

CAR(S) | CHECK VALVES

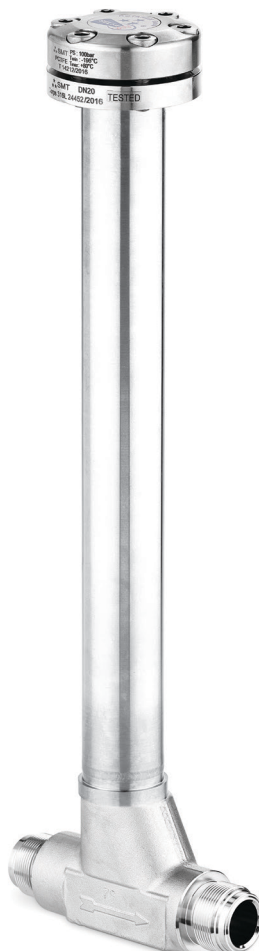
Check valve with replaceable spring and plug.

APPLICATIONS

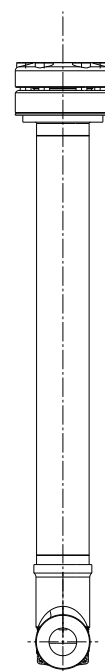
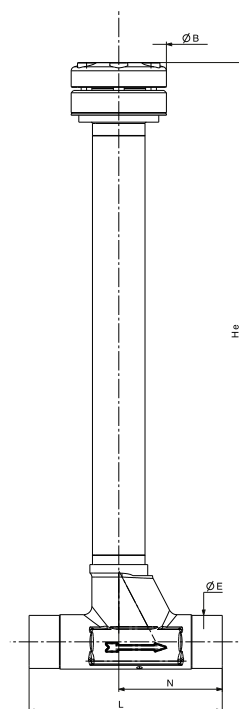
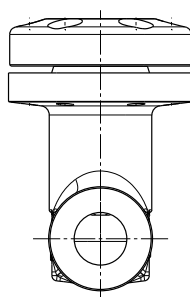
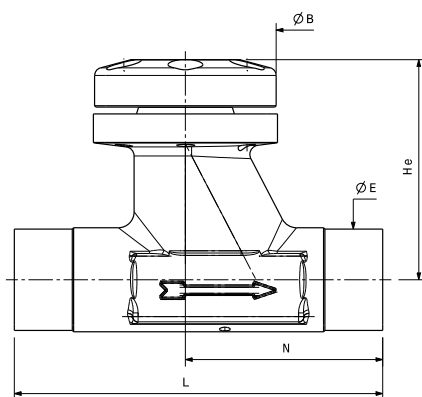
- Pure and ultra pure gases
- Combustible gases
- Oxidizing gases
- Toxic and corrosive gases
- Radioactive gases
- Noble gases

KEY FEATURES & BENEFITS

- 100% Helium leak test performed on all valves
- Individual serial number for full traceability
- Electropolished surface roughness
- 100% degreased for Oxygen use
- Cryogenic extension available



DIMENSIONS



SPECIFICATIONS

Fluid media	Standard, high and ultra high purity and corrosive gases or liquids	Temperature range	77.15 K to 523.15 K (-196°C to +250°C)*	Certified max. Helium outboard leak rate (at max. pressure)	$\leq 1.10^{-10} \text{ Pa.m}^3.\text{s}^{-1}$
Max. working pressure	see table below	Flow capacity (Cv)	-	Certified max. Helium across the seat leak rate (at max. pressure)	$\leq 1.10^{-6} \text{ Pa.m}^3.\text{s}^{-1*}$
Pneumatic actuator operating pressure	-	Nominal seat Diameter	see table below		

* depending on valve size, gas type and seat material

CONSTRUCTION MATERIAL

	Parts	Material
Wetted parts	Body	SS 316L
	Seat	PCTFE or Vespel
	Head/body seal gasket	UNS N02201 (Nickel)
Non-wetted parts	Head	SS 316L

SURFACE FINISH

-	EP4	EP2
Ra 0.8 µm	Ra 0.4 µm EP	Ra 0.25 µm EP

All specifications subject to change without notice

SEAT DIAMETER / MAX. WORKING PRESSURE / CRACKING PRESSURE

Valve	Seat diameter	Max. working pressure	Cracking pressure Δp
CAR 8	8mm	200 bar*	1.00 bar
CAR 12	12mm	200 bar*	0.70 bar
CAR 20	20mm	100 bar*	0.70 bar
CAR 32	32mm	100 bar*	0.35 bar
CAR 50	50mm	45 bar*	0.50 bar
CARS 20	20mm	10 bar*	0.70 bar



* for oxidizing gases (for example O₂, NF₃ etc.)
Max. working pressure 30 bar

MANUAL DIMENSIONS

MAN.	CAR8	CAR12	CAR20	CARS20 ²	CAR32	CAR50
ØB	48mm/(1.89")	70mm/(2.76")	70mm/(2.76")	69mm/(2.72")	108mm/(4.25")	135mm/(5.31")
ØE (up to)	22.5mm/(0.89")	31.5mm/(1.24")	38.5mm/(1.52")	34mm/(1.34")	52mm/(2.05")	77mm/(3.03")
He	45mm/(1.77")	75mm/(2.95")	83.5mm/(3.29")	420mm/(16.54")	104mm/(4.09")	128mm/(5.04")
L	90mm/(3.54")	140mm/(5.51")	140mm/(5.51")	140mm/(5.51")	180mm/(7.09")	250mm/(9.84")
N	45mm/(1.77")	70mm/(2.76")	75mm/(2.95")	65mm/(2.56")	110mm/(4.33")	150mm/(5.90")

Dimensions are for reference only and are subject to change without notice

PRODUCT CONFIGURATOR

	Size	Body material	Seat material	End connection ¹	Surface finish	Options
CAR	12	I	/K	BWO 19.05X1.65mm	EP4	-
	Seat Ø8mm	08 SS316L	PCTFE	Butt welded orbital	BWO Ra 0.8µm	No option
	Seat Ø12mm	12	PI (Vespel®)	Butt welded	BW Ra 0.4µm (electropolished)	EP4 Patte de fixation ²
	Seat Ø20mm	20		Socket welded	SW Ra 0.25µm (electropolished)	EP2
	Seat Ø32mm	32		Metal face seal - Male	MV	
	Seat Ø50mm	50		Metal face seal - Female	FV	

¹Size to be defined by customer and ROTAREX²Minimal operating temperature -270° (3.15K)

Please check with your Rotarex contact the consistency of your selected configuration



Special configuration on demand