



**U
BUSCH
U**

VACUUM SOLUTIONS

ACCESSORIES
for vacuum pumps

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Your Partner. For All Your Vacuum Needs.



The future of vacuum. Since 1963.

Busch Vacuum Solutions offers vacuum and overpressure solutions for all industries. From individual vacuum pumps, blowers, and compressors to tailor-made vacuum systems. More than 50 years ago, Dr.-Ing. Karl and Ayhan Busch developed the ideal vacuum pump for the food packaging industry. Today, the family business from Maulburg in the Black Forest is the market leader in all areas of industrial vacuum. With over 3500 employees in more than 40 countries. Thanks to our great experience and highly qualified specialists, we are driving innovation. And working on the vacuum world of the future.

Essential connection components. To meet your vacuum system's requirements.

Connections are fundamental components of a vacuum system. They join the different parts to create one coherent, perfectly coordinated system. Our broad range comprises several hundred components for applications ranging from the rough to ultra-high vacuum ranges. Find a match to meet your needs from a variety of different connection types, sizes, and materials. State-of-the-art production technologies result in a tight fit and low outgassing (desorption) rates, ensuring that our components meet your requirements.

Connection components from Busch are easy to use and compatible with all applications. Making them ideal for your process.



Our extensive product portfolio draws on the widest range of vacuum and overpressure technologies.

ISO-KF: Small Flange for Vacuum Applications



Designed for an optimal vacuum performance

- Suitable for pressures up to 10^{-8} hPa.
- Can be used for overpressures up to 1,500 hPa
- Two symmetrical flanges and one elastomer O-ring seal, which is positioned by a centering ring
- Pressing force created by a clamping ring
- Efficient assembly and disassembly without any tools
- According to DIN 28403 and ISO 2861
- Nominal diameter DN 10 up to DN 50

Extended pressure range to less than 10^{-9} hPa by using metal seals

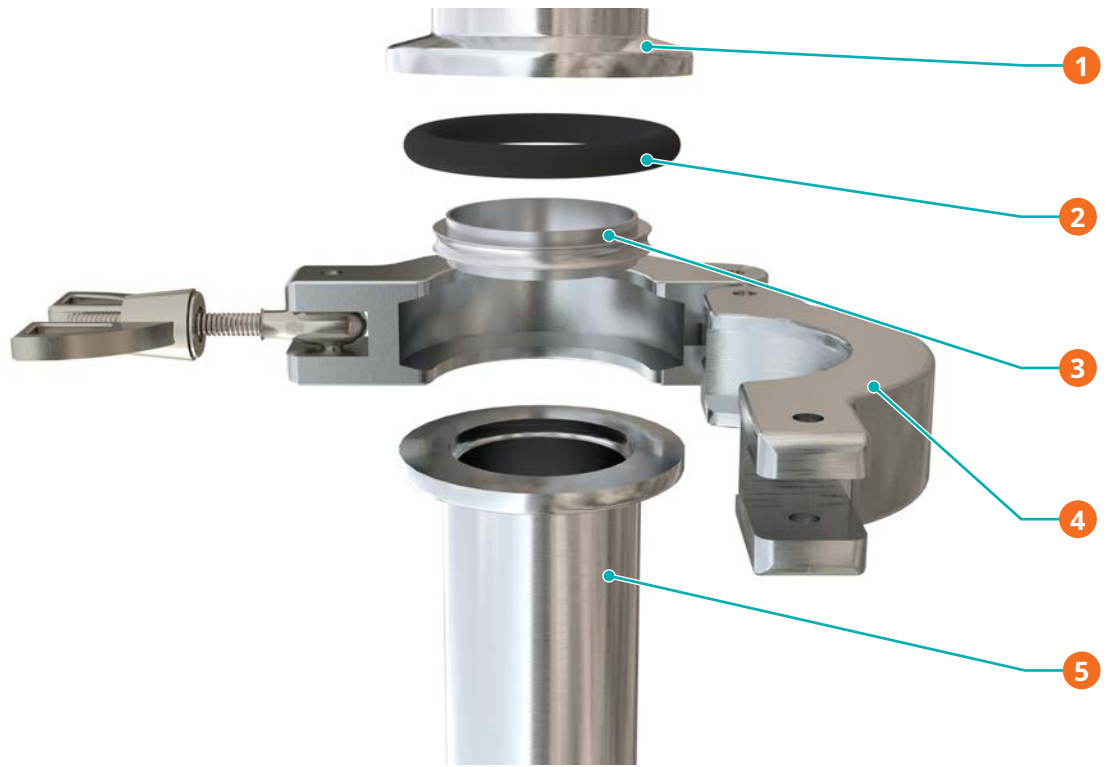
- Significantly higher pressing force required, created by special clamps

Alternative mounting on a base plate

Pressing force by claw clamps or bulkhead clamps

Material

- 1.4301/304
- 1.4404/316
- Aluminum
- Further material on request



- 1 ISO-KF flange
- 2 O-Ring (e.g. FKM)
- 3 Centering ring
- 4 Clamping ring
- 5 ISO-KF flange

Operating principle ISO-KF with clamping ring



ISO-KF on base plate with bulkhead clamp and blind holes



ISO-KF on base plate with blind holes and single claw clamp



ISO-K / ISO-F: Clamping Flange for Vacuum Applications



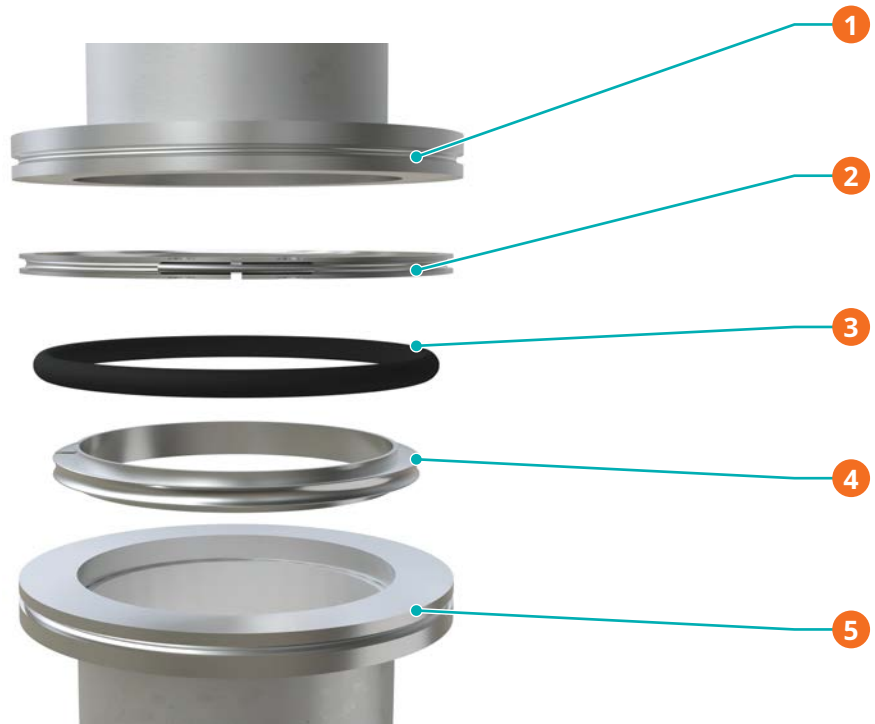
Designed for high vacuum applications

- Suitable for pressures up to 10^{-8} hPa.
 - Can be used for overpressures up to 1,500 hPa
 - Two symmetrical flanges and one elastomer O-ring seal, which is positioned by a centering ring
 - Pressing force created claw clamps (ISO-K) respectively screws (ISO-F)
 - Combination of ISO-K with ISO-F flanges possible due to rotatable bolt rings
 - According to DIN 28404 and ISO 1609
 - Commonly used sizes: DN 63 ISO-K, DN 100 ISO-K, DN 160 ISO-K...DN 630 ISO-K up to DN1000 ISO-F
- Extended pressure range to less than 10^{-9} hPa by using metal seals
- Significantly higher pressing force required. ISO-F flanges with screws recommended. For ISO-K flanges increase the number of claw clamps.

Material

- 1.4301/304
- 1.4404/316
- Aluminum
- Further material on request

Functional principles ISO-K



- 1 ISO-K flange
- 2 Outer ring
- 3 O-Ring (e.g. FKM)
- 4 Centering ring
- 5 ISO-K flange

ISO-K connection with double claw clamp



ISO-F centering ring same like ISO-K

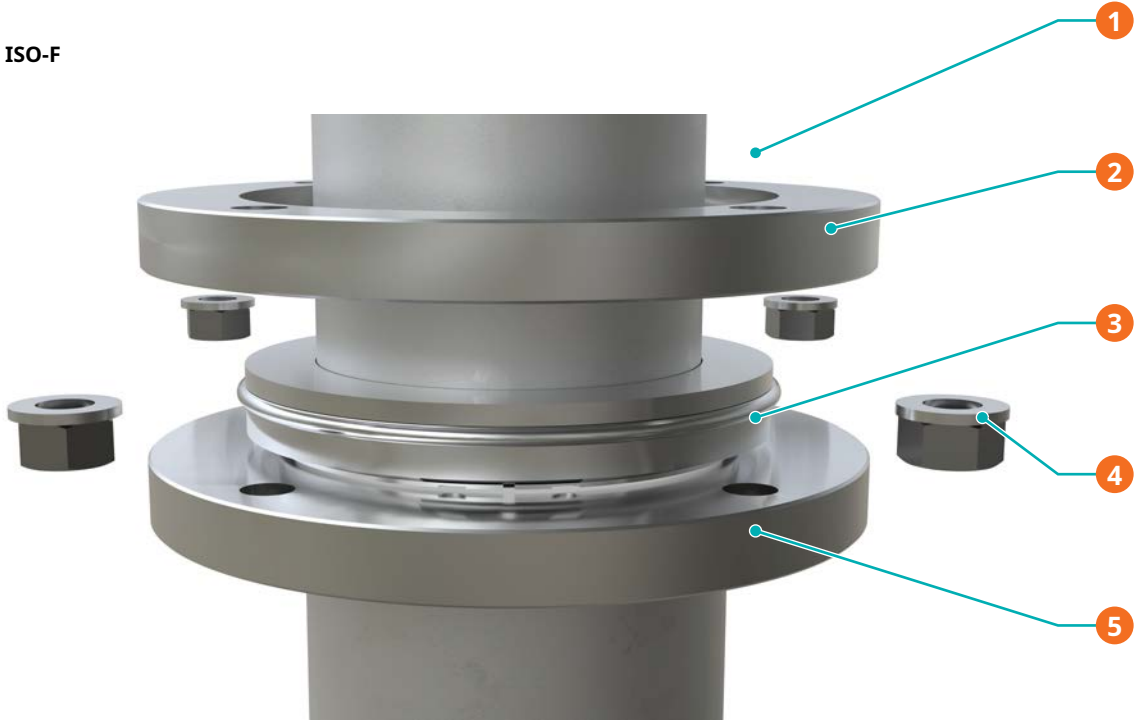


ISO-K on base plate with blind holes and single claw clamp



Functional principles ISO-K / ISO-F

Adaption ISO-K to ISO-F



- 1 Screws M8-M12 accordingly
- 2 Rotateable collar flange
- 3 ISO-K flange
- 4 Through bore hole
- 5 Bolt nut screws M8-M12

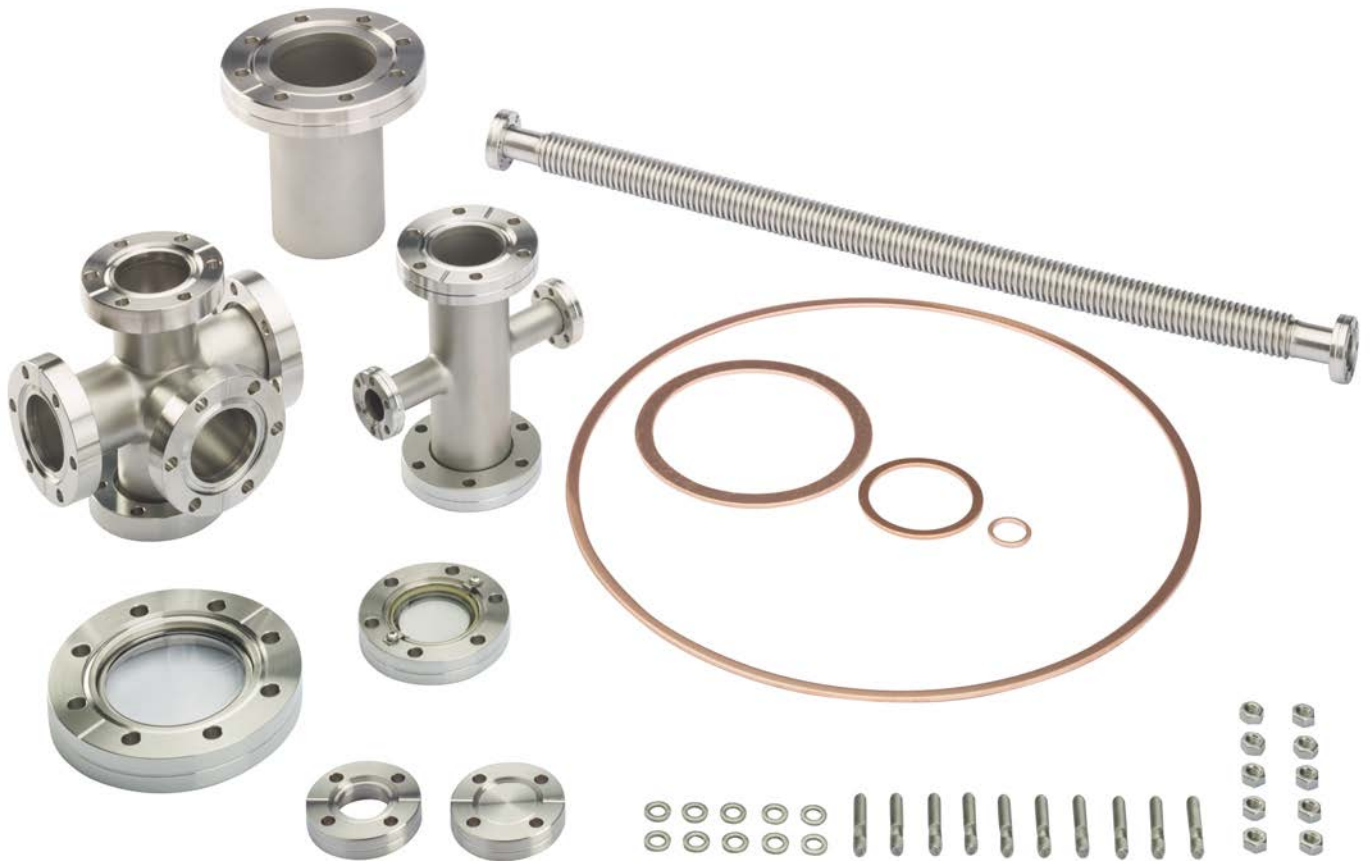
ISO-KF on base plate with bottom half shells and blind holes



ISO-F on base plate with blind holes



CF: Flange suitable for Ultra-High Vacuum Applications (UHV)



Designed for ultra-high vacuum applications

- From ambient pressure up to less than 10-12 hPa
- Bakable up to 450 °C
- Two symmetrical flanges with knife-edge and flat copper gasket which is positioned in a sealing recess
- Sufficient number of screws which provide the necessary high pressing force
- Knife-edges press into the copper seal and form a hermetically sealed connection (gasket cannot be reused)
- According to ISO 3669 in nominal diameters DN 10 to DN 400
- For nominal sizes larger than DN 250 different flange dimensions are still common

Material

- Stainless steel with low carbon content 1.4307 - sufficient for many applications
- For higher demands, e.g., regarding strength or low magnetizability premium steel 1.4429 ESR is recommended



COMPONENTS

ISO-KF

ISO-KF Centering Ring



- Material: O-ring in various materials
- Temperature range: FKM: -15 to 150 °C (shortly up to 200 °C);
NBR: -25 to 120 °C;
CR: -5 to 120 °C; EPDM: -50 to 130 °C

Dimensions



Aluminum EN AW-6061

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 KF	CR	12	10	3,9	8	5	0450227058
DN 16 KF	CR	17	16	3,9	8	5	0450227059
DN 25 KF	CR	26	25	3,9	8	5	0450227060
DN 40 KF	CR	41	40	3,9	8	5	0450227061
DN 50 KF	CR	52	50	3,9	8	5,33	0450227062
DN 10 KF	FKM	12	10	3,9	8	5	0450227046
DN 16 KF	FKM	17	16	3,9	8	5	0450227047
DN 25 KF	FKM	26	25	3,9	8	5	0450227048
DN 40 KF	FKM	41	40	3,9	8	5	0450227049
DN 50 KF	FKM	52	50	3,9	8	5,33	0450227050
DN 10 KF	NBR	12	10	3,9	8	5	0450227030
DN 16 KF	NBR	17	16	3,9	8	5	0450227031
DN 25 KF	NBR	26	25	3,9	8	5	0450227032

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 40 KF	NBR	41	40	3,9	8	5	0450227033
DN 50 KF	NBR	52	50	3,9	8	5,33	0450227034

According to ISO 2861

Stainless Steel 304/1.4301

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 KF	FKM	12	10	3,9	8	5	0450227464
DN 16 KF	FKM	17	16	3,9	8	5	0450227465
DN 25 KF	FKM	26	25	3,9	8	5	0450227466
DN 40 KF	FKM	41	40	3,9	8	5	0450227467
DN 50 KF	FKM	52	50	3,9	8	5,33	0450227468
DN 16 KF	EPDM	17	16	3,9	8	5	0450227477
DN 25 KF	EPDM	26	25	3,9	8	5	0450227478
DN 40 KF	EPDM	41	40	3,9	8	5	0450227479
DN 50 KF	EPDM	52	50	3,9	8	5,33	0450227480

According to ISO 2861

Stainless Steel 316L/1.4404

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 KF	FKM	12	10	3,9	8	5	0450227576
DN 16 KF	FKM	17	16	3,9	8	5	0450227577
DN 25 KF	FKM	26	25	3,9	8	5	0450227578
DN 40 KF	FKM	41	40	3,9	8	5	0450227579
DN 50 KF	FKM	52	50	3,9	8	5,33	0450227580

According to ISO 2861

ISO-KF Centering Ring, Plastic



- Material: Plastic
- Temperature range: -15 to 150 °C (shortly up to 200 °C)

Dimensions



PTFE

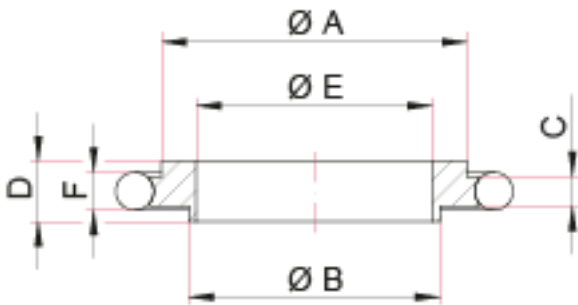
Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 KF	FKM	12	10	3,9	8	5	0450227492
DN 16 KF	FKM	17	16	3,9	8	5	0450227493
DN 25 KF	FKM	26	25	3,9	8	5	0450227494
DN 40 KF	FKM	41	40	3,9	8	5	0450227495
DN 50 KF	FKM	52	50	3,9	8	5,33	0450227496

ISO-KF Reducer Centering Ring



- Material: O-ring in various materials
- Temperature range: FKM: -15 to 150 °C (shortly up to 200 °C); NBR: -25 to 120 °C; CR: -5 to 120 °C

Dimensions



Aluminum EN AW-6061

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Nominal diameter reduced	Part number
DN 16 KF	FKM	17	12	3,9	8	10	5	DN 10 KF	0450227051
DN 25 KF	FKM	26	22	3,9	8	21	5	DN 20 KF	0450227052
DN 40 KF	FKM	41	34	3,9	8	32	5	DN 32 KF	0450227053
DN 16 KF	NBR	17	12	3,9	8	10	5	DN 10 KF	0450227035
DN 25 KF	NBR	26	22	3,9	8	21	5	DN 20 KF	0450227036
DN 40 KF	NBR	41	34	3,9	8	32	5	DN 32 KF	0450227037
DN 16 KF	CR	17	12	3,9	8	10	5	DN 10 KF	0450227063
DN 25 KF	CR	26	22	3,9	8	21	5	DN 20 KF	0450227064
DN 40 KF	CR	41	34	3,9	8	32	5	DN 32 KF	0450227065

According to ISO 2861

Stainless Steel 304/1.4301

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Nominal diameter reduced	Part number
DN 16 KF	FKM	17	12	3,9	8	10	5	DN 10 KF	0450227469
DN 25 KF	FKM	26	22	3,9	8	21	5	DN 20 KF	0450227470
DN 40 KF	FKM	41	34	3,9	8	32	5	DN 32 KF	0450227471

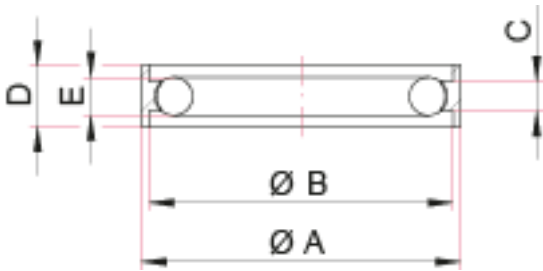
According to ISO 2861

ISO-KF Outer Centering Ring



- Available in aluminum, stainless steel or plastic

Dimensions



Aluminum EN AW-6061

- Temperature range: FKM: -15 to 150 °C (shortly up to 200 °C); EPDM: -50 to 130 °C

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 16 KF	EPDM	32,5	30	3,9	8	5	0450227054
DN 25 KF	EPDM	42	40	3,9	8	5	0450227055
DN 40 KF	EPDM	57,5	55	3,9	8	5	0450227056
DN 50 KF	EPDM	77,5	75	3,9	8	5,33	0450227057
DN 16 KF	FKM	32,5	30	3,9	8	5	0450227042
DN 25 KF	FKM	42	40	3,9	8	5	0450227043
DN 40 KF	FKM	57,5	55	3,9	8	5	0450227044
DN 50 KF	FKM	77,5	75	3,9	8	5,33	0450227045

Stainless Steel 304/1.4301

- Temperature range: -15 to 150 °C (shortly up to 200 °C)

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 16 KF	FKM	32,5	30	3,9	8	5	0450227455

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 25 KF	FKM	42	40	3,9	8	5	0450227456
DN 40 KF	FKM	57,5	55	3,9	8	5	0450227457
DN 50 KF	FKM	77,5	75	3,9	8	5,33	0450227458

Plastic PTFE

- Temperature range: -15 to 150 °C (shortly up to 200 °C)

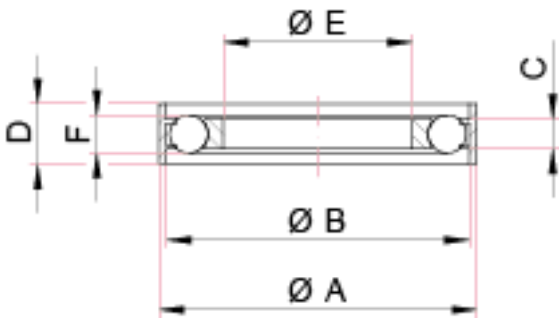
Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 16 KF	FKM	32,5	30	3,9	8	5	0450227488
DN 25 KF	FKM	42	40	3,9	8	5	0450227489
DN 40 KF	FKM	57,5	55	3,9	8	5	0450227490
DN 50 KF	FKM	77,5	75	3,9	8	5,33	0450227491

ISO-KF Outer Centering Ring with Inner Support Ring



- Inner ring material: Stainless steel
- Temperature range: -15 to 150 °C (shortly up to 200 °C)

Dimensions



Aluminum EN AW-6061

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Part number
DN 16 KF	FKM	32,5	30	3,9	8	16	5	0450227038
DN 25 KF	FKM	42	40	3,9	8	25	5	0450227039
DN 40 KF	FKM	57,5	55	3,9	8	40	5	0450227040
DN 50 KF	FKM	77,5	75	3,9	8	50	5,33	0450227041

Stainless Steel 304/1.4301

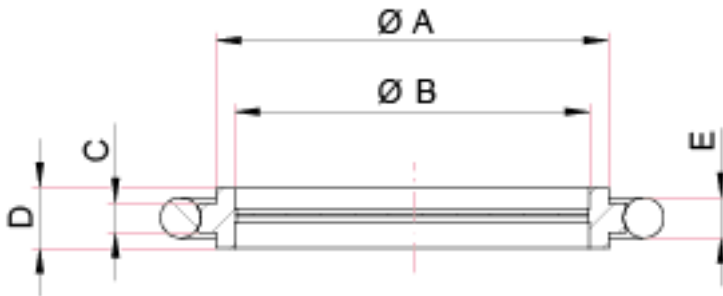
Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Part number
DN 16 KF	FKM	32,5	30	3,9	8	16	5	0450227451
DN 25 KF	FKM	42	40	3,9	8	25	5	0450227452
DN 40 KF	FKM	57,5	55	3,9	8	40	5	0450227453
DN 50 KF	FKM	75,5	75	3,9	8	50	5,33	0450227454

ISO-KF Centering Ring with Screen



- Material: Stainless Steel
- Wire thickness: Approximately 0.3 mm
- Mesh: Approximately 1 mm
- Temperature range: -15 to 150 °C (shortly up to 200 °C)

Dimensions



Stainless Steel 304/1.4301

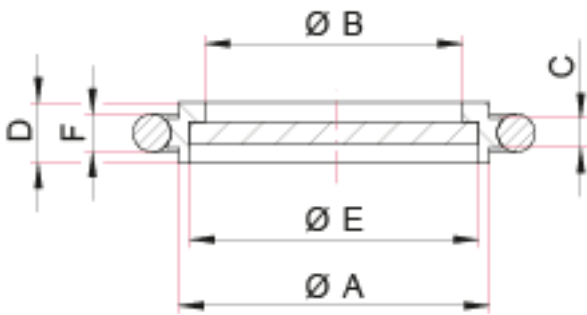
Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Part number
DN 10 KF	FKM	12	10	3,9	8	7	5	0450227459
DN 16 KF	FKM	17	16	3,9	8	13	5	0450227460
DN 25 KF	FKM	26	25	3,9	8	19	5	0450227461
DN 40 KF	FKM	41	40	3,9	8	34	5	0450227462
DN 50 KF	FKM	52	50	3,9	8	45	5,33	0450227463

ISO-KF Centering Ring with Sintered Metal Filter



- Material: Sintered bronze
- Mesh: Average pore diameter: Approximately 0.02 mm
- Temperature range: -15 to 150 °C (shortly up to 200 °C)

Dimensions



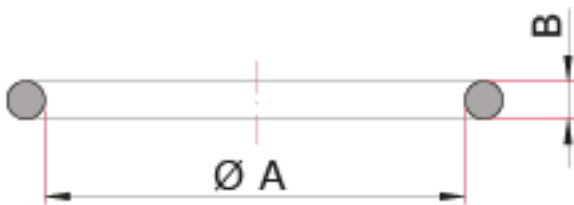
Stainless Steel 304/1.4301

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Part number
DN 10 KF	FKM	12	9	3,9	8	10	5	0450227472
DN 16 KF	FKM	17	13	3,9	8	14	5	0450227473
DN 25 KF	FKM	26	23	3,9	8	24	5	0450227474
DN 40 KF	FKM	41	38	3,9	8	39	5	0450227475
DN 50 KF	FKM	52	48	3,9	8	49	5,33	0450227476

ISO-KF O-Ring



Dimensions



FKM

- Temperature range: -15 to 150 °C (shortly up to 200 °C)

Nominal diameter	A [mm]	B [mm]	Part number
DN 10 KF	15	5	0990226924
DN 16 KF	18	5	0990226925
DN 25 KF	28	5	0990226926
DN 40 KF	42	5	0990226927
DN 50 KF	53,34	5,33	0990226928

According to ISO 2861

NBR

- Temperature range: -25 to 120 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 10 KF	15	5	0990229017
DN 16 KF	18	5	0990226922
DN 25 KF	28	5	0990226923
DN 40 KF	42	5	0990229018
DN 50 KF	53,34	5,33	0990229019

According to ISO 2861

Silicone (VMQ)

- Temperature range: -55 to 200 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 10 KF	15	5	0990229020
DN 16 KF	18	5	0990226933
DN 25 KF	28	5	0990229021
DN 40 KF	42	5	0990229022
DN 50 KF	53,34	5,33	0990229023

According to ISO 2861

EPDM

- Temperature range: -50 to 130 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 10 KF	15	5	0990229024
DN 16 KF	18	5	0990226934
DN 25 KF	28	5	0990226935
DN 40 KF	42	42	0990229025
DN 50 KF	53,34	5,33	0990229026

According to ISO 2861

CR

- Temperature range: -5 to 120 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 10 KF	15	5	0990229027
DN 16 KF	18	5	0990229028
DN 25 KF	28	5	0990229029
DN 40 KF	42	5	0990229030
DN 50 KF	53,34	5,33	0990229031

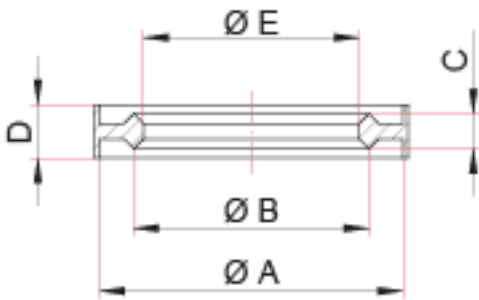
According to ISO 2861

ISO-KF Aluminum Edged Seal



- For stainless steel flanges
- No gas permeation
- Fastener: ISO-KF Clamp for Metal Seals
- For single use only
- Temperature range: -196 to 150 °C

Dimensions



Aluminum EN AW-6082/3.2315, Soft-annealed

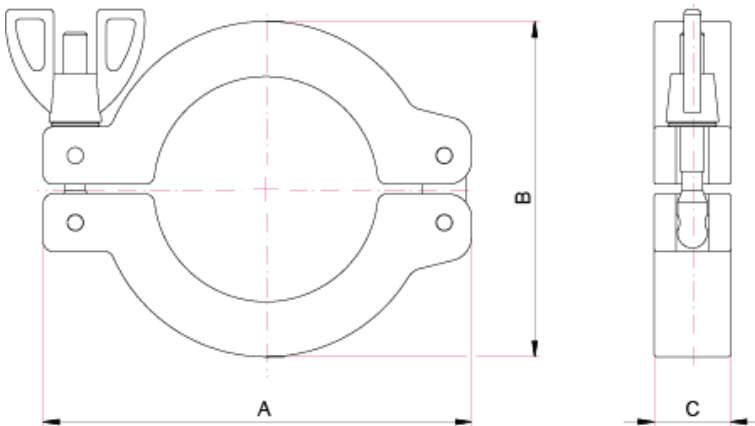
Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 / 16 KF	30	21	4,5	7	18,5	0450227026
DN 20 / 25 KF	40	31	4,5	7	28,5	0450227027
DN 32 / 40 KF	55	46	4,5	7	43,5	0450227028
DN 50 KF	75	66	4,5	7	63,5	0450227029

ISO-KF Clamp for Elastomer Seal



- Suitable for use with elastomer seals
- Torque: max. 2 Nm on wingnut
- Temperature range: -196 to 200 °C
- Over pressure max.: 1500 hPa

Dimensions



Aluminum ADC 12

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 10 / 16 KF	63	43	16	0450226957
DN 20 / 25 KF	72	54	16	0450226958
DN 32 / 40 KF	90	70	16	0450226959
DN 50 KF	113	92	22	0450226960

According to ISO 2861

Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 10 / 16 KF	62	45	17	0450227126
DN 20 / 25 KF	73	53	17	0450227127
DN 32 / 40 KF	90	68	17	0450227128
DN 50 KF	115	90	19	0450227129

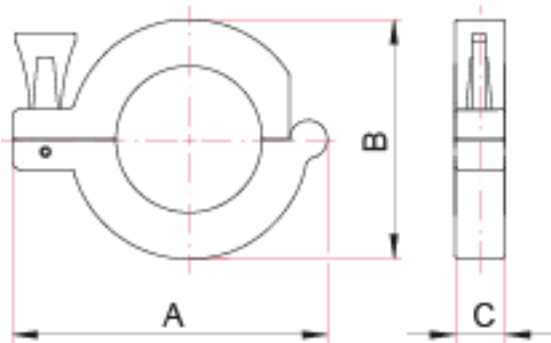
According to ISO 2861

ISO-KF Clamping Ring for Elastomer Seal, Plastic



- Particularly well suited for glass flanges
- Suitable for use with elastomer seals
- Torque: max. 2 Nm on wingnut
- Temperature range: -10 to 80 °C
- Over pressure max.: 500 hPa

Dimensions



Plastic

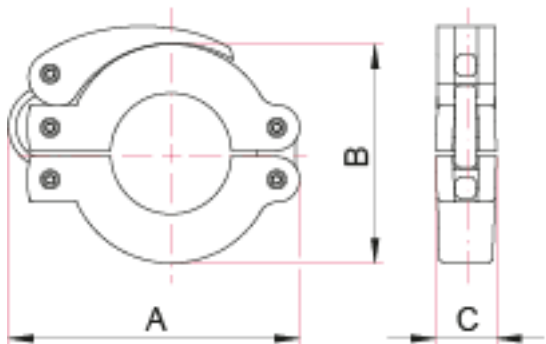
Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 10 / 16 KF	65	47	20	0450227481
DN 20 / 25 KF	79	59	20	0450227482
DN 32 / 40 KF	92	74	20	0450227483
DN 50 KF	123	95	23	0450227484

