TEESING

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ROTAREX

VALVES - FITTINGS - REGULATORS

LINE VALVES FOR ULTRA HIGH PURITY SPECIALTY GASES & FLUIDS - CRYOGENIC GASES & FLUIDS

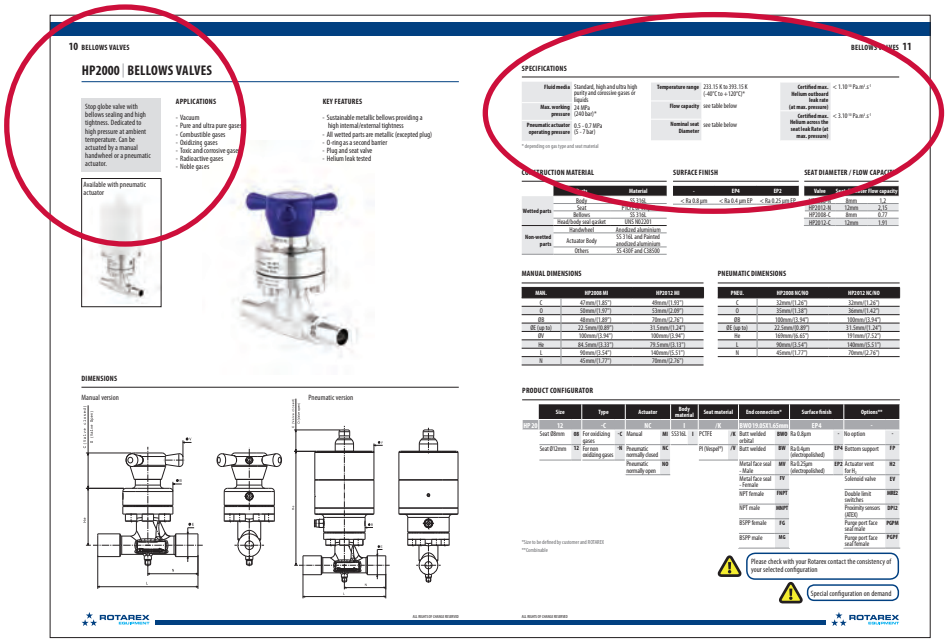
TABLE OF CONTENTS

SELECTING THE RIGHT PRODUCT

To choose the right valve for your application, and to get the best results, you should identify the following technical parameters:

TECHNICAL PARAMETER	EXAMPLES
Gas	Inert, flammable, oxidizing, corrosive, noble
Operating pressure	Bar or psi
Operating temperature	Range to be given in °C, °F or K
Flow	Volumic or mass flow
Actuation	Manual, pneumatic (normally open), pneumatic (normally closed)
End connection type	BWO, BW, SW, Face seal etc.
End connection size	In or mm
Surface finish	Ra <0.80 µm, Ra <0.40 µm or Ra <0.25 µm
Application	Industrial, micro-electronic, research, etc.
Atex requirement	Yes / No
Conformity	2014/68/EU (CE), 2010/35/EU (π)
Options	Limit switches, buttom support, purge ports etc

Each product page is designed to provide you the essential technical information at a glance :



NOTES

BELLOWS VALVES

	K300 P. 08
Technology	Bellows
Max. Working Pressure	1.5/3/10 MPa (15/30/100 bar)
Temperature Range	233.15 K to 393.15 K (-40°C to + 120°C)
Flow Capacity (Cv)	0.78 - 114
Material	Stainless steel

	HP2000 P. 10
Technology	Bellows
Max. Working Pressure	24 MPa (240 bar)
Temperature Range	233.15 K to 393.15 K (-40°C to + 120°C)
Flow Capacity (Cv)	0.77 - 2.15
Material	Stainless steel or Monel 400

	K900 P. 12
Technology	Bellows
Max. Working Pressure	1.5/3/10 MPa (15/30/100 bar)
Temperature Range	77.15 K to 523.15 K (-196°C to + 250°C)
Flow Capacity (Cv)	0.78 - 114
Material	Stainless steel

	HP9000 P. 14
Technology	Bellows
Max. Working Pressure	24 MPa (240 bar)
Temperature Range	77.15 K to 523.15 K (-196 °C to + 250°C)
Flow Capacity (Cv)	0.77 - 2.15
Material	Stainless steel

	SUPRA P. 16
Technology	Bellows
Max. Working Pressure	1/2.5 MPa (10/25 bar)
Temperature Range	3.15 K to 353.15 K (-270°C to + 80°C)
Flow Capacity (Cv)	0.78 - 34
Material	Stainless steel

CHECK VALVES

	CAR(S) P. 18
Technology	Spring-type
Max. Working Pressure	4.5/20 MPa (45/200 bar)
Temperature Range	77.15 K to 523.15 K (-196°C to + 250°C)
Flow Capacity (Cv)	-
Material	Stainless steel

K300 | BELLOWS VALVES

Stop globe valve with bellows sealing and high tightness. Dedicated to low pressure at ambient temperature. Can be actuated by a manual handwheel or a pneumatic actuator.

Also available with pneumatic actuator

APPLICATIONS

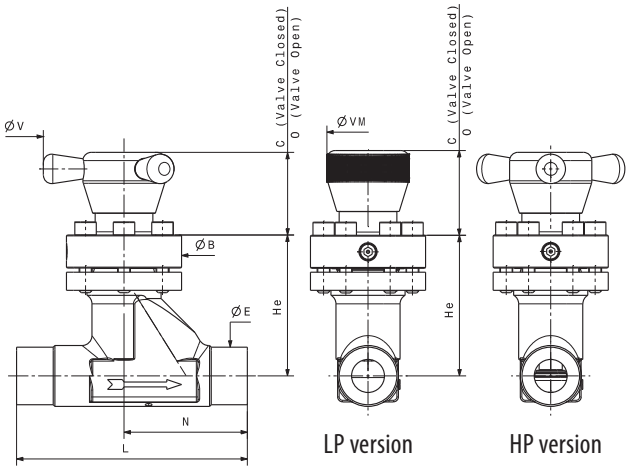
- Vacuum
- Pure and ultra pure gases
- Combustible gases
- Oxidizing gases
- Toxic and corrosive gases
- Radioactive gases
- Noble gases

KEY FEATURES & BENEFITS

- 100% Helium leak test performed on all valves
- Sustainable metallic bellows providing a high internal/ external tightness
- Fluid specific seat material as standard options: Metal - Metal on request
- Visual Open-Close indicator for both manual and pneumatic versions
- Individual serial number for full traceability
- Corrosion resistant internal option available: Hastelloy® bellows
- Electropolished surface roughness
- 100% degreased for Oxygen use
- Corrosion resistant external option available: Inox actuation for both manual and pneumatic versions

