

HAND-OPERATED HIGH PRESSURE VALVES

type NV-series

Resato offers a complete range of valves for high pressure applications. Special attention has been paid to the safety of the valves.

Customers all over the world have extensively tested the reliability of our products. Resato valves are used in applications ranging from waterjet cutting systems, high pressure test systems, high pressure food preservation systems to test and control systems used in the oil/gas and chemical/petrochemical industries. Our catalog lists standard valves (hand-operated and air-operated); however, we also supply customized valve designs for specialized applications.

KEY FEATURES

- Large orifices at rated pressures.
- Excellent flow capacity performance.
- Safety guaranteed by special safety cover.
- Smooth operation under pressure due to internal needle thrust bearing.
- Standard type panel mounted.
- Air actuators available for all hand-operated valves.



KEY SPECIFICATIONS

- Maximum working pressure 10 000 bar / 150 000 psi.
- Most valves available in NACE MR0175/ISO 15156 specification
- Build with non-corrosive materials

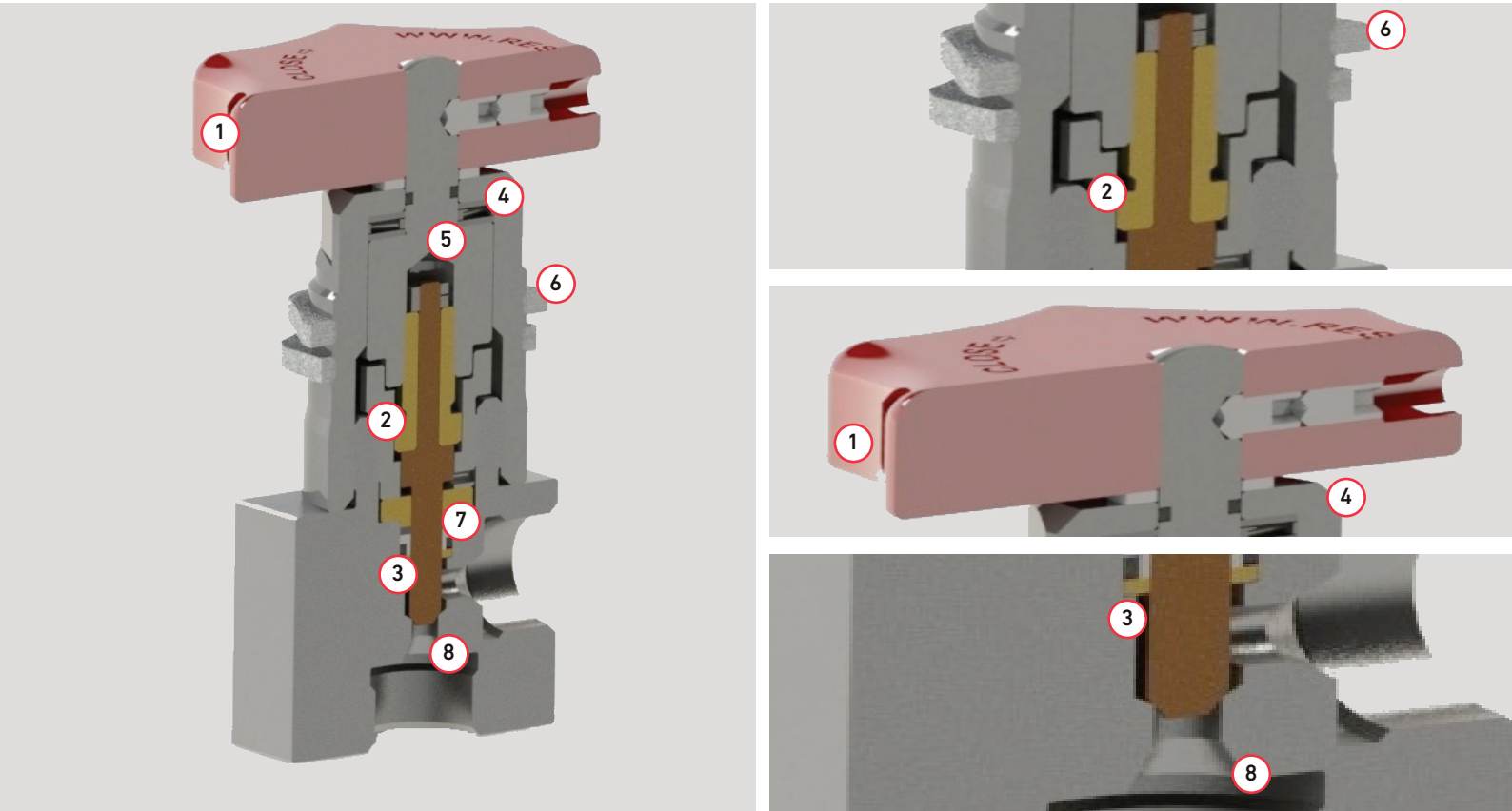
ORDERING CODE

SEE TABLE IN DOCUMENT

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ITEM	DESCRIPTION
1	Ergonomically formed hand wheel prevents damage to valves by use of "strange tools"
2	Internal stem-lifting stop prevents stem blowout
3	Non-rotating stem made of hardened stainless steel
4	Safety cover protects the operator against blowout of valve internals
5	Needle thrust bearing ensures smooth operation
6	Suitable for panel mounting. Panel nuts are supplied standard
7	Self-adjusting compensating packing requires minimal pre-loading
8	Wide internal orifices ensure excellent flow capabilities

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ORDERING CODE SYSTEM