ISO-KF Quick-Release Clamp



- Suitable for use with elastomer seals
- Temperature range: -10 to 80 °C
- Over pressure max.: 500 hPa

Dimensions



Aluminum/Plastic

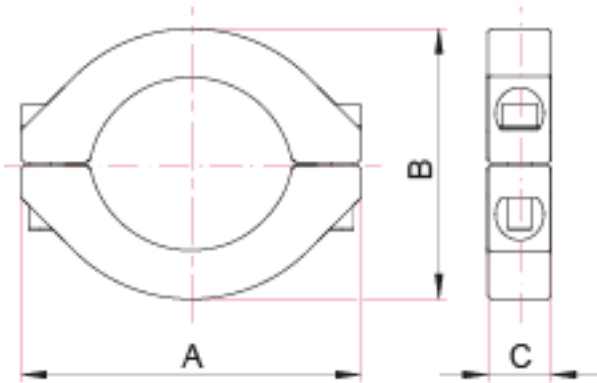
Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 10 / 16 KF	68	45	16	0450226961
DN 20 / 25 KF	80	55	16	0450226962
DN 32 / 40 KF	98	70	18	0450226963

ISO-KF Clamp for Metal Seals



- Suitable for use with elastomer and metal seals
- Bolts: Hexagon socket, A2-70 steel
- We recommend using a screw thread lubricant
- Temperature range: -196 to 300 °C
- Over pressure max.: 500 hPa

Dimensions



Stainless Steel 304/1.4301

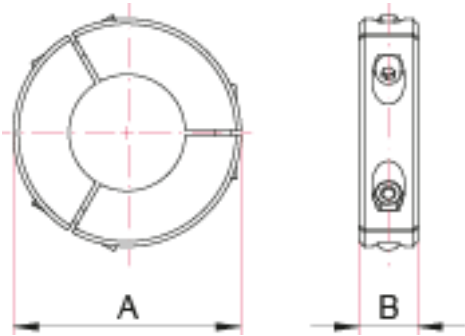
Nominal diameter	A [mm]	B [mm]	C [mm]	Bolt	Part number
DN 10 / 16 KF	55	47	18	M5 x 25	0450227122
DN 20 / 25 KF	66,5	57	18	M5 x 25	0450227123
DN 32 / 40 KF	82,5	72	18	M5 x 25	0450227124
DN 50 KF	122	96	21	M8 x 35	0450227125

ISO-KF Bolt Clamp (3-Part) for Metal Seals



- Suitable for use with metal and elastomer seals
- Bolts: Hexagon socket, A2-70 steel
- Temperature range: -196 to 200 °C
- Over pressure max.: 500 hPa

Dimensions



Aluminum

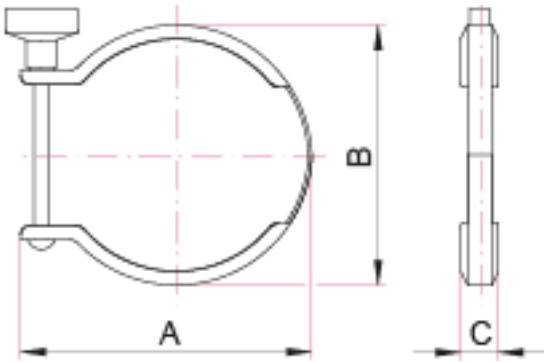
Nominal diameter	A [mm]	B [mm]	Bolt	Part number
DN 10 / 16 KF	48	18	M4 x 30	0450226953
DN 20 / 25 KF	70	19	M6 x 30	0450226954
DN 32 / 40 KF	85	23	M8 x 35	0450226955
DN 50 KF	112	28	M8 x 35	0450226956

ISO-KF Hingeless Clamp



- Suitable for use with elastomer seals
- Compact design
- Torque: max. 2 Nm on wingnut
- Temperature range: -10 to 125 °C
- Over pressure max.: 500 hPa

Dimensions



Stainless Steel 304/1.4301

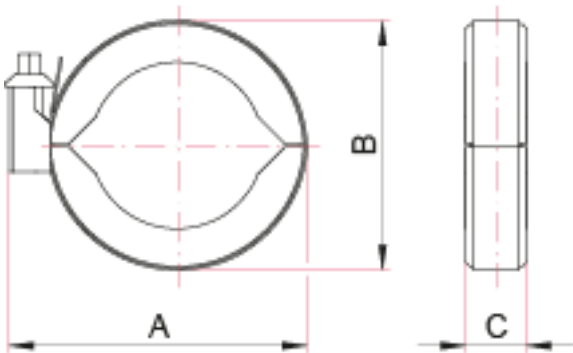
Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 10 / 16 KF	47	38	16	0450227118
DN 20 / 25 KF	54	49	16	0450227119
DN 32 / 40 KF	70	62	16	0450227120
DN 50 KF	90	84	16	0450227121

ISO-KF Clamping Ring for Elastomer Seals



- Suitable for use with elastomer seals
- Compact design
- Screw: Hexagon head; wrench width 7 mm
- Temperature range: 0 to 100 °C
- Over pressure max.: 500 hPa

Dimensions



Aluminum ADC 12/Steel

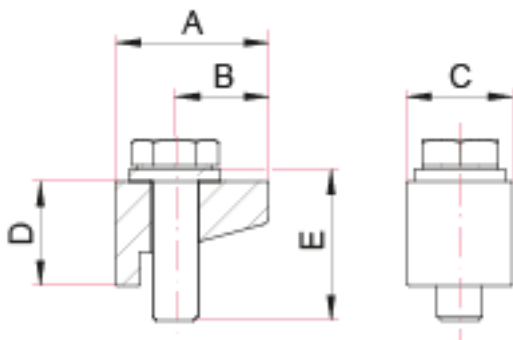
Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 10 / 16 KF	54	39	16	0450226950
DN 20 / 25 KF	63	48	16	0450226951
DN 32 / 40 KF	80	64	16	0450226952

ISO-KF Claw Clamp



- Suitable for use with elastomer seals
- For installing on a base plate with KF centering ring
- Holes: Needed number of tapped holes in base plate: 4x90° (Thread: M6, depth: min. 6 mm)
- Torque: Max. 8 Nm
- Bolt: Hexagon head, A2-70 steel, M6 x 20 mm
- Temperature range: -196 to 200 °C
- Over pressure max.: 500 hPa

Dimensions



Bore Holes in Base Plate

- Thread M6, depth minimum 6 mm

[DN]	Bolt Circle Ø Tapped Hole [mm]	Number of Tapped Holes	Core Hole for Centering [mm]	Sealing Surface to Ø [mm]	Recommended Torque [Nm]
10	45	4 x 90°	12,2	30	3
16	45	4 x 90°	17,2	30	3
20	55	4 x 90°	22,2	40	4
25	55	4 x 90°	26,2	40	4
32	71	4 x 90°	34,2	55	5
40	71	4 x 90°	41,2	55	5
50	91	4 x 90°	52,4	75	6

Aluminum EN AW-6061

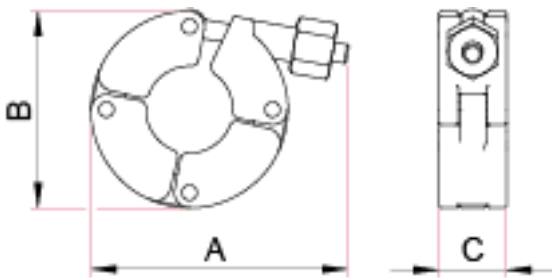
Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 - 50 KF	20,5	12,5	14	14	20	0450226949

ISO-KF Chain Clamp, Aluminum



- Suitable for use with elastomer and metallic seals
- Hand grip: Stainless steel
- Temperature range: -196 to 200 °C
- Over pressure max.: 500 hPa

Dimensions



Aluminum/stainless steel

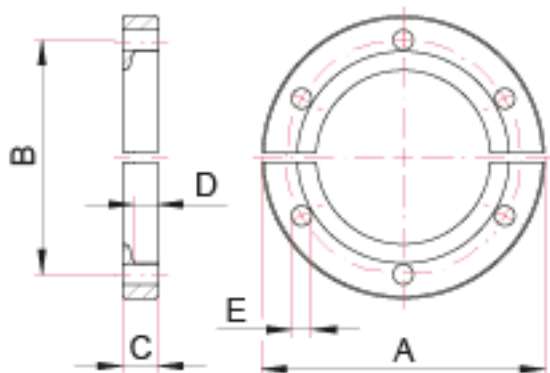
Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 10-16 ISO-KF	71	52,5	18	0450228651
DN 20-25 ISO-KF	82	65	18	0450228652
DN 32-40 ISO-KF	98	79	18	0450228653
DN 50 ISO-KF	117	97,5	20	0450228654

ISO-KF Bulkhead Clamp



- Suitable for use with elastomer seals
- For mounting on a base plate with KF centering ring
- Holes: Number of tapped holes in base plate: DN 10-40: 6x60°; DN 50: 8x45° (Thread M5, depth: min. 10 mm)
- Kind of screw: Hexagon head, A2-70 steel, M5x20
- Temperature range: -196 to 200 °C
- Over pressure max.: 500 hPa

Dimensions



Bore Holes in Base Plate

- Thread M6, depth minimum 6 mm

Flange Size [DN]	Bolt Circle Ø Tapped Hole [mm]	Number of Tapped Holes [mm]	Core Hole for Centering [mm]	Sealing Surface to Ø [mm]
10	38,1	6 x 60°	12,2	30
16	38,1	6 x 60°	17,2	30
20	48,0	6 x 60°	22,2	40
25	48,0	6 x 60°	26,2	40
32	62,0	6 x 60°	34,2	55
40	62,0	6 x 60°	41,2	55
50	82,55	8 x 45°	52,4	75

Aluminum EN AW-6082/3.2315

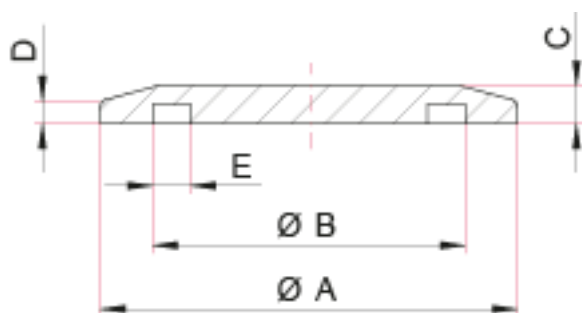
Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 / 16 KF	50,8	38,1	9,2	6,5	5,3	0450226964
DN 20 / 25 KF	60,3	48	9,9	6,6	5,3	0450226965
DN 32 / 40 KF	74,6	62	9,3	6,6	5,3	0450226966
DN 50 KF	95,2	82,55	10,3	6,5	5,3	0450226967

ISO-KF Blank Flange



- Available in stainless steel or aluminum

Dimensions



Aluminum EN AW-6082/3.2315

- Pressure range: $1 \cdot 10^{-8}$ hPa to 1500 hPa over pressure
- Temperature range: -196 to 200 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 KF	30	12,2	5	3	-	0450226968
DN 16 KF	30	17,2	5	3	-	0450226969
DN 25 KF	40	26,2	5	3	3,5	0450226970
DN 40 KF	55	41,2	5	3	5	0450226971
DN 50 KF	75	52,4	5	3	5	0450226972

Flanges according to ISO 2861

Stainless Steel 304/1.4301

- Pressure range: $1 \cdot 10^{-8}$ hPa to 1500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 KF	30	12,2	5	3	-	0450227141
DN 16 KF	30	17,2	5	3	-	0450227142
DN 25 KF	40	26,2	5	3	3,5	0450227143

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 40 KF	55	41,2	5	3	5	0450227144
DN 50 KF	75	52,4	5	3	5	0450227145

Flanges according to ISO 2861

Stainless Steel 316L/1.4404

- Pressure range: 1 · 10⁻⁸ hPa to 1500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 350 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 KF	30	12,2	5	3	-	0450227506
DN 16 KF	30	17,2	5	3	-	0450227507
DN 25 KF	40	26,2	5	3	3,5	0450227508
DN 40 KF	55	41,2	5	3	5	0450227509
DN 50 KF	75	52,4	5	3	5	0450227510

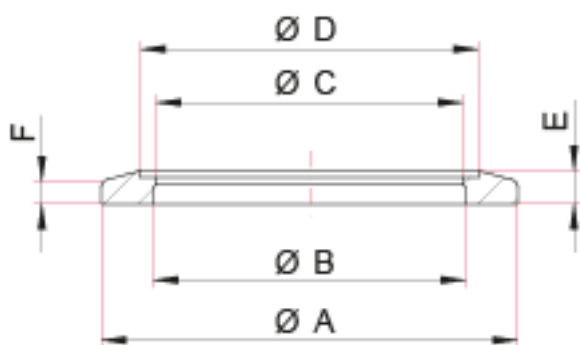
Flanges according to ISO 2861

ISO-KF Weld Ring Flange



- Various stainless steel grades available

Dimensions



Stainless Steel 304/1.4301

- Pressure range: 1 · 10⁻⁸ hPa to 1500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Part number
DN 10 KF	12.7 x 1.24	30	12,2	10,2	12,8	5	3	0450227130
DN 10 KF	14 x 2	30	12,2	10	14,15	5	3	0450227131
DN 16 KF	19.05 x 1.65	30	17,2	15,75	19,2	5	3	0450227132
DN 16 KF	20 x 2	30	17,2	16	20,2	5	3	0450227133
DN 25 KF	25.4 x 1.65	40	26,2	22,1	25,6	5	3	0450227134
DN 25 KF	28 x 2	40	26,2	24	28,2	5	3	0450227135
DN 40 KF	38 x 1.5	55	41,2	34,8	38,4	5	3	0450227136
DN 40 KF	44.5 x 2	55	41,2	40,5	44,7	5	3	0450227137
DN 50 KF	50.8 x 1.65	75	52,4	47,5	51	5	3	0450227138
DN 50 KF	57 x 3.2	75	52,4	50,6	57,2	5	3	0450227140

Flanges according to ISO 2861

Stainless Steel 316L/1.4404

- Pressure range: 1 · 10⁻⁸ hPa to 1500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 350 °C

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Part number
DN 10 KF	14 x 2	30	12,2	10	14,15	5	3	0450227501
DN 16 KF	20 x 2	30	17,2	16	20,2	5	3	0450227502
DN 25 KF	28 x 2	40	26,2	24	28,2	5	3	0450227503
DN 40 KF	44.5 x 2	55	41,2	40,5	44,7	5	3	0450227504
DN 50 KF	57 x 3.2	75	52,4	50,6	57,2	5	3	0450227505

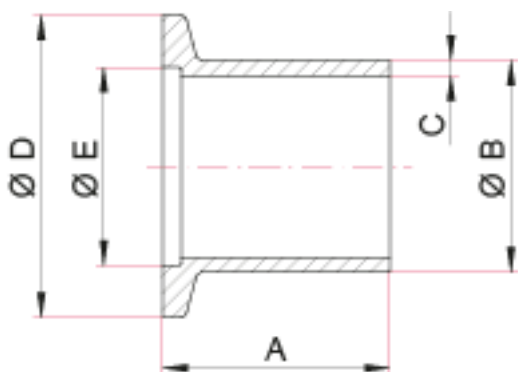
Flanges according to ISO 2861

ISO-KF Half Nipple



- Custom lengths on request
- Pressure range: 1 · 10⁻⁸ hPa to 1500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 1500 hPa over pressure (metal seal)

Dimensions



Stainless Steel 304/1.4301

- Temperature range: -196 to 300 °C

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 KF	14 x 2	30	14	2	30	12,2	0450227146
DN 10 KF	14 x 2	52	14	2	30	12,2	0450227147
DN 10 KF	14 x 2	70	14	2	30	12,2	0450227148
DN 16 KF	19.05 x 1.65	40	19,05	1,65	30	17,2	0450227149
DN 16 KF	20 x 2	30	20	2	30	17,2	0450227150
DN 16 KF	20 x 2	52	20	2	30	17,2	0450227151
DN 16 KF	20 x 2	70	20	2	30	17,2	0450227152
DN 25 KF	25.4 x 1.65	40	25,4	1,65	40	26,2	0450227153
DN 25 KF	28 x 2	30	28	2	40	26,2	0450227154
DN 25 KF	28 x 2	55	28	2	40	26,2	0450227155
DN 25 KF	28 x 2	70	28	2	40	26,2	0450227156

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 40 KF	38 x 1.5	40	38	1,5	55	41,2	0450227157
DN 40 KF	42.4 x 2	26	42,4	2	55	41,2	0450227158
DN 40 KF	44.5 x 2	30	44,5	2	55	41,2	0450227159
DN 40 KF	44.5 x 2	58	44,5	2	55	41,2	0450227160
DN 40 KF	44.5 x 2	70	44,5	2	55	41,2	0450227161
DN 50 KF	50.8 x 1.65	40	50,8	1,65	75	52,4	0450227162
DN 50 KF	54 x 2	26	54	2	75	52,4	0450227163
DN 50 KF	57 x 3.2	30	57	3,2	75	52,4	0450227164
DN 50 KF	57 x 3.2	58	57	3,2	75	52,4	0450227165
DN 50 KF	57 x 3.2	70	57	3,2	75	52,4	0450227166

Stainless Steel 316L/1.4404

- Temperature range: -196 to 350 °C

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 10 KF	14 x 2	30	14	2	30	12,2	0450227511
DN 10 KF	14 x 2	70	14	2	30	12,2	0450227512
DN 16 KF	19.05 x 1.65	40	19,05	1,65	30	17,2	0450227513
DN 16 KF	20 x 2	30	20	2	30	17,2	0450227514
DN 16 KF	20 x 2	70	20	2	30	17,2	0450227515
DN 25 KF	25.4 x 1.65	40	25,4	1,65	40	26,2	0450227516
DN 25 KF	28 x 2	30	28	2	40	26,2	0450227525
DN 25 KF	28 x 2	70	28	2	40	26,2	0450227526
DN 40 KF	42.4 x 2	26	42,4	2	55	41,2	0450227527
DN 40 KF	44.5 x 2	30	44,5	2	55	41,2	0450227528
DN 40 KF	44.5 x 2	70	44,5	2	55	41,2	0450227529
DN 50 KF	54 x 2	26	54	2	75	52,4	0450227530
DN 50 KF	57 x 3.2	30	57	3,2	75	52,4	0450227531
DN 50 KF	57 x 3.2	70	57	3,2	75	52,4	0450227532

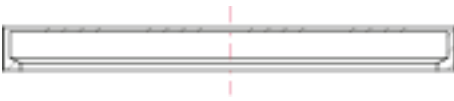
Flanges according to ISO 2861

ISO-KF Flange Cap



- Made from plastic

Dimensions



Polyethylene (PE)

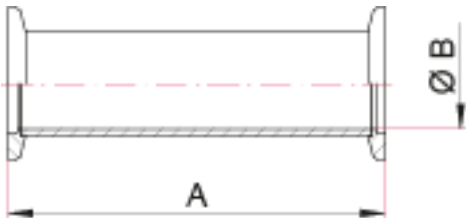
Nominal diameter	Quantity per package	Part number
DN 16 KF	10	0990229032
DN 25 KF	10	0990229033
DN 40 KF	10	0990229034
DN 50 KF	10	0990229035

ISO-KF Full Nipple



Custom lengths on request

Dimensions



Aluminium EN AW-6082/3.2315

- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 16 KF	80	16	0450227016
DN 25 KF	100	24	0450227017
DN 40 KF	130	40	0450227018

Flanges according to ISO 2861

Stainless Steel 304/1.4301

- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 16 KF	80	16	0450227230
DN 25 KF	100	24	0450227231
DN 40 KF	130	40	0450227232
DN 50 KF	140	50	0450227233

Flanges according to ISO 2861

Stainless Steel 316L/1.4404

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 350 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 16 KF	80	16	0450227555
DN 25 KF	100	24	0450227556
DN 40 KF	130	40	0450227557
DN 50 KF	140	50	0450227558

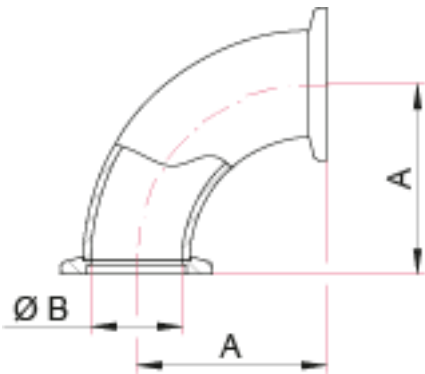
Flanges according to ISO 2861

ISO-KF Elbow, Radius, 90°



- Various stainless steel grades available

Dimensions



Stainless Steel 304/1.4301

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 10 KF	30	10	0450227193
DN 16 KF	40	16	0450227195
DN 25 KF	50	24	0450227197
DN 40 KF	65	40	0450227199
DN 50 KF	70	51	0450227201

Flanges according to ISO 2861

Stainless Steel 316L/1.4404

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 350 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 16 KF	40	16	0450227539

Nominal diameter	A [mm]	B [mm]	Part number
DN 25 KF	50	24	0450227541
DN 40 KF	65	40	0450227543
DN 50 KF	70	51	0450227545

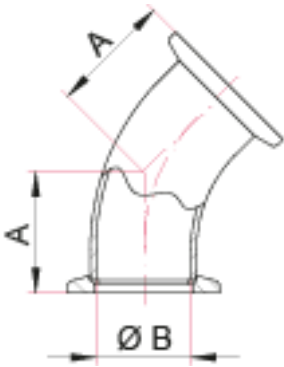
Flanges according to ISO 2861

ISO-KF Elbow, Radius, 45°



- ISO-KF Elbow, Radius, 45°

Dimensions



Stainless Steel 304/1.4301

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 10 KF	30	10	0450227192
DN 16 KF	25	16	0450227194
DN 25 KF	32	24	0450227196
DN 40 KF	40	40	0450227198
DN 50 KF	51	51	0450227200

Flanges according to ISO 2861

Stainless Steel 316L/1.4404

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 350 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 16 KF	26	16	0450227538
DN 25 KF	32	24	0450227540

Nominal diameter	A [mm]	B [mm]	Part number
DN 40 KF	40	40	0450227542
DN 50 KF	51	51	0450227544

Flanges according to ISO 2861

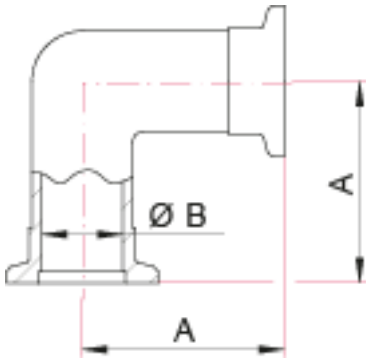
ISO-KF Elbow, 90°



- Aluminum
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

Aluminum EN AW-6082/3.2315

Dimensions



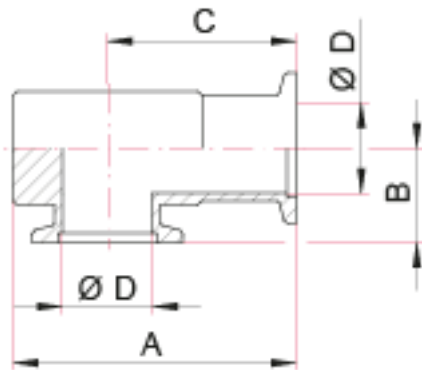
Nominal diameter	A [mm]	B [mm]	Part number
DN 10 KF	30	10	0450226985
DN 16 KF	25	16	0450226986
DN 25 KF	32	24	0450226987
DN 40 KF	40	40	0450226988

Flanges according to ISO 2861



Aluminum EN AW-2007/3.1645

Dimensions



Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 KF	58	20	40	16	0450227012
DN 25 KF	73	25	50	25	0450227013
DN 40 KF	95	35	65	40	0450227015

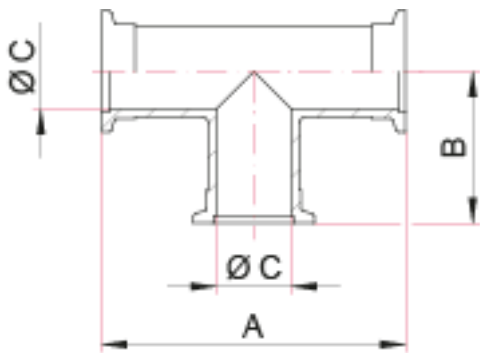
Flanges according to ISO 2861

ISO-KF Tee



Aluminum EN AW-6082/3.2315

Dimensions



- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

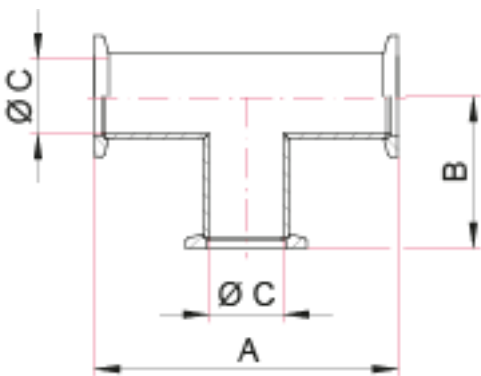
Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 10 KF	60	30	10	0450227001
DN 16 KF	80	40	16	0450227002
DN 25 KF	100	50	24	0450227004
DN 40 KF	130	65	40	0450227006

Flanges according to ISO 2861



Stainless Steel 304/1.4301

Dimensions



- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 10 KF	60	30	10	0450227225
DN 16 KF	80	40	16	0450227226
DN 25 KF	100	50	24	0450227227
DN 40 KF	130	65	40	0450227228
DN 50 KF	140	70	51	0450227229

Flanges according to ISO 2861

Stainless Steel 316L/1.4404

- Pressure range: 1 · 10⁻⁸ hPa to 1500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 350 °C

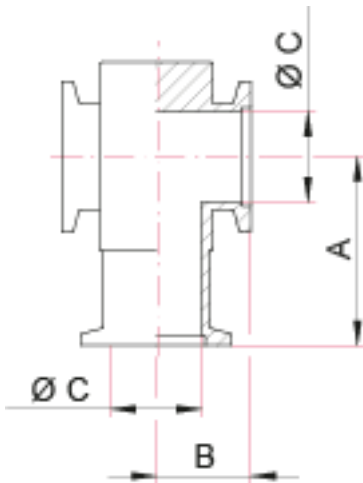
Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 16 KF	80	40	16	0450227551
DN 25 KF	100	50	24	0450227552
DN 40 KF	130	65	40	0450227553
DN 50 KF	140	70	50	0450227554

Flanges according to ISO 2861



Aluminum EN AW-2007/3.1645

Dimensions



- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 16 KF	40	20	16	0450227003
DN 25 KF	50	25	25	0450227005
DN 40 KF	65	35	40	0450227007

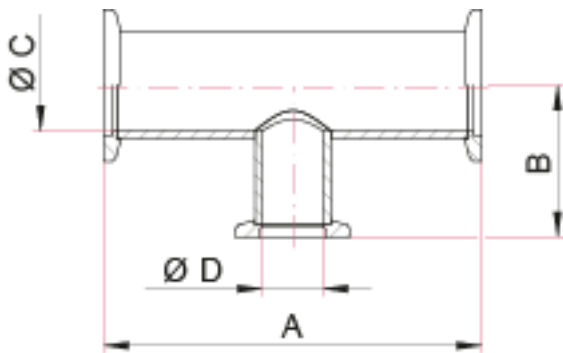
Flanges according to ISO 2861

ISO-KF Reducer Tee



Stainless Steel 304/1.4301

Dimensions



- Pressure range: 1 · 10⁻⁸ hPa to 1500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

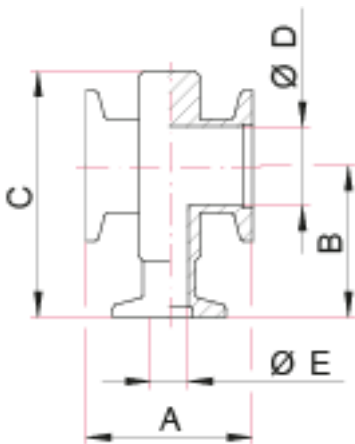
Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Nominal diameter reduced	Part number
DN 25 KF	100	40	24	16	DN 16 KF	0450227219
DN 40 KF	130	40	40	16	DN 16 KF	0450227220
DN 40 KF	130	50	40	24	DN 25 KF	0450227221
DN 50 KF	140	50	50	16	DN 16 KF	0450227222
DN 50 KF	140	65	50	24	DN 25 KF	0450227223
DN 50 KF	140	65	50	40	DN 40 KF	0450227224

Flanges according to ISO 2861



Aluminum EN AW-2007/3.1645

Dimensions



- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Nominal diameter reduced	Part number
DN 25 KF	44	40	62,5	25	DN 16 KF	0450226998
DN 40 KF	59	50	80	40	DN 16 KF	0450226999
DN 40 KF	59	50	80	40	DN 25 KF	0450227000

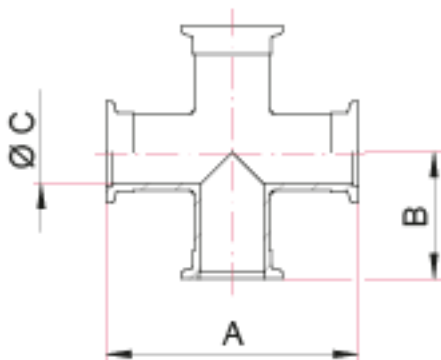
Flanges according to ISO 2861

ISO-KF 4-Way Cross



Aluminum EN AW-6082/3.2315

Dimensions



- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

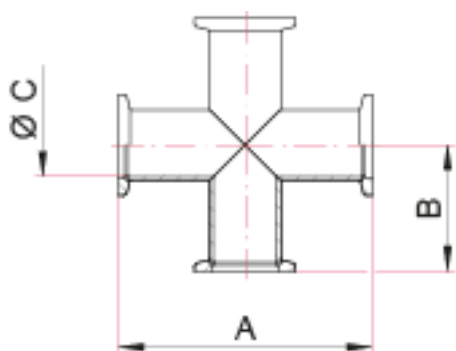
Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 16 KF	80	40	16	0450226976
DN 25 KF	100	50	24	0450226978
DN 40 KF	130	65	40	0450226980

Flanges according to ISO 2861



Stainless Steel 304/1.4301

Dimensions



- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 10 KF	60	30	10	0450227173
DN 16 KF	80	40	16	0450227174
DN 25 KF	100	50	24	0450227175
DN 40 KF	130	65	40	0450227190
DN 50 KF	140	70	51	0450227191

Flanges according to ISO 2861

Stainless Steel 316L/1.4404

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 350 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 10 KF	60	30	10	0450227533
DN 16 KF	80	40	16	0450227534

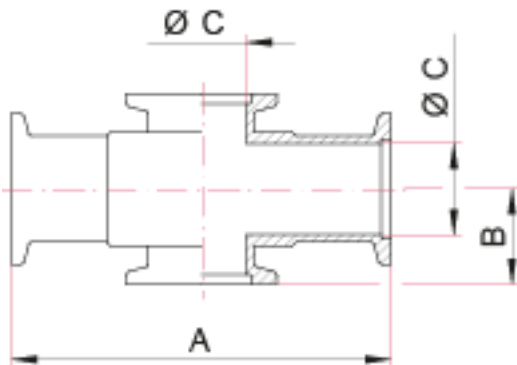
Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 25 KF	100	50	24	0450227535
DN 40 KF	130	65	40	0450227536
DN 50 KF	140	70	51	0450227537

Flanges according to ISO 2861



Aluminum EN AW-2007/3.1645

Dimensions



- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 16 KF	80	20	16	0450226977
DN 25 KF	100	25	25	0450226979
DN 40 KF	130	35	40	0450226981

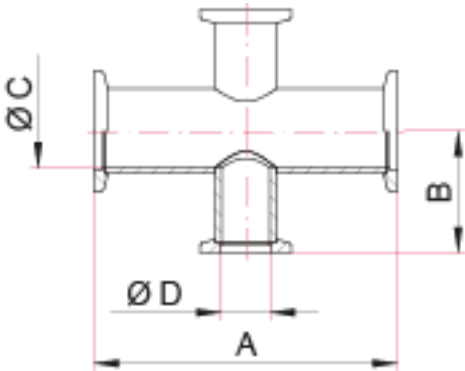
Flanges according to ISO 2861

ISO-KF Reducer Cross



Stainless Steel 304/1.4301

Dimensions



- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

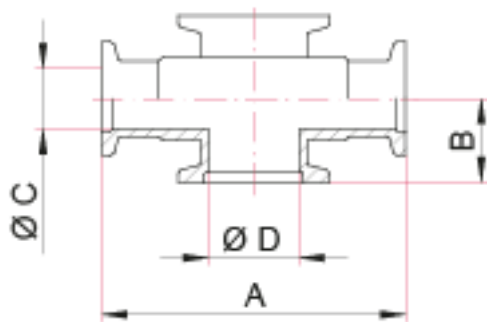
Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Nominal diameter reduced	Part number
DN 24 KF	100	40	24	16	DN 16 KF	0450227167
DN 40 KF	130	40	40	16	DN 16 KF	0450227168
DN 40 KF	130	50	40	24	DN 25 KF	0450227169
DN 50 KF	140	40	50	16	DN 16 KF	0450227170
DN 50 KF	140	50	50	24	DN 25 KF	0450227171
DN 50 KF	140	65	50	40	DN 40 KF	0450227172

Flanges according to ISO 2861



Aluminum EN AW-2007/3.1645

Dimensions



- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Nominal diameter reduced	Part number
DN 25 KF	80	22	16	25	DN 16 KF	0450226973
DN 40 KF	100	30	16	40	DN 16 KF	0450226974
DN 40 KF	100	30	25	40	DN 25 KF	0450226975