DIMENSIONS

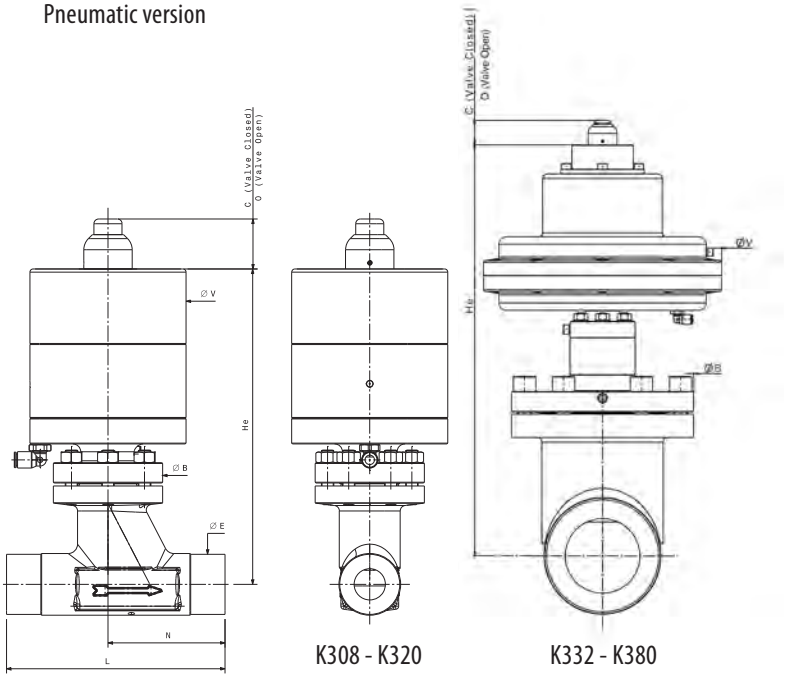
Manual version



LP version

HP version

Pneumatic version



K308 - K320

K332 - K380

SPECIFICATIONS

Fluid media	Standard, high and ultra high purity and corossive gases or liquids	**Temperature range**	233.15 K to 393.15 K (-40°C to +120°C)*	**Certified max. Helium outboard leak rate (at max. pressure)**	≤ 1.10^{-10} Pa.m^3.s^{-1}
Max. working pressure	see table below	**Flow capacity (Cv)**	see table below	**Certified max. Helium across the seat leak Rate (at max. pressure)**	≤ 3.10^{-10} Pa.m^3.s^{-1}
Pneumatic actuator operating pressure	0.5 - 0.7 MPa (5 - 7 bar)	**Nominal seat Diameter**	see table below		

* depending on valve size, actuation type, gas type and seat material

CONSTRUCTION MATERIAL

	Parts	Material
Wetted parts	Body	SS 316L
	Seat	PCTFE or Vespel
	Bellows	SS 316L
	Head/body seal gasket	UNS N02201 (Nickel)
Non-wetted parts	Handwheel	Anodized aluminium
	Actuator Body	SS 316L and Painted anodized aluminium
	Others	SS 430F and C38500

SURFACE FINISH

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

SEAT DIAMETER / FLOW CAPACITY/ MAX WORKING PRESSURE

Valve	Seat diameter	Flow capacity (Cv)	Max. working pressure
K308	8mm	0.78	30 bar
K312	12mm	3	100 bar
K320	20mm	7	100 bar
K332	32mm	18	30 bar
K350	50mm	45	30 bar
K380	80mm	114	15 bar

All specifications subject to change without notice

MANUAL DIMENSIONS

MAN.	K308 LPMI	K312 LPMI	K312 HPMI	K320 LPMI	K320 HPMI	K332 LPMI	K350 LPMI	K380 LPMI
C	37mm/(1.46")	51.5mm/(2.03")	51.5mm/(2.03")	51.5mm/(2.03")	51.5mm/(2.03")	62mm/(2.44")	63mm/(2.48")	275mm/(10.83")
O	38.5mm/(1.52")	55.5mm/(2.19")	55.5mm/(2.19")	56.5mm/(2.22")	56.5mm/(2.22")	70mm/(2.76")	75mm/(2.95")	297mm/(11.69")
ØB	48mm/(1.89")	70mm/(2.76")	70mm/(2.76")	70mm/(2.76")	70mm/(2.76")	108mm/(4.25")	135mm/(5.31")	195mm/(7.68")
ØE (up to)	22.5mm/(0.89")	31.5mm/(1.24")	31.5mm/(1.24")	38.5mm/(1.52")	38.5mm/(1.52")	52mm/(2.05")	77mm/(3.03")	120mm/(4.72")
ØV	-	-	100mm/(3.94")	-	100mm/(3.94")	-	-	300mm/(11.81")
ØVM	35mm/(1.38")	50mm/(1.97")	-	50mm/(1.97")	-	125mm/(4.92")	125mm/(4.92")	-
He	41mm/(1.61")	76.5mm/(3.01")	76.5mm/(3.01")	85.5mm/(3.37")	85.5mm/(3.37")	102mm/(4.02")	125.5mm/(4.94")	175mm/(6.89")
L	90mm/(3.54")	140mm/(5.51")	140mm/(5.51")	140mm/(5.51")	140mm/(5.51")	180mm/(7.09")	250mm/(9.84")	400mm/(15.75")
N	45mm/(1.77")	70mm/(2.76")	70mm/(2.76")	75mm/(2.95")	75mm/(2.95")	110mm/(4.33")	150mm/(5.90")	235mm/(9.25")

PNEUMATIC DIMENSIONS

PNEU.	K308 LPNC/LPNO	K312 LPNC/LPNO	K312 HPNC/HPNO	K320 LPNC/LPNO	K320 HPNC/HPNO	K332 LPNC/LPNO	K350 LPNC/LPNO	K380 LPNC/LPNO
C	11mm/(0.43")	32mm/(1.26")	32mm/(1.26")	32mm/(1.26")	32mm/(1.26")	32mm/(1.26")	27mm/(1.06")	26mm/(1.02")
O	12.5mm/(0.49")	36mm/(1.42")	36mm/(1.42")	37mm/(1.46")	37mm/(1.46")	40mm/(1.57")	39mm/(1.53")	38mm/(1.50")
ØB	48mm/(1.89")	70mm/(2.76")	70mm/(2.76")	70mm/(2.76")	70mm/(2.76")	108mm/(4.25")	135mm/(5.31")	195mm/(7.68")
ØE (up to)	22.5mm/(0.89")	31.5mm/(1.24")	31.5mm/(1.24")	38.5mm/(1.52")	38.5mm/(1.52")	52mm/(2.05")	77mm/(3.03")	120mm/(4.72")
ØV	58mm/(2.28")	100mm/(3.94")	100mm/(3.94")	100mm/(3.94")	100mm/(3.94")	185mm/(7.28")	255mm/(10.04")	255mm/(10.04")
He	87mm/(3.42")	138mm/(5.43")	166.5mm/(6.56")	176mm/(6.93")	202mm/(7.95")	267mm/(10.51")	347mm/(13.66")	441mm/(17.36")
L	90mm/(3.54")	140mm/(5.51")	140mm/(5.51")	140mm/(5.51")	140mm/(5.51")	180mm/(7.09")	250mm/(9.84")	400mm/(15.75")
N	45mm/(1.77")	70mm/(2.76")	70mm/(2.76")	75mm/(2.95")	75mm/(2.95")	110mm/(4.33")	150mm/(5.90")	235mm/(9.25")