Every valve code specifies connection type, body type and pressure rating

Example valve code: **NVU2-1-42**

Valve connections

Code Connection (Metric)

NV1	M16 x 1.5	(for 6 mm or 1/4" O.D. tubing)
NV2	M20 x 1.5	(for 10 mm or 3/8" O.D. tubing)
NV3	M30 x 2	(for 14 mm or 9/16" O.D. tubing)

Code Connection (UNF)

NVU1	9/16" – 18 UNF	(for 6 mm or 1/4" O.D. tubing)
NVU2	3/4" – 16 UNF	(for 10 mm or 3/8" O.D. tubing)
NVU3	1 1/8" – 12 UNF	(for 14 mm or 9/16" O.D. tubing)

Valve body types

Code Type

1	2-way straight
2	2-way angle
3	3-way 2 on pressure

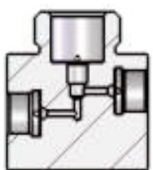
Valve pressure rating

Code Rating

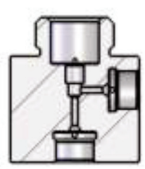
21	2100 bar / 30 000 psi
42	4200 bar / 60 000 psi
70	7000 bar / 100 000 psi

NV1 SERIES (Connections M16x1,5 and 9/16" -18 UNF, for tubing size 6mm or 1/4" O.D.)

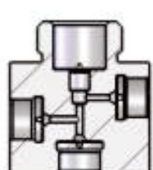
2-way straight

	M16x1.5	9/16" - 18 UNF	Pressure rating bar/psi	Orifice mm	Rated* C _v
	Ordering code	Ordering code			
	NV1-1-42 NV1-1-70	NVU1-1-42 NVU1-1-70	4200 / 60 000 7000 / 100 000	3.5 2.2	0,08 0,07

2-way angle

	M16x1.5	9/16" - 18 UNF	Pressure rating bar/psi	Orifice mm	Rated* C _v
	Ordering code	Ordering code			
	NV1-2-42 NV1-2-70	NVU1-2-42 NVU1-2-70	4200 / 60 000 7000 / 100 000	3.5 2.2	0,08 0,08

3-way 2 on pressure

	M16x1.5	9/16" - 18 UNF	Pressure rating bar/psi	Orifice mm	Rated* C _v
	Ordering code	Ordering code			
	NV1-3-42 NV1-3-70	NVU1-3-42 NVU1-3-70	4200 / 60 000 7000 / 100 000	3.5 2.2	0,08 / 0,08 0,07 / 0,08

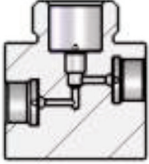
*The C_v values are only valid for fluids with a viscosity of 1,0mPa-s. (water)

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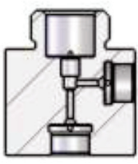
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NV2 SERIES (Connections M20x1,5 and 3/4" -16 UNF, for tubing size 10mm or 3/8" O.D.)

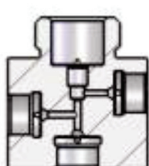
2-way straight

	M20x1.5 Ordering code	3/4" - 16 UNF Ordering code	Pressure rating bar/psi	Orifice mm	Rated* C _v
	NV2-1-21	NVU2-1-21	2100 / 30 000	5	0,57
	NV2-1-42	NVU2-1-42	4200 / 60 000	3,5	0,26

2-way angle

	M20x1.5 Ordering code	3/4" - 16 UNF Ordering code	Pressure rating bar/psi	Orifice mm	Rated* C _v
	NV2-2-21	NVU2-2-21	2100 / 30 000	5	0,77
	NV2-2-42	NVU2-2-42	4200 / 60 000	3,5	0,38

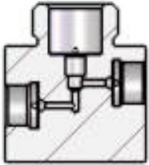
3-way 2 on pressure

	M20x1.5 Ordering code	3/4" - 16 UNF Ordering code	Pressure rating bar/psi	Orifice mm	Rated* C _v
	NV2-3-21	NVU2-3-21	2100 / 30 000	5	0,57 / 0,77
	NV2-3-42	NVU2-3-42	4200 / 60 000	3,5	0,26 / 0,38

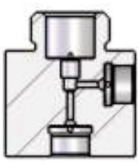
*The C_v values are only valid for fluids with a viscosity of 1,0mPa·s. (water)

NV3 SERIES (Connections M30x2 and 1 1/8" -12 UNF, for tubing size 14mm or 9/16" O.D.)

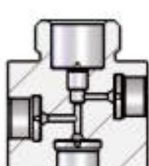
2-way straight

	M30x2 Ordering code	1 1/8" - 12 UNF Ordering code	Pressure rating bar/psi	Orifice mm	Rated* C _v
	NV3-1-21	NVU3-1-21	2100 / 30 000	7,5	0,60
	NV3-1-42	NVU3-1-42	4200 / 60 000	5	0,48

2-way angle

	M30x2 Ordering code	1 1/8" - 12 UNF Ordering code	Pressure rating bar/psi	Orifice mm	Rated* C _v
	NV3-2-21	NVU3-2-21	2100 / 30 000	7,5	0,68
	NV3-2-42	NVU3-2-42	4200 / 60 000	5	0,57

3-way 2 on pressure

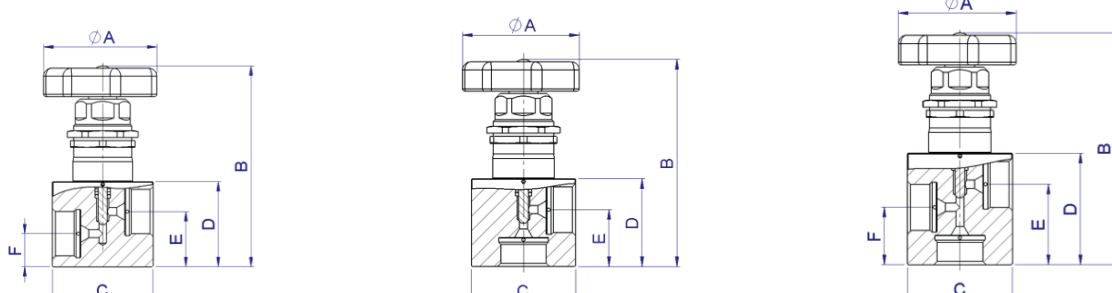
	M30x2 Ordering code	1 1/8" - 12 UNF Ordering code	Pressure rating bar/psi	Orifice mm	Rated* C _v
	NV3-3-21	NVU3-3-21	2100 / 30 000	7,5	0,60 / 0,68
	NV3-3-42	NVU3-3-42	4200 / 60 000	5	0,48 / 0,57

*The C_v values are only valid for fluids with a viscosity of 1,0mPa·s. (water)