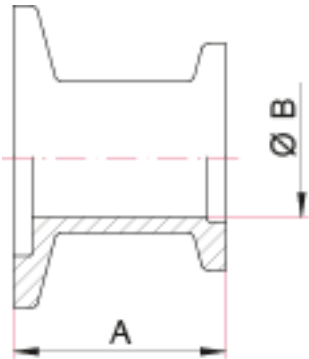
Flanges according to ISO 2861

ISO-KF Straight Reducer



- Available in stainless steel or aluminum

Dimensions



Aluminum EN AW-6082/3.2315

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 25 KF	40	10	DN 10 KF	0450226989
DN 25 KF	28	16	DN 16 KF	0450226990
DN 25 KF	40	16	DN 16 KF	0450226991
DN 40 KF	28	16	DN 16 KF	0450226992
DN 40 KF	40	16	DN 16 KF	0450226993
DN 40 KF	28	24	DN 25 KF	0450226994
DN 40 KF	40	25	DN 25 KF	0450226995
DN 50 KF	40	24	DN 25 KF	0450226996
DN 50 KF	40	40	DN 40 KF	0450226997

Flanges according to ISO 2861

Stainless Steel 304/1.4301

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 25 KF	28	16	DN 16 IKF	0450227202
DN 25 KF	40	16	DN 16 KF	0450227203
DN 40 KF	28	16	DN 16 KF	0450227204
DN 40 KF	40	16	DN 16 KF	0450227205
DN 40 KF	28	24	DN 25 KF	0450227206
DN 40 KF	40	24	DN 25 KF	0450227207
DN 50 KF	40	16	DN 16 KF	0450227208
DN 50 KF	28	24	DN 25 KF	0450227209
DN 50 KF	40	24	DN 25 KF	0450227210
DN 50 KF	28	40	DN 40 KF	0450227211
DN 50 KF	40	40	DN 40 KF	0450227212

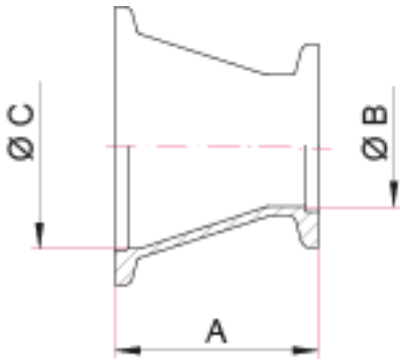
Flanges according to ISO 2861

ISO-KF Conical Reducer



- Available in stainless steel or aluminum

Dimensions



Stainless Steel 304/1.4301

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Nominal diameter reduced	Part number
DN 25 KF	40	16	24	DN 16 KF	0450227213
DN 40 KF	40	16	40	DN 16 KF	0450227214
DN 40 KF	40	24	40	DN 25 KF	0450227215
DN 50 KF	40	16	50	DN 16 KF	0450227216
DN 50 KF	40	24	50	DN 25 KF	0450227217
DN 50 KF	40	40	50	DN 40 KF	0450227218

Flanges according to ISO 2861

Stainless Steel 316L/1.4404

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 350 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Nominal diameter reduced	Part number
DN 25 KF	40	16	24	DN 16 KF	0450227546
DN 40 KF	40	16	40	DN 16 KF	0450227547
DN 40 KF	40	24	40	DN 25 KF	0450227548
DN 50 KF	40	24	50	DN 25 KF	0450227549
DN 50 KF	40	40	50	DN 40 KF	0450227550

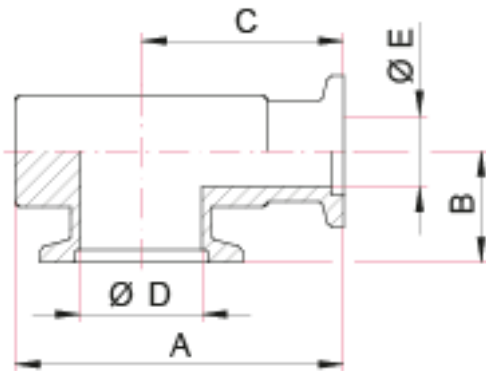
Flanges according to ISO 2861

ISO-KF Reducer Elbow



- Aluminum
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

Dimensions



Aluminum EN AW-2007/3.1645

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Nominal diameter reduced	Part number
DN 25 KF	62	22	40	25	16	DN 16 KF	0450227009
DN 40 KF	72	30	50	40	16	DN 16 KF	0450227010
DN 40 KF	80	30	50	40	25	DN 25 KF	0450227011

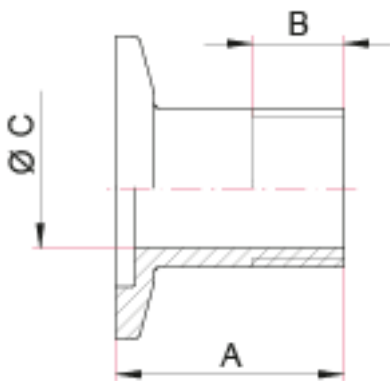
Flanges according to ISO 2861

ISO-KF Flange with Pipe Thread, w/o Seal, Male



- Materials: Stainless steel
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	Thread	Part number
DN 10 KF	30	12	10	G3/8"	0450227070
DN 16 KF	30	9	9	G1/4"	0450227071
DN 16 KF	30	12	16	G1/2"	0450227072
DN 25 KF	30	12	16	G1/2"	0450227073
DN 25 KF	30	12	20	G3/4"	0450227074
DN 25 KF	30	12	24	G1"	0450227075
DN 40 KF	30	14	35	G1.25"	0450227076
DN 40 KF	30	12	41	G1.5"	0450227077
DN 50 KF	35	16	51	G2"	0450227078

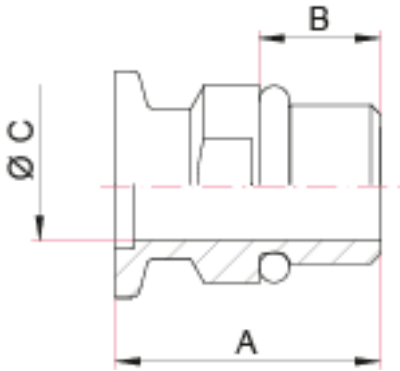
Flanges according to ISO 2861

ISO-KF Flange with Pipe Thread and FKM Seal, Male



- Material: Stainless steel
- Seal: FKM
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure
- Temperature range: -15 to 150 °C (shortly up to 200 °C)

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	Wrench size [mm]	Thread	Part number
DN 10 KF	35	16	10	19	G3/8"	0450227349
DN 16 KF	35	16	15	23	G1/2"	0450227350
DN 25 KF	45	24	21	32	G3/4"	0450227351
DN 25 KF	45	24	24	34	G1"	0450227352
DN 40 KF	50	28	40	50	G1.5"	0450227353

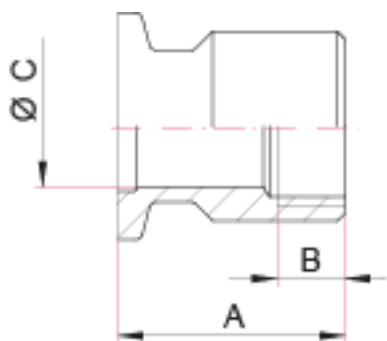
Flanges according to ISO 2861

ISO-KF Flange with Pipe Thread, w/o Seal, Female



- Material: Stainless steel
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	Thread	Part number
DN 10 KF	30	15	10	G3/8"	0450227066
DN 16 KF	30	9	16	G1/2"	0450227067
DN 25 KF	30	12	24	G3/4"	0450227068
DN 40 KF	30	16	28	G1"	0450227069

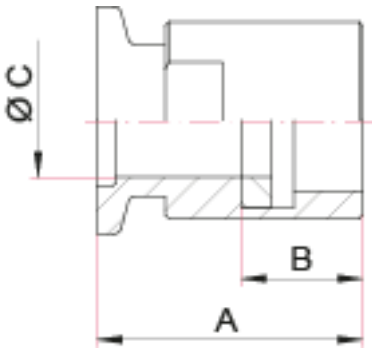
Flanges according to ISO 2861

ISO-KF Flange with Pipe Thread and FKM Seal, Female



- Material: Stainless steel
- Seal: FKM
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure
- Temperature range: -15 to 150 °C (shortly up to 200 °C)

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	Wrench size [mm]	Thread	Part number
DN 10 KF	35	15	10	17	G3/8"	0450227345
DN 16 KF	35	16	15	21	G1/2"	0450227346
DN 25 KF	45	25	24	35	G1"	0450227347
DN 40 KF	50	26	40	46	G1.5"	0450227348

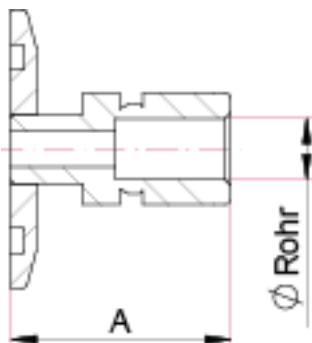
Flanges according to ISO 2861

ISO-KF Swagelok® Adapter



- Original Swagelok® fitting
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Materials: Stainless steel 304/1.4301
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301, Metric Sizes

Nominal diameter	A [mm]	Tube external diameter	Part number
DN 16 KF	40	6 mm	0450227098
DN 16 KF	41	8 mm	0450227099
DN 25 KF	38	6 mm	0450227104
DN 25 KF	39	8 mm	0450227105
DN 25 KF	41	10 mm	0450227102
DN 25 KF	43	12 mm	0450227103
DN 40 KF	38	6 mm	0450227107

Flanges according to ISO 2861

Stainless Steel 304/1.4301, Imperial Sizes

Nominal diameter	A [mm]	Tube external diameter	Part number
DN 16 KF	40	1/4"	0450227096

Nominal diameter	A [mm]	Tube external diameter	Part number
DN 16 KF	53	1/2"	0450227097
DN 25 KF	38	1/4"	0450227100
DN 25 KF	53	1/2"	0450227101
DN 40 KF	38	1/4"	0450227106

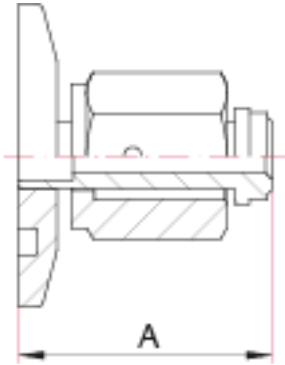
Flanges according to ISO 2861

ISO-KF VCR Adapter, Female



- Original Swagelok® VCR adapter
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Materials: Stainless steel 304/1.4301
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	VCR connection	Part number
DN 16 KF	36	1/4"	0450227108
DN 16 KF	41	1/2"	0450227109
DN 25 KF	33	1/4"	0450227110
DN 25 KF	37	1/2"	0450227111

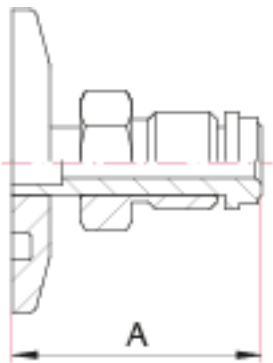
Flanges according to ISO 2861

ISO-KF VCR Adapter, Male



- Original Swagelok® VCR Adapter
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Materials: Stainless steel 304/1.4301
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	VCR connection	Part number
DN 16 KF	36	1/4"	0450227112
DN 16 KF	41	1/2"	0450227113
DN 25 KF	33	1/4"	0450227114
DN 25 KF	37	1/2"	0450227115
DN 40 KF	33	33	0450227116
DN 40 KF	37	1/2"	0450227117

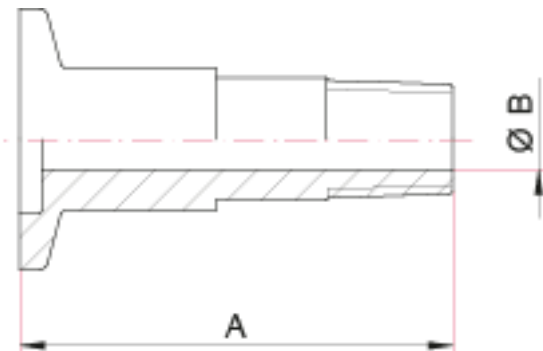
Flanges according to ISO 2861

ISO-KF Flange with NPT Thread, Male



- Material: Stainless steel
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	Thread	Part number
DN 16 KF	50	7,1	NPT 1/4"	0450227083
DN 25 KF	50	7,1	NPT 1/4"	0450227084
DN 25 KF	75	11,9	NPT 1/2"	0450227085

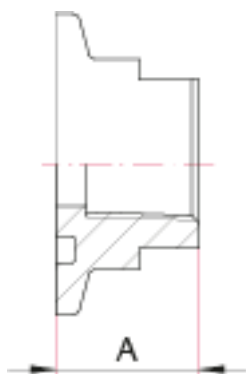
Flanges according to ISO 2861

ISO-KF Flange with NPT Thread, Female



- Material: Stainless steel
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	Thread	Part number
DN 16 KF	19	NPT 1/8"	0450227079
DN 16 KF	19	NPT 1/4"	0450227080
DN 25 KF	19	NPT 1/8"	0450227081
DN 25 KF	19	NPT 1/4"	0450227082

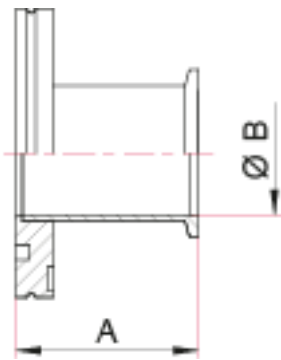
Flanges according to ISO 2861

ISO-K/KF Straight Adapter



- Other combinations and lengths on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 63 ISO-K	40	24	DN 25 ISO-KF	0450227800
DN 63 ISO-K	40	40,5	DN 40 ISO-KF	0450227801
DN 63 ISO-K	40	50,6	DN 50 ISO-KF	0450227802
DN 100 ISO-K	40	24	DN 25 ISO-KF	0450227803
DN 100 ISO-K	40	40,5	DN 40 ISO-KF	0450227804
DN 100 ISO-K	40	50,6	DN 50 ISO-KF	0450227805
DN 160 ISO-K	40	40,5	DN 40 ISO-KF	0450227807

ISO-KF Flanges according to ISO 2861

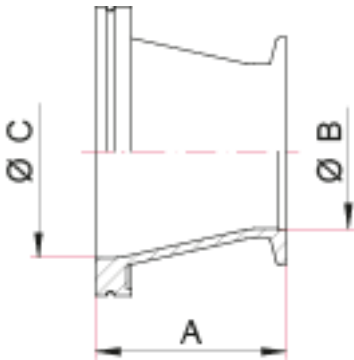
ISO-K Flanges according to ISO 1609

ISO-K/KF Conical Adapter



- Available in stainless steel or aluminum

Dimensions



Aluminum EN AW-6082

- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Nominal diameter reduced	Part number
DN 63 ISO-K	40	40,5	70	DN 40 ISO-KF	0450227645
DN 63 ISO-K	45	50	70	DN 50 ISO-KF	0450227646

Flanges according to ISO 2861
ISO-K Flanges according to ISO 1609

Stainless Steel 304/1.4301

- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Nominal diameter reduced	Part number
DN 63 ISO-K	63	24	70	DN 25 ISO-KF	0450227814
DN 63 ISO-K	63	40,5	70	DN 40 ISO-KF	0450227815

Nominal diameter	A [mm]	B [mm]	C [mm]	Nominal diameter reduced	Part number
DN 63 ISO-K	63	50	70	DN 50 ISO-KF	0450227816
DN 100 ISO-K	63	40,5	102	DN 40 ISO-KF	0450227817
DN 100 ISO-K	63	50	102	DN 50 ISO-KF	0450227818

Flanges according to ISO 2861

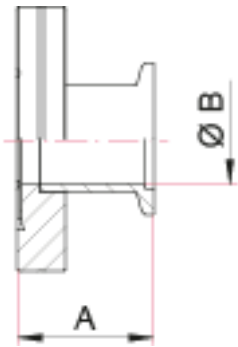
- ISO-K Flanges according to ISO 1609

ISO-KF/CF Adapter



- Other nominal diameters and dimensions on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to ambient pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to ambient pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301; CF Flange 304L

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 16 CF	36	16	DN 16 ISO-KF	0453228270
DN 16 CF	36	16	DN 25 ISO-KF	0453228271
DN 16 CF	36	16	DN 40 ISO-KF	0453228272
DN 40 CF	36	16	DN 16 ISO-KF	0453228274
DN 40 CF	36	24	DN 25 ISO-KF	0453228275
DN 40 CF	50	40,5	DN 40 ISO-KF	0453228276
DN 63 CF	50	40,5	DN 40 ISO-KF	0453228278
DN 100 CF	50	40,5	DN 40 ISO-KF	0453228280

ISO-KF Flanges according to ISO 2861

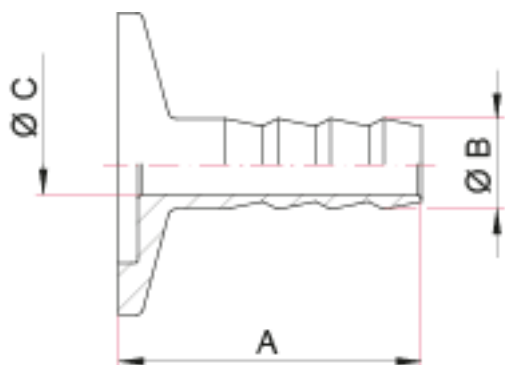
CF Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

ISO-KF Hose Connector



- Fastener: Hose clamp (see accessories)
- Adapter for rubber hose

Dimensions



Aluminum EN AW-6082/3.2315

- Temperature range: -196 bis 150 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 16 KF	40	8	4	0450226937
DN 16 KF	40	12	7	0450226936
DN 25 KF	40	8	4	0450226939
DN 25 KF	40	12	7	0450226938
DN 40 KF	40	12	7	0450226940

Flanges according to ISO 2861

Stainless Steel 304/1.4301

- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 16 KF	40	8	4	0450227087
DN 16 KF	40	12	7	0450227086

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 25 KF	40	12	7	0450227088
DN 25 KF	40	16	12	0450227089
DN 25 KF	40	20	16	0450227090
DN 40 KF	40	12	7	0450227091

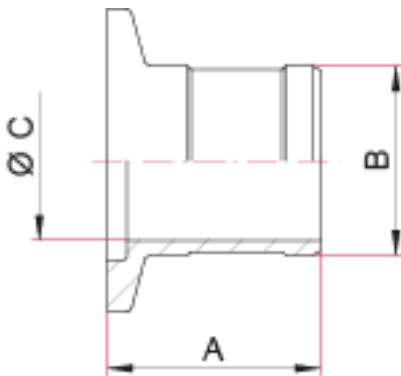
Flanges according to ISO 2861

ISO-KF Adapter for PVC Hose



- For connecting a PVC hose with embedded spring or a CR sleeve
- Fastener: Hose clamp (see accessories)

Dimensions



Aluminum

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 16 KF	28	16	12	0450226941
DN 25 KF	28	16	12	0450226942
DN 25 KF	40	25	21	0450226943
DN 40 KF	32	45	40	0450226944
DN 50 KF	60	50	45	0450226945
DN 10 KF	40	14	9	0574228660
DN 16 KF	40	20	15	0574228661
DN 25 KF	40	20	16	0574228662
DN 40 KF	40	26	22	0574228663
DN 40 KF	40	37	37	0574228664

Please check the hose inner diameter before ordering
Flanges according to ISO 2861

Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 16 KF	28	16	12	0450227092
DN 25 KF	28	25	21	0450227093
DN 40 KF	32	45	40	0450227094
DN 50 KF	60	50	45	0450227095

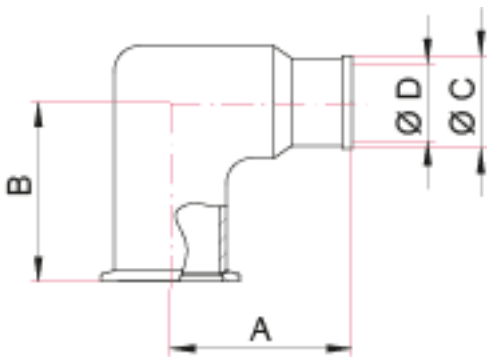
Please check the hose inner diameter before ordering
Flanges according to ISO 2861

ISO-KF 90° Elbow with Hose Adapter



- For connecting a PVC hose or a CR sleeve
- Fastener: Hose clamp (see accessories)

Dimensions



Aluminum EN AW-6061

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 KF	40	40	17	13	0450226946
DN 25 KF	50	50	26	22	0450226947
DN 40 KF	65	65	41	37	0450226948

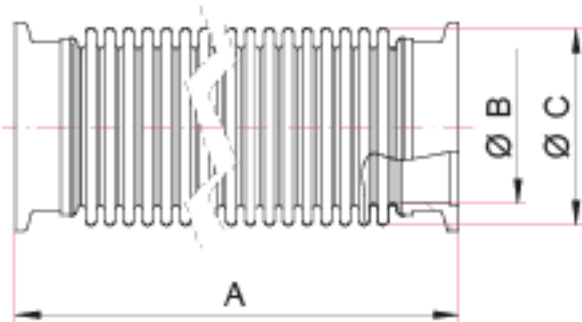
Please check the hose inner diameter before ordering
Flanges according to ISO 2861

ISO-KF Corrugated Hose, Flexible



- Flange connection length: 15 mm
- Custom lengths on request
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel: Flange 304/1.4301; Bellows 316L

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Bend radius, often movement [mm]	Part number
DN 10 KF	250	10	15,9	17	100	0452227278
DN 10 KF	500	10	15,9	17	100	0452227279
DN 10 KF	750	10	15,9	17	100	0452227280
DN 10 KF	1000	10	15,9	17	100	0452227281
DN 10 KF	1500	10	15,9	17	100	0452227282
DN 10 KF	2000	10	15,9	17	100	0452227283
DN 16 KF	250	16	23	26	140	0452227284
DN 16 KF	500	16	23	26	140	0452227285
DN 16 KF	750	16	23	26	140	0452227286
DN 16 KF	1000	16	23	26	140	0452227287
DN 16 KF	1500	16	23	26	140	0452227288
DN 16 KF	2000	16	23	26	140	0452227289
DN 25 KF	250	24	33	38	180	0452227290
DN 25 KF	500	24	33	38	180	0452227291

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Bend radius, often movement [mm]	Part number
DN 25 KF	750	24	33	38	180	0452227292
DN 25 KF	1000	24	33	38	180	0452227293
DN 25 KF	1500	24	33	38	180	0452227294
DN 25 KF	2000	24	33	38	180	0452227295
DN 40 KF	250	40	52	59	240	0452227296
DN 40 KF	500	40	52	59	240	0452227297
DN 40 KF	750	40	52	59	240	0452227298
DN 40 KF	1000	40	52	59	240	0452227299
DN 40 KF	1500	40	52	59	240	0452227300
DN 40 KF	2000	40	52	59	240	0452227301
DN 50 KF	250	50	63	72	280	0452227303
DN 50 KF	750	50	63	72	280	0452227305
DN 50 KF	1000	50	63	72	280	0452227306
DN 50 KF	1500	50	63	72	280	0452227307
DN 50 KF	2000	50	63	72	280	0452227308

Please note that the hose shrinks under vacuum.

The minimum bending radii are applicable for a temperature of 20 °C.

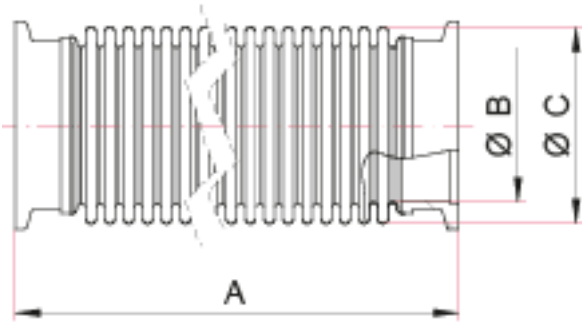
Flanges according to ISO 2861

ISO-KF Corrugated Hose, Flexible, Annealed



- Flange connection length: 15 mm
- Stress relieved; low reset force when bent
- Custom lengths on request
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel: Flange 304/1.4301; Bellows 316L

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Part number
DN 10 KF	250	10	16	17	0452227258
DN 10 KF	500	10	16	17	0452227259
DN 10 KF	750	10	16	17	0452227260
DN 10 KF	1000	10	16	17	0452227261
DN 16 KF	250	16	23	26	0452227262
DN 16 KF	500	16	23	26	0452227263
DN 16 KF	750	16	23	26	0452227264
DN 16 KF	1000	16	23	26	0452227265
DN 25 KF	250	24	33	38	0452227266
DN 25 KF	500	24	33	38	0452227267
DN 25 KF	750	24	33	38	0452227268
DN 25 KF	1000	24	33	38	0452227269

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Part number
DN 40 KF	250	40	52	59	0452227270
DN 40 KF	500	40	52	59	0452227271
DN 40 KF	750	40	52	59	0452227272
DN 40 KF	1000	40	52	59	0452227273
DN 50 KF	250	49,9	63	72	0452227274
DN 50 KF	500	49,9	63	72	0452227275
DN 50 KF	750	49,9	63	72	0452227276
DN 50 KF	1000	49,9	63	72	0452227277

Please note that the hose shrinks under vacuum.

The minimum bending radius is applicable for a temperature of 20 °C.

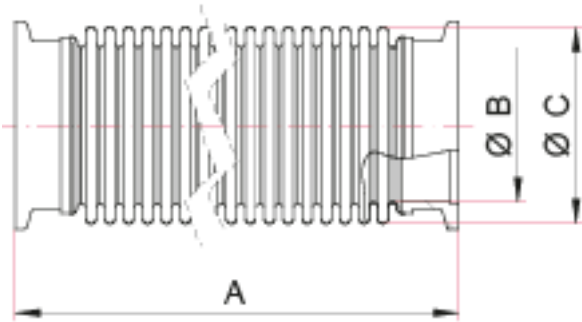
Flanges according to ISO 2861

ISO-KF Corrugated Hose, Highly Flexible, Thin-wall



- Flange connection length: 15 mm
- Custom lengths on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel: Flange 304/1.4301; Bellows 316L

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Bend radius, often movement [mm]	Part number
DN 16 KF	250	16	26	26	105	0452227234
DN 16 KF	500	16	26	26	105	0452227235
DN 16 KF	750	16	26	26	105	0452227236
DN 16 KF	1000	16	26	26	105	0452227237
DN 16 KF	1500	16	26	26	105	0452227238
DN 16 KF	2000	16	26	26	105	0452227239
DN 25 KF	250	24	37	38	135	0452227240
DN 25 KF	500	24	37	38	135	0452227241
DN 25 KF	750	24	37	38	135	0452227242
DN 25 KF	1000	24	37	38	135	0452227243
DN 25 KF	1500	24	37	38	135	0452227244
DN 25 KF	2000	24	37	38	135	0452227245

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Bend radius, often movement [mm]	Part number
DN 40 KF	250	40	56	59	180	0452227246
DN 40 KF	500	40	56	59	180	0452227247
DN 40 KF	750	40	56	59	180	0452227248
DN 40 KF	1000	40	56	59	180	0452227249
DN 40 KF	1500	40	56	59	180	0452227250
DN 40 KF	2000	40	56	59	180	0452227251
DN 50 KF	250	50	67	72	210	0452227252
DN 50 KF	500	50	67	72	210	0452227253
DN 50 KF	750	50	67	72	210	0452227254
DN 50 KF	1000	50	67	72	210	0452227255
DN 50 KF	1500	50	67	72	210	0452227256
DN 50 KF	2000	50	67	72	210	0452227257

Please note that the hose shrinks under vacuum.

The minimum bending radii are applicable for a temperature of 20 °C.

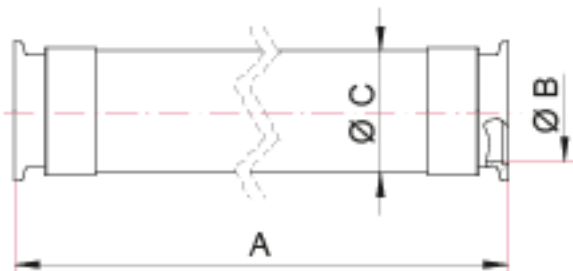
Flanges according to ISO 2861

ISO-KF Corrugated Hose, Sheathed



- Custom lengths on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel: Flange and Braided Sheath 304/1.4301; Bellows 316L

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Bend radius, often movement [mm]	Part number
DN 16 KF	250	15,9	24,9	44	140	0452227309
DN 16 KF	500	15,9	24,9	44	140	0452227310
DN 16 KF	750	15,9	24,9	44	140	0452227311
DN 16 KF	1000	15,9	24,9	44	140	0452227312
DN 25 KF	250	24	35,1	64	180	0452227313
DN 25 KF	500	24	35,1	64	180	0452227314
DN 25 KF	750	24	35,1	64	180	0452227315
DN 25 KF	1000	24	35,1	64	180	0452227316
DN 40 KF	250	40	54,7	98	240	0452227317
DN 40 KF	500	40	54,7	98	240	0452227321
DN 40 KF	750	40	54,7	98	240	0452227322
DN 40 KF	1000	40	54,7	98	240	0452227323
DN 50 KF	250	49,9	65,7	120	280	0452227324
DN 50 KF	500	49,9	65,7	120	280	0452227325

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Bend radius, often movement [mm]	Part number
DN 50 KF	750	49,9	65,7	120	280	0452227326
DN 50 KF	1000	49,9	65,7	120	280	0452227327

Please note that the hose shrinks under vacuum.

The minimum bending radii are applicable for a temperature of 20 °C.

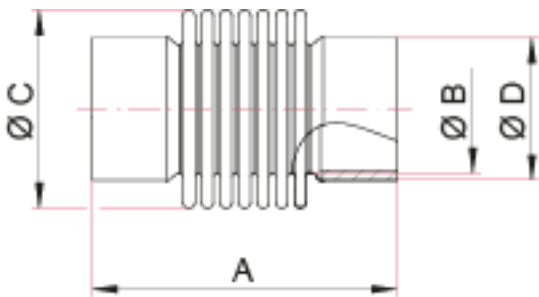
Flanges according to ISO 2861

ISO-KF Spring Bellows with Weld Ends



- Flange connection length: 15 mm
- Weld end wall thickness: 2 mm
- Custom lengths on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Materials: Stainless steel 316L
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 316L

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Axial stroke [mm]	Part number
DN 16 KF	90	16	26	20	±7	0458227559
DN 25 KF	120	24	39	28	±16	0458227560
DN 40 KF	120	40,5	58	44,5	±18	0458227561
DN 50 KF	120	50	69	54	±19.5	0458227562

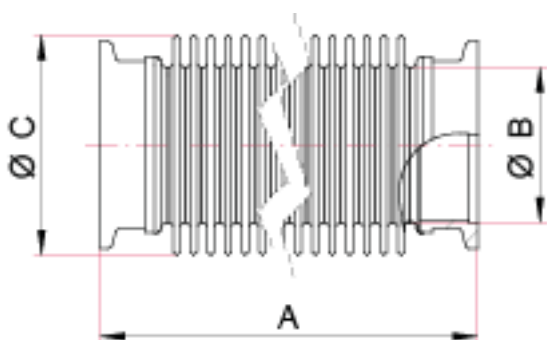
Please note that the spring bellows shrinks under vacuum.
The axial stroke is applicable for a temperature of 20 °C and 10000 load cycles.

ISO-KF Spring Bellows



- Flange connection length: 15 mm
- Custom lengths on request
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure
- Materials: Flange: stainless steel 1.4301/304; bellows: stainless steel 316L
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel: Flange 304/1.4301; Bellows 316L

Nominal diameter	A [mm]	B [mm]	C [mm]	Axial stroke [mm]	Part number
DN 16 KF	60	16	26	±3.5	0458227563
DN 16 KF	70	16	26	±5	0458227564
DN 16 KF	100	16	26	±8.5	0458227565
DN 16 KF	120	16	26	±11	0458227566
DN 25 KF	60	24	39	±5	0458227567
DN 25 KF	100	24	39	±12.5	0458227568
DN 25 KF	120	24	39	±16	0458227569
DN 40 KF	60	39	58	±5.5	0458227570
DN 40 KF	100	39	58	±14	0458227571
DN 40 KF	120	39	58	±18	0458227572
DN 50 KF	60	50	69	±6.5	0458227573
DN 50 KF	100	50	69	±15	0458227574
DN 50 KF	120	50	69	±19.5	0458227575

Please note that the spring bellows shrinks under vacuum.

The axial stroke is applicable for a temperature of 20 °C and 10000 load cycles.

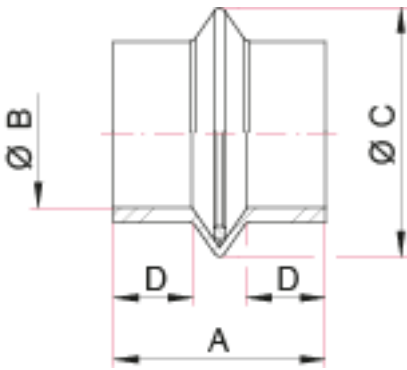
Flanges according to ISO 2861

ISO-KF CR Sleeve



- Sleeve made from chloroprene rubber
- Connection: Adapter for PVC hose (see adapters) and hose clamp (see accessories)
- Pressure range: 1 · 10⁻⁵ hPa to ambient pressure
- Temperature range: -5 to 120 °C

Dimensions



Chloroprene Rubber (CR)

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 KF	44	17	44	12	0450227485
DN 25 KF	50	25	50	15	0450227486
DN 40 KF	56	41	68	18	0450227487

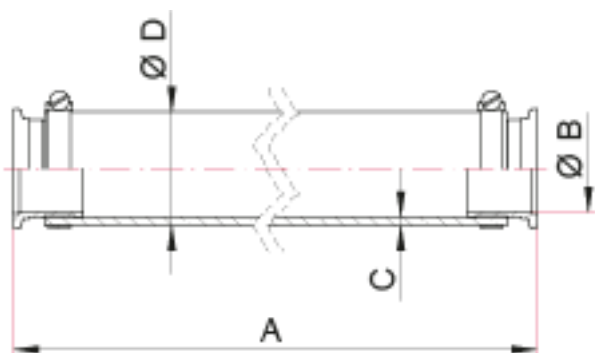
Please note that the sleeve shrinks under vacuum.

