.4301 (DIN EN 10088)</b>
<b>SEAL MATERIALS</b>	<b>EPDM, HNBR OR FPM</b> ALL SEAL MATERIALS ARE FDA COMPLIANT
<b>MAX. TEMPERATURE</b>	<b>EPDM, HNBR: 135°C - SHORT-TERM: 140°C</b> <b>FPM: 135 °C - NOT SUITED FOR HOT WATER AND STEAM</b> <b>OPTION: FPM STEAM-RESISTANT</b>
<b>SURFACES</b>	<b>INTERNAL FINISH: GROUND RA &lt; 1.6 MM OR 0.8 MM</b> <b>EXTERNAL FINISH: GLASS BEADED, SATIN FINISH</b>

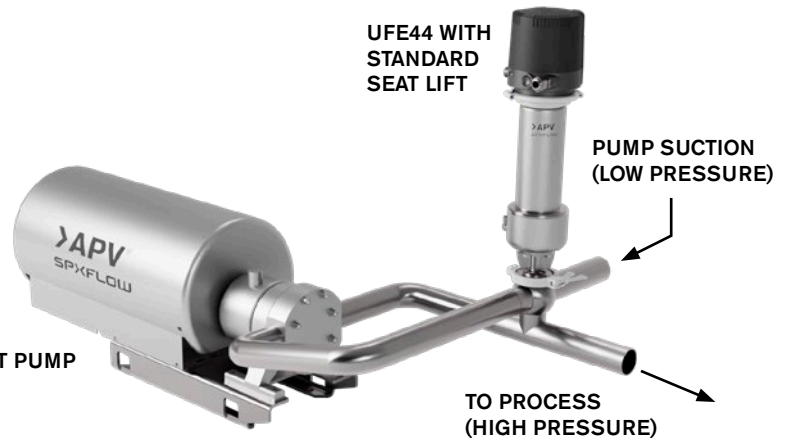
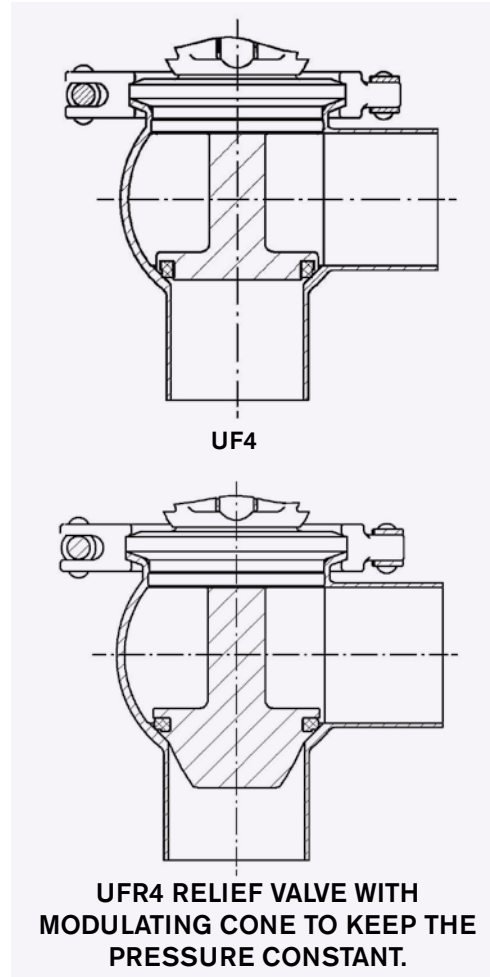
### PRESSURE SETTING RANGES

SIZE	UF4 EFFECTIVE PRESSURE SETTING RANGE			
	ACTUATOR #41	ACTUATOR #42	ACTUATOR #43	ACTUATOR #44
DN25/1"	0 – 7.0	6.0 – 10	-	-
DN40/1.5"	0 – 3.5	2.5 – 7.2	6.2 – 10	-
DN50/2"	0 – 2.2	1.4 – 4.3	3.3 – 10	-
2.5"	0 – 1.5	1.0 – 3.0	2.5 – 9.3	8.8 – 10
DN65	0 – 1.3	0.5 – 2.7	2.3 – 7.8	7.3 – 10
3"	0 – 1.1	0.5 – 2.3	2.0 – 6.6	6.1 – 10
DN80	0 – 0.9	0.4 – 1.8	1.6 – 5.2	4.7 – 10
DN100/4"	0 – 0.6	0.2 – 1.2	1.0 – 3.5	3.0 – 10

SIZE	UFR4 EFFECTIVE PRESSURE SETTING RANGE			
	ACTUATOR #41	ACTUATOR #42	ACTUATOR #43	ACTUATOR #44
DN25/1"	0 – 6.0	5.0 – 10	-	-
DN40/1.5"	0 – 3.0	2.0 – 6.0	5.0 – 10	-
DN50/2"	0 – 2.2	1.4 – 3.8	2.8 – 10	-
2.5"	0 – 1.5	1.0 – 2.7	2.2 – 7.0	6.5 – 10
DN65	0 – 1.3	0.5 – 2.7	2.3 – 7.0	6.5 – 10
3"	0 – 1.1	0.5 – 2.3	2.0 – 6.0	5.5 – 10
DN80	0 – 0.9	0.4 – 1.8	1.6 – 5.0	4.5 – 10
DN100/4"	0 – 0.6	0.2 – 1.2	1.0 – 3.3	2.8 – 10

APPLICATION FOR PUMP PROTECTION, E.G. UFE44:  
UPPER PASSAGE = SUCTION SIDE  
LOWER PASSAGE = PRESSURE SIDE – HARDLY ANY DEAD SPACE BETWEEN UPPER AND LOWER HOUSING PARTS.

POSITIVE DISPLACEMENT PUMP



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