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DIMENSIONS



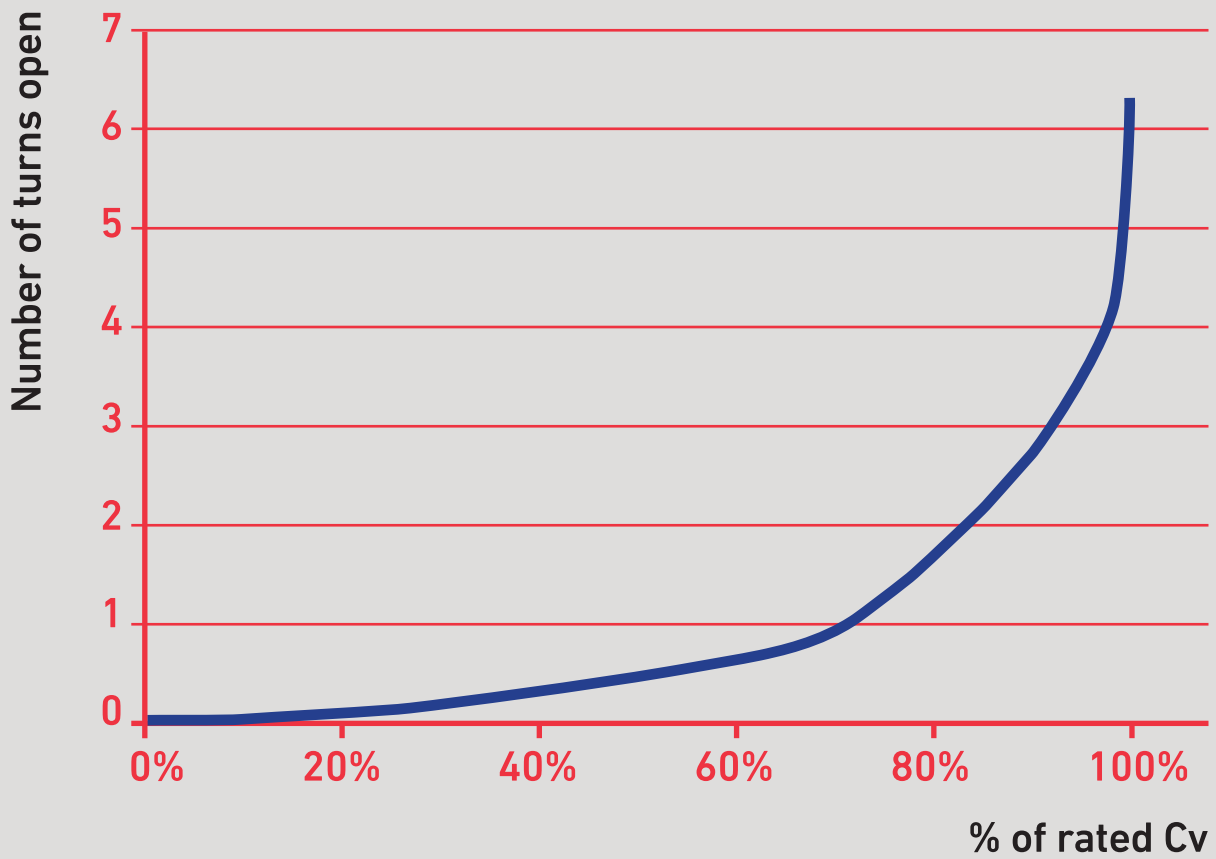
NV(U)	Pressure rating bar/psi	Orifice mm	A	B	C	D	E	F
1-1-42	4200 / 60 000	3.5	75 mm	115 mm	50mm	26mm	26mm	17 mm
1-1-70	7000 / 100 000	2.2				41mm	20 mm	28 mm
1-2-42	4200 / 60 000	3.5				26mm	26 mm	-
1-2-70	7000 / 100 000	2.2				41mm	28mm	-
1-3-42	4200 / 60 000	3.5		124 mm		50 mm	35 mm	26 mm
1-3-70	7000 / 100 000	2.2		28 mm		20 mm		
2-1-21	2100 / 30 000	5		115 mm		41 mm	26mm	17 mm
2-1-42	4200 / 60 000	3,5						-
2-2-21	2100 / 30 000	5			-			
2-2-42	4200 / 60 000	3,5			-			
2-3-21	2100 / 30 000	5			124 mm	50 mm	26 mm	
2-3-42	4200 / 60 000	3,5						
3-1-21	2100 / 30 000	7.5	64mm	129 mm	54 mm	35 mm	21 mm	
3-1-42	4200 / 60 000	5				-		
3-2-21	2100 / 30 000	7.5			-			
3-2-42	4200 / 60 000	5			128 mm	68 mm	49 mm	35 mm
3-3-21	2100 / 30 000	7.5		142 mm				
3-3-42	4200 / 60 000	5		142 mm				

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FLOW COEFFICIENT

Generalized Flow Coefficient curves (C_v)



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SPECIFICATIONS

BODY	All wetted parts are made of stainless steel
HAND WHEEL	Aluminium, colour anodized
REMAINING PARTS	Non-corrosive materials

MATERIAL CERTIFICATES

All valves are marked with Resato logo, ordering code, material specification, pressure rating and material batch number (refers to DIN 3.1.B material certificate).

AMBIANT TEMPERATURE

Pressure ratings are based on room temperature. Please contact Resato for temperatures lower than -20°C or higher than 60°C.

NACE MR-01-75

On request most valves are available to NACE MR0175/ISO 15156 for sour gas service. In this case a "SG" will be added to the ordering code.

MEDIUM TYPES

The medium types to be used are; Water, oil, emulsion of water and oil. Other than the liquids mentioned may only be used in accordance with Resato.

Resato international BV

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V1.0 - Please note that general data and specifications given in this brochure are subject to change without notice.

Feel free to contact our sales department if you need more definite information.