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

PRODUCT CONFIGURATOR

	Size	Pressure range[1]	Actuation	Body material	Seat material	End connection[2]	Surface finish	Options[3]
K3	12	LP	MI	I	/K	BWO 19.05X1.65mm	EP4	-
	Seat Ø8mm 08	Low-pressure (15/30 bar version) LP	Manual MI	SS316L I	PCTFE /K	Butt welded orbital BWO	Ra 0.8µm -	No option -
	Seat Ø12mm 12	High-pressure (100 bar version) HP	Pneumatic normally closed NC		PI (Vespel®) /V	Butt welded BW	Ra 0.4µm (electropolished) EP4	Bottom support[4] FP
	Seat Ø20mm 20		Pneumatic normally open NO			Socket welded SW	Ra 0.25µm (electropolished) EP2	Actuator vent for H_2 H2
	Seat Ø32mm 32					Metal face seal - Male MV		Solenoid valve EV
	Seat Ø50mm 50					Metal face seal - Female FV		Double limit switches MRE2
	Seat Ø80mm 80							Proximity sensors (ATEX) DPI2
								Purge port[2] PGP

[1]High-pressure version available for K312 and K320
[2]Size to be defined by customer and ROTAREX
[3]Combinable
[4]Only for K308 and K312

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

Special configuration on demand

HP2000 | BELLOWS VALVES

Stop globe valve with bellows sealing and high tightness. Dedicated to high pressure at ambient temperature. Can be actuated by a manual handwheel or a pneumatic actuator.

Available with pneumatic actuator

APPLICATIONS

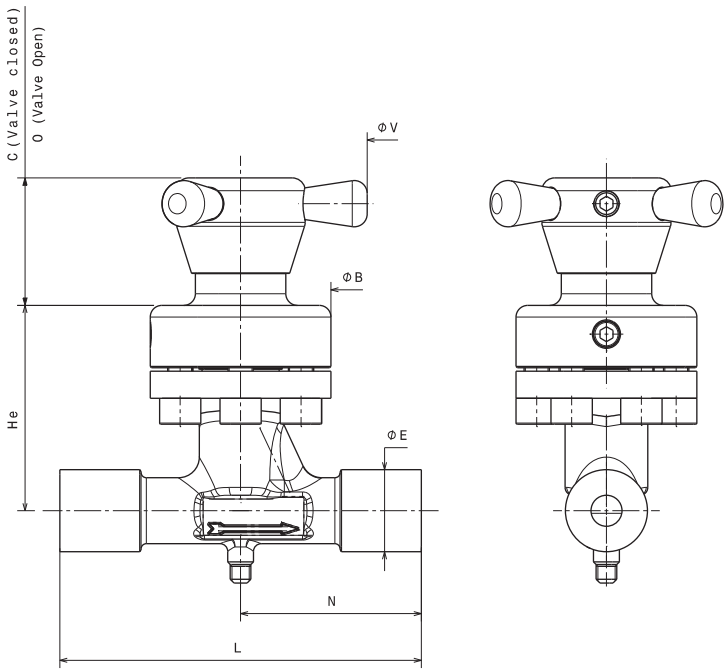
- Vacuum
- Pure and ultra pure gases
- Combustible gases
- Oxidizing gases
- Toxic and corrosive gases
- Radioactive gases
- Noble gases

KEY FEATURES & BENEFITS

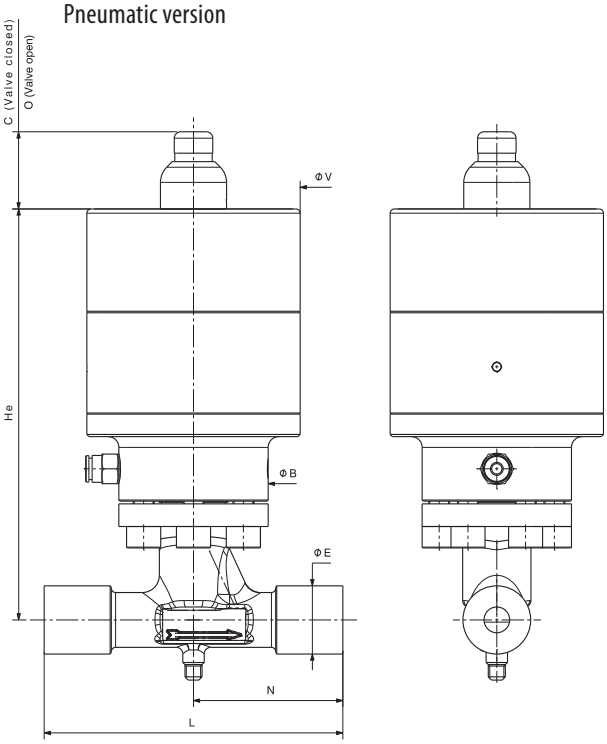
- 100% Helium leak test performed on all valves
- Sustainable metallic bellows providing a high internal/ external tightness
- Fluid specific seat material as standard options: Metal - Metal on request
- Visual Open-Close indicator for both manual and pneumatic versions
- Individual serial number for full traceability
- Corrosion resistant internal option available: Hastelloy® bellows
- Electropolished surface roughness
- 100% degreased for Oxygen use
- Corrosion resistant external option available: Inox actuation for both manual and pneumatic versions

DIMENSIONS

Manual version



Pneumatic version



SPECIFICATIONS

Fluid media	Standard, high and ultra high purity and corossive gases or liquids	**Temperature range**	233.15 K to 393.15 K (-40°C to +120°C)*	**Certified max. Helium outboard leak rate (at max. pressure)**	≤ 1.10^{-10} Pa.m^3.s^{-1}
Max. working pressure	24 MPa (240 bar)*	**Flow capacity (Cv)**	see table below	**Certified max. Helium across the seat leak Rate (at max. pressure)**	≤ 3.10^{-10} Pa.m^3.s^{-1}
Pneumatic actuator operating pressure	0.5 - 0.7 MPa (5 - 7 bar)	**Nominal seat Diameter**	see table below		

* depending on gas type and seat material

CONSTRUCTION MATERIAL

	Parts	Material
Wetted parts	Body	SS 316L or Monel 400
	Seat	PCTFE or Vespel
	Bellows	SS 316L
	Head/body seal gasket	UNS N02201 (Nickel)
Non-wetted parts	Handwheel	Anodized aluminium
	Actuator Body	SS 316L and Painted anodized aluminium
	Others	SS 430F and C38500

SURFACE FINISH

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

SEAT DIAMETER / FLOW CAPACITY

Valve	Seat diameter	Flow capacity (Cv)
HP2008-N	8mm	1,2
HP2012-N	12mm	2,15
HP2008-C	8mm	0.77
HP2012-C	12mm	1.91

All specifications subject to change without notice

MANUAL DIMENSIONS

MAN.	HP2008 MI	HP2012 MI
C	47mm/(1.85")	49mm/(1.93")
O	50mm/(1.97")	53mm/(2.09")
ØB	48mm/(1.89")	70mm/(2.76")
ØE (up to)	22.5mm/(0.89")	31.5mm/(1.24")
ØV	100mm/(3.94")	100mm/(3.94")
He	84.5mm/(3.33")	79.5mm/(3.13")
L	90mm/(3.54")	140mm/(5.51")
N	45mm/(1.77")	70mm/(2.76")

PNEUMATIC DIMENSIONS

PNEU.	HP2008 NC/NO	HP2012 NC/NO
C	32mm/(1.26")	32mm/(1.26")
O	35mm/(1.38")	36mm/(1.42")
ØB	100mm/(3.94")	100mm/(3.94")
ØE (up to)	22.5mm/(0.89")	31.5mm/(1.24")
ØV	100mm/(3.94")	100mm/(3.94")
He	169mm/(6.65")	191mm/(7.52")
L	90mm/(3.54")	140mm/(5.51")
N	45mm/(1.77")	70mm/(2.76")

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

PRODUCT CONFIGURATOR

	Size	Type	Actuation	Body material	Seat material	End connection[1]	Surface finish	Options[2]
HP 20	12	-C	NC	I	/K	BWO 19.05X1.65mm	EP4	-
	Seat Ø8mm **08**	For oxidizing gases[3] **-C**	Manual **MI**	SS316L **I**	PCTFE **/K**	Butt welded orbital **BWO**	Ra 0.8µm **-**	No option **-**
	Seat Ø12mm **12**	For non oxidizing gases **-N**	Pneumatic normally closed **NC**	Monel 400 **M**	PI (Vespel®) **/V**	Butt welded **BW**	Ra 0.4µm (electropolished) **EP4**	Bottom support **FP**
			Pneumatic normally open **NO**			Metal face seal - Male **MV**	Ra 0.25µm (electropolished) **EP2**	Actuator vent for H_2 **H2**
						Metal face seal - Female **FV**		Solenoid valve **EV**
								Double limit switches **MRE2**
								Proximity sensors (ATEX) **DPI2**
								Purge port[1] **PGP**

[1]Size to be defined by customer and ROTAREX
[2]Combinable
[3]Max. working pressure for O_2 200 bar

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

Special configuration on demand

K900 | BELLOWS VALVES

Stop globe valve with replaceable bellows sealing. Dedicated to low pressure at cryogenic temperature. Can be actuated by a manual handwheel or a pneumatic actuator.

Available with manual actuator

APPLICATIONS

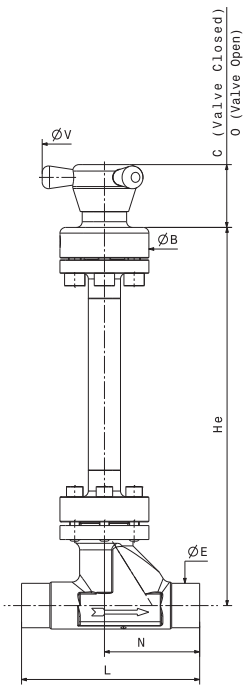
- Recommended for liquid nitrogen and liquid oxygen
- Pure and ultra pure gases or liquids
- Combustible gases or liquids
- Oxidizings gases or liquids
- Toxic and corrosive gases or liquids
- Radioactive gases or liquids
- Noble gases or liquids

KEY FEATURES & BENEFITS

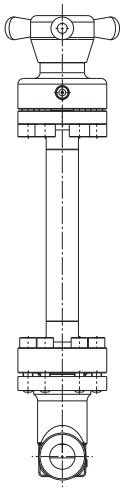
- 100% Helium leak test performed on all valves
- Sustainable metallic bellows providing a high internal/ external tightness
- Fluid specific seat material as standard options: Metal - Metal on request
- Visual Open-Close indicator for both manual and pneumatic versions
- Individual serial number for full traceability
- Corrosion resistant internal option available: Hastelloy® bellows
- Electropolished surface roughness
- 100% degreased for Oxygen use
- Cryogenic extension

DIMENSIONS

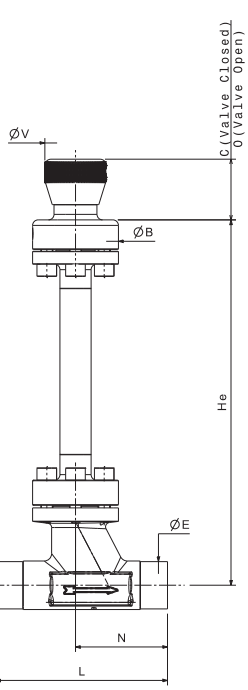
Manual version



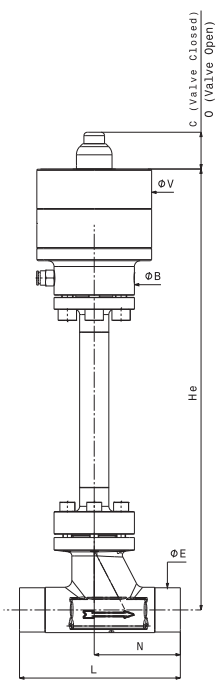
HP version



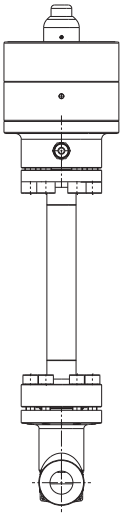
Pneumatic version



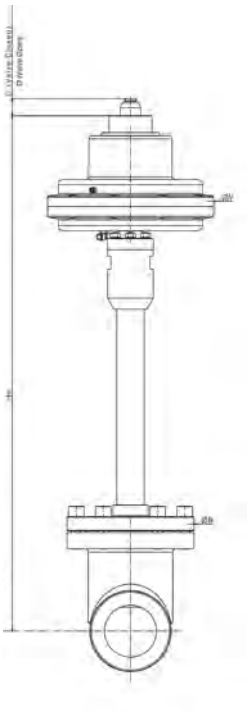
LP version



K908 - K920



K932 - K980



SPECIFICATIONS

Fluid media	Standard, high and ultra high purity and corossive gases or liquids
Max. working pressure	see table below
Pneumatic actuator operating pressure	0.5 - 0.7 MPa (5 - 7 bar)

Temperature range	77.15 K to 523.15 K (-196°C to +250°C)*
Flow capacity (Cv)	see table below
Nominal seat Diameter	see table below

Certified max. Helium outboard leak rate (at max. pressure)	$\leq 1.10^{-10}$ Pa.m^3.s^{-1}
Certified max. Helium across the seat leak Rate (at max. pressure)	$\leq 3.10^{-10}$ Pa.m^3.s^{-1}

* depending on valve size, actuation type, gas type and seat material

CONSTRUCTION MATERIAL

	Parts	Material
Wetted parts	Body	SS 316L
	Seat	PCTFE or Vespel
	Bellows	SS 316L
	Head/body seal gasket	UNS N02201 (Nickel)
Non-wetted parts	Handwheel	Anodized aluminium
	Actuator Body	SS 316L and Painted anodized aluminium
	Others	SS 430F and C38500

SURFACE FINISH

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

SEAT DIAMETER / FLOW CAPACITY/ MAX WORKING PRESSURE

Valve	Seat diameter	Flow capacity (Cv)	Max working pressure
K908	8mm	0.78	30 bar
K912	12mm	3	100 bar
K920	20mm	7	100 bar
K932	32mm	18	30 bar
K950	50mm	45	30 bar
K980	80mm	114	15 bar

Other dimensions upon request

All specifications subject to change without notice

MANUAL DIMENSIONS

MAN.	K908 LPMI	K912 LPMI	K912 HPMI	K920 LPMI	K920 HPMI	K932 LPMI	K950 LPMI	K980 LPMI
C	37mm/(1.46")	49mm/(1.93")	49mm/(1.93")	49mm/(1.93")	49mm/(1.93")	45mm/(1.77")	41mm/(1.61")	629mm/(24.76")
O	38.5mm/(1.52")	53mm/(2.09")	53mm/(2.09")	54mm/(2.13")	54mm/(2.13")	57mm/(2.24")	53mm/(2.09")	641mm/(25.24")
ØB	48mm/(1.89")	70mm/(2.76")	70mm/(2.76")	70mm/(2.76")	70mm/(2.76")	108mm/(4.25")	135mm/(5.31")	195mm/(7.68")
ØE (up to)	22.5mm/(0.89")	31.5mm/(1.24")	31.5mm/(1.24")	38.5mm/(1.52")	38.5mm/(1.52")	52mm/(2.05")	77mm/(3.03")	120mm/(4.72")
ØV	35mm/(1.38")	50mm/(1.97")	100mm/(3.94")	50mm/(1.97")	100mm/(3.94")	125mm/(4.92")	125mm/(4.92")	300mm/(11.81")
He	181mm/(7.13")	289mm/(11.38")	289mm/(11.38")	298mm/(11.73")	298mm/(11.73")	537mm/(21.14")	563mm/(22.17")	-
L	90mm/(3.54")	140mm/(5.51")	140mm/(5.51")	140mm/(5.51")	140mm/(5.51")	180mm/(7.09")	250mm/(9.84")	400mm/(15.75")
N	45mm/(1.77")	70mm/(2.76")	70mm/(2.76")	75mm/(2.95")	75mm/(2.95")	110mm/(4.33")	150mm/(5.90")	235mm/(9.25")

PNEUMATIC DIMENSIONS

MAN.	K908 LPNC/LPNO	K912 LPNC/LPNO	K912 HPNC/HPNO	K920 LPNC/LPNO	K920 HPNC/HPNO	K932 LPNC/LPNO	K950 LPNC/LPNO	K980 LPNC/LPNO
C	11mm/(0.43")	32mm/(1.26")	32mm/(1.26")	32mm/(1.26")	32mm/(1.26")	32mm/(1.26")	27mm/(1.06")	26mm/(1.02")
O	12.5mm/(0.49")	36mm/(1.42")	36mm/(1.42")	37mm/(1.46")	37mm/(1.46")	40mm/(1.57")	39mm/(1.53")	38mm/(1.50")
ØB	48mm/(1.89")	70mm/(2.76")	70mm/(2.76")	70mm/(2.76")	70mm/(2.76")	108mm/(4.25")	135mm/(5.31")	195mm/(7.68")
ØE (up to)	22.5mm/(0.89")	31.5mm/(1.24")	31.5mm/(1.24")	38.5mm/(1.52")	38.5mm/(1.52")	52mm/(2.05")	77mm/(3.03")	120mm/(4.72")
ØV	58mm/(2.28")	100mm/(3.94")	100mm/(3.94")	100mm/(3.94")	100mm/(3.94")	185mm/(7.28")	255mm/(10.04")	255mm/(10.04")
He	227mm/(8.94")	346mm/(13.62")	375mm/(14.76")	384mm/(15.12")	410mm/(16.14")	665mm/(26.18")	690mm/(27.16")	794,5mm/(31.26")
L	90mm/(3.54")	140mm/(5.51")	140mm/(5.51")	140mm/(5.51")	140mm/(5.51")	180mm/(7.09")	250mm/(9.84")	400mm/(15.75")
N	45mm/(1.77")	70mm/(2.76")	70mm/(2.76")	75mm/(2.95")	75mm/(2.95")	110mm/(4.33")	150mm/(5.90")	235mm/(9.25")

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

PRODUCT CONFIGURATOR

	Size		Pressure range[1]		Actuation		Body material		Seat material		End connection[2]		Surface finish		Options[3]	
K9	12		LP		MI		I		/K		BWO 19.05X1.65mm		EP4		-	
	Seat Ø8mm	08	Low pressure (15/30 bar version)	LP	Manual	MI	SS316L	I	PCTFE	/K	Butt welded orbital	BWO	Ra 0.8µm	-	No option	-
	Seat Ø12mm	12	High pressure (100 bar version)	HP	Pneumatic normally open	NO			PI (Vespel®)	/V	Butt welded	BW	Ra 0.4µm (electropolished)	EP4	Bottom support	FP
	Seat Ø20mm	20			Pneumatic normally closed	NC					Socket welded	SW	Ra 0.25µm (electropolished)	EP2	Actuator vent for H_2	H2
	Seat Ø32mm	32									Metal face seal - Male	MV			Solenoid valve	EV
	Seat Ø50mm	50									Metal face seal - Female	FV			Double limit switches	MRE2
	Seat Ø80mm	80													Proximity sensors (ATEX)	DPI2
															Purge port[2]	PGP

[1]High-pressure version available for K912 and K920
[2]Size to be defined by customer and ROTAREX
[3]Combinable

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

Special configuration on demand

HP9000 | BELLOWS VALVES

Stop globe valve with replaceable bellows sealing. Dedicated to high pressure at cryogenic temperature. Can be actuated by a manual handwheel or a pneumatic actuator.

Available with manual actuator

APPLICATIONS

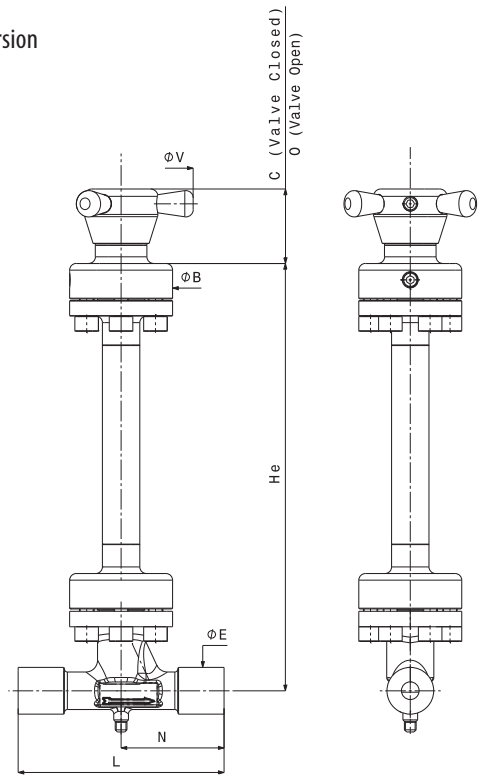
- Recommended for liquid nitrogen and liquid oxygen
- Vacuum
- Pure and ultra pure gases or liquids
- Combustible gases or liquids
- Oxidizings gases or liquids
- Toxic and corrosive gases or liquids
- Radioactive gases or liquids
- Noble gases or liquids

KEY FEATURES & BENEFITS

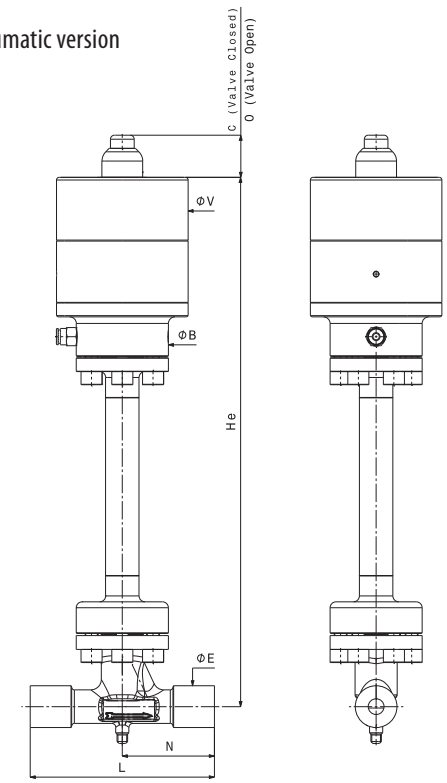
- 100% Helium leak test performed on all valves
- Sustainable metallic bellows providing a high internal/ external tightness
- Fluid specific seat material as standard options: Metal - Metal on request
- Visual Open-Close indicator for both manual and pneumatic versions
- Individual serial number for full traceability
- Corrosion resistant internal option available: Hastelloy® bellows
- Electropolished surface roughness
- 100% degreased for Oxygen use
- Cryogenic extension

DIMENSIONS

Manual version



Pneumatic version



SPECIFICATIONS

Fluid media	Standard, high and ultra high purity and corossive gases or liquids
Max. working pressure	24 MPa (240 bar)*
Pneumatic actuator operating pressure	0.5 - 0.7 MPa (5 - 7 bar)

Temperature range	77.15 K to 523.15 K (-196°C to +250°C)*
Flow capacity (Cv)	see table below
Nominal seat Diameter	see table below

Certified max. Helium outboard leak rate (at max. pressure)	$\leq 1.10^{-10}$ Pa.m^3.s^{-1}
Certified max. Helium across the seat leak Rate (at max. pressure)	$\leq 3.10^{-10}$ Pa.m^3.s^{-1}

* depending on gas type and seat material

CONSTRUCTION MATERIAL

	Parts	Material
Wetted parts	Body	SS 316L
	Seat	PCTFE or Vespel
	Bellows	SS 316L
	Head/body seal gasket	UNS N02201 (Nickel)
Non-wetted parts	Handwheel	Anodized aluminium
	Actuator Body	SS 316L and Painted anodized aluminium
	Others	SS 430F and C38500

SURFACE FINISH

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

SEAT DIAMETER / FLOW CAPACITY

Valve	Seat diameter	Flow capacity (Cv)
HP9008-N	8mm	1,2
HP9012-N	12mm	2,15
HP9008-C	8mm	0.77
HP9012-C	12mm	1.91

Other dimensions upon request

All specifications subject to change without notice

MANUAL DIMENSIONS

MAN.	HP9008 MI	HP9012 MI
C	49mm/(1.93")	49mm/(1.93")
O	52mm/(2.05")	53mm/(2.09")
ØB	70mm/(2.76")	70mm/(2.76")
ØE (up to)	22.5mm/(0.89")	31.5mm/(1.24")
ØV	100mm/(3.94")	100mm/(3.94")
He	290.5mm/(11.44")	290.5mm/(11.44")
L	90mm/(3.54")	140mm/(5.51")
N	45mm/(1.77")	70mm/(2.76")

PNEUMATIC DIMENSIONS

MAN.	HP9008 NC/NO	HP9012 NC/NO
C	32mm/(1.26")	32mm/(1.26")
O	35mm/(1.38")	36mm/(1.42")
ØB	70mm/(2.76")	70mm/(2.76")
ØE (up to)	22.5mm/(0.89")	31.5mm/(1.24")
ØV	100mm/(3.94")	100mm/(3.94")
He	376.5mm/(14.82")	402,5mm/(15.84")
L	90mm/(3.54")	140mm/(5.51")
N	45mm/(1.77")	70mm/(2.76")

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

PRODUCT CONFIGURATOR

	Size		Type		Actuation		Body material		Seat material		End connection[1]		Surface finish		Options[2]	
HP 90	12		-C		MI		I		/K		BWO 19.05X1.65mm		EP4		-	
	Seat Ø8mm	08	For oxidizing gases[3]	-C	Manual	MI	SS316L	I	PCTFE	/K	Butt welded orbital	BWO	Ra 0.8µm	-	No option	-
	Seat Ø12mm	12	For non oxidizing gases	-N	Pneumatic normally open	NO			PI (Vespel®)	/V	Butt welded	BW	Ra 0.4µm (electropolished)	EP4	Bottom support	FP
					Pneumatic normally closed	NC					Metal face seal - Male	MV	Ra 0.25µm (electropolished)	EP2	Actuator vent for H_2	H2
											Metal face seal - Female	FV			Solenoid valve	EV
															Double limit switches	MRE2
															Proximity sensors (ATEX)	DPI2
															Purge port[1]	PGP

[1]Size to be defined by customer and ROTAREX
[2]Combinable
[3]Max. working pressure for O_2 200 bar

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

Special configuration on demand

SUPRA | BELLOWS VALVES

Stop globe valve with replaceable bellows sealing. Dedicated to low pressure at low cryogenic temperature (close to absolute zero). Can be actuated by a manual handwheel or a pneumatic actuator.

Available with pneumatic actuator

APPLICATIONS

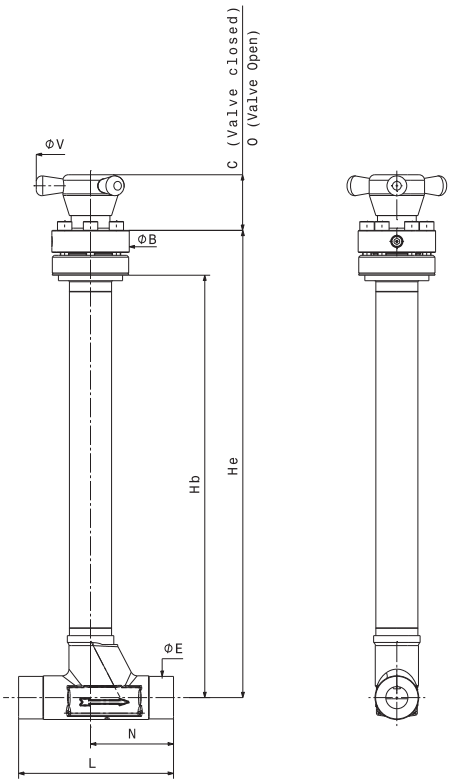
- Recommended for liquid helium and liquid hydrogen
- Vacuum
- Pure and ultra pure gases or liquids
- Combustible gases or liquids
- Oxidizings gases or liquids
- Toxic and corrosive gases or liquids
- Radioactive gases or liquids
- Noble gases or liquids

KEY FEATURES & BENEFITS

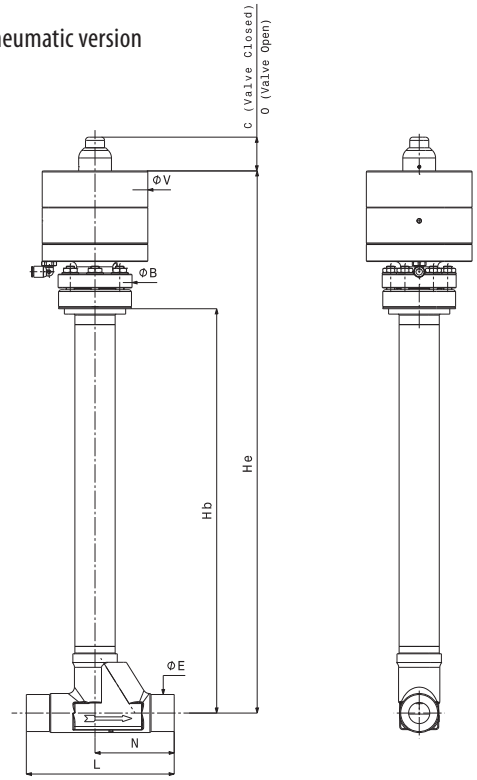
- 100% Helium leak test performed on all valves
- Sustainable metallic bellows providing a high internal/ external tightness
- Fluid specific seat material as standard options: Metal - Metal on request
- Individual serial number for full traceability
- Electropolished surface roughness
- Thermal insulation
- 100% degreased for Oxygen use
- Ready for vacuum installation
- Cryogenic extension

DIMENSIONS

Manual version



Pneumatic version



SPECIFICATIONS

Fluid media	Standard, high and ultra high purity and corossive gases or liquids
Max. working pressure	see table below
Pneumatic actuator operating pressure	0.5 - 0.7 MPa (5 - 7 bar)

* depending on actuation type and gas type

Temperature range	3.15 K to 353.15 K (-270°C to +80°C)
Flow capacity (Cv)	see table below
Nominal seat Diameter	see table below

Certified max. Helium outboard leak rate (at max. pressure)	$\leq 1.10^{-10}$ Pa.m^3.s^{-1}
Certified max. Helium across the seat leak Rate (at max. pressure)	$\leq 3.10^{-10}$ Pa.m^3.s^{-1}

CONSTRUCTION MATERIAL

	Parts	Material
Wetted parts	Body	SS 316L
	Seat	PCTFE or Vespel
	Bellows	SS 316L
	Head/body seal gasket	UNS N02201 (Nickel)
Non-wetted parts	Handwheel	Anodized aluminium
	Actuator Body	SS 316L and Painted anodized aluminium
	Others	SS 430F and C38500

SURFACE FINISH

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

SEAT DIAMETER / FLOW CAPACITY/ MAX WORKING PRESSURE

Valve	Seat diameter	Flow capacity (Cv)	Max working pressure
SUPRA 8	8mm	0.78	15 bar
SUPRA 12	12mm	2,70	25 bar
SUPRA 20	20mm	4,81	25 bar
SUPRA 32	32mm	15,00	25 bar
SUPRA 50	50mm	34,10	20 bar

All specifications subject to change without notice

MANUAL DIMENSIONS

MAN.	S08 MI	S12 MI	S20 MI	S32 MI	S50 MI
C	37mm/(1.46")	51.5mm/(2.03")	51.5mm/(2.03")	62mm/(2.44")	63mm/(2.48")
O	38.5mm/(1.52")	55.5mm/(2.19")	56.5mm/(2.22")	70mm/(2.76")	75mm/(2.95")
ØB	48mm/(1.89")	70mm/(2.76")	70mm/(2.76")	108mm/(4.25")	135mm/(5.31")
ØE (up to)	17.5mm/(0.69")	31.5mm/(1.24")	38.5mm/(1.52")	52mm/(2.05")	77mm/(3.03")
ØV	35mm/(1.38")	100mm/(3.94")	100mm/(3.94")	125mm/(4.92")	125mm/(4.92")
Hb	300mm/(11.81")	382mm/(15.04")	382mm/(15.04")	427mm/(16.91")	473mm/(18.62")
He	338mm/(13.31")	423mm/(16.65")	423mm/(16.65")	473mm/(18.62")	523mm/(20.59")
L	90mm/(3.54")	140mm/(5.51")	140mm/(5.51")	180mm/(7.09")	250mm/(9.84")
N	45mm/(1.77")	70mm/(2.76")	75mm/(2.95")	110mm/(4.33")	150mm/(5.90")

PNEUMATIC DIMENSIONS

PNEU.	S08 NC/NO	S12 NC/NO	S20 NC/NO	S32 NC/NO	S50 NC/NO
C	11mm/(0.43")	32mm/(1.26")	32mm/(1.26")	32mm/(1.26")	27mm/(1.06")
O	12.5mm/(0.49")	36mm/(1.42")	37mm/(1.46")	40mm/(1.57")	39mm/(1.53")
ØB	48mm/(1.89")	70mm/(2.76")	70mm/(2.76")	108mm/(4.25")	135mm/(5.31")
ØE (up to)	17.5mm/(0.69")	31.5mm/(1.24")	38.5mm/(1.52")	52mm/(2.05")	77mm/(3.03")
ØV	58mm/(2.28")	100mm/(3.94")	100mm/(3.94")	185mm/(7.28")	255mm/(10.04")
Hb	300mm/(11.81")	382mm/(15.04")	382mm/(15.04")	427mm/(16.81")	473mm/(18.62")
He	383mm/(15.08")	481mm/(18.94")	510mm/(20.08")	638mm/(25.12")	744mm/(29.29")
L	90mm/(3.54")	140mm/(5.51")	140mm/(5.51")	180mm/(7.09")	250mm/(9.84")
N	45mm/(1.77")	70mm/(2.76")	75mm/(2.95")	110mm/(4.33")	150mm/(5.90")

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

PRODUCT CONFIGURATOR

	Size	Actuation	Body material	Seat material	End connection[1]	Surface finish	Options[2]
SUPRA	12	MI	I	/K	BWO 19.05X1.65mm	EP4	-
	Seat Ø8mm **08**	Manual **MI**	SS316L **I**	PCTFE **/K**	Butt welded orbital **BWO**	Ra 0.8µm **-**	No option **-**
	Seat Ø12mm **12**	Pneumatic normally open **NO**		PI (Vespel®) **/V**	Butt welded **BW**	Ra 0.4µm (electropolished) **EP4**	Bottom support **FP**
	Seat Ø20mm **20**	Pneumatic normally closed **NC**			Socket welded **SW**	Ra 0.25µm (electropolished) **EP2**	Actuator vent for H_2 **H2**
	Seat Ø32mm **32**						Solenoid valve **EV**
	Seat Ø50mm **50**						Double limit switches **MRE2**
							Proximity sensors (ATEX) **DPI2**
							Flange for vacuum installation **BV**
							Flange for cooling system **BT**
							Purge port[1] **PGP**

[1]Size to be defined by customer and ROTAREX
[2]Combinable

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

Special configuration on demand

CAR(S) | CHECK VALVES

Check valve with replaceable spring and plug.

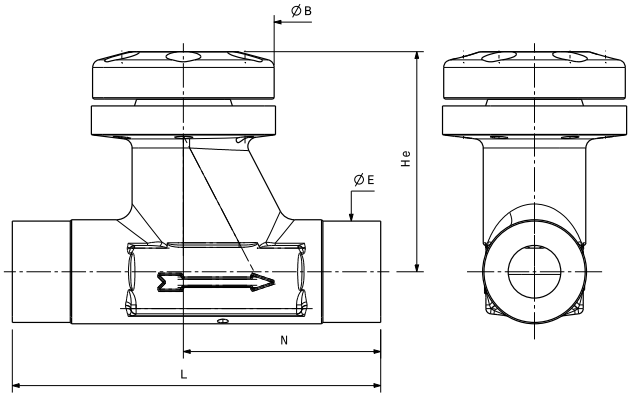
APPLICATIONS

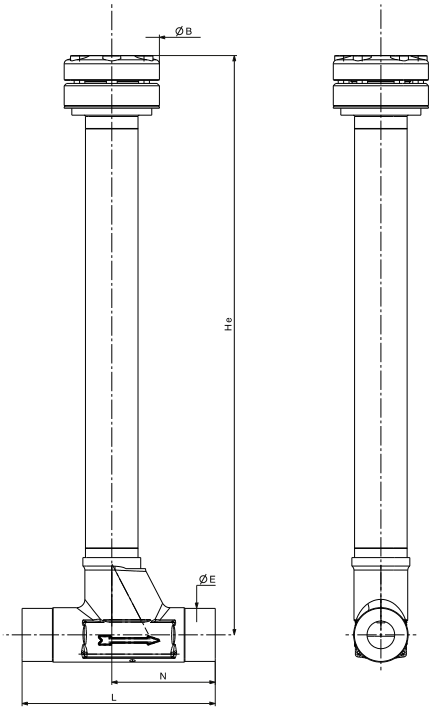
- Pure and ultra pure gases
- Combustible gases
- Oxidizing gases
- Toxic and corrosive gases
- Radioactive gases
- Noble gases

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 corossive gases or liquids
Max. working pressure	see table below
Pneumatic actuator operating pressure	-

Temperature range	77.15 K to 523.15 K (-196°C to +250°C)*
Flow capacity (Cv)	-
Nominal seat Diameter	see table below

Certified max. Helium outboard leak rate (at max. pressure)	$\leq 1.10^{-10}$ Pa.m^3.s^{-1}
Certified max. Helium across the seat leak Rate (at max. pressure)	$\leq 1.10^{-6}$ Pa.m^3.s^{-1}*

* 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 O_2, NF_3 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	I	PCTFE	/K	Butt welded orbital	BWO	Ra 0.8µm	-	No option	-
	Seat Ø12mm	12			PI (Vespel®)	/V	Butt welded	BW	Ra 0.4µm (electropolished)	EP4	Patte de fixation[2]	FP
	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				

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

Special configuration on demand

[1]Size to be defined by customer and ROTAREX
[2]Minimal operating temperature -270° (3.15K)

NOTES

NOTES

A FULL LINE OF GAS CONTROL SOLUTIONS

COMPLETE SOLUTIONS FROM SOURCE TO PROCESS.

ROTAREX is helping engineers worldwide to get better gas results: from ultra high purity production and medical care facilities to industrial and LPG applications, as well as alternative energy vehicles, fire suppression, diving, aerospace, cryogenics, laboratory, petro-chemical and welding. ROTAREX applies over 90 years of know-how and experience to custom design, develop and manufacture the high performance valves, regulators and fittings to suit your needs, all in one hand. Discover the difference ROTAREX can make in your world.

CYLINDER VALVES | **EQUIPMENT** | **FIRETEC** | **AUTOMOTIVE** | **LPG/SRG** | **MEDITEC**

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WATER CARBONATION

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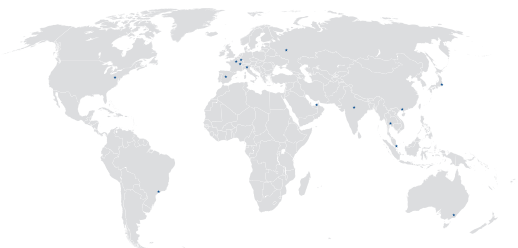
LPG CYLINDER VALVES & REGULATORS

DIGITAL MEASUREMENT SYSTEMS

PLASTIC INJECTION MOULDING



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ROTAREX
VALVES - FITTINGS - REGULATORS

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WE MAKE YOUR TECHNOLOGY WORK

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