

NON-RETURN VALVE ULTRA 12

Special versions model ULTRA 10



WITT non-return valves for reliable protection against dangerous reverse gas flow. Flow-optimised valve system causes very low pressure drop at minimal noise emission. Every non-return valve 100% tested.

ULTRA 12 is based on ULTRA 10 and is customized according to the requirements of the customer - ideal for special requirements. A modular system which allows flexible material combinations for housing and sealings.

Combination possibilities

- housing available in brass, stainless steel or aluminium
- sealings of NBR, CR, FKM, EPDM, FFKM for example
- with or without dirt filter in gas inlet

Benefits

- precisely tailored design for special requirements. For example corrosive environments, acetylene, ultra-lightweight construction, temperatures above 70 °C / 158 °F
- a spring loaded non-return valve prevents back feeding of gases which could lead to unwanted gas mixtures
- low pressure drop – using complex valve assembly with low opening pressures (approx. 4 mbar)
- stainless steel filter (100 µm) in the gas inlet protects the non-return valve against dirt contamination, extending the service life
- flow-optimised valve system for:
 - ultra low pressure drop
 - minimal noise emission
- no leaks – using of a spring loaded valve assembly with elastomer sealing
- in accordance to DIN EN ISO 5175-2

- diverse applications – useful for many technical gases
- reduce installation costs – the spring loaded valve is not affected by gravity and may be installed in any orientation

Operation / Usage

- non-return valves are used to protect equipment and pipelines against dangerous reverse gas flow. Use is possible for applications according to EN 746-2
- WITT non-return valves may be mounted in any position / orientation

Maintenance

- annual testing of the non-return valve and body leak tightness is recommended
- WITT is happy to supply special test equipment
- non-return valves are only to be serviced by the manufacturer

Approvals

Company certified according to ISO 9001
 Designed for Oxygen Service in accordance with EIGA 13/20 and CGA G-4.4: Oxygen Pipeline and Piping Systems
 Cleaned for Oxygen Service in accordance with EIGA 33/18 and CGA G-4.1: Cleaning of Equipment for Oxygen Service

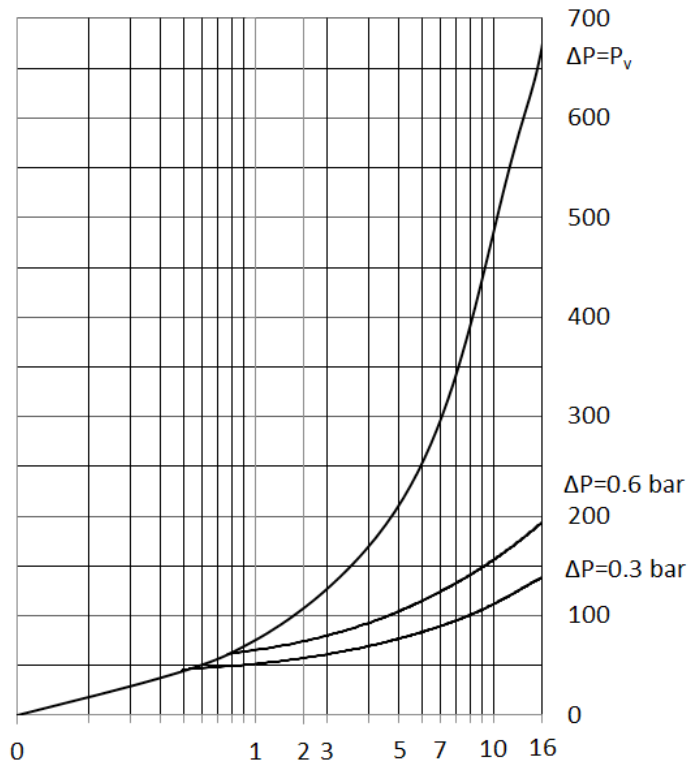
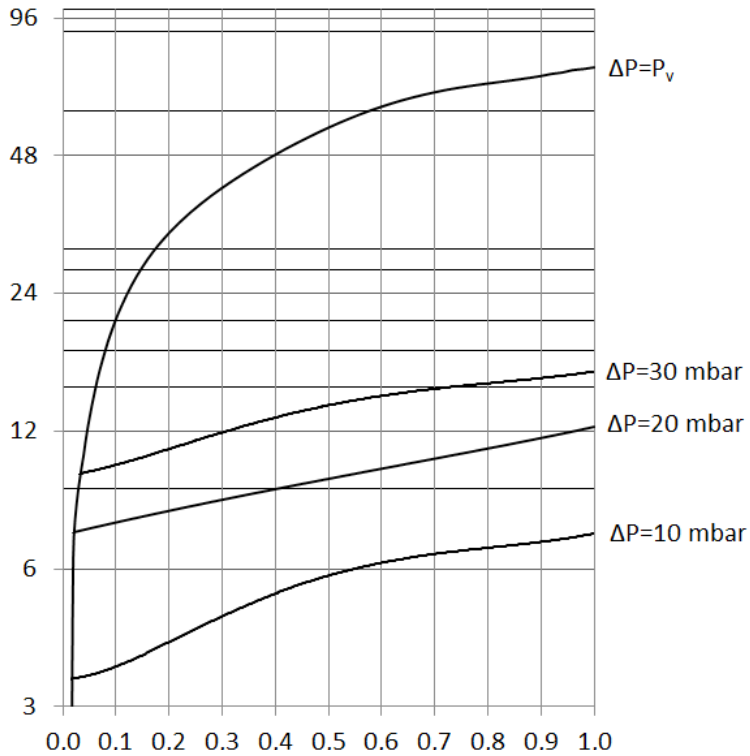
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ULTRA 12

Flow without filter
approx. 10% higher

Flow diagram for air (20 °C / 68 °F)



Normal volume flow [Nm³/h]
(1013 mbar / 14.7 psi, 0 °C / 32 °F)

Normal volume flow [Nm³/h]
(1013 mbar / 14.7 psi, 0 °C / 32 °F)

Inlet pressure: P_v [bar] Opening pressure: 4 mbar

Conversion factors:

Butane	x 0.68
Natural gas	x 1.25
Methane	x 1.33
Propane	x 0.80
Oxygen	x 0.95
Town gas	x 1.54
Hydrogen	x 3.75

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Examples for material combinations housing / elastomers

This overview shows only some possible material combinations and connections.

The modular system of ULTRA 12 offers many other diverse materials and combination possibilities.

Tell us your requirements and you will receive your individual non-return valve, precisely tailored to your application.

Model	Max. working pressure	[bar]	Filter 100 µm	Material				Connection [inch]	Order-No.
				Seals		Housing	Valve		
				O-Ring	Valve				
ULTRA 12	Carbon dioxide (CO ₂), Argon (Ar), Helium (He), Town gas (C), Ethylene (E), Natural gas (M) and LPG (P), Hydrogen (H), Nitrogen (N ₂), Carbon Monoxide (CO), Oxygen (O), Compressed air (D)	16.0	—	NBR	CR	Brass 2.0401 CuZn39Pb3	PEEK	G 1/2	034-001
	Argon (Ar), Helium (He), Town gas (C), Ethylene (E), and LPG (P), Hydrogen (H), Nitrogen (N ₂), Carbon Monoxide (CO), Oxygen (O), Compressed air (D)	10.0	✓	NBR	CR	Aluminium 3.2315 AlSi1MgMn	PEEK	G 1/2	034-005
	Argon (Ar), Helium (He), Town gas (C), Ethylene (E), Natural gas (M) and LPG (P), Hydrogen (H), Nitrogen (N ₂), Carbon Monoxide (CO), Oxygen (O), Compressed air (D)	16.0	✓	FPM	FKM	Brass 2.0401 CuZn39Pb3	PEEK	G 1/2	034-006

Other gases and connections available upon request

Operating temperatures are depending to pressure, gas and seal material. Please do not hesitate to contact us.