ISO-KF PVC Hose with Embedded Spring and Flanges



- Inner tube: PVC, transparent
- Casing: Steel coil
- Hose cover: PVC, transparent
- Smooth inner and outer walls
- Custom lengths on request
- Pressure range: $1 \cdot 10^{-4}$ hPa to ambient pressure
- Temperature range: -10 to 60 °C

Dimensions



PVC with Stainless Steel Flange, 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Bend radius [mm]	Part number
DN 16 KF	500	12	3,1	22	30	0458226914
DN 16 KF	1000	12	3,1	22	30	0458226915
DN 25 KF	500	21	4	33	50	0458226916
DN 25 KF	1000	21	4	33	50	0458226917
DN 40 KF	500	40	4,9	55	90	0458226918
DN 40 KF	1000	40	4,9	55	90	0458226919
DN 50 KF	500	45	5,9	62	100	0458226920
DN 50 KF	1000	45	5,9	62	100	0458226921

The minimum bending radius is applicable for a temperature of 20 °C.

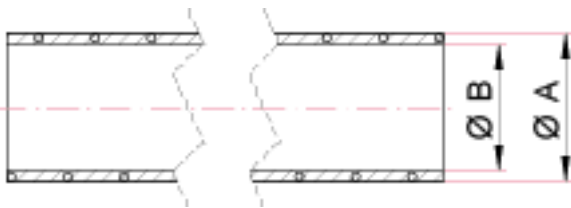
Flanges according to ISO 2861

ISO-KF PVC Hose with Embedded Spring



- Inner tube material: PVC, transparent
- Casing: steel coil
- Hose cover material: PVC, transparent
- Smooth inner and outer walls
- Length: up to 50 m; min. order: 1 m; orders > 1 m calculated pro rata
- Connection: hose adapter and hose clamp
- Pressure range: $1 \cdot 10^{-4}$ hPa to 500 hPa over pressure
- Temperature range: -10 to 60 °C

Dimensions



PVC

Inner diameter	A [mm]	B [mm]	Bend radius [mm]	Part number
16	22	16	30	0570226900
25	33	25	50	0570226904
45	55	45	90	0570226905
50	62	50	100	0570226907
10	16	10	-	0570226912

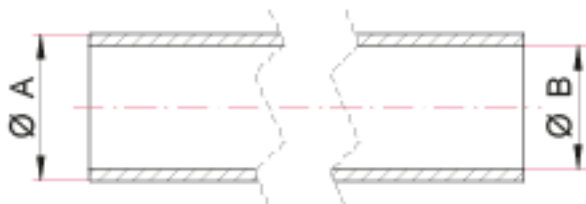
The minimum bending radius is applicable for a temperature of 20 °C.

ISO-KF Rubber Hose



- For vacuum applications
- Custom lengths on request; minimum order: 1 m; orders > 1 m calculated pro rata
- Pressure range: $1 \cdot 10^{-4}$ hPa to ambient pressure
- Temperature range: -30 to 85 °C

Dimensions



Rubber

Inner diameter [mm]	A [mm]	B [mm]	Part number
7	17	7	0570226908
10	25	10	0570226909
16	32	16	0570226910

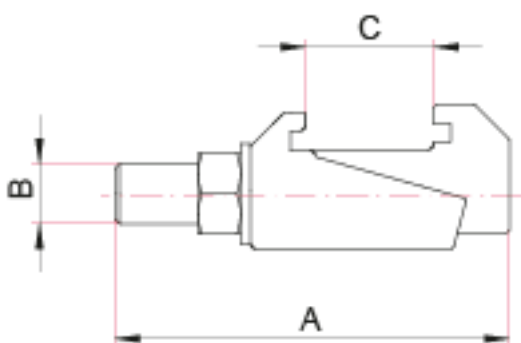
ISO-K / ISO-F

ISO-K Double Claw Clamp



- Suitable for use with metal and elastomer seals
- For stainless steel clamps we recommend using thread lubricant
- Torque: (for installation) DN 63-250: 12 to 16 Nm; DN 320-630: 20 to 26 Nm

Dimensions



Stainless Steel 316/1.4401

- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B	C [mm]	Part number
DN 63-250 ISO-K	61,5	M10	15 - 27	0450227706
DN 320-500 ISO-K	75	M12	27 - 33	0450227707
DN 630 ISO-K	85	M12	36 - 44	0450227708

Not to be used for the assembly of turbo pumps!

Use the fastening elements given in the corresponding operating instructions.

Zinc-plated Steel

- Temperature range: 0 to 200 °C

Nominal diameter	A [mm]	B	C [mm]	Part number
DN 63-250 ISO-K	61,5	M10	15 - 27	0450227915
DN 320-500 ISO-K	77	M12	27 - 33	0450227916
DN 630 ISO-K	86	M12	36 - 44	0450227923

Not to be used for the assembly of turbo pumps!

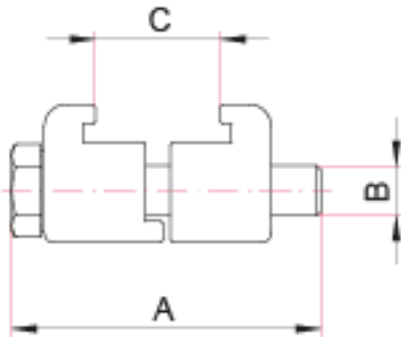
Use the fastening elements given in the corresponding operating instructions

ISO-K Double Claw Clamp, Aluminum



- Suitable for use with elastomer seals
- Temperature range: -196 to 200 °C

Dimensions



Aluminum EN AW-6061; Screw: Stainless Steel A2-70

Nominal diameter	A [mm]	B	C [mm]	Part number
DN 63-100 ISO-K	50	M8	24 - 27	0450227630
DN 160-250 ISO-K	52	M10	27 - 32	0450227631
DN 320-500 ISO-K	65	M12	32 - 38	0450227632

Not to be used for the assembly of turbo pumps!

Use the fastening elements given in the corresponding operating instructions

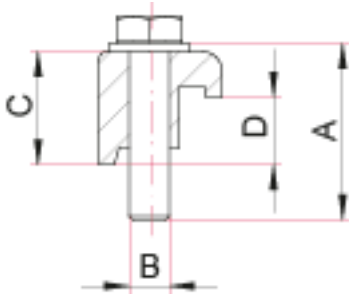
ISO-K Claw Clamp



- Zinc-plated and stainless steel versions: Suitable for use with metal and elastomer seals
- Aluminum version: Suitable for use with elastomer seals
- For installing an ISO-K flange on a base plate without O-ring groove
- For a base plate with O-ring groove please use single claw clamp for base plate with sealing groove (BPD)

Aluminum EN AW-6061; Screw: Stainless Steel A2-70

Dimensions



- Temperature range: -196 to 200 °C

Nominal diameter	A [mm]	B	C [mm]	D [mm]	Part number
DN 63-100 ISO-K	35	M8	23	14	0450227633
DN 160-250 ISO-K	35	M10	23	14	0450227634
DN 320-500 ISO-K	50	M12	30	21	0450227635

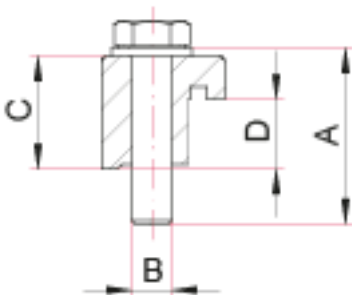
Not to be used for the assembly of turbo pumps!

Use the fastening elements given in the corresponding operating instructions.



Stainless Steel 304/1.4301

Dimensions



- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B	C [mm]	D [mm]	Part number
DN 63-100 ISO-K	35	M8	23	14	0450227709
DN 320-500 ISO-K	35	M10	23	14	0450227710
DN 320-500 ISO-K	50	M12	30	21	0450227711

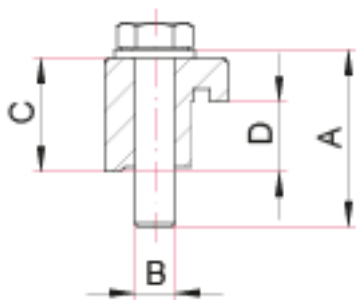
Not to be used for the assembly of turbo pumps!

Use the fastening elements given in the corresponding operating instructions.



Zinc-plated Steel

Dimensions



- Temperature range: 0 to 200 °C

Nominal diameter	A [mm]	B	C [mm]	D [mm]	Part number
DN 63-100 ISO-K	35	M8	23	14	0450227928
DN 160-250 ISO-K	35	M10	23	14	0450227929
DN 320-500 ISO-K	50	M12	30	20	0450227930
DN 630 ISO-K	60	M12	41,5	26	0450227931

Not to be used for the assembly of turbo pumps!

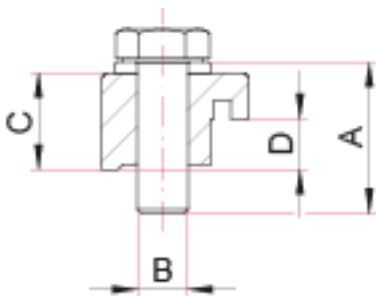
Use the fastening elements given in the corresponding operating instructions.

ISO-K Single Claw Clamp for Base Plate with Sealing Groove



- Suitable for use with metal and elastomer seals
- For installing an ISO-K flange on a base plate with O-ring groove
- If there is no O-ring groove, please use the longer single claw clamps (BPR)
- Temperature range: 0 to 200 °C

Dimensions



Zinc-plated Steel

Nominal diameter	A [mm]	B	C [mm]	D [mm]	Part number
DN 63-100 ISO-K	30	M8	19	10,1	0450227924
DN 160-250 ISO-K	35	M10	19	10,1	0450227925
DN 320-500 ISO-K	45	M12	31	15,4	0450227926
DN 630 ISO-K	55	M12	36	20,4	0450227927

Not to be used for the assembly of turbo pumps!

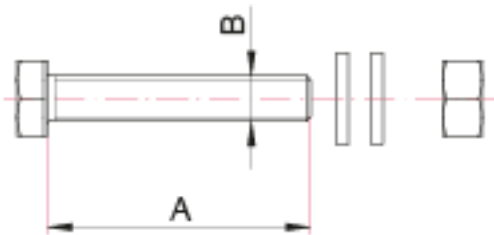
Use the fastening elements given in the corresponding operating instructions.

ISO-F Screw Set



- For connecting two ISO-F flanges
- For connecting an ISO-F flange and an ISO-K/ISO-F bolt ring
- For connecting two ISO-K/ISO-F bolt rings
- Suitable for use with metal and elastomer seals
- Hexagon head screws, each with two washers and one nut

Dimensions



Zinc-plated Steel, property class 8.8

Nominal diameter	A [mm]	B	Package [Qty.]	Part number
DN 63-100 ISO-K/ISO-F	40	M8	8	0999229144
DN 160-250 ISO-K/ISO-F	50	M10	12	0999229145
DN 320-500 ISO-K/ISO-F	65	M12	16	0999229146
DN 630 ISO-K/ISO-F	70	M12	20	0999229147

Stainless Steel A2-70

Nominal diameter	A [mm]	B	Package [Qty.]	Part number
DN 63-100 ISO-K/ISO-F	40	M8	8	0999229140
DN 160-250 ISO-K/ISO-F	50	M10	12	0999229141
DN 320-500 ISO-K/ISO-F	65	M12	16	0999229142
DN 630 ISO-K/ISO-F	70	M12	20	0999229143

ISO-K Centering Ring with Outer Ring



- Aluminum outer ring
- Temperature range: FKM: -15 to 150 °C (shortly up to 200 °C); NBR: -25 to 120 °C; CR: -5 to 120 °C

Dimensions



Aluminum

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 63 ISO-K	NBR	70	68	3,9	8	5,33	0450227671
DN 80 ISO-K	NBR	83	81	3,9	8	5,33	0450227672
DN 100 ISO-K	NBR	102	100	3,9	8	5,33	0450227673
DN 160 ISO-K	NBR	153	151	3,9	8	5,33	0450227674
DN 200 ISO-K	NBR	213	211	3,9	8	5,33	0450227675
DN 250 ISO-K	NBR	261	259	3,9	8	5,33	0450227676
DN 320 ISO-K	NBR	318	313	5,6	14	7	0450227677
DN 400 ISO-K	NBR	400	395	5,6	14	7	0450227678
DN 500 ISO-K	NBR	501	496	5,6	14	7	0450227679
DN 630 ISO-K	NBR	651	646	5,6	14	7	0450227680
DN 63 ISO-K	CR	70	68	3,9	8	5,33	0450227691
DN 80 ISO-K	CR	83	81	3,9	8	5,33	0450227692
DN 100 ISO-K	CR	102	100	3,9	8	5,33	0450227693
DN 160 ISO-K	CR	153	151	3,9	8	5,33	0450227694

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
0450227695	CR	213	211	3,9	8	5,33	0450227695
DN 250 ISO-K	CR	261	259	3,9	8	5,33	0450227696
DN 320 ISO-K	CR	318	313	5,6	14	7	0450227697
DN 400 ISO-K	CR	400	395	5,6	14	7	0450227698
DN 500 ISO-K	CR	501	496	5,6	14	7	0450227699
DN 630 ISO-K	CR	651	646	5,6	14	7	0450227700
DN 63 ISO-K	FKM	70	68	3,9	8	5,33	0450227681
DN 80 ISO-K	FKM	83	81	3,9	8	5,33	0450227682
DN 100 ISO-K	FKM	102	100	3,9	8	5,33	0450227683
DN 160 ISO-K	FKM	153	151	3,9	8	5,33	0450227684
DN 200 ISO-K	FKM	213	211	3,9	8	5,33	0450227685
DN 250 ISO-K	FKM	261	259	3,9	8	5,33	0450227686
DN 320 ISO-K	FKM	318	313	5,6	14	7	0450227687
DN 400 ISO-K	FKM	400	395	5,6	14	7	0450227688
DN 500 ISO-K	FKM	501	496	5,6	14	7	0450227689
DN 630 ISO-K	FKM	651	646	5,6	14	7	0450227690

Stainless Steel 316Ti/1.4571 (DN 320: 304/1.4301) Outer Ring: Aluminum

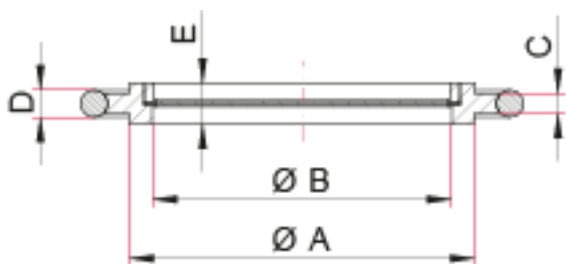
Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 63 ISO-K	FKM	70	68	3,9	8	5,33	0450227901
DN 80 ISO-K	FKM	83	81	3,9	8	5,33	0450227902
DN 100 ISO-K	FKM	102	100	3,9	8	5,33	0450227903
DN 160 ISO-K	FKM	153	151	3,9	8	5,33	0450227904
DN 200 ISO-K	FKM	213	211	3,9	8	5,33	0450227905
DN 250 ISO-K	FKM	261	259	3,9	8	5,33	0450227906
DN 320 ISO-K	FKM	318	313	5,6	14	7	0450227907

ISO-K Centering Ring with Screen



- Material: Stainless Steel
- Temperature range: -15 to 150 °C (shortly up to 200 °C)

Dimensions



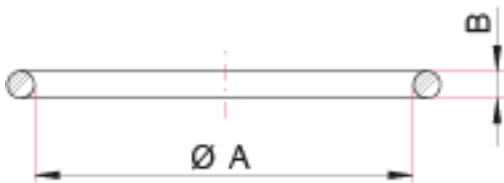
Stainless Steel 304/1.4301

Nominal diameter	O-ring material	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Mesh [mm]	Wire thickness [mm]	Part number
DN 63 ISO-K	FKM	70	60	3,9	5,33	8	0,5	0,2	0450227908
DN 80 ISO-K	FKM	83	73	3,9	5,33	8	0,6	0,2	0450227909
DN 100 ISO-K	FKM	102	92	3,9	5,33	8	0,8	0,2	0450227910
DN 160 ISO-K	FKM	153	143	3,9	5,33	8	1,2	0,2	0450227911

ISO-K O-Rings



Dimensions



FKM

- Temperature range: -15 to 150 °C (shortly up to 200 °C)

Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 63 ISO-K	76	5,33	5	0990227593
DN 80 ISO-K	88,27	5,33	5	0990227594
DN 100 ISO-K	107	5,33	5	0990227595
DN 160 ISO-K	158	5,33	5	0990227596
DN 200 ISO-K	209	5,33	5	0990227601
DN 250 ISO-K	253	5,33	5	0990227602
DN 320 ISO-K	317	7	1	0486227603
DN 400 ISO-K	405	7	1	0486227604
DN 500 ISO-K	507	7	1	0486227605
DN 630 ISO-K	659	7	1	0486227606

NBR

- Temperature range: -25 to 120 °C

Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 63 ISO-K	76	5,33	5	0990227583
DN 80 ISO-K	88,27	5,33	5	0990227584

Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 100 ISO-K	107	5,33	5	0990227585
DN 160 ISO-K	158	5,33	5	0990227586
DN 200 ISO-K	209	5,33	5	0990227587
DN 250 ISO-K	253	5,33	5	0990227588
DN 320 ISO-K	317	7	1	0486227589
DN 400 ISO-K	405	7	1	0486227590
DN 500 ISO-K	507	7	1	0486227591
DN 630 ISO-K	659	7	1	0486227592

CR

- Temperature range: -5 to 120 °C

Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 63 ISO-K	76	5,33	5	0990227620
DN 80 ISO-K	88,27	5,33	5	0990227621
DN 100 ISO-K	107	5,33	5	0990227622
DN 160 ISO-K	158	5,33	5	0990227623
DN 200 ISO-K	209	5,33	5	0990227624
DN 250 ISO-K	253	5,33	5	0990227625
DN 320 ISO-K	317	7	1	0486227626
DN 400 ISO-K	405	7	1	0486227627
DN 500 ISO-K	507	7	1	0486227628
DN 630 ISO-K	659	7	1	0486227629

EPDM

- Temperature range: -50 to 130 °C

Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 63 ISO-K	76	5,33	5	0990227614
DN 80 ISO-K	88,27	5,33	5	0990227615
DN 100 ISO-K	107	5,33	5	0990227616
DN 160 ISO-K	158	5,33	5	0990227617
DN 200 ISO-K	209	5,33	5	0990227618
DN 250 ISO-K	253	5,33	5	0990227619

Silicone

- Temperature range: -55 to 200 °C

Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 63 ISO-K	76	5,33	5	0990227608

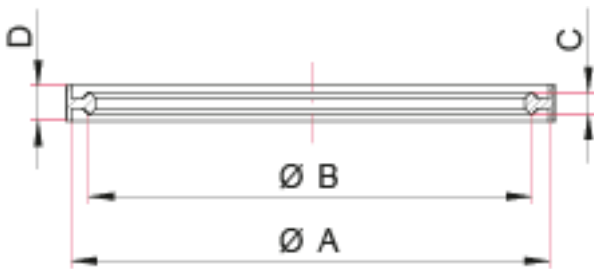
Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 80 ISO-K	88,27	5,33	5	0990227609
DN 100 ISO-K	107	5,33	5	0990227610
DN 160 ISO-K	158	5,33	5	0990227611
DN 200 ISO-K	209	5,33	5	0990227612
DN 250 ISO-K	253	5,33	5	0990227613

ISO-K Metal Seal, Aligned at Outer Diameter



- For stainless steel flanges
- No gas permeation
- For single use only
- Temperature range: -196 to 150 °C

Dimensions



Aluminum EN AW-6082

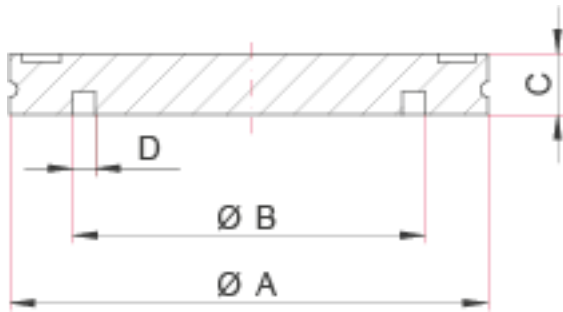
Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 63 ISO-K	95	88	4,5	7	0484227665
DN 80 ISO-K	110	103	4,5	7	0484227666
DN 100 ISO-K	130	123	4,5	7	0484227667
DN 160 ISO-K	180	173	4,5	7	0484227668
DN 200 ISO-K	240	233	4,5	7	0484227669
DN 250 ISO-K	290	283	4,5	7	0484227670

ISO-K Blank Flange



- Available in stainless steel or aluminum

Dimensions



Aluminum EN AW-6082

- Pressure range: $1 \cdot 10^{-8}$ hPa to 1500 hPa over pressure
- Temperature range: -196 bis 200 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 63 ISO-K	95	70	12	4,5	0450227636
DN 80 ISO-K	110	83	12	4,5	0450227637
DN 100 ISO-K	130	102	12	4,5	0450227638
DN 160 ISO-K	180	153	12	4,5	0450227639
DN 200 ISO-K	240	213	12	4,5	0450227640
DN 250 ISO-K	290	261	12	4,5	0450227641

Flanges according to ISO 1609

Stainless Steel 304/1.4301

- Pressure range: $1 \cdot 10^{-8}$ hPa to 1500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 63 ISO-K	95	70	12	4,5	0450227737
DN 80 ISO-K	110	83	12	4,5	0450227738
DN 100 ISO-K	130	102	12	4,5	0450227739

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 160 ISO-K	180	153	12	4,5	0450227740
DN 200 ISO-K	240	213	12	4,5	0450227741
DN 250 ISO-K	290	261	12	4,5	0450227742
DN 320 ISO-K	370	318	17	4,5	0450227743
DN 400 ISO-K	450	400	17	4,5	0450227744
DN 500 ISO-K	550	501	17	4,5	0450227745
DN 630 ISO-K	690	651	22	4,5	0450227746

Flanges according to ISO 1609

Stainless Steel 316L/1.4404

- Pressure range: 1 · 10⁻⁸ hPa to 1500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 63 ISO-K	95	70	12	4,5	0450227958
DN 80 ISO-K	110	83	12	4,5	0450227959
DN 100 ISO-K	130	102	12	4,5	0450227960
DN 160 ISO-K	180	153	12	4,5	0450227964
DN 200 ISO-K	240	213	12	4,5	0450227965
DN 250 ISO-K	290	261	12	4,5	0450227966
DN 320 ISO-K	370	318	17	4,5	0450227967

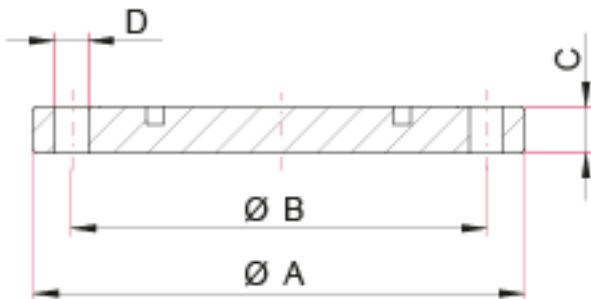
Flanges according to ISO 1609

ISO-F Blank Flange



- Other flange materials on request
- Other flange sizes on request
- Pressure range: 1 · 10⁻⁸ hPa to 1500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 63 ISO-F	130	110	12	9	0453228597
DN 100 ISO-F	165	145	12	9	0453228598
DN 160 ISO-F	225	200	16	11	0453228599
DN 200 ISO-F	285	260	16	11	0453228600
DN 250 ISO-F	335	310	16	11	0453228601

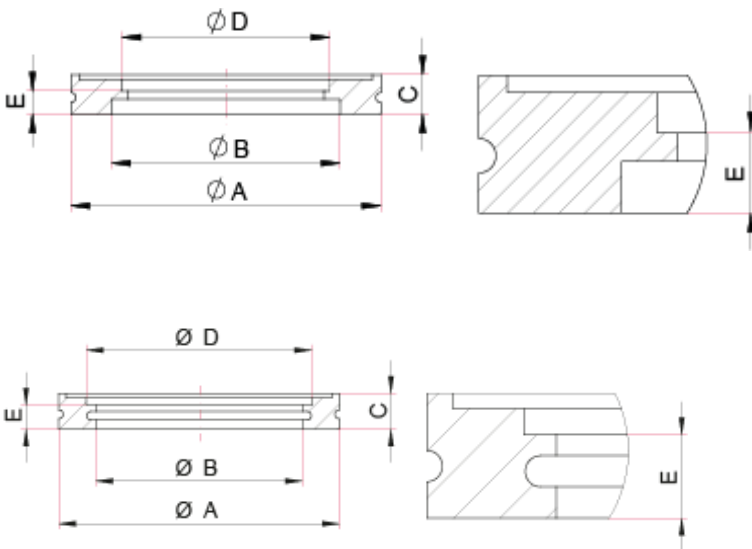
Flanges according to ISO 1609

ISO-K Weld Ring Flange



- Other flange materials on request

Dimensions



Stainless Steel 304/1.4301

- Pressure range: 1 · 10⁻⁸ hPa to 1500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 63 ISO-K	63.5 x 1.65	95	70	12	63,8	6	0450227712
DN 63 ISO-K	70 x 2	95	70	12	70,3	6	0450227713
DN 63 ISO-K	76.1 x 3	95	70	12	76,4	6	0450227714
DN 63 ISO-K	76.1 x 3	95	70	12	76,4	8	0450227715
DN 80 ISO-K	76.1 x 3	110	83	12	76,4	6	0450227716
DN 80 ISO-K	88.9 x 3	110	83	12	89,2	6	0450227717
DN 100 ISO-K	101.6 x 2.1	130	102	12	101,9	6	0450227718
DN 100 ISO-K	104 x 2	130	102	12	104,3	6	0450227719

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 100 ISO-K	108 x 3	130	102	12	108,3	6	0450227720
DN 100 ISO-K	108 x 3	130	102	12	108,3	8	0450227721
DN 100 ISO-K	114.3 x 2	130	102	12	114,6	6	0450227722
DN 160 ISO-K	152.4 x 2.4	180	153	12	152,7	6	0450227723
DN 160 ISO-K	159 x 3	180	153	12	159,3	6	0450227724
DN 160 ISO-K	159 x 3	180	153	12	159,3	8	0450227725
DN 200 ISO-K	203.2 x 2.4	240	213	12	203,6	6	0450227726
DN 200 ISO-K	219 x 3	240	213	12	219,4	6	0450227727
DN 200 ISO-K	219 x 3	240	213	12	219,4	8	0450227728
DN 250 ISO-K	254 x 2	290	261	12	254,4	6	0450227729
DN 250 ISO-K	273 x 3	290	261	12	273,4	6	0450227730
DN 250 ISO-K	273 x 3	290	261	12	273,4	8	0450227731
DN 320 ISO-K	324 x 3	370	318	17	324,4	8	0450227732
DN 320 ISO-K	324 x 3	370	318	17	324,4	10	0450227733
DN 400 ISO-K	406 x 3	450	400	17	406,5	8	0450227734
DN 500 ISO-K	508 x 4	550	501	17	508,5	8	0450227735
DN 630 ISO-K	660 x 5	690	651	22	660,5	12	0450227736

Flanges according to ISO 1609

Stainless Steel 316L/1.4404

- Pressure range: 1 · 10⁻⁸ hPa to 1500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 350 °C

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 63 ISO-K	63.5 x 1.65	95	70	12	63,8	6	0450227938
DN 63 ISO-K	70 x 2	95	70	12	70,3	6	0450227939
DN 63 ISO-K	76.1 x 3	95	70	12	76,4	6	0450227940
DN 63 ISO-K	76.1 x 3	95	70	12	76,4	8	0450227941
DN 80 ISO-K	76.1 x 3	110	83	12	76,4	6	0450227942
DN 80 ISO-K	88.9 x 3	110	83	12	89,2	6	0450227943
DN 100 ISO-K	101.6 x 2.1	130	102	12	101,9	6	0450227944
DN 100 ISO-K	104 x 2	130	102	12	104,3	6	0450227945
DN 100 ISO-K	108 x 3	130	102	12	108,3	6	0450227946
DN 100 ISO-K	108 x 3	130	102	12	108,3	8	0450227947
DN 100 ISO-K	114.3 x 2	130	102	12	114,6	6	0450227948

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 160 ISO-K	159 x 3	180	153	12	159,3	6	0450227949
DN 160 ISO-K	159 x 3	180	153	12	159,3	8	0450227950
DN 200 ISO-K	203.2 x 2.4	240	213	12	203,6	6	0450227951
DN 200 ISO-K	219 x 3	240	213	12	219,4	6	0450227952
DN 250 ISO-K	254 x 2	290	261	12	254,4	6	0450227953
DN 250 ISO-K	273 x 3	290	216	12	273,4	6	0450227954
DN 320 ISO-K	324 x 3	370	318	17	324,4	8	0450227955
DN 400 ISO-K	406 x 3	450	400	17	406,5	8	0450227956
DN 500 ISO-K	508 x 4	550	501	17	508,5	8	0450227957

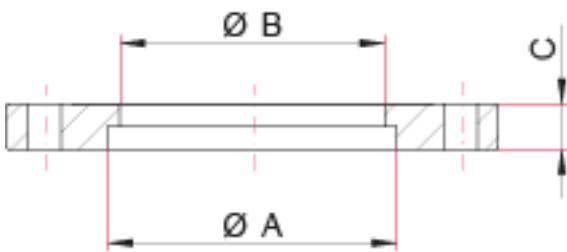
Flanges according to ISO 1609

ISO-F Weld Flange



- Other flange sizes or materials available upon request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 1500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 1500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	Part number
DN 63 ISO-F	76.1 x 3	76,4	70	12	0453228592
DN 100 ISO-F	108 x 3	108,3	102	12	0453228593
DN 160 ISO-F	159 x 3	159,3	153	16	0453228594
DN 200 ISO-F	219 x 3	219,4	213	16	0453228595
DN 250 ISO-F	273 x 3	273,4	261	16	0453228596

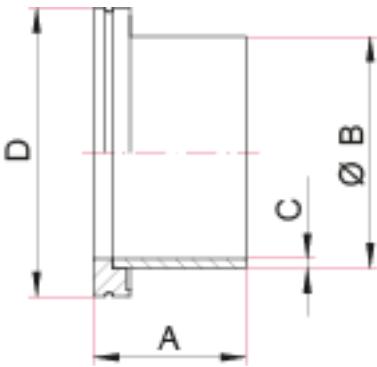
Flanges according to ISO 1609

ISO-K Half Nipple



- Custom lengths on request
- Pressure range: 1 · 10⁻⁸ hPa to 1500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 1500 hPa over pressure (metal seal)
- Materials: Flange: stainless steel 304/1.4301; tube: stainless steel 304/1.4301 or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	Part number
DN 63 ISO-K	63.5 x 1.65	100	63,5	1,65	0450227758
DN 63 ISO-K	76.1 x 3	100	76,1	3	0450227759
DN 80 ISO-K	76.1 x 3	100	76,1	3	0450227760
DN 80 ISO-K	88.9 x 3	100	88,9	3	0450227761
DN 100 ISO-K	101.6 x 2.1	100	101,6	2,1	0450227762
DN 100 ISO-K	108 x 3	100	108	3	0450227763
DN 160 ISO-K	152.4 x 2.4	100	152,4	2,4	0450227764
DN 160 ISO-K	159 x 3	100	159	3	0450227765
DN 200 ISO-K	203.2 x 2.4	100	203,2	2,4	0450227766
DN 200 ISO-K	219 x 3	100	219	3	0450227767
DN 250 ISO-K	254 x 2	100	254	2	0450227768
DN 250 ISO-K	273 x 3	100	273	3	0450227769

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	Part number
DN 320 ISO-K	324 x 3	100	324	3	0450227770
DN 400 ISO-K	406 x 3	100	406,4	3	0450227771
DN 500 ISO-K	508 x 4	100	508	4	0450227772
DN 630 ISO-K	660 x 5	100	660	5	0450227773

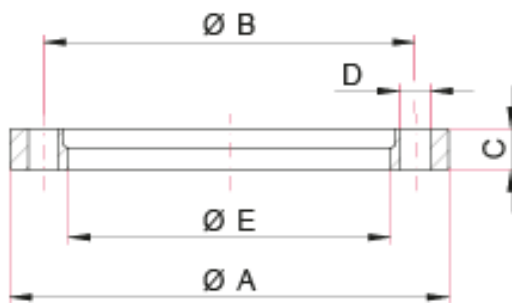
Flanges according to ISO 1609

ISO-K Rotatable Bolt Ring



- Circlip included
- Fixation: Set of screws

Dimensions



Note

The rotatable bolt ring lets you convert an ISO-K flange into a rotatable ISO-F flange.

Stainless Steel 304/1.4301

- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 63 ISO-K	130	110	12	9	95,5	0450227752
DN 80 ISO-K	145	125	12	9	110,5	0450227753
DN 100 ISO-K	165	145	12	9	130,5	0450227754
DN 160 ISO-K	225	200	16	11	180,7	0450227755
DN 200 ISO-K	285	260	16	11	240,7	0450227756
DN 250 ISO-K	335	310	16	11	290,7	0450227757

Flanges according to ISO 1609

Nickel-plated Steel S235JR/1.0038

- Temperature range: 0 to 200 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 63 ISO-K	130	110	12	9	95,5	0450227932
DN 100 ISO-K	165	145	12	9	130,5	0450227933
DN 160 ISO-K	225	200	16	11	180,7	0450227934
DN 200 ISO-K	285	260	16	11	240,7	0450227935

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 250 ISO-K	335	310	16	11	290,7	0450227936
DN 320 ISO-K	425	395	20	13,5	370,8	0450227937

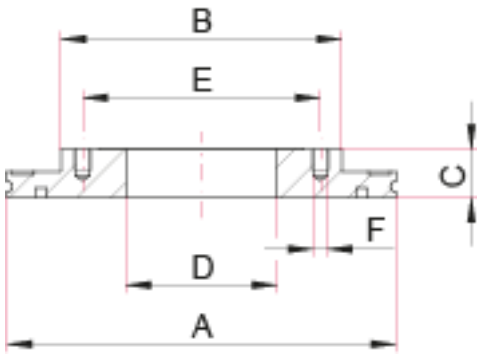
Flanges according to ISO 1609

ISO-K/ISO-F Adapter Flange



- Other flange sizes on request
- Reduced nominal width implemented with ISO-F blind hole threads
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions

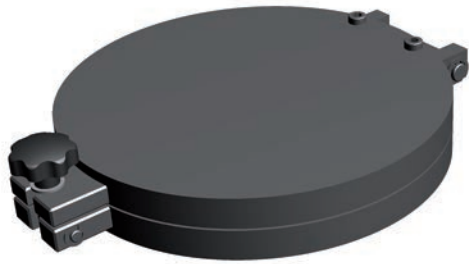


Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F	Nominal diameter reduced	Part number
DN 160 ISO-K	180	130	22	70	110	M8	DN 63 ISO-F	0450227747
DN 160 ISO-K	180	165	22	102	145	M8	DN 100 ISO-F	0450227748
DN 200 ISO-K	240	165	20	102	145	M8	DN 100 ISO-F	0450227749
DN 200 ISO-K	240	225	26	153	200	M10	DN 160 ISO-F	0450227750
DN 250 ISO-K	290	225	22	153	200	M10	DN 160 ISO-F	0450227751

Flanges according to ISO 1609

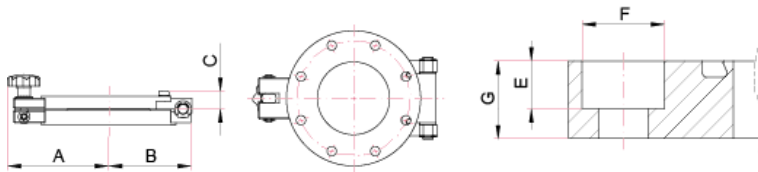
ISO-F Quick-Access-Door



- Screw holes: Through-holes with counter-bore for cylinder head
- Can be installed using hexagon socket screws
- Bakeout temperature: up to 200 °C
- Seal: FKM
- Pressure range: 1 · 10⁻⁸ hPa to ambient pressure
- Temperature range: -15 to 150 °C

Stainless Steel 304/1.4301, without Sight Glass

Dimensions

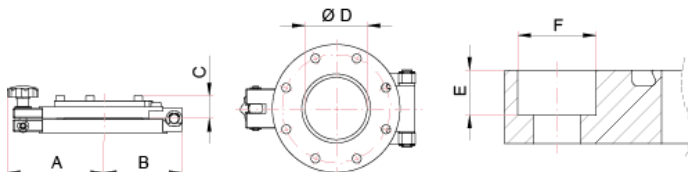


Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Part number
DN 63 ISO-F	98	80	16	-	10	16	0453228602
DN 100 ISO-F	116	99	16	-	10	16	0453228604
DN 160 ISO-F	147	130	20	-	12,5	20	0453228606
DN 200 ISO-F	177	160	20	-	12,5	20	0453228608

Stainless Steel 304/1.4301, with Sight Glass

- Sight glass: Borosilicate glass

Dimensions



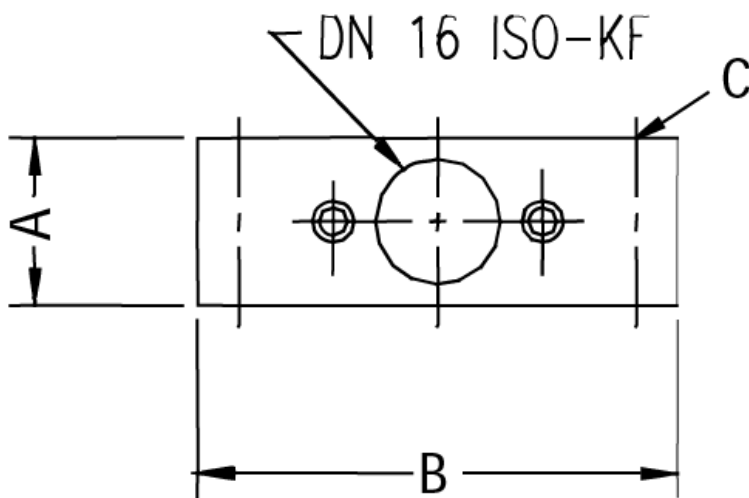
Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Part number
DN 63 ISO-F	98	80	23	63	10	16	0453228603
DN 100 ISO-F	116	99	27	95	10	16	0453228605
DN 160 ISO-F	147	130	31	145	12,5	20	0453228607
DN 200 ISO-F	177	160	31	145	12,5	20	0453228609

ISO-F Measurement Flange



- Suitable for application with elastomer seal
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure
- Temperature range: -196 to 200 °C

Dimensions



Aluminum

Nominal diameter	A [mm]	B [mm]	C	Part number
DN 63 ISO-F	35	130	4 x M8	0450228665
DN 100 ISO-F	35	165	8 x M8	0450228666

ISO-K Flange Cap



- Made from plastic

Dimensions



Polyethelene (PE)

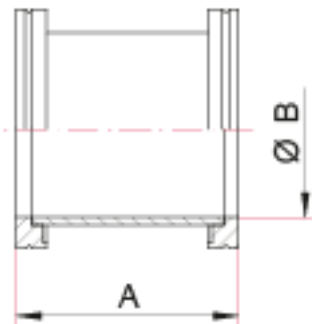
Nominal diameter	Package [Qty.]	Part number
DN 63 ISO-K	5	0990229036
DN 80 ISO-K	5	0990229037
DN 100 ISO-K	5	0990229038
DN 160 ISO-K	5	0990229039
DN 200 ISO-K	5	0990229040
DN 250 ISO-K	5	0990229041

ISO-K Full Nipple



- Other lengths and materials on request
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	Part number
DN 63 ISO-K	88	70	0450227839
DN 63 ISO-K	176	70	0450227840
DN 100 ISO-K	108	102	0450227841
DN 100 ISO-K	216	102	0450227842
DN 160 ISO-K	138	153	0450227843
DN 160 ISO-K	276	153	0450227844
DN 200 ISO-K	178	213	0450227845
DN 250 ISO-K	208	261	0450227846

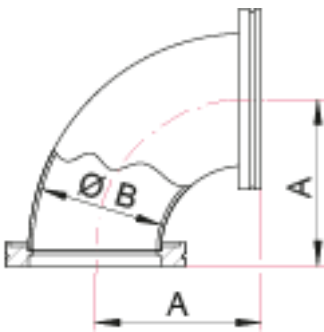
Flanges according to ISO 1609

ISO-K 90° Elbow, Radius



- Larger flange sizes on request

Dimensions



Stainless Steel 304/1.4301

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 63 ISO-K	88	66	0450227797
DN 100 ISO-K	108	100	0450227798
DN 160 ISO-K	232	150	0450227799

Flanges according to ISO 1609

Stainless Steel 316L/1.4404

- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 350 °C

Nominal diameter	A [mm]	B [mm]	Part number
DN 63 ISO-K	88	66	0450227968
DN 100 ISO-K	108	100	0450227969

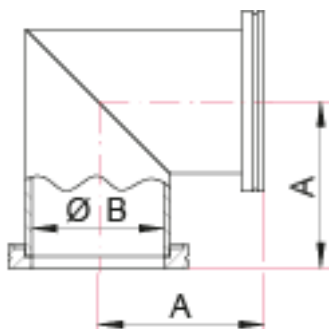
Flanges according to ISO 1609

ISO-K 90° Elbow, Mitered



- Larger flange sizes on request
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	Part number
DN 160 ISO-K	138	153	0450227836
DN 200 ISO-K	178	213	0450227837
DN 250 ISO-K	208	261	0450227838

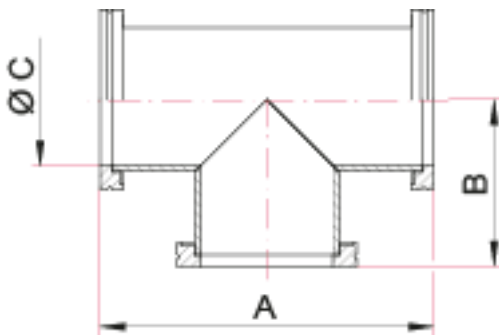
Flanges according to ISO 1609

ISO-K Tee



- Larger flange sizes on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 63 ISO-K	176	88	70	0450227831
DN 100 ISO-K	216	108	102	0450227832
DN 160 ISO-K	276	138	153	0450227833
DN 200 ISO-K	356	178	213	0450227834
DN 250 ISO-K	416	208	261	0450227835

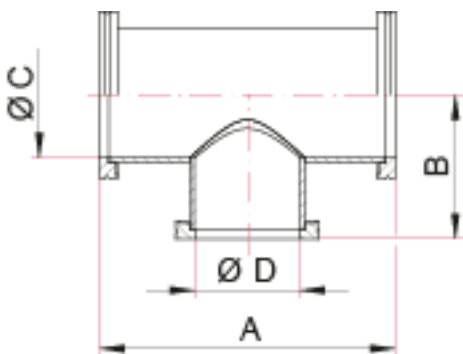
Flanges according to ISO 1609

ISO-K Reducer Tee



- Other flange sizes and dimensions on request
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Nominal diameter reduced	Part number
DN 100 ISO-K	216	107	102	70	DN 63 ISO-K	0450227826
DN 160 ISO-K	276	130	153	70	DN 63 ISO-K	0450227829
DN 160 ISO-K	276	131	153	102	DN 100 ISO-K	0450227830

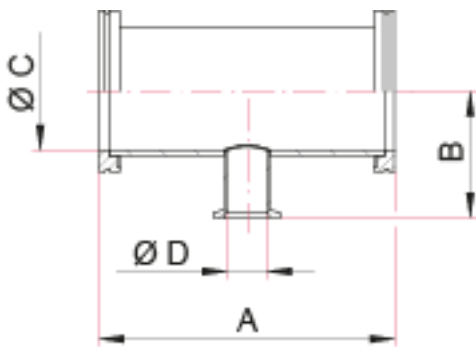
Flanges according to ISO 1609

ISO-K to ISO-KF Reducer Tee



- Other flange sizes and dimensions on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Nominal diameter reduced	Part number
DN 63 ISO-K	176	75	70	24	DN 25 ISO-KF	0450227822
DN 63 ISO-K	176	75	70	40,5	DN 40 ISO-KF	0450227823
DN 100 ISO-K	216	100	102	24	DN 25 ISO-KF	0450227824
DN 100 ISO-K	216	100	102	40,5	DN 40 ISO-KF	0450227825
DN 160 ISO-K	276	125	153	24	DN 25 ISO-KF	0450227827
DN 160 ISO-K	276	125	153	40,5	DN 40 ISO-KF	0450227828

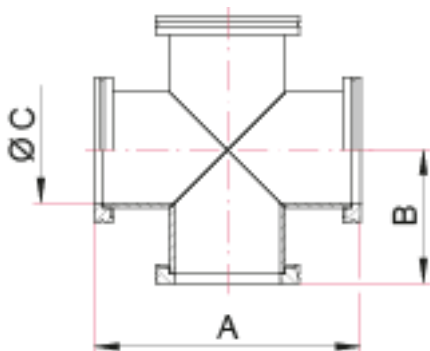
Flanges according to ISO 1609

ISO-K Cross



- Other flange sizes and dimensions on request
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 63 ISO-K	176	88	66	0450227792
DN 100 ISO-K	216	108	100	0450227793
DN 160 ISO-K	276	138	153	0450227794
DN 200 ISO-K	356	178	213	0450227795
DN 250 ISO-K	416	208	261	0450227796

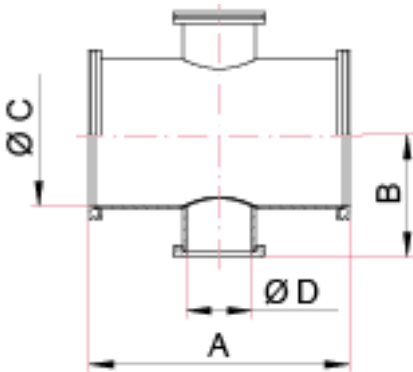
Flanges according to ISO 1609

ISO-K Reducer Cross



- Other flange sizes and dimensions on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Nominal diameter reduced	Part number
DN 100 ISO-K	216	107	102	70	DN 63 ISO-K	0450227786
DN 160 ISO-K	276	130	153	70	DN 63 ISO-K	0450227789
DN 160 ISO-K	276	131	153	102	DN 100 ISO-K	0450227791

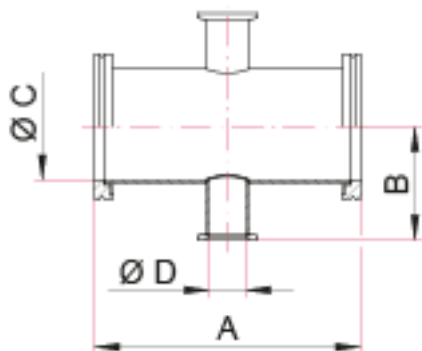
Flanges according to ISO 1609

ISO-K to ISO-KF Adapter Cross



- Other flange sizes and dimensions on request
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Nominal diameter reduced	Part number
DN 63 ISO-K	176	75	70	24	DN 25 ISO-KF	0450227782
DN 63 ISO-K	176	75	70	40,5	DN 40 ISO-KF	0450227783
DN 100 ISO-K	216	100	102	24	DN 25 ISO-KF	0450227784
DN 100 ISO-K	216	100	102	40,5	DN 40 ISO-KF	0450227785
DN 160 ISO-K	276	125	153	24	DN 25 ISO-KF	0450227787
DN 160 ISO-K	276	125	153	40,5	DN 40 ISO-KF	0450227788

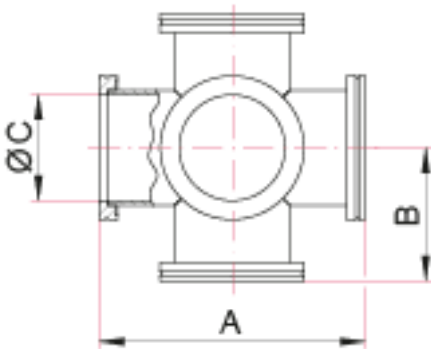
Flanges according to ISO 1609

ISO-K 6-Way Cross



- Other flange sizes and dimensions on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 63 ISO-K	176	88	70	0450227774
DN 100 ISO-K	216	108	102	0450227775
DN 160 ISO-K	276	138	153	0450227776
DN 200 ISO-K	356	178	213	0450227777
DN 250 ISO-K	416	208	261	0450227778

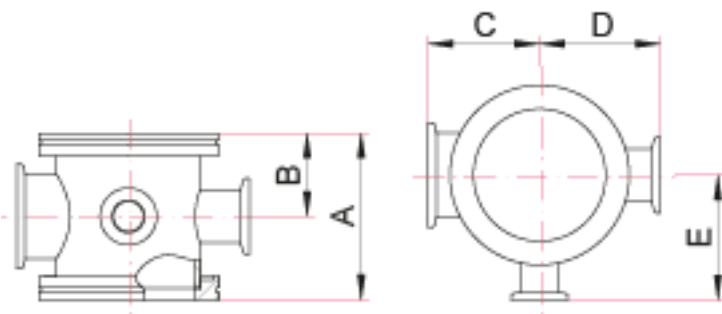
Flanges according to ISO 1609

ISO-K Instrument Cross



- Three ports: DN 16 KF, DN 25 KF and DN 40 KF
- Other flange sizes and dimensions on request
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Part number
DN 63 ISO-K	88	44	59	64	66	0450227779
DN 100 ISO-K	100	50	77	80	82	0450227780
DN 160 ISO-K	100	50	107	105	107	0450227781

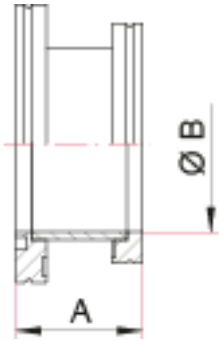
Flanges according to ISO 1609

ISO-K Reducer, Straight



- Other flange sizes and dimensions on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 100 ISO-K	50	70	DN 63 ISO-K	0450227806
DN 160 ISO-K	50	70	DN 63 ISO-K	0450227808
DN 160 ISO-K	50	102	DN 100 ISO-K	0450227809
DN 200 ISO-K	50	102	DN 100 ISO-K	0450227810
0450227811	50	153	DN 160 ISO-K	0450227811
DN 250 ISO-K	50	153	DN 160 ISO-K	0450227812
DN 250 ISO-K	50	213	DN 200 ISO-K	0450227813

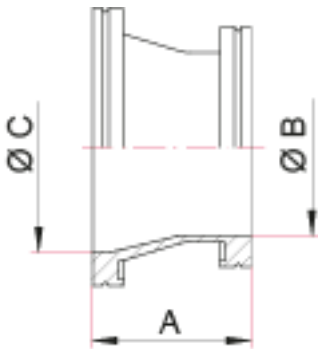
Flanges according to ISO 1609

ISO-K Conical Reducer



- Material: Stainless steel
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	Nominal diameter reduced	Part number
DN 100 ISO-K	63	70	102	DN 63 ISO-K	0450227819
DN 160 ISO-K	63	70	153	DN 63 ISO-K	0450227820
DN 160 ISO-K	104	102	153	DN 100 ISO-K	0450227821

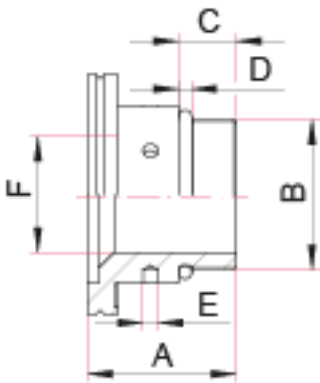
Flanges according to ISO 1609

ISO-K Flange with Pipe Thread and FPM Seal, Male



- FKM O-ring included
- Holes: (blind holes) for C-spanner wrench: 6 x Ø 6 mm
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure
- Temperature range: -15 to 200 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B	C [mm]	D [mm]	E [mm]	F [mm]	Part number
DN 63 ISO-K	59	G2"	23	5	6	48	0450227701
DN 63 ISO-K	60	G3"	23	5	6	50	0450227702
DN 100 ISO-K	60	G3"	23	5	6	70	0450227703

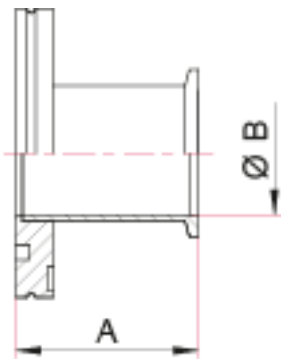
Flanges according to ISO 1609

ISO-K/KF Straight Adapter



- Other combinations and lengths on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 63 ISO-K	40	24	DN 25 ISO-KF	0450227800
DN 63 ISO-K	40	40,5	DN 40 ISO-KF	0450227801
DN 63 ISO-K	40	50,6	DN 50 ISO-KF	0450227802
DN 100 ISO-K	40	24	DN 25 ISO-KF	0450227803
DN 100 ISO-K	40	40,5	DN 40 ISO-KF	0450227804
DN 100 ISO-K	40	50,6	DN 50 ISO-KF	0450227805
DN 160 ISO-K	40	40,5	DN 40 ISO-KF	0450227807

ISO-KF Flanges according to ISO 2861

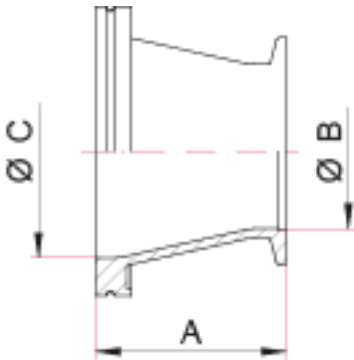
ISO-K Flanges according to ISO 1609

ISO-K/KF Conical Adapter



- Available in stainless steel or aluminum

Dimensions



Aluminum EN AW-6082

- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure
- Temperature range: -196 to 150 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Nominal diameter reduced	Part number
DN 63 ISO-K	40	40,5	70	DN 40 ISO-KF	0450227645
DN 63 ISO-K	45	50	70	DN 50 ISO-KF	0450227646

Flanges according to ISO 2861
ISO-K Flanges according to ISO 1609

Stainless Steel 304/1.4301

- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Nominal diameter	A [mm]	B [mm]	C [mm]	Nominal diameter reduced	Part number
DN 63 ISO-K	63	24	70	DN 25 ISO-KF	0450227814
DN 63 ISO-K	63	40,5	70	DN 40 ISO-KF	0450227815

Nominal diameter	A [mm]	B [mm]	C [mm]	Nominal diameter reduced	Part number
DN 63 ISO-K	63	50	70	DN 50 ISO-KF	0450227816
DN 100 ISO-K	63	40,5	102	DN 40 ISO-KF	0450227817
DN 100 ISO-K	63	50	102	DN 50 ISO-KF	0450227818

Flanges according to ISO 2861

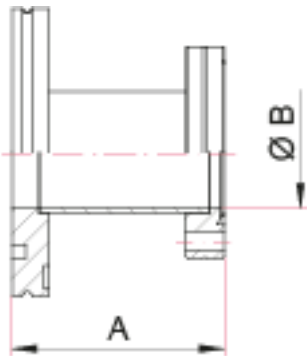
- ISO-K Flanges according to ISO 1609

ISO-K/CF Adapter



- Other flange sizes and dimensions on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301; CF Flange 304L

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 16 CF	60	16	DN 63 ISO-K	0453228273
DN 40 CF	70	37	DN 63 ISO-K	0453228277
DN 63 CF	90	66	DN 63 ISO-K	0453228279
DN 100 CF	90	102	DN 100 ISO-K	0453228281
DN 160 CF	100	153	DN 160 ISO-K	0453228282

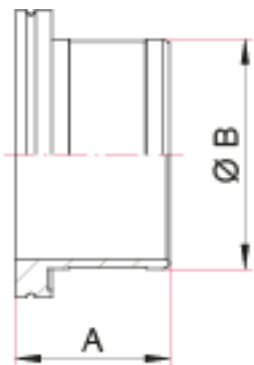
CF Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2
ISO-K Flanges according to ISO 1609

ISO-K Sleeve Coupling



- For connecting a CR sleeve
- Fastener: hose clamp (see accessories)

Dimensions



Aluminum EN AW-6082

Nominal diameter	A [mm]	B [mm]	Part number
DN 63 ISO-K	51	76	0450227642
DN 100 ISO-K	56	108	0450227643
DN 160 ISO-K	56	159	0450227644

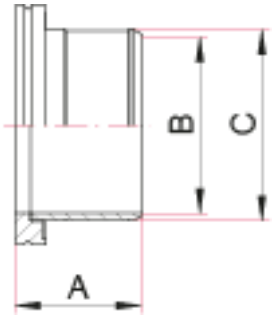
Flanges according to ISO 1609

ISO-K Hose Adapter



- For connecting a PVC hose with embedded spring (330SPM)
- Fastener: hose clamp (see accessories)

Dimensions



Stainless Steel 304/1.4301

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 63 ISO-K	50	70	76,1	0450227704
DN 100 ISO-K	50	95	101,6	0450227705

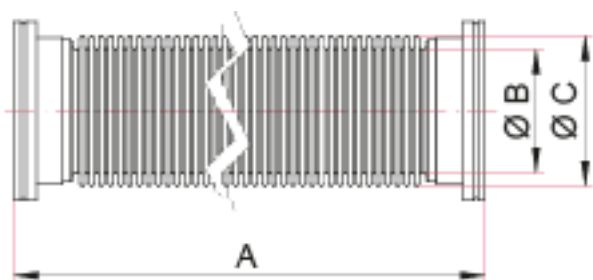
Flanges according to ISO 1609

ISO-K Corrugated Hose, Flexible



- Flange connection length: 30 mm
- Custom lengths on request
- Pressure min.: $1 \cdot 10^{-8}$ hPa
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel: Flange 304/1.4301; Bellows 316L

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Bend radius, often movement [mm]	Over pressure max. [hPa]	Part number
DN 63 ISO-K	250	65	80	90	330	500	0452227870
DN 63 ISO-K	500	65	80	90	330	500	0452227871
DN 63 ISO-K	750	65	80	90	330	500	0452227872
DN 63 ISO-K	1000	65	80	90	330	500	0452227873
DN 63 ISO-K	1500	65	80	90	330	500	0452227874
DN 100 ISO-K	250	100	119	131	530	300	0452227875
DN 100 ISO-K	500	100	119	131	530	300	0452227876
DN 100 ISO-K	750	100	119	131	530	300	0452227877
DN 100 ISO-K	1000	100	119	131	530	300	0452227878
DN 160 ISO-K	250	150	173	216	1050	100	0452227879
DN 160 ISO-K	500	150	173	216	1050	100	0452227880
DN 160 ISO-K	750	150	173	216	1050	100	0452227881
DN 160 ISO-K	1000	150	173	216	1050	100	0452227882

Please note that the hose shrinks under vacuum.

The minimum bending radii are applicable for a temperature of 20 °C.

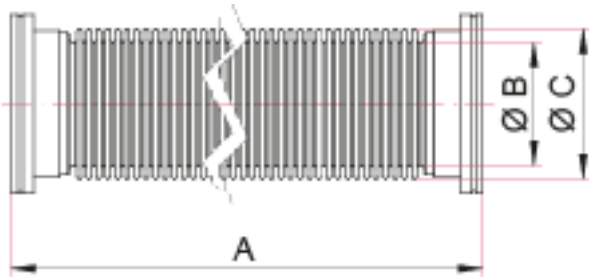
Flanges according to ISO 1609

ISO-K Corrugated Hose, Flexible, Annealed



- Flange connection length: 30 mm
- Stress relieved; low reset force when bent
- Custom lengths on request
- Pressure min.: 1 · 10⁻⁸ hPa
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel: Flange 304/1.4301; Bellows 316L

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Over pressure max. [hPa]	Part number
DN 63 ISO-K	250	65	80	90	500	0452227858
DN 63 ISO-K	500	65	80	90	500	0452227859
DN 63 ISO-K	750	65	80	90	500	0452227860
DN 63 ISO-K	1000	65	80	90	500	0452227861
DN 100 ISO-K	250	100	119	131	300	0452227862
DN 100 ISO-K	500	100	119	131	300	0452227863
DN 100 ISO-K	750	100	119	131	300	0452227864
DN 100 ISO-K	1000	100	119	131	300	0452227865
DN 160 ISO-K	250	150	173	216	100	0452227866
DN 160 ISO-K	500	150	173	216	100	0452227867
DN 160 ISO-K	750	150	173	216	100	0452227868
DN 160 ISO-K	1000	150	173	216	100	0452227869

Please note that the hose shrinks under vacuum.

The minimum bending radius is applicable for a temperature of 20 °C.

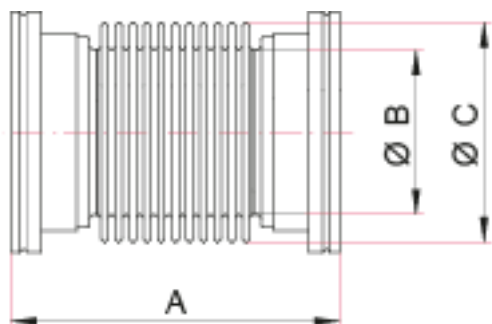
Flanges according to ISO 1609

ISO-K Spring Bellows



- Flange connection length: 30 mm
- Custom lengths on request
- Pressure range: 1 · 10⁻⁸ hPa to 500 hPa over pressure (elastomer seal);
1 · 10⁻⁹ hPa to 500 hPa over pressure (metal seal)
- Materials: Stainless steel (flange: 304; bellows: DN 63 to DN 100 and DN 320: 316L; DN 160 to DN 250: 316Ti)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel

Nominal diameter	A [mm]	B [mm]	C [mm]	Axial stroke [mm]	Part number
DN 63 ISO-K	130	65	87	±16	0458227847
DN 63 ISO-K	150	65	87	±20	0458227848
DN 80 ISO-K	130	80	104	±11	0458227849
DN 80 ISO-K	150	80	104	±15	0458227850
DN 100 ISO-K	130	100	127	±17	0458227851
DN 100 ISO-K	150	100	127	±21	0458227852
DN 160 ISO-K	150	150	184	±14	0458227853
DN 160 ISO-K	220	150	184	±25	0458227854
DN 200 ISO-K	220	200	235	±25	0458227855
DN 250 ISO-K	220	250	285	±25	0458227856
DN 320 ISO-K	220	318	368	±25	0458227857

Please note that the spring bellows shrinks under vacuum.

The axial stroke is applicable for a temperature of 20 °C and 10000 load cycles.

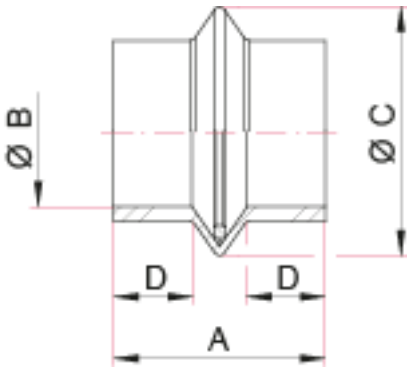
Flanges according to ISO 1609

ISO-K CR Sleeve



- Sleeve made from chloroprene rubber
- Connection: sleeve coupling (see adapters) and hose clamp (see accessories)
- Pressure range: $1 \cdot 10^{-5}$ hPa to ambient pressure
- Temperature range: -5 to 120 °C

Dimensions



Chloroprene Rubber (CR)

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 63 ISO-K	65	75	115	20	0450227912
DN 100 ISO-K	75	105	160	16	0450227913
DN 160 ISO-K	75	156	218	16	0450227914

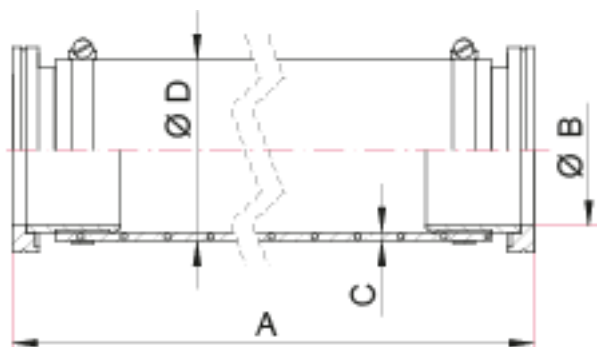
Please note that the sleeve shrinks under vacuum.

ISO-K PVC Hose with Embedded Spring and Flanges



- Inner tube material: PVC, transparent
- Casing: Steel coil
- Hose cover material: PVC, transparent
- Smooth inner and outer walls
- Custom lengths on request
- Pressure range: $1 \cdot 10^{-4}$ hPa to ambient pressure
- Temperature range: -10 to 60 °C

Dimensions



PVC with Stainless Steel Flange 304/1.4301

Inner diameter [mm]	A [mm]	B [mm]	C [mm]	D[mm]	Bend radius [mm]	Part number
DN 63 ISO-K	500	70	7,5	90	150	0458227581
DN 63 ISO-K	1000	70	7,5	90	150	0458227582

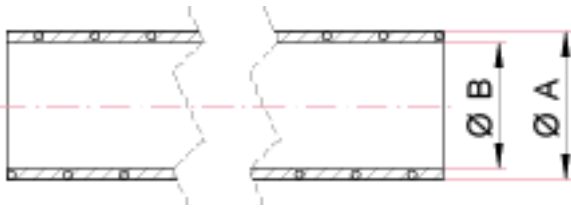
The minimum bending radius is applicable for a temperature of 20 °C.
Flanges according to ISO 1609

ISO-K PVC Hose with Embedded Spring



- Inner tube material: PVC, transparent
- Casing: Steel coil
- Hose cover material: PVC, transparent
- Smooth inner and outer walls
- Length: Up to 50 m; min. order: 1 m; orders > 1 m calculated pro rata
- Connection: Hose Adapter and Hose Clamp
- Pressure range: $1 \cdot 10^{-4}$ hPa to 500 hPa over pressure
- Temperature range: -10 to 60 °C

Dimensions



PVC

Inner diameter [mm]	A [mm]	B [mm]	Bend radius [mm]	Part number
75	90	75	150	0570226911

The minimum bending radius is applicable for a temperature of 20 °C.

CF

CF Copper Gasket



- For single use only
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Temperature range: -196 to 200 °C

Dimensions



OFHC Copper (Oxygen Free)

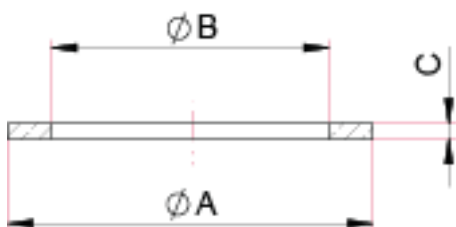
Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 16 CF	21,3	16	10	0990229102
DN 25 CF	32,8	25,5	10	0990229105
DN 40 CF	48,2	36,6	10	0990229110
DN 50 CF	61,6	50,8	10	0990229113
DN 63 CF	82,4	63,4	10	0990229115
DN 75 CF	91,4	76,3	10	0990229118
DN 100 CF	120,5	101,6	10	0990229120
DN 130 CF	141,4	127,1	5	0990229123
DN 160 CF	171,3	152,4	5	0990229128
DN 200 CF	222,1	203,3	5	0990229132
DN 250 CF	272,9	254	5	0990228590
DN 300 CF	313,2	300	5	0990229138
DN 350 CF	376,6	356,5	5	0990229139

CF Silver-plated Copper Gasket



- For single use only
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Temperature range: -196 to 450 °C

Dimensions



OFHC Copper (Oxygen Free), Silver-plated

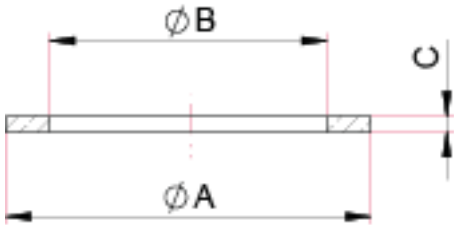
Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 16 CF	21,3	16	5	0990229104
DN 25 CF	32,8	25,5	5	0990229106
DN 40 CF	48,2	36,6	5	0990229112
DN 63 CF	82,4	63,4	5	0990229117
DN 100 CF	120,5	101,6	5	0990229122
DN 160 CF	171,3	152,4	5	0990229130
DN 200 CF	222,1	203,3	5	0990229134
DN 250 CF	DN 250 CF	254	5	0990229137

CF Vacuum-annealed Copper Gasket



- Particularly well suited for viewports
- For single use only
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Temperature range: -196 to 200 °C

Dimensions



OFHC Copper (Oxygen Free), Vacuum-annealed

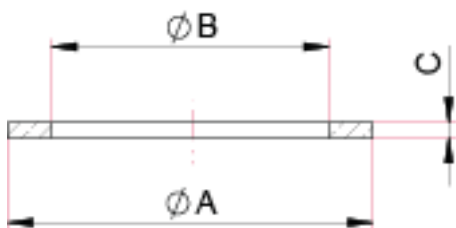
Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 16 CF	21,3	16	5	0990229101
DN 40 CF	48,2	36,6	5	0990229107
DN 63 CF	82,4	63,4	5	0990229114
DN 100 CF	120,5	101,6	5	0990229119
DN 160 CF	171,3	152,4	5	0990229124
DN 200 CF	222,1	203,3	5	0990229131
DN 250 CF	272,9	254	5	0990229135

CF Silver-plated, Vacuum-annealed Copper Gasket



- Particularly well suited for viewports
- For single use only
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Temperature range: -196 to 450 °C

Dimensions



OFHC Copper (Oxygen Free), Silver-plated, Vacuum-annealed

Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 16 CF	21,3	16	5	0990229103
DN 40 CF	48,2	36,6	5	0990229111
DN 63 CF	82,4	63,4	5	0990229116
DN 100 CF	120,5	101,6	5	0990229121
DN 160 CF	171,3	152,4	5	0990229129
DN 200 CF	222,1	203,3	5	0990229133
DN 250 CF	272,9	254	5	0990229136

CF Elastomer Gasket FKM



- Reusable
- Version with centering lip: better fixation in flange for easier assembly;
higher purity of materials for lower desorption
- Pressure range: $1 \cdot 10^{-8}$ hPa to ambient pressure
- Temperature range: -15 to 150 °C (shortly up to 200 °C)

FKM Cut from Sheet Material

Dimensions



Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 16 CF	21,4	16	2	0990229042
DN 40 CF	48,2	37	2	0990229043
DN 63 CF	82,4	63	2	0990229044
DN 100 CF	120,5	109	2	0990229045
DN 160 CF	171,3	152	2	0990229046
DN 200 CF	222,1	203	2	0990229047
DN 250 CF	272,9	254	2	0990229048

FKM with Centering Lip; Heat-molded

Dimensions



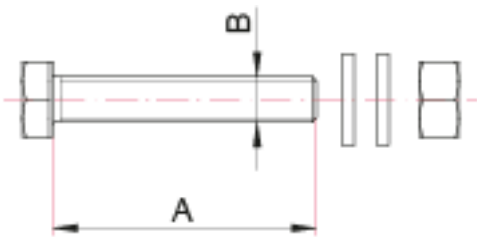
Nominal diameter	A [mm]	B [mm]	Package [Qty.]	Part number
DN 16 CF	21,4	16	1	0480227970
DN 40 CF	48,2	36	1	0480227971
DN 63 CF	82,4	71	1	0480227972
DN 100 CF	120,5	109	1	0480227973
DN 160 CF	171,3	158	1	0480227974
DN 200 CF	222,1	200	1	0480227975
DN 250 CF	272,9	254	1	0480227976

CF Hexagon Head Screw Set for Flanges with Through-holes



- For installing two flanges with through-holes
- Set includes the screws required for the specified flange size
- Includes two washers and one nut for each screw

Dimensions



Stainless Steel A2

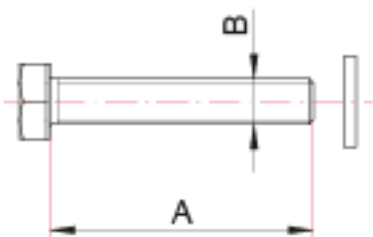
Nominal diameter	A [mm]	B	Number per set	Part number
DN 16 CF	20	M4	6	0999229060
DN 25 CF	35	M6	4	0999229062
DN 40 CF	35	M6	6	0999229064
DN 50 CF	45	M8	8	0999229066
DN 63 CF	45	M8	8	0999229068
DN 75 CF	45	M8	10	0999229070
DN 100 CF	50	M8	16	0999229072
DN 130 CF	55	M8	18	0999229074
DN 160 CF	55	M8	20	0999229076
DN 200 CF	60	M8	24	0999229079
DN 250 CF	65	M8	32	0999229082
DN 300 CF	70	M10	30	0999229084
DN 350 CF	70	M10	36	0999229085

CF Hexagon Head Screw Set for Flanges with Tapped Holes



- For installing a flange with through-holes on a flange with tapped-holes
- Ideal for installing gate valves
- Set includes the screws required for the specified flange size
- One screw and one washer

Dimensions



Stainless Steel A2-70

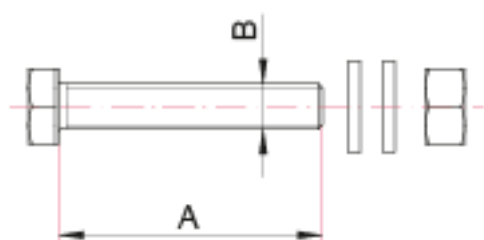
Nominal diameter	A [mm]	B	Number per set	Part number
DN 16 CF	14	M4	6	0999229059
DN 40 CF	20	M6	6	0999229063
DN 63 CF	30	M8	8	0999229067
DN 100 CF	30	M8	16	0999229071
DN 160 CF	35	M8	20	0999229075
DN 200 CF	35	M8	24	0999229078
DN 250 CF	35	M8	32	0999229081

CF Hexagon Head Screw Set for Spacer Flanges



- For installing a spacer between two standard flanges with through-holes
- Set includes the screws required for the specified flange size
- Includes two washers and one nut for each screw

Dimensions



Stainless Steel A2-70

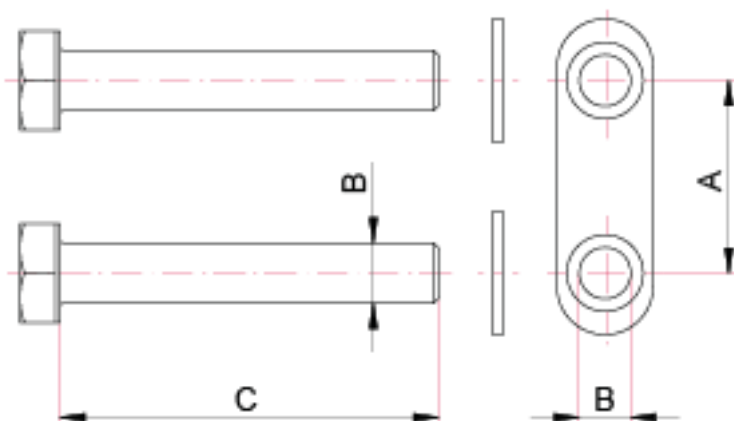
Nominal diameter	A [mm]	B	Number per set	Part number
DN 16 CF	30	M4	6	0999229061
DN 40 CF	50	M6	6	0999229065
DN 63 CF	65	M8	8	0999229069
DN 100 CF	70	M8	16	0999229073
DN 160 CF	80	M8	20	0999229077
DN 200 CF	90	M8	24	0999229080
DN 250 CF	90	M8	32	0999229083

CF Plate Nut Sets



- Set includes screws and washers for the specified flange size
- Easy assembly with only one wrench (no counter-tightening necessary)

Dimensions



Stainless Steel 304; Screws A2-70

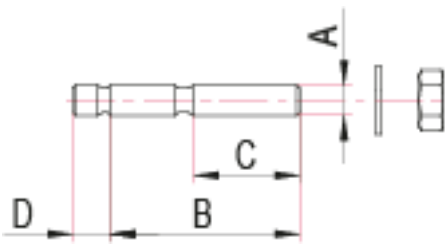
Nominal diameter	A [mm]	B	C [mm]	Number per set	Part number
DN 16 CF	13,5	M4	20	3	0999229049
DN 40 CF	29,3	M6	35	3	0999229050
DN 63 CF	35,2	M8	45	4	0999229051
DN 100 CF	25,4	M8	50	8	0999229052
DN 160 CF	28,3	M8	55	10	0999229053

CF Stud Screw Set with Hexagon Nut



- 10 sets per package
- Includes washer and one nut for each screw

Dimensions



Stainless Steel A2

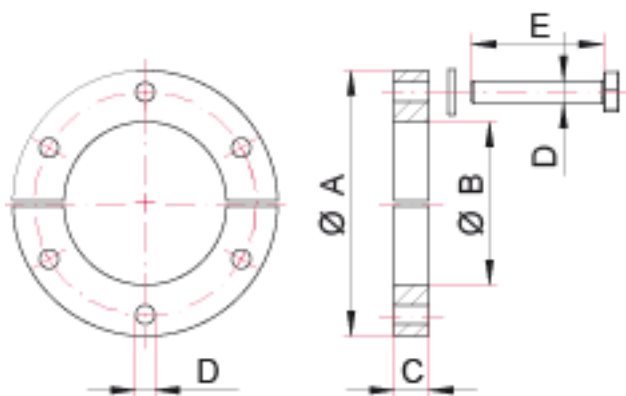
Nominal diameter	A [mm]	B	C [mm]	Number per set	Part number
DN 25-40 CF	M6	25	18	6	0999229086
DN 25-40 CF	M6	30	18	6	0999229087
DN 25-40 CF	M6	35	18	6	0999229088
DN 63-250 CF	M8	40	22	8	0999229089
DN 63-250 CF	M8	45	22	8	0999229090
DN 63-250 CF	M8	50	22	8	0999229091
DN 63-250 CF	M8	55	22	8	0999229092
DN 63-250 CF	M8	60	22	8	0999229093

CF Hexagon Head Screw Set with Horseshoe Nuts



- For installing two flanges with through-holes
- Easy assembly with only one wrench (no counter-tightening necessary)
- Set contains two horseshoe nut plates with screws and washers

Dimensions



Stainless Steel 304/1.4301; Screws A2-70

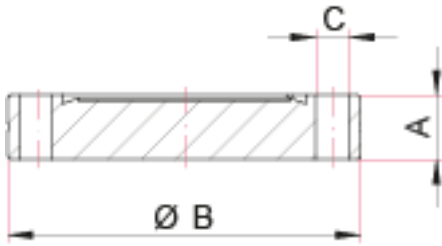
Nominal diameter	A [mm]	B [mm]	C [mm]	D	E [mm]	Part number
DN 16 CF	34	20	6	M4	20	0999229054
DN 40 CF	69,6	45	9	M6	35	0999229055
DN 63 CF	113,5	80	12	M8	45	0999229056
DN 100 CF	151,6	115	12	M8	50	0999229057
DN 160 CF	202,4	165	12	M8	55	0999229058

CF Blank Flange



- Other flange materials on request
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 16 CF	7,75	34	4,4	0453228113
DN 25 CF	12	54	6,6	0453228115
DN 40 CF	12,7	69,9	6,6	0453228116
DN 50 CF	17,3	85,7	8,4	0453228118
DN 63 CF	17,5	113,5	8,4	0453228119
DN 75 CF	17,5	117,4	8,4	0453228121
DN 100 CF	19,8	152	8,4	0453228122
DN 130 CF	21,4	171,4	8,4	0453228124
DN 160 CF	22,2	202,4	8,4	0453228125
DN 200 CF	24,5	253,2	8,4	0453228127
DN 250 CF	26	304,8	8,4	0453228129
DN 300 CF	28,5	355,6	10,5	0453228131
DN 350 CF	28,5	419,1	10,5	0453228132

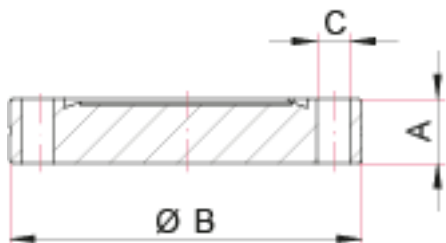
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Blank Flange, with Thread



- Other flange materials on request
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L, with Metric Thread

Nominal diameter	A [mm]	B [mm]	C	Part number
DN 16 CF	7,75	34	M4	0453228114
DN 40 CF	12,7	69,9	M6	0453228117
DN 63 CF	17,5	113,5	M8	0453228120
DN 100 CF	19,8	152	M8	0453228123
DN 160 CF	22,2	202,4	M8	0453228126
DN 200 CF	24,5	253,2	M8	0453228128
DN 250 CF	26	304,8	M8	0453228130

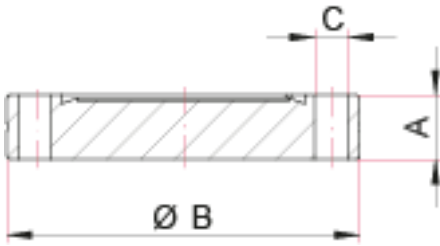
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Blank Flange, 316LN ESR



- Bakeable under vacuum up to 1050 °C
- Low desorption
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Magnetic permeability: ≤1.01
- Temperature range: -196 to 350 °C

Dimensions



Stainless Steel 316LN ESR/1.4429 ESU

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 16 CF	7,75	34	4,4	0453228472
DN 25 CF	12	54	6,6	0453228474
DN 40 CF	12,7	69,9	6,6	0453228475
DN 50 CF	17,3	85,7	8,4	0453228477
DN 63 CF	17,5	113,5	8,4	0453228478
DN 75 CF	17,5	117,4	8,4	0453228480
DN 100 CF	19,8	152	8,4	0453228481
DN 130 CF	21,4	171,4	8,4	0453228483
DN 160 CF	22,2	202,4	8,4	0453228484
DN 200 CF	24,5	253,2	8,4	0453228487
DN 250 CF	26	304,8	8,4	0453228488

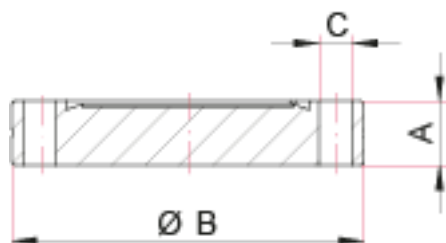
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Blank Flange, with Thread, 316LN ESR



- Bakeable under vacuum up to 1050 °C
- Low desorption
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Magnetic permeability: ≤1.01
- Temperature range: -196 to 350 °C

Dimensions



Stainless Steel 316LN ESR/1.4429 ESU, with Thread

Nominal diameter	A [mm]	B [mm]	C	Part number
DN 16 CF	7,75	34	M4	0453228473
DN 40 CF	12,7	69,9	M6	0453228476
DN 63 CF	17,5	113,5	M8	0453228479
DN 100 CF	19,8	152	M8	0453228482
DN 160 CF	22,2	202,4	M8	0453228486

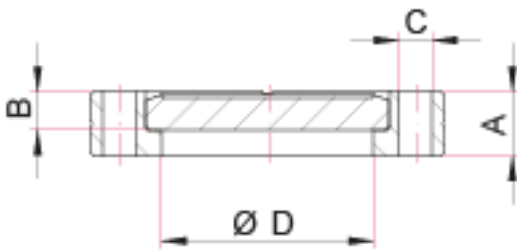
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Blank Flange, Rotatable



- Other flange materials on request
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 CF	7,75	5,8	4,4	19,2	0453228106
DN 40 CF	12,7	7,6	6,6	42	0453228107
DN 63 CF	17,5	12,6	8,4	72	0453228108
DN 100 CF	19,8	14,4	8,4	109	0453228109
DN 160 CF	22,2	15,8	8,4	161	0453228110
DN 200 CF	24,5	15,8	8,4	207	0453228111
DN 250 CF	26	16,6	8,4	260	0453228112

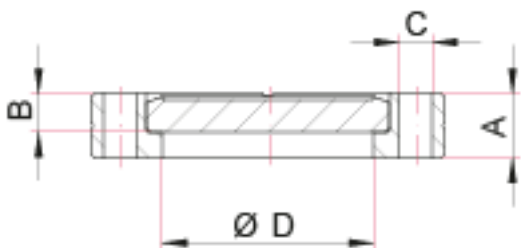
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Blank Flange, Rotatable, 316LN ESR



- Bakeable under vacuum up to 1050 °C
- Low desorption
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Magnetic permeability: ≤1.01
- Temperature range: -196 to 350 °C

Dimensions



Stainless Steel 316LN ESR/1.4429 ESU

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 CF	7,75	5,8	4,4	19,2	0453228467
DN 40 CF	12,7	7,6	6,6	42	0453228468
DN 63 CF	17,5	12,6	8,4	72	0453228469
DN 100 CF	19,8	14,4	8,4	109	0453228470
DN 160 CF	22,2	15,8	8,4	161	0453228471

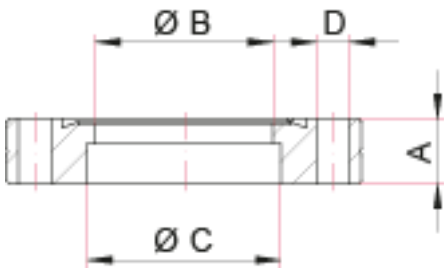
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Weld Flange



- Other flange materials on request
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 CF	18 x 1	7,75	16	18,15	4,4	0453228051
DN 16 CF	19.05 x 1.65	7,75	15,75	19,2	4,4	0453228053
DN 25 CF	25.4 x 1.65	12	22,1	25,6	6,6	0453228055
DN 25 CF	28 x 2	12	24	28,2	6,6	0453228057
DN 40 CF	38 x 1.5	12,7	35	38,2	6,6	0453228059
DN 40 CF	40 x 1.5	12,7	37	40,2	6,6	0453228062
DN 40 CF	42.4 x 2	12,7	38,4	42,6	6,6	0453228064
DN 40 CF	44.5 x 2	12,7	40,5	44,7	6,6	0453228066
DN 50 CF	50.8 x 1.65	17,3	47,5	51,1	8,4	0453228069
DN 63 CF	63.5 x 1.65	17,5	60,2	63,8	8,4	0453228072
DN 63 CF	70 x 2	17,5	66	70,3	8,4	0453228074
DN 75 CF	76.1 x 2	17,5	72,1	76,4	8,4	0453228076
DN 100 CF	101.6 x 2.1	19,8	97,4	101,9	8,4	0453228078
DN 100 CF	104 x 2	19,8	100	104,3	8,4	0453228080
DN 100 CF	108 x 2	19,8	104	108,3	8,4	0453228082
DN 130 CF	127 x 1.65	21,4	123,7	127,3	8,4	0453228084
DN 160 CF	152.4 x 2.4	22,2	147,6	152,7	8,4	0453228086

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 160 CF	154 x 2	22,2	150	154,3	8,4	0453228088
DN 160 CF	159 x 2	22,2	155	159,3	8,4	0453228090
DN 200 CF	203.2 x 2.4	24,5	198,4	203,5	8,4	0453228092
DN 200 CF	204 x 2	24,5	200	204,3	8,4	0453228094
DN 200 CF	205 x 2.5	24,5	200	205,3	8,4	0453228096
DN 250 CF	254 x 2	26	250	254,3	8,4	0453228098
DN 250 CF	256 x 3	26	250	256,3	8,4	0453228101
DN 300 CF	306 x 3	28,5	300	306,3	10,5	0453228103
DN 350 CF	356 x 3	28,5	350	356,3	10,5	0453228105

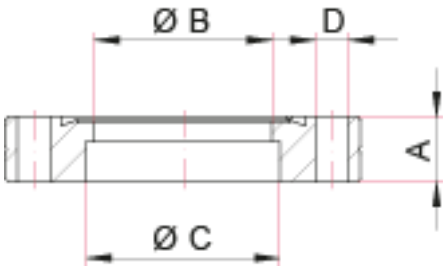
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Weld Flange, with Thread



- Other flange materials on request
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L, with Metric Thread

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D	Part number
DN 16 CF	18 x 1	7,75	16	18,15	M4	0453228052
DN 25 CF	28 x 2	12	24	28,2	M6	0453228058
DN 40 CF	38 x 1.5	12,7	35	38,2	M6	0453228060
DN 40 CF	40 x 1.5	12,7	37	40,2	M6	0453228063
DN 40 CF	42.4 x 2	12,7	38,4	42,6	M6	0453228065
DN 40 CF	44.5 x 2	12,7	40,5	44,7	M6	0453228067
DN 63 CF	70 x 2	17,5	66	70,3	M8	0453228075
DN 100 CF	104 x 2	19,8	100	104,3	M8	0453228081
DN 100 CF	108 x 2	19,8	104	108,3	M8	0453228083
DN 160 CF	154 x 2	22,2	150	154,3	M8	0453228089
DN 160 CF	159 x 2	22,2	155	159,3	M8	0453228091
DN 200 CF	204 x 2	24,5	200	204,3	M8	0453228095
DN 200 CF	205 x 2.5	24,5	200	205,3	M8	0453228097
DN 250 CF	254 x 2	26	250	254,3	M8	0453228099
DN 250 CF	256 x 3	26	250	256,3	M8	0453228102
DN 300 CF	306 x 3	28,5	300	306,3	M10	0453228104

Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

Stainless Steel 304L, with Imperial (UN) Thread

DN 16 CF	19.05 x 1.65	7,75	15,75	19,2	8-32	0453228054
DN 25 CF	25.4 x 1.65	12	22,1	25,6	1/4-28	0453228056
DN 40 CF	38 x 1.5	12,7	35	38,2	1/4-28	0453228061
DN 40 CF	44.5 x 2	12,7	40,5	44,7	1/4-28	0453228068
DN 50 CF	50.8 x 1.65	17,3	47,5	51,1	5/16-24	0453228071
DN 63 CF	63.5 x 1.65	17,5	60,2	63,8	5/16-24	0453228073
DN 75 CF	76.1 x 2	17,5	72,1	76,4	5/16-24	0453228077
DN 100 CF	101.6 x 2.1	19,8	97,4	101,9	5/16-24	0453228079
DN 130 CF	127 x 1.65	21,4	123,7	127,3	5/16-24	0453228085
DN 160 CF	152.4 x 2.4	22,2	147,6	152,7	5/16-24	0453228087
DN 200 CF	203.2 x 2.4	24,5	198,4	203,5	5/16-24	0453228093
DN 250 CF	254 x 2	26	250	254,3	5/16-24	0453228100

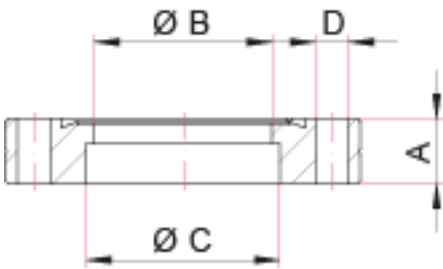
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Weld Flange, 316LN ESR



- Bakeable under vacuum up to 1050 °C
- Low desorption
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Magnetic permeability: ≤1.01
- Temperature range: -196 to 350 °C

Dimensions



Stainless Steel 316LN ESR/1.4429 ESU

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 CF	18 x 1	7,75	16	18,15	4,4	0453228446
DN 16 CF	19.05 x 1.65	7,75	15,75	19,2	4,4	0453228448
DN 40 CF	38 x 1.5	12,7	35	38,2	6,6	0453228449
DN 40 CF	40 x 1.5	12,7	37	40,2	6,6	0453228450
DN 63 CF	63.5 x 1.65	17,5	60,2	63,8	8,4	0453228452
DN 63 CF	70 x 2	17,5	66	70,3	8,4	0453228453
DN 100 CF	101.6 x 2.1	19,8	97,4	101,9	8,4	0453228455
DN 100 CF	104 x 2	19,8	100	104,3	8,4	0453228456
DN 100 CF	108 x 2	19,8	104	108,3	8,4	0453228458
DN 160 CF	152.4 x 2.4	22,2	147,6	152,7	8,4	0453228459
DN 160 CF	154 x 2	22,2	150	154,3	8,4	0453228460
DN 160 CF	159 x 2	22,2	155	159,3	8,4	0453228462
DN 200 CF	204 x 2	24,5	200	204,3	8,4	0453228463
DN 250 CF	254 x 2	26	250	254,3	8,4	0453228465

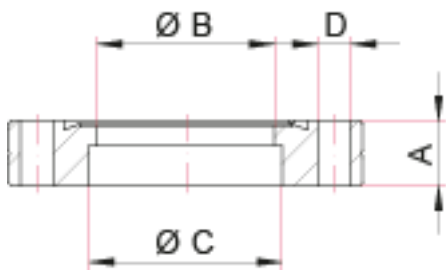
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Weld Flange, with Thread, 316LN ESR



- Bakeable under vacuum up to 1050 °C
- Low desorption
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Magnetic permeability: ≤1.01
- Temperature range: -196 to 350 °C

Dimensions



Stainless Steel 316LN ESR/1.4429 ESU, with Thread

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D	Part number
DN 16 CF	18 x 1	7,75	16	18,15	M4	0453228447
DN 40 CF	40 x 1.5	12,7	37	40,2	M6	0453228451
DN 63 CF	70 x 2	17,5	66	70,3	M8	0453228454
DN 100 CF	104 x 2	19,8	100	104,3	M8	0453228457
DN 160 CF	154 x 2	22,2	150	154,3	M8	0453228461
DN 200 CF	204 x 2	24,5	200	204,3	M8	0453228464
DN 250 CF	254 x 2	26	250	254,3	M8	0453228466

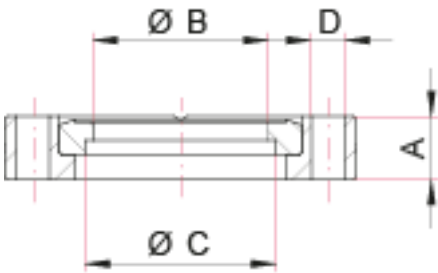
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Weld Flange, Rotatable



- Other flange materials on request
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 CF	18 x 1	7,75	16	18,15	4,4	0453227995
DN 16 CF	19,05 x 1,65	7,75	15,75	19,2	4,4	0453227997
DN 25 CF	25.4 x 1.65	12	22,1	25,6	6,6	0453227999
DN 25 CF	28 x 2	12	24	28,2	6,6	0453228001
DN 40 CF	38 x 1.5	12,7	35	38,2	6,6	0453228003
DN 40 CF	40 x 1.5	12,7	37	40,2	6,6	0453228006
DN 40 CF	42.4 x 2	12,7	38,4	42,6	6,6	0453228008
DN 40 CF	44.5 x 2	12,7	40,5	44,7	6,6	0453228010
DN 50 CF	50.8 x 1.65	17,3	47,5	51,1	8,4	0453228013
DN 63 CF	63.5 x 1.65	17,5	60,2	63,8	8,4	0453228016
DN 63 CF	70 x 2	17,5	66	70,3	8,4	0453228018
DN 75 CF	76.1 x 2	17,5	72,1	76,4	8,4	0453228020
DN 100 CF	101.6 x 2.1	19,8	97,4	101,9	8,4	0453228023
DN 100 CF	104 x 2	19,8	100	104,3	8,4	0453228025
DN 100 CF	108 x 2	19,8	104	108,3	8,4	0453228027
DN 130 CF	127 x 1.65	21,4	123,7	127,3	8,4	0453228029

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 160 CF	152.4 x 2.4	22,2	147,6	152,7	8,4	0453228031
DN 160 CF	154 x 2	22,2	150	154,3	8,4	0453228033
DN 160 CF	159 x 2	22,2	155	159,3	8,4	0453228035
DN 200 CF	203.2 x 2.4	24,5	198,4	203,5	8,4	0453228037
DN 200 CF	204 x 2	24,5	200	204,3	8,4	0453228039
DN 200 CF	205 x 2.5	24,5	200	205,3	8,4	0453228041
DN 250 CF	254 x 2	26	250	254,3	8,4	0453228043
DN 250 CF	256 x 3	26	250	256,3	8,4	0453228046
DN 300 CF	306 x 3	28,5	300	306,3	10,5	0453228048
DN 350 CF	356 x 3	28,5	350	356,3	10,5	0453228050

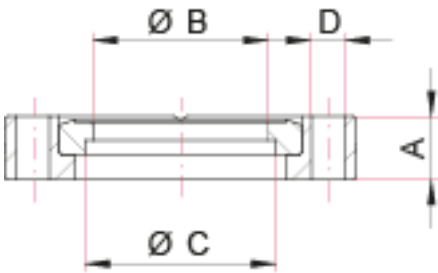
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2.

CF Weld Flange, Rotatable, with Thread



- Other flange materials on request
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L, with Metric Thread

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D	Part number
DN 16 CF	18 x 1	7,75	16	18,15	M4	0453227996
DN 25 CF	28 x 2	12	24	28,2	M6	0453228002
DN 40 CF	38 x 1.5	12,7	35	38,2	M6	0453228004
DN 40 CF	40 x 1.5	12,7	37	40,2	M6	0453228007
DN 40 CF	42.4 x 2	12,7	38,4	42,6	M6	0453228009
DN 40 CF	44.5 x 2	12,7	40,5	44,7	M6	0453228011
DN 50 CF	50.8 x 1.65	17,3	47,5	51,1	M8	0453228014
DN 63 CF	70 x 2	17,5	66	70,3	M8	0453228019
DN 75 CF	76.1 x 2	17,5	72,1	76,4	M8	0453228021
DN 100 CF	104 x 2	19,8	100	104,3	M8	0453228026
DN 100 CF	108 x 2	19,8	104	108,3	M8	0453228028
DN 160 CF	154 x 2	22,2	150	154,3	M8	0453228034
DN 160 CF	159 x 2	22,2	155	159,3	M8	0453228036
DN 200 CF	204 x 2	24,5	200	204,3	M8	0453228040
DN 200 CF	205 x 2.5	24,5	200	205,3	M8	0453228042
DN 250 CF	254 x 2	26	250	254,3	M8	0453228044

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D	Part number
DN 250 CF	256 x 3	26	250	256,3	M8	0453228047
DN 300 CF	306 x 3	28,5	300	306,3	M10	0453228049

Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

Stainless Steel 304L, with Imperial (UN) Thread

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D	Part number
DN 16 CF	19.05 x 1.65	7,75	15,75	19,2	8-32	0453227998
DN 25 CF	25.4 x 1.65	12	22,1	25,6	1/4-28	0453228000
DN 40 CF	38 x 1.5	12,7	35	38,2	1/4-28	0453228005
DN 40 CF	44.5 x 2	12,7	40,5	44,7	1/4-28	0453228012
DN 50 CF	50.8 x 1.65	17,3	47,5	51,1	5/16-24	0453228015
DN 63 CF	63.5 x 1.65	17,5	60,2	63,8	5/16-24	0453228017
DN 75 CF	76.1 x 2	17,5	72,1	76,4	5/16-24	0453228022
DN 100 CF	101.6 x 2.1	19,8	97,4	101,9	5/16-24	0453228024
DN 130 CF	127 x 1.65	21,4	123,7	127,3	5/16-24	0453228030
DN 160 CF	152.4 x 2.4	22,2	147,6	152,7	5/16-24	0453228032
DN 200 CF	203.2 x 2.4	24,5	198,4	203,5	5/16-24	0453228038
DN 250 CF	254 x 2	26	250	254,3	5/16-24	0453228045

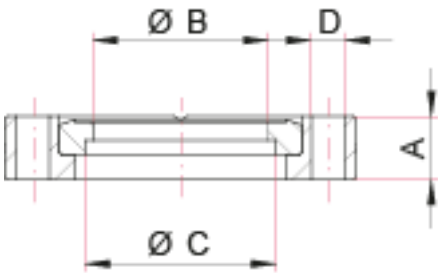
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Weld Flange, Rotatable, 316LN ESR



- Bakeable under vacuum up to 1050 °C
- Low desorption
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Magnetic permeability: ≤ 1.01
- Temperature range: -196 to 350 °C

Dimensions



Stainless Steel 316LN ESR/1.4429 ESU

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 CF	18 x 1	7,75	16	18,15	4,4	0453228425
DN 16 CF	19.05 x 1.65	7,75	15,75	19,2	4,4	0453228427
DN 40 CF	38 x 1.5	13	35	38,2	6,6	0453228428
DN 40 CF	40 x 1.5	12,7	37	40,2	6,6	0453228429
DN 63 CF	63.5 x 1.65	17,5	60,2	63,8	8,4	0453228431
DN 63 CF	70 x 2	17,5	66	70,3	8,4	0453228432
DN 100 CF	101.6 x 2.1	19,8	97,4	101,9	8,4	0453228434
DN 100 CF	104 x 2	19,8	100	104,3	8,4	0453228435
DN 100 CF	108 x 2	19,8	104	108,3	8,4	0453228437
DN 160 CF	152.4 x 2.4	22,2	147,6	157,7	8,4	0453228438
DN 160 CF	154 x 2	22,2	150	154,3	8,4	0453228439
DN 160 CF	159 x 2	22,2	155	159,3	8,4	0453228441
DN 200 CF	204 x 2	24,5	200	204,3	8,4	0453228442
DN 250 CF	254 x 2	26	250	254,3	8,4	0453228444

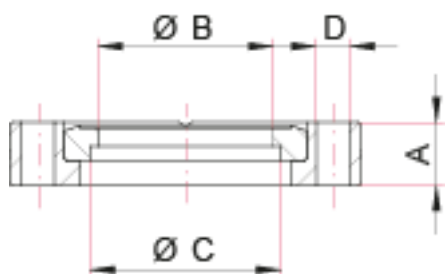
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Weld Flange, Rotatable, with Thread, 316LN ESR



- Bakeable under vacuum up to 1050 °C
- Low desorption
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Magnetic permeability: ≤1.01
- Temperature range: -196 to 350 °C

Dimensions



Stainless Steel 316LN ESR/1.4429 ESU, with Thread

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D	Part number
DN 16 CF	18 x 1	7,75	16	18,15	M4	0453228426
DN 40 CF	40 x 1.5	12,7	37	40,2	M6	0453228430
DN 63 CF	70 x 2	17,5	66	70,3	M8	0453228433
DN 100 CF	104 x 2	19,8	100	104,3	M8	0453228436
DN 160 CF	154 x 2	22,2	150	154,3	M8	0453228440
DN 200 CF	204 x 2	24,5	200	204,3	M8	0453228443
DN 250 CF	254 x 2	26	250	254,3	M8	0453228445

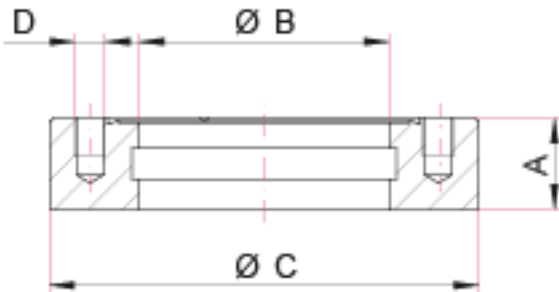
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Weld-On Flange



- Flange for welding to a flat panel or a round chamber/tube
- Other flange materials on request
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L

Nominal diameter	A [mm]	B [mm]	C [mm]	D	Part number
DN 16 CF	16	16	34	M4	0453228155
DN 40 CF	24	37	69,9	M6	0453228156
DN 63 CF	24	66	113,5	M8	0453228157
DN 100 CF	24	102	152	M8	0453228158

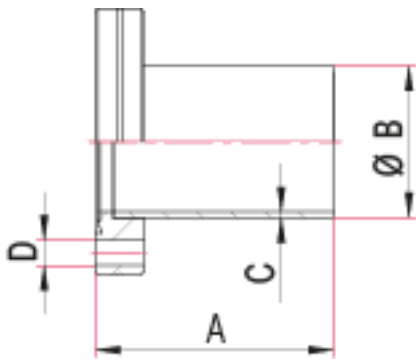
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Half Nipple



- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Other tube dimensions on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 CF	18 x 1	38	18	1	4,4	0453228176
DN 16 CF	19.05 x 1.65	38	19,05	1,65	4,4	0453228178
DN 25 CF	25.4 x 1.65	52	25,4	1,65	6,6	0453228179
DN 40 CF	38 x 1.5	63	38	1,5	6,6	0453228180
DN 40 CF	40 x 1.5	63	40	1,5	6,6	0453228181
DN 50 CF	50.8 x 1.65	82	50,8	1,65	8,4	0453228183
DN 63 CF	63.5 x 1.65	105	63,5	1,65	8,4	0453228184
DN 63 CF	70 x 2	105	70	2	8,4	0453228185
DN 75 CF	76.1 x 2	90	76,1	2	8,4	0453228187
DN 100 CF	101.6 x 2.1	135	101,6	2,1	8,4	0453228188
DN 100 CF	108 x 2	135	108	2	8,4	0453228189

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 160 CF	154 x 2	167	154	2	8,4	0453228192
DN 160 CF	159 x 2	167	159	2	8,4	0453228193

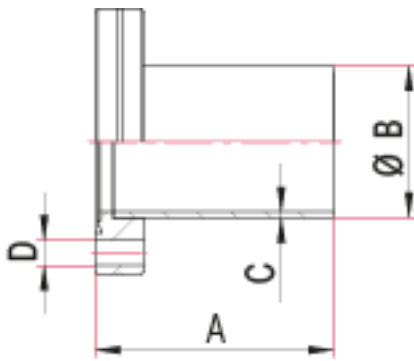
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Half Nipple, with Thread



- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Other tube dimensions on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel, with Metric Thread

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D	Part number
DN 16 CF	18 x 1	38	18	1	M4	0453228177
DN 40 CF	40 x 1.5	63	40	1,5	M6	0453228182
DN 63 CF	70 x 2	105	70	2	M8	0453228186
DN 100 CF	108 x 2	135	108	2	M8	0453228191
DN 160 CF	159 x 2	167	159	2	M8	0453228195

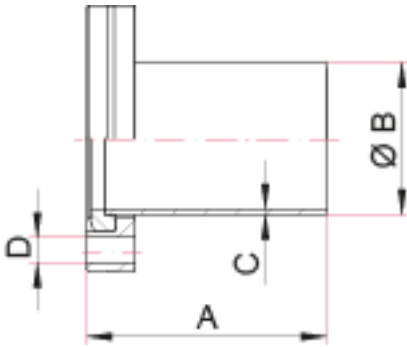
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Half Nipple, Rotatable



- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Other tube diameters on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 CF	18 x 1	38	18	1	4,4	0453228196
DN 16 CF	19.05 x 1.65	38	19,05	1,65	4,4	0453228198
DN 25 CF	25.4 x 1.65	52	25,4	1,65	6,6	0453228199
DN 40 CF	38 x 1.5	63	38	1,5	6,6	0453228200
DN 40 CF	40 x 1.5	63	40	1,5	6,6	0453228203
DN 50 CF	50.8 x 1.65	82	50,8	1,65	8,4	0453228205
DN 63 CF	63.5 x 1.65	105	63,5	1,65	8,4	0453228206
DN 63 CF	70 x 2	105	70	2	8,4	0453228207
DN 75 CF	76.1 x 2	90	76,1	2	8,4	0453228209
DN 100 CF	101.6 x 2.1	135	101,6	2,1	8,4	0453228210
DN 100 CF	108 x 2	135	108	2	8,4	0453228211

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 160 CF	154 x 2	167	154	2	8,4	0453228214
DN 160 CF	159 x 2	167	159	2	8,4	0453228215

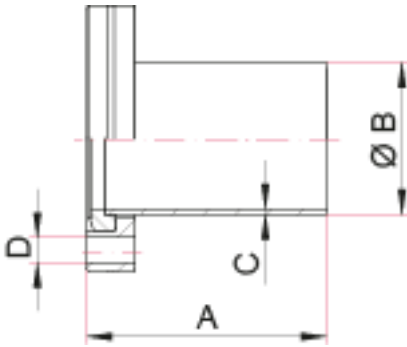
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Half Nipple, Rotatable, with Thread



- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Other tube diameters on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel, with Metric Thread

Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D	Part number
DN 16 CF	18 x 1	38	18	1	M4	0453228197
DN 40 CF	38 x 1.5	63	38	1,5	M6	0453228201
DN 40 CF	40 x 1.5	38	40	1,5	M6	0453228202
DN 40 CF	40 x 1.5	63	40	1,5	M6	0453228204
DN 63 CF	70 x 2	105	70	2	M8	0453228208
DN 100 CF	108 x 2	135	108	2	M8	0453228213
DN 160 CF	159 x 2	167	159	2	M8	0453228217

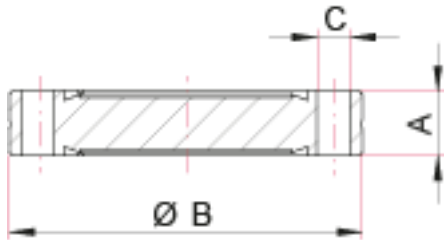
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Spacer Flange



- Other flange materials on request
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L

Nominal diameter	A [mm]	B [mm]	C [mm]	Part number
DN 16 CF	7,75	34	4,4	0453228133
DN 40 CF	12,7	69,9	6,6	0453228134
DN 63 CF	17,5	113,5	8,4	0453228135
DN 100 CF	19,8	152	8,4	0453228136
DN 160 CF	22,2	202,4	8,4	0453228137

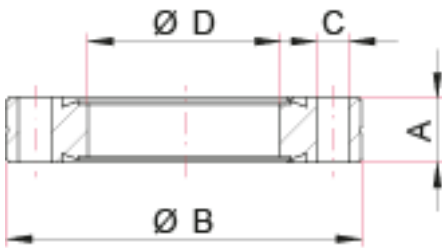
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Spacer Flange with Bore Holes



- Other flange materials on request
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 16 CF	7,75	34	4,4	16	0453228138
DN 40 CF	12,7	69,9	6,6	37	0453228139
DN 63 CF	17,5	113,5	8,4	66	0453228140
DN 100 CF	19,8	152	8,4	102	0453228141
DN 160 CF	22,2	202,4	8,4	155	0453228142

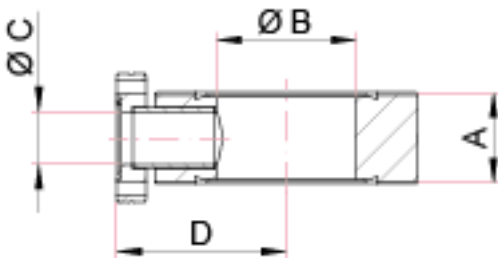
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Spacer Flange with Bore Holes and Port(s)



- Available with up to three DN 16 CF ports with M4 metric thread
- Tube surface: Glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L

Nominal diameter	Number of ports	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 40 CF	1	24	37	14	45	0453228143
DN 40 CF	2	24	37	14	45	0453228144
DN 40 CF	3	24	37	14	45	0453228145
DN 63 CF	1	24	66	14	67	0453228146
DN 63 CF	2	24	66	14	67	0453228147
DN 63 CF	3	24	66	14	67	0453228148
DN 100 CF	1	24	100	14	90	0453228149
DN 100 CF	2	24	100	14	90	0453228150
DN 100 CF	3	24	100	14	90	0453228151
DN 160 CF	1	24	150	14	115	0453228152
DN 160 CF	2	24	150	14	115	0453228153
DN 160 CF	3	24	150	14	115	0453228154

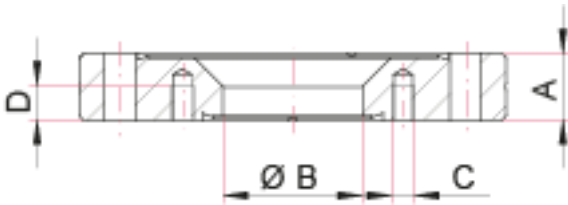
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Reducer Flange



- The reduced-size flange has blind tapped holes. Make sure the screws used for installation are in the correct length.
- Other flange materials on request
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304L

Nominal diameter	A [mm]	B [mm]	C	D [mm]	Nominal diameter reduced	Part number
DN 40 CF	12,7	16	M4	6	DN 16 CF	0453228159
DN 63 CF	17,5	16	M4	6	DN 16 CF	0453228160
DN 63 CF	17,5	37	M6	9	DN 40 CF	0453228161
DN 100 CF	19,8	37	M6	9	DN 40 CF	0453228162
DN 100 CF	19,8	66	M8	13	DN 63 CF	0453228163
DN 160 CF	22,2	37	M6	9	DN 40 CF	0453228164
DN 160 CF	22,2	66	M8	13	DN 63 CF	0453228165
DN 160 CF	22,2	100	M8	13	DN 100 CF	0453228166
DN 200 CF	24,5	37	M6	9	DN 40 CF	0453228167
DN 200 CF	24,5	66	M8	13	DN 63 CF	0453228168
DN 200 CF	24,5	100	M8	13	DN 100 CF	0453228169
DN 200 CF	24,5	155	M8	13	DN 160 CF	0453228170
DN 250 CF	26	37	M6	9	DN 40 CF	0453228171
DN 250 CF	26	66	M8	13	DN 63 CF	0453228172
DN 250 CF	26	100	M8	13	DN 100 CF	0453228173
DN 250 CF	26	155	M8	13	DN 160 CF	0453228174
DN 250 CF	26	200	M8	13	DN 200 CF	0453228175

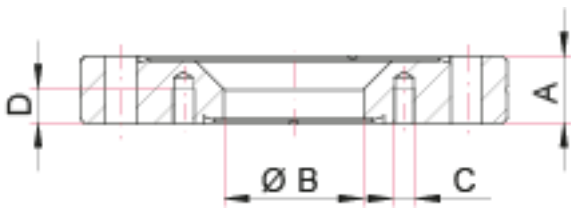
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Reducer Flange, 316LN ESR



- The reduced-size flange has blind tapped holes. Make sure the screws used for installation are the correct length.
- Bakeable under vacuum up to 1050 °C
- Low desorption
- Bakeout temperature: up to 450 °C
- Pressure range: 1 · 10⁻¹³ hPa to ambient pressure
- Magnetic permeability: ≤ 1.01
- Temperature range: -196 to 350 °C

Dimensions



Stainless Steel 316LN ESR/1.4429 ESU

Nominal diameter	A [mm]	B [mm]	C	D [mm]	Nominal diameter reduced	Part number
DN 40 CF	12,7	16	M4	6	DN 16 CF	0453228489
DN 63 CF	17,5	16	M4	6	DN 16 CF	0453228490
DN 63 CF	17,5	37	M6	9	DN 40 CF	0453228491
DN 100 CF	19,8	37	M6	9	DN 40 CF	0453228492
DN 100 CF	19,8	66	M8	13	DN 63 CF	0453228493
DN 160 CF	22,2	37	M6	9	DN 40 CF	0453228494
DN 160 CF	22,2	66	M8	13	DN 63 CF	0453228495
DN 160 CF	22,2	100	M8	13	DN 100 CF	0453228580
DN 200 CF	24,5	37	M6	9	DN 40 CF	0453228581
DN 200 CF	24,5	66	M8	13	DN 63 CF	0453228582
DN 200 CF	24,5	100	M8	13	DN 100 CF	0453228583
DN 200 CF	24,5	155	M8	13	DN 160 CF	0453228584
DN 250 CF	26	37	M6	9	DN 40 CF	0453228585
DN 250 CF	26	66	M8	13	DN 63 CF	0453228586
DN 250 CF	26	100	M8	13	DN 100 CF	0453228587
DN 250 CF	26	155	M8	13	DN 160 CF	0453228588
DN 250 CF	26	200	M8	13	DN 200 CF	0453228589

Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

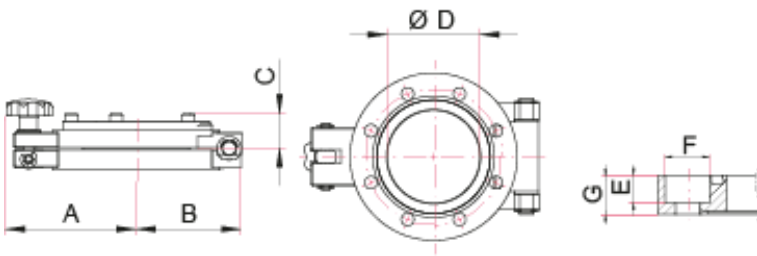
CF Quick-Access-Door



- Screw holes: Through-holes with counter-bore for cylinder head
- Can be installed using hexagon socket screws
- Bakeout temperature: up to 200 °C
- Seal: FKM
- Pressure range: $1 \cdot 10^{-8}$ hPa to ambient pressure
- Temperature range: -15 to 150 °C

Stainless Steel, without Sight Glass

Dimensions

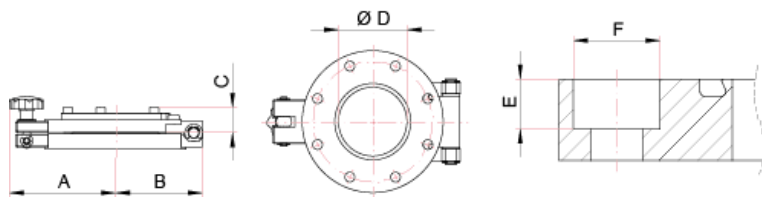


Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Part number
DN 63 CF	88	72	16	-	10	16	0453228218
DN 100 CF	108	93	16	-	10	16	0453228220
DN 160 CF	134	119	20	-	10	16	0453228222
DN 200 CF	160	145	20	-	10	16	0453228224
DN 250 CF	186	171	20	-	10	16	0453228226



Stainless Steel, with Sight Glass

Dimensions



- Sight glass: Borosilicate glass

Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Part number
DN 63 CF	88	72	23	63	10	16	0453228219
DN 100 CF	108	93	27	95	10	16	0453228221
DN 160 CF	134	119	31	145	10	16	0453228223
DN 200 CF	160	145	31	145	10	16	0453228225
DN 250 CF	186	171	31	145	10	16	0453228227

CF Flange Cap



- Made from plastic

Dimensions



Polyethylene (PE)

Nominal diameter	Package [Qty.]	Part number
DN 16 CF	10	0851229094
DN 40 CF	10	0851229095
DN 63 CF	10	0851229096
DN 100 CF	10	0851229097
DN 160 CF	5	0851229098
DN 200 CF	5	0851229099
DN 250 CF	5	0851229100

CF-Swagelok® Adapter



- For metric and imperial (inch) tube diameters
- Original Swagelok® adapter
- Other flanges sizes and pipe diameters on request
- Pressure range: 1 · 10⁻⁹ hPa to ambient pressure
- Materials: Stainless steel 304L (Flange)
- Temperature range: -196 to 300 °C

Dimensions

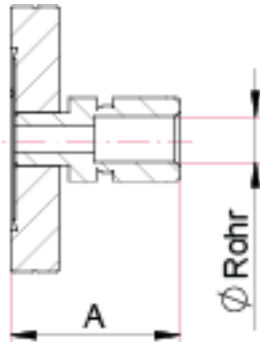


Bild bitte prüfen

Stainless Steel for Metric Tube Sizes

Nominal diameter	Tube external diameter	A [mm]	Part number
DN 16 CF	6 mm	39	0453227979
DN 16 CF	8 mm	40	0453227980
DN 40 CF	6 mm	39	0453227985
DN 40 CF	8 mm	40	0453227986
DN 40 CF	10 mm	42	0453227983
DN 40 CF	12 mm	45	0453227984

Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

Stainless Steel for Imperial (Inch) Tube Sizes

Nominal diameter	Tube external diameter	A [mm]	Part number
DN 16 CF	1/8"	32	0453227977
DN 16 CF	1/4"	39	0453227978

Nominal diameter	Tube external diameter	A [mm]	Part number
DN 40 CF	1/4"	41	0453227981
DN 40 CF	1/2"	50	0453227982

Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

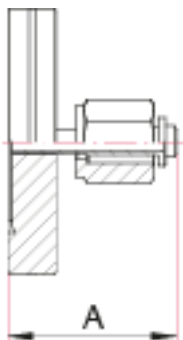
CF-VCR Adapter, Male and Female



- Original Swagelok® VCR-Adapter
- Other flange sizes and VCR adapters on request
- Tightness: $< 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: $1 \cdot 10^{-11}$ hPa to ambient pressure
- Materials: Flange: Stainless steel 304L; VCR adapter: 316L/1.4404
- Temperature range: -196 to 300 °C

Female

Dimensions



Nominal diameter	VCR connection	A [mm]	Part number
DN 16 CF	1/4"	44	0453227987
DN 16 CF	1/2"	47	0453227988
DN 40 CF	1/4"	44	0453227989
DN 40 CF	1/2"	47	0453227990

Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2



Male

Dimensions



Nominal diameter	VCR connection	A [mm]	Part number
DN 16 CF	1/4"	44	0453227991
DN 16 CF	1/2"	47	0453227992
DN 40 CF	1/4"	44	0453227993
DN 40 CF	1/2"	47	0453227994

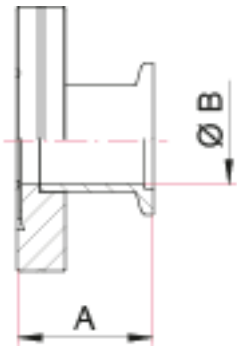
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

ISO-KF/CF Adapter



- Other nominal diameters and dimensions on request
- Pressure range: 1 · 10⁻⁸ hPa to ambient pressure (elastomer seal);
1 · 10⁻⁹ hPa to ambient pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301; CF Flange 304L

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 16 CF	36	16	DN 16 ISO-KF	0453228270
DN 16 CF	36	16	DN 25 ISO-KF	0453228271
DN 16 CF	36	16	DN 40 ISO-KF	0453228272
DN 40 CF	36	16	DN 16 ISO-KF	0453228274
DN 40 CF	36	24	DN 25 ISO-KF	0453228275
DN 40 CF	50	40,5	DN 40 ISO-KF	0453228276
DN 63 CF	50	40,5	DN 40 ISO-KF	0453228278
DN 100 CF	50	40,5	DN 40 ISO-KF	0453228280

ISO-KF Flanges according to ISO 2861

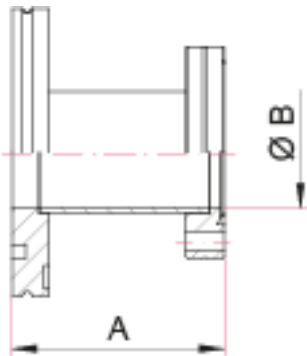
CF Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

ISO-K/CF Adapter



- Other flange sizes and dimensions on request
- Pressure range: $1 \cdot 10^{-8}$ hPa to 500 hPa over pressure (elastomer seal);
 $1 \cdot 10^{-9}$ hPa to 500 hPa over pressure (metal seal)
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel 304/1.4301; CF Flange 304L

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 16 CF	60	16	DN 63 ISO-K	0453228273
DN 40 CF	70	37	DN 63 ISO-K	0453228277
DN 63 CF	90	66	DN 63 ISO-K	0453228279
DN 100 CF	90	102	DN 100 ISO-K	0453228281
DN 160 CF	100	153	DN 160 ISO-K	0453228282

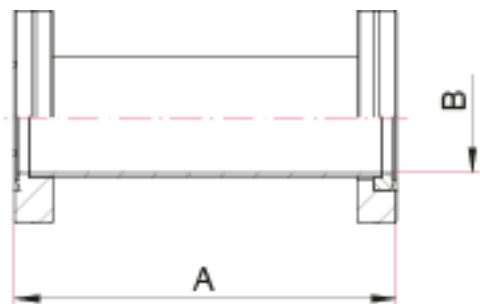
CF Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2
ISO-K Flanges according to ISO 1609

CF Full Nipple



- One end fixed; one end rotatable
- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube material on request
- Other lengths and tube dimensions on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel

Nominal diameter	A [mm]	B [mm]	Part number
DN 16 CF	76	16	0453228288
DN 40 CF	126	37	0453228289
DN 63 CF	210	66	0453228290
DN 100 CF	270	104	0453228291
DN 160 CF	334	155	0453228292

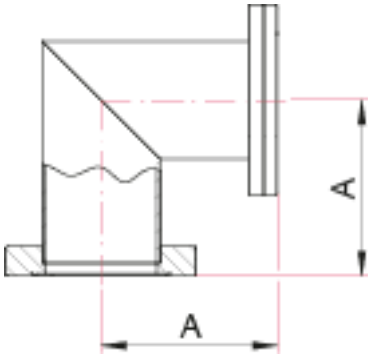
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF 90° Elbow



- One end fixed, one end rotatable
- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel

Nominal diameter	A [mm]	Part number
DN 16 CF	38	0453228283
DN 40 CF	63	0453228284
DN 63 CF	105	0453228285
DN 100 CF	135	0453228286
DN 160 CF	167	0453228287

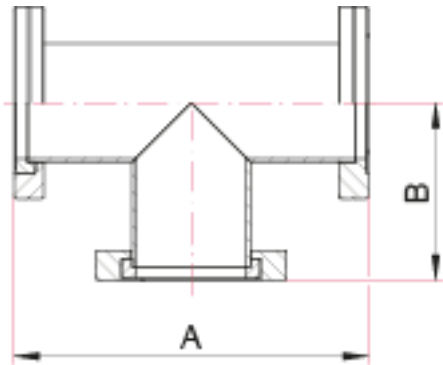
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Tee



- One rotatable flange per axis
- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions

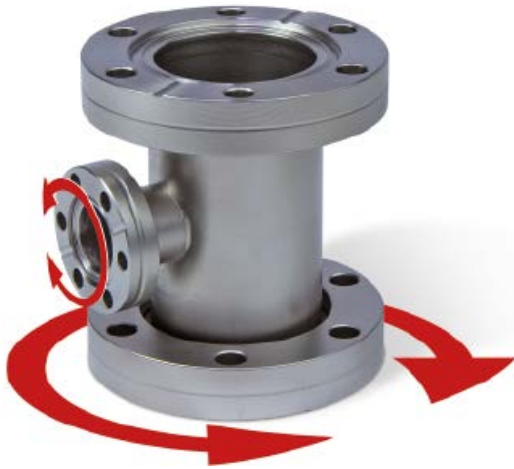


Stainless Steel

Nominal diameter	A [mm]	B [mm]	Part number
DN 16 CF	76	38	0453228265
DN 40 CF	126	63	0453228266
DN 63 CF	210	105	0453228267
DN 100 CF	270	135	0453228268
DN 160 CF	334	167	0453228269

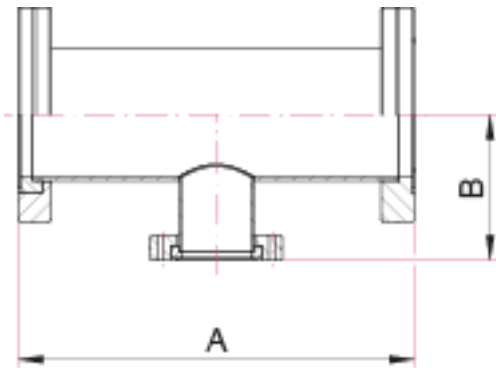
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Reducer Tee



- One rotatable flange per axis
- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 40 CF	126	60	DN 16 CF	0453228258
DN 63 CF	210	77	DN 40 CF	0453228259
DN 100 CF	270	95	DN 40 CF	0453228260
DN 100 CF	270	95	DN 63 CF	0453228261
DN 160 CF	334	120	DN 40 CF	0453228262
DN 160 CF	334	120	DN 63 CF	0453228263
DN 160 CF	334	120	DN 100 CF	0453228264

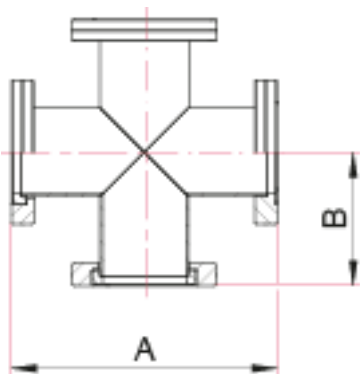
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF 4-Way Cross



- One rotatable flange per axis
- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel

Nominal diameter	A [mm]	B [mm]	Part number
DN 16 CF	76	38	0453228245
DN 40 CF	126	63	0453228246
DN 63 CF	210	105	0453228247
DN 100 CF	270	135	0453228248
DN 160 CF	334	167	0453228249

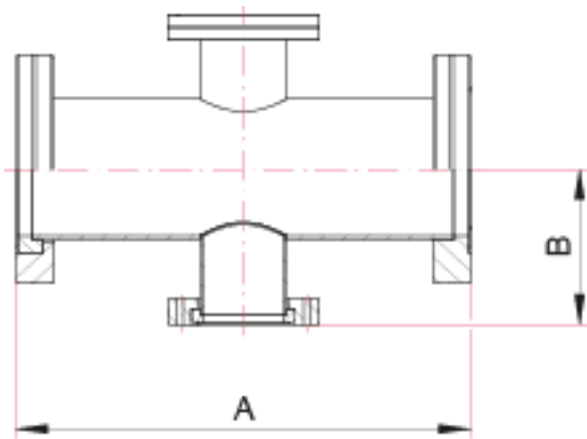
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF 4-Way Reducer Cross



- One rotatable flange per axis
- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 40 CF	126	60	DN 16 CF	0453228238
DN 63 CF	210	77	DN 40 CF	0453228239
DN 100 CF	270	95	DN 40 CF	0453228240
DN 100 CF	270	95	DN 63 CF	0453228241
DN 160 CF	334	120	DN 40 CF	0453228242
DN 160 CF	334	120	DN 63 CF	0453228243
DN 160 CF	334	120	DN 100 CF	0453228244

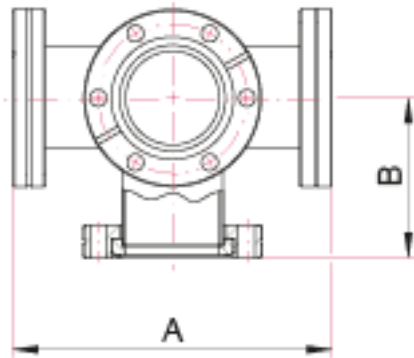
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF 5-Way Cross



- One rotatable flange per axis
- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube material on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: $1 \cdot 10^{-12}$ hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel

Nominal diameter	A [mm]	B [mm]	Part number
DN 16 CF	76	38	0453228234
DN 40 CF	126	63	0453228235
DN 63 CF	210	105	0453228236
DN 100 CF	270	135	0453228237

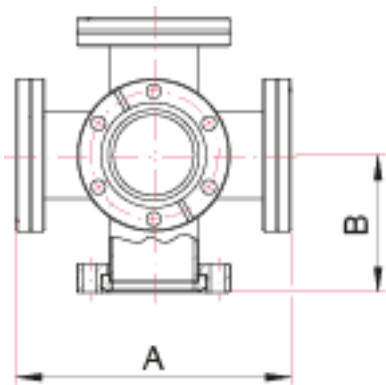
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF 6-Way Cross



- One rotatable flange per axis
- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: $1 \cdot 10^{-12}$ hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel

Nominal diameter	A [mm]	B [mm]	Part number
DN 16 CF	76	38	0453228228
DN 40 CF	126	63	0453228229
DN 63 CF	210	105	0453228230
DN 100 CF	270	135	0453228231
DN 160 CF	334	167	0453228232
DN 200 CF	406	203	0453228233

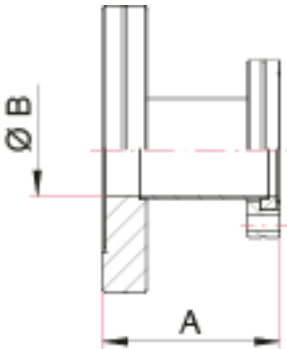
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Reducer Nipple, Straight



- Reduced flange size rotatable
- Tube surface: glass bead blasted (polished version on request)
- Other flange and tube materials on request
- Other lengths and tube dimensions on request
- Bakeout temperature: up to 450 °C
- Tightness: $\leq 1 \cdot 10^{-11}$ Pa m³/s
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: Flange: stainless steel 304L; tube: stainless steel 304L or better
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel

Nominal diameter	A [mm]	B [mm]	Nominal diameter reduced	Part number
DN 40 CF	70	16	DN 16 CF	0453228250
DN 63 CF	70	16	DN 16 CF	0453228251
DN 63 CF	70	37	DN 40 CF	0453228252
DN 100 CF	70	37	DN 40 CF	0453228253
DN 100 CF	70	66	DN 63 CF	0453228254
DN 160 CF	70	37	DN 40 CF	0453228255
DN 160 CF	127	66	DN 63 CF	0453228256
DN 160 CF	127	104	DN 100 CF	0453228257

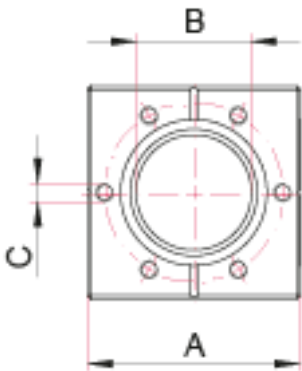
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

CF Cube



- Up to DN 100: manufactured from forged material
- DN 160: manufactured from welded plates
- Bakeout temperature: up to 450 °C
- Pressure range: $1 \cdot 10^{-12}$ hPa to ambient pressure
- Materials: Stainless steel 316L/1.4404
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel, with Thread

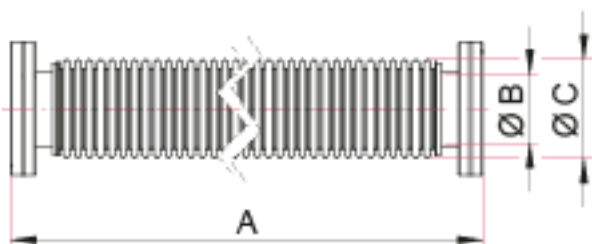
Nominal diameter	A [mm]	B [mm]	C	Thread depth [mm]	Part number
DN 16 CF	35	16	M4	5	0453228420
DN 40 CF	70,5	38	M6	8	0453228421
DN 63 CF	114	66	M8	8	0453228422
DN 100 CF	155	104	M8	8	0453228423
DN 160 CF	208	155	M8	8	0453228424

ISO-CF Corrugated Hose, Flexible



- One flange rotatable
- Other lengths on request
- Pressure range: $1 \cdot 10^{-9}$ hPa to ambient pressure
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel: Flange 304L; Bellows 316L

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Bend radius, often movement [mm]	Part number
DN 16 CF	250	12	17	50	200	0452228322
DN 16 CF	500	12	17	50	200	0452228323
DN 16 CF	750	12	17	50	200	0452228324
DN 16 CF	1000	12	17	50	200	0452228325
DN 40 CF	250	37	52	130	250	0452228326
DN 40 CF	500	37	52	130	250	0452228399
DN 40 CF	750	37	52	130	250	0452228400
DN 40 CF	1000	37	52	130	250	0452228401
DN 63 CF	250	65	81	200	410	0452228402
DN 63 CF	500	65	81	200	410	0452228403
DN 63 CF	750	65	81	200	410	0452228404
DN 63 CF	1000	65	81	200	410	0452228405
DN 100 CF	250	100	119	230	560	0452228406
DN 100 CF	500	100	119	230	560	0452228407

Nominal diameter	A [mm]	B [mm]	C [mm]	Bend radius, unique movement [mm]	Bend radius, often movement [mm]	Part number
DN 100 CF	750	100	119	230	560	0452228408
DN 100 CF	1000	100	119	230	560	0452228409

Please note that the hose shrinks under vacuum.

The minimum bending radii are applicable for a temperature of 20 °C.

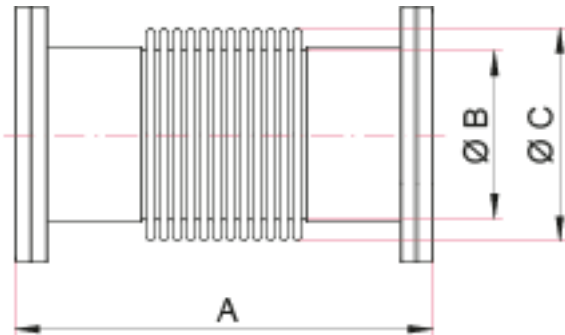
Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

ISO-CF Spring Bellows



- One flange rotatable
- Other lengths on request
- Pressure range: 1 · 10⁻⁹ hPa to ambient pressure
- Materials: flange: stainless steel: 304L; bellows: stainless steel 316L
- Temperature range: -196 to 300 °C

Dimensions



Stainless Steel: Flange 304L; Bellows 316L

Nominal diameter	A [mm]	B [mm]	C [mm]	Axial stroke [mm]	Part number
DN 16 CF	110	15	26	±5	0458228317
DN 40 CF	160	37	59	±10	0458228318
DN 63 CF	250	66	87	±18	0458228319
DN 100 CF	250	100	128	±22	0458228320
DN 160 CF	270	155	184	±15	0458228321

Please note that the spring bellows shrinks under vacuum.

The axial stroke is applicable for a temperature of 20 °C and 10000 load cycles.

Flange sizes DN16 to DN250 according to ISO 3669 and compatible with ISO/TS 3669-2

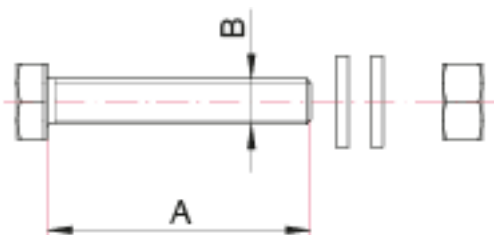
COF

COF Screw Set



- For the assembly of two flanges with through holes
- Set includes the screws required for the specified flange size
- Set includes two washers and one nut for each screw

Dimensions



Stainless Steel A2-70

Nominal diameter	A [mm]	B	Package [Qty.]	Part number
DN 400 COF	75	M12	36	0999229148
DN 450 COF	90	M16	36	0999229149
DN 500 COF	100	M16	36	0999229150
DN 600 COF	100	M16	40	0999229151
DN 800 COF	100	M16	52	0999229152

Stainless Steel A4-80

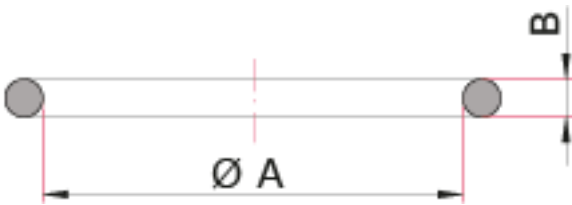
Nominal diameter	A [mm]	B	Package [Qty.]	Part number
DN 400 COF	75	M12	36	0999229153
DN 450 COF	90	M16	36	0999229154
DN 500 COF	100	M16	36	0999229155
DN 600 COF	100	M16	40	0999229156
DN 800 COF	100	M16	52	0999229157

COF Elastomer Seal



- For single use only
- Pressure range: $1 \cdot 10^{-8}$ hPa to ambient pressure
- Temperature range: -15 to 150 °C

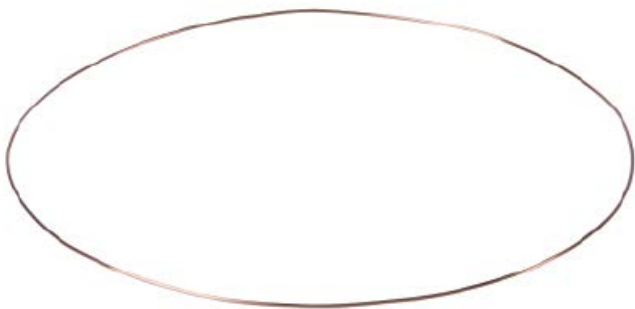
Dimensions



FKM

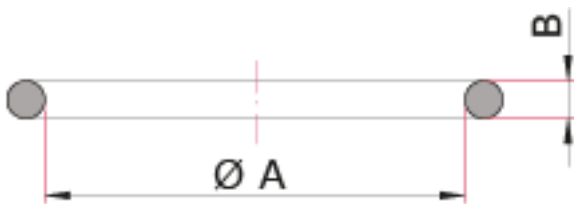
Nominal diameter	A [mm]	B [mm]	Part number
DN 400 COF	436	2,5	0486228611
DN 400 COF	491	2,5	0486228612
DN 500 COF	535	2,5	0486228613
DN 600 COF	635	2,5	0486228614
DN 800 COF	835	2,5	0486228615

COF Copper Wire Seal



- For single use only
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 200 °C

Dimensions



OFHC Copper (Annealed)

Nominal diameter	A [mm]	B [mm]	Part number
DN 400 COF	435,8	2	0484228646
DN 450 COF	491,4	2	0484228647
DN 500 COF	535,4	2	0484228648
DN 600 COF	635,4	2	0484228649
DN 800 COF	835,4	2	0484228650

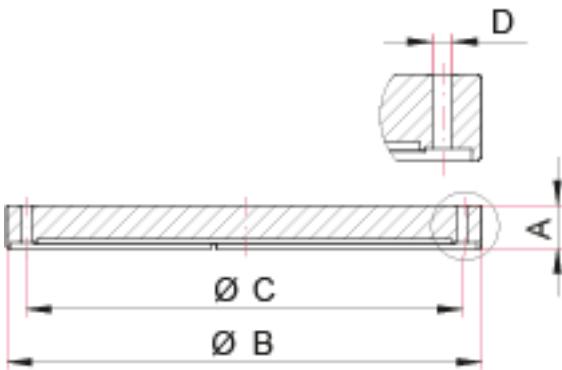
COF Blank Flange



- Flange material: 304L/1.4307 stainless steel, forged
- Other flange materials available upon request
- Bakeout temperature: up to 300 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 200 °C

Stainless Steel, Female

Dimensions

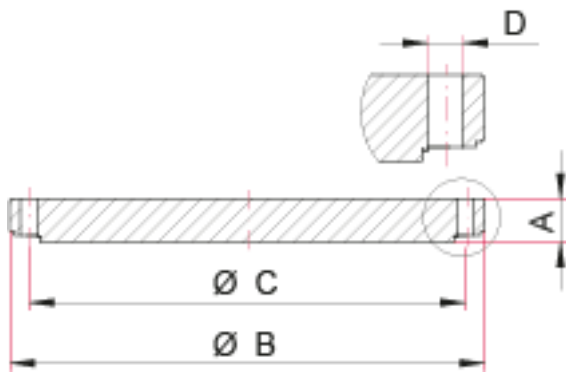


Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 400 COF	33	497	454	13	0453228626
DN 450 COF	38	562	513,1	17	0453228628
DN 500 COF	43	595	559	17	0453228630
DN 600 COF	43	690	661	17	0453228632
DN 800 COF	43	890	859	17	0453228634



Stainless Steel, Male

Dimensions



Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 400 COF	33	497	454	13	0453228636
DN 450 COF	38	562	513,1	17	0453228638
DN 500 COF	43	595	559	17	0453228640
DN 600 COF	43	690	661	17	0453228642
DN 800 COF	43	890	859	17	0453228644

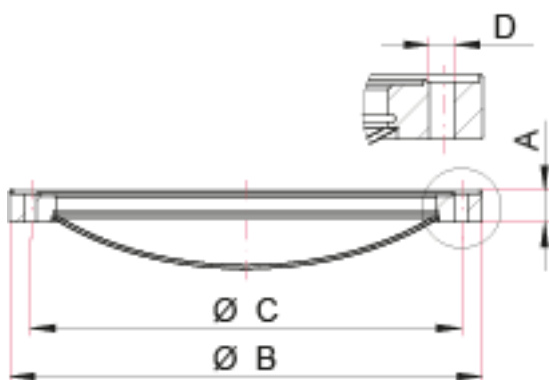
COF Blank Flange, with Domed Stainless Steel Disk or Dished Head



- Other flange materials available upon request
- Bakeout temperature: up to 300 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Materials: (flange) 304L/1.4307 stainless steel, forged
- Temperature range: -196 to 200 °C

Stainless Steel, Female

Dimensions

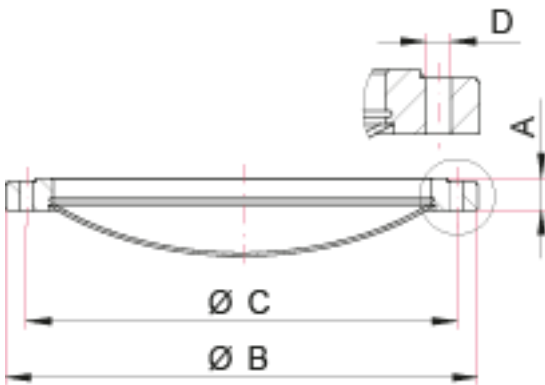


Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 400 COF	33	497	454	13	0453228627
DN 450 COF	38	562	513,1	17	0453228629
DN 500 COF	43	595	559	17	0453228631
DN 600 COF	43	690	661	17	0453228633
DN 800 COF	43	890	859	17	0453228635



Stainless Steel, Male

Dimensions



Nominal diameter	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 400 COF	33	497	454	13	0453228637
DN 450 COF	38	562	513,1	17	0453228639
DN 500 COF	43	595	559	17	0453228641
DN 600 COF	43	690	661	17	0453228643
DN 800 COF	43	890	859	17	0453228645

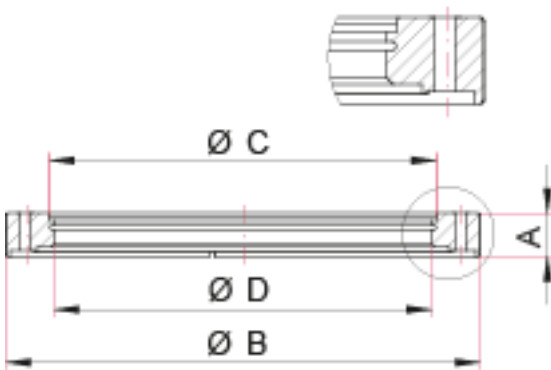
COF Weld Flange



- Flange material: 304L/1.4307 stainless steel, forged
- With weld lip
- Other flange materials available upon request
- Bakeout temperature: up to 300 °C
- Pressure range: 1 · 10⁻¹² hPa to ambient pressure
- Temperature range: -196 to 200 °C

Stainless Steel, Female

Dimensions

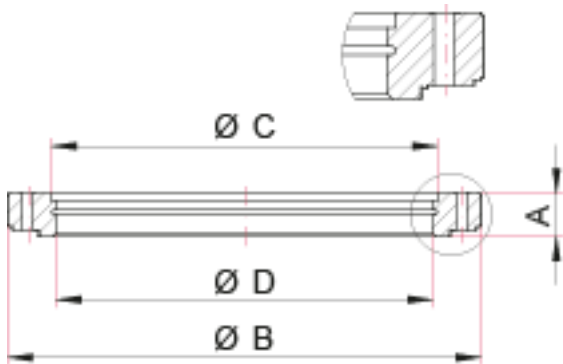


Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
406 x 3	406 x 3	33	497	406,3	400	0453228616
DN 450 COF	458 x 4	38	562	458,5	450	0453228617
DN 500 COF	508 x 4	43	595	508,5	500	0453228618
DN 600 COF	610 x 5	43	690	610,5	600	0453228619
DN 800 COF	812 x 6	43	890	812,5	800	0453228620



Stainless Steel, Male

Dimensions



Nominal diameter	Tube dimension [mm]	A [mm]	B [mm]	C [mm]	D [mm]	Part number
DN 400 COF	406 x 3	33	497	406,3	400	0453228621
DN 450 COF	458 x 4	38	562	458,5	450	0453228622
DN 500 COF	508 x 4	43	595	508,5	500	0453228623
DN 600 COF	610 x 5	43	690	610,5	600	0453228624
DN 800 COF	812 x 6	43	890	812,5	800	0453228625

VALVES

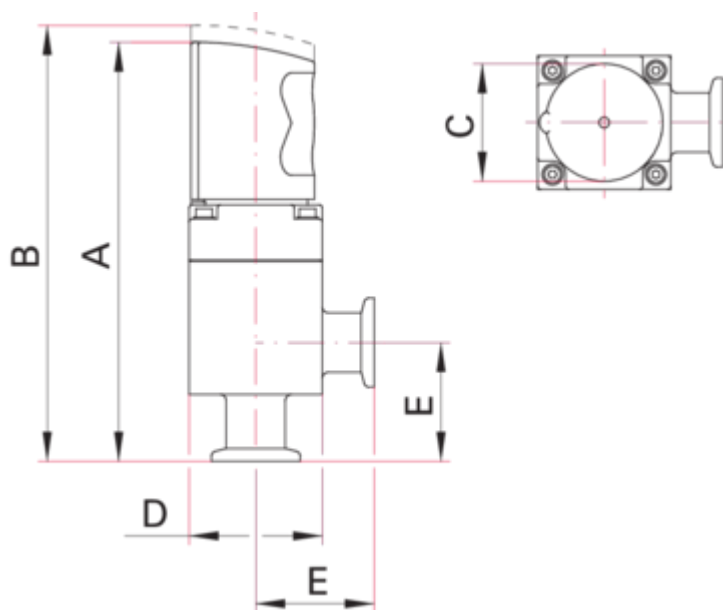
Angle valves, manual, DN 16 to 40 ISO-KF



- Quick opening by partly turning the rotary knob
- Bellows-sealed
- With visual indication of open and closed positions
- Service life: 10000 operating cycles

SA = Manually actuated, aluminum housing
 SX = Manually actuated, stainless steel housing

Dimensions



	AVC 016 SA	AVC 025 SA	AVC 040 SA
A	141.3 mm	145.3 mm	186.2 mm
B	149.5 mm	155.7 mm	201.4 mm
C	39.6 mm	39.6 mm	50 mm
D	45 mm	54 mm	69 mm
E	40 mm	50 mm	65 mm

	AVC 016 SX	AVC 025 SX	AVC 040 SX
A	143.9 mm	148.9 mm	189.2 mm
B	152.1 mm	159.1 mm	204.4 mm
C	39.6 mm	39.6 mm	50 mm
D	45 mm	54 mm	69 mm
E	40 mm	50 mm	65 mm

Technical data	AVC 016 SA AVC 016 SX	AVC 025 SA AVC 025 SX	AVC 040 SA AVC 040 SX
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Actuator	Rotary knob	Rotary knob	Rotary knob
Bakeout temperature: actuator	50 °C	50 °C	50 °C
Operating pressure max.	2000 hPa (abs.)	2000 hPa (abs.)	1500 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	2000 hPa	2000 hPa	1500 hPa
Differential pressure in closing direction	4000 hPa	4000 hPa	2000 hPa
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Conductance for molecular flow	5 l/s	14 l/s	45 l/s
Service life	Aluminum	10000 cycles	10000 cycles

	AVC 016 SA	AVC 025 SA	AVC 040 SA
Bakeout temperature: housing	80 °C	80 °C	80 °C
Housing	Aluminum	Aluminum	Aluminum
Weight	0.31 kg	0.42 kg	0.85 kg
Part number	0654228671	0654228687	0654228703

	AVC 016 SX	AVC 025 SX	AVC 040 SX
Bakeout temperature: housing	150 °C	150 °C	150 °C
Housing	Stainless steel	Stainless steel	Stainless steel
Weight	0.34 kg	0.49 kg	0.96 kg
Part number	0654228672	0654228688	0654228704

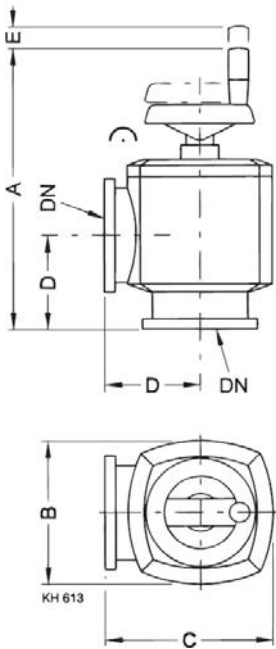
Angle valves, manual, DN 63 to 100 ISO-K



- Spindle drive with ergonomic handwheel for continuous opening
- Bellows-sealed
- With visual indication of open and closed positions
- Service life: 10000 operating cycles

SA = Manually actuated, aluminum housing
 SX = Manually actuated, stainless steel housing

Dimensions



	EVB 063 SA	EVB 100 SA
A	266 mm	320 mm
B	124 mm	164 mm
C	150 mm	190 mm
D	88 mm	108 mm
E	20 mm	25 mm

	EVB 063 SX	EVB 100 SX
A	266 mm	320 mm
B	124 mm	164 mm
C	150 mm	190 mm
D	88 mm	108 mm
E	20 mm	25 mm

Technical data	EVB 063 SA EVB 063 SX	EVB 100 SA EVB 100 SX
Flange (out)	DN 63 ISO-K	DN 100 ISO-K
Flange (in)	DN 63 ISO-K	DN 100 ISO-K
Actuator	Spindle	Spindle
Bakeout temperature: actuator	60 °C	60 °C
Bakeout temperature: housing	150 °C	150 °C
Operating pressure max.	1500 hPa (abs.)	1500 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM
Differential pressure in opening direction	1500 hPa	1500 hPa
Differential pressure in closing direction	1500 hPa	1500 hPa
Feedthrough	Bellows, stainless steel	Bellows, stainless steel
Conductance for molecular flow	140 l/s	330 l/s
Can be opened to a pressure difference of	1500 hPa	1500 hPa
Service life	10000 cycles	10000 cycles

	EVB 063 SA	EVB 100 SA
Housing	Aluminum	Aluminum
Weight	3.6 kg	6.1 kg
Part number	0540227647	0540227648

	EVB 063 SX	EVB 100 SX
Housing	Stainless steel	Stainless steel
Weight	6.5 kg	11.1 kg
Part number	0540227883	0540227884

Angle valves, manual, DN 16 to 63 CF



- Suitable for UHV applications
- Hermetically sealed, welded stainless steel body
- Bellows-sealed
- Valve plate replaceable
- For high purity and toxic gases
- For gas analysis

	UVH 016 - VI	UVH 040 - VI	UVH 063 - VI
A	104.2 mm	150.9 mm	231.2 mm
B	38 mm	63 mm	105 mm
C	15 mm	27 mm	36 mm

Technical data	UVH 016 - VI	UVH 040 - VI	UVH 063 - VI
Flange (out)	DN 63 CF-R	DN 40 CF-R	DN 63 CF-R
Flange (in)	DN 16 CF-R	DN 40 CF-R	DN 63 CF-R
Actuator	Hand wheel	Hand wheel	Hand wheel
Heat up and cool down speed	4 K/min	4 K/min	4 K/min
Bakeout temperature: with adjustment knob	80 °C	80 °C	80 °C
Bakeout temperature: without adjustment knob	180 °C	180 °C	180 °C
Operating pressure max.	4000 hPa (abs.)	4000 hPa (abs.)	4000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal: Valve plate	FKM	FKM	FKM
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Housing	Stainless steel	Stainless steel	Stainless steel

Technical data	UVH 016 - VI	UVH 040 - VI	UVH 063 - VI
Weight	0.35 kg	1.8 kg	4.8 kg
Conductance for molecular flow	3 l/s	38 l/s	100 l/s
Service life	50000 cycles	50000 cycles	50000 cycles

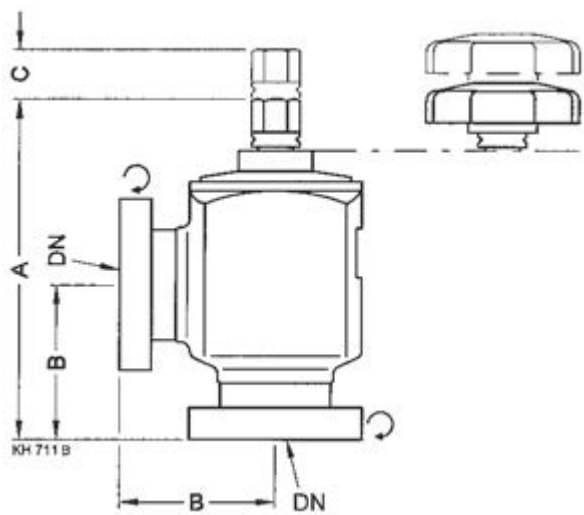
Part number			
Angle valves	0543228719	0543228720	0543228721

All-metal angle valves, manual, DN 16 to 63 CF



- Suitable for UHV applications
- Hermetically sealed, welded stainless steel body
- Bellows-sealed
- Valve plate replaceable
- For high purity and toxic gases
- For gas analysis

Dimensions



	UVH 016 - CU	UVH 040 - CU	UVH 063 - CU
A	88 mm	140 mm	210 mm
B	38 mm	63 mm	105 mm
C	15 mm	27 mm	36 mm

Technical data	UVH 016 - CU	UVH 040 - CU	UVH 063 - CU
Flange (out)	DN 16 CF-R	DN 40 CF-R	DN 63 CF-R
Flange (in)	DN 16 CF-R	DN 40 CF-R	DN 63 CF-R
Actuator	Hand wheel / Outer hexagon	Hand wheel / Outer hexagon	Hand wheel / Outer hexagon
Heat up and cool down speed	4 K/min	4 K/min	2 K/min
Bakeout temperature: with adjustment knob	80 °C	80 °C	80 °C
Bakeout temperature: without adjustment knob	300 °C	300 °C	300 °C
Operating pressure max.	4000 hPa (abs.)	4000 hPa (abs.)	4000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-11}$	$1 \cdot 10^{-11}$	$1 \cdot 10^{-11}$
Tightness	$5 \cdot 10^{-13} \text{ Pa m}^3$	$5 \cdot 10^{-13} \text{ Pa m}^3$	$5 \cdot 10^{-13} \text{ Pa m}^3$
Seal plate	Copper	Copper	Copper
Seal: Valve plate	Copper	Copper	Copper
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Housing	Stainless steel	Stainless steel	Stainless steel
Weight	0.4 kg	2 kg	5 kg
Conductance for molecular flow	3 l/s	38 l/s	100 l/s
Service life	1000 cycles	1000 cycles	1000 cycles

Part number			
Angle valves	0543228984	0543228985	0543228986

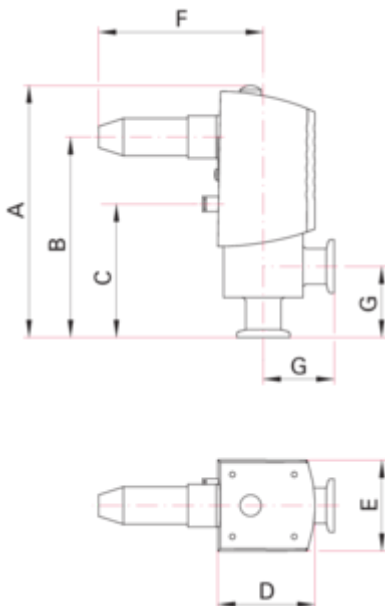
Angle valves, electropneumatic, with PI, with PV, DN 16 to 40 ISO-KF



- Bellows-sealed
- With visual position indicator
- Normally closed (n.c.)
- Service life: 10 million operating cycles

AVC = Angle valve with bellows feedthrough
PA = Electropneumatically actuated, aluminum housing
PX = Electropneumatically actuated, stainless steel housing
AC = Alternating current
DC = Direct current
PI = Position indicator
PV = Pilot valve

Dimensions



	AVC 016 PA	AVC 025 PA	AVC 040 PA
A	142 mm	146.9 mm	188.8 mm
B	112.9 mm	117.8 mm	159.7 mm
C	75.1 mm	79 mm	114.9 mm
D	55 mm	64.3 mm	81.3 mm
E	51.4 mm	60.1 mm	75.7 mm
F	93.2 mm	97.8 mm	105.3 mm
G	40 mm	50 mm	65 mm

Technical data	AVC 016 PA	AVC 025 PA	AVC 040 PA
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Bakeout temperature: actuator, pilot valve	50 °C	50 °C	50 °C
Bakeout temperature: housing	80 °C	80 °C	80 °C
Operating pressure max.	2000 hPa	2000 hPa	2000 hPa
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	2000 hPa	2000 hPa	2000 hPa
Differential pressure in closing direction	5000 hPa	5000 hPa	5000 hPa
Compressed air (overpressure) max.	8000 hPa	8000 hPa	8000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa	4000 hPa
Compressed air volume	4 cm ³	11 cm ³	35 cm ³
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Housing	Aluminum	Aluminum	Aluminum
Weight	0.49 kg	0.68 kg	1.21 kg
Power pilot valve	2.5 W	2.5 W	2.5 W
Conductance for molecular flow	5 l/s	14 l/s	45 l/s
Opening time	100 ms	120 ms	260 ms
Closing time	100 ms	160 ms	540 ms
Service life	10000000 cycles	10000000 cycles	10000000 cycles
Electrical position indicator	Included	Included	Included
Electrical position indicator: Rating	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A
Control valve	Included	Included	Included

	AVC 016 PA	AVC 025 PA	AVC 040 PA
Supply	24 V AC	24 V AC	Included
Part number	0654228677	0654228693	0654228709
Supply	24 V DC	24 V DC	24 V DC
Part number	0654228679	0654228695	0654228711
Supply	100-115 V AC	100-115 V AC	100-115 V AC
Part number	0654228683	0654228699	0654228715
Supply	200-230 V AC	200-230 V AC	200-230 V AC
Part number	0654228685	0654228701	0654228717

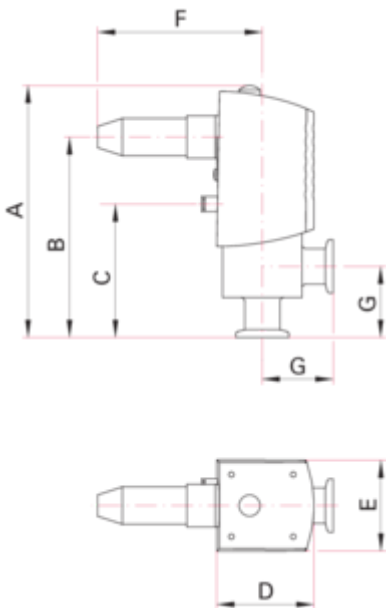
Angle valves, electropneumatic, with PI, with PV, DN 16 to 40 ISO-KF



- Bellows-sealed
- With visual position indicator
- Normally closed (n.c.)
- Service life: 10 million operating cycles

AVC = Angle valve with bellows feedthrough
PA = Electropneumatically actuated, aluminum housing
PX = Electropneumatically actuated, stainless steel housing
AC = Alternating current
DC = Direct current
PI = Position indicator
PV = Pilot valve

Dimensions



	AVC 016 PX	AVC 025 PX	AVC 040 PX
A	144.5 mm	150.3 mm	191.8 mm
B	115.4 mm	121.2 mm	162.7 mm
C	77.6 mm	82.5 mm	117.9 mm
D	55 mm	64.3 mm	81.3 mm
E	51.4 mm	60.1 mm	75.7 mm
F	93.2 mm	97.8 mm	105.3 mm
G	40 mm	50 mm	65 mm

Technical data	AVC 016 PX	AVC 025 PX	AVC 040 PX
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Bakeout temperature: actuator, pilot valve	50 °C	50 °C	50 °C
Bakeout temperature: housing	150 °C	150 °C	150 °C
Operating pressure max.	2000 hPa (abs.)	2000 hPa (abs.)	2000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	2000 hPa	2000 hPa	2000 hPa
Differential pressure in closing direction	5000 hPa	5000 hPa	5000 hPa
Compressed air (overpressure) max.	8000 hPa	8000 hPa	8000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa	4000 hPa
Compressed air volume	4 cm ³	11 cm ³	35 cm ³
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Housing	Stainless steel	Stainless steel	Stainless steel
Weight	0.52 kg	0.75 kg	1.33 kg
Power pilot valve	4.8 / 3.6 VA	4.8/3.6 VA	4.8 / 3.6 VA
Conductance for molecular flow	5 l/s	14 l/s	45 l/s
Opening time	100 ms	120 ms	260 ms
Closing time	100 ms	160 ms	540 ms
Service life	10000000 cycles	10000000 cycles	10000000 cycles
Electrical position indicator	Included	Included	Included
Electrical position indicator: Rating	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A
Control valve	Included	Included	Included

	AVC 016 PX	AVC 025 PX	AVC 040 PX
Supply	24 V AC	24 V DC	24 V AC
Part number	0654228678	0654228694	0654228710
Supply	24 V DC	24 V DC	24 V DC
Part number	0654228681	0654228697	0654228713
Supply	100-115 V AC	100-115 V AC	100-115 V AC
Part number	0654228684	0654228700	0654228716
Supply	200-230 V AC	200-230 V AC	200-230 V AC
Part number	0654228686	0654228702	0654228718

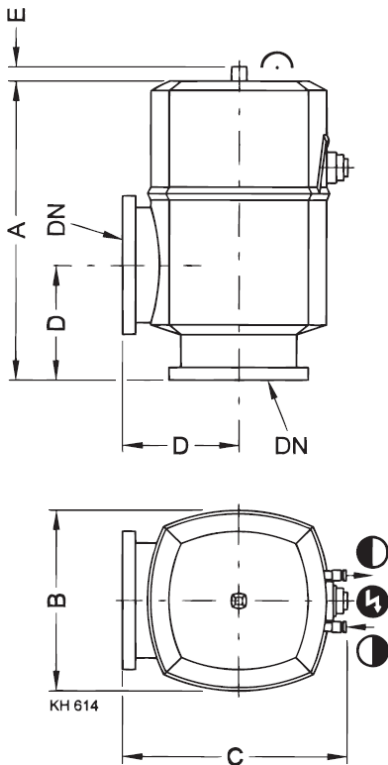
Angle valves, electropneumatic, with PI, with PV, DN 63 to 160 ISO-K



- Bellows-sealed
- With visual position indicator
- Normally closed (n.c.)
- Service life: 1.5 million operating cycles

EVB = Angle valve with bellows feedthrough
PA = Electropneumatically actuated, aluminum housing
PX = Electropneumatically actuated, stainless steel housing
AC = Alternating current
DC = Direct current
PI = Position indicator
PV = Pilot valve

Dimensions



	EVB 063 PA	EVB 100 PA	EVB 160 PA
A	250 mm	282 mm	366 mm
B	124 mm	164 mm	215 mm
C	168 mm	208 mm	264 mm
D	88 mm	108 mm	138 mm
E	14 mm	14 mm	14 mm

	EVB 063 PX	EVB 100 PX
A	250 mm	282 mm
B	124 mm	164 mm
C	168 mm	208 mm
D	88 mm	108 mm
E	14 mm	14 mm

Technical data	EVB 063 PA EVB 063 PX	EVB 100 PA EVB 100 PX	EVB 160 PA
Flange (out)	DN 63 ISO-K	DN 100 ISO-K	DN 160 ISO-K
Flange (in)	DN 63 ISO-K	DN 100 ISO-K	DN 160 ISO-K
Bakeout temperature: actuator, pilot valve	60 °C	60 °C	60 °C
Operating pressure max.	1500 hPa (abs.)	1500 hPa (abs.)	1500 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	1500 hPa	1500 hPa	1500 hPa
Differential pressure in closing direction	1500 hPa	1500 hPa	1500 hPa
Compressed air (overpressure) max.	8000 hPa	8000 hPa	8000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa	4000 hPa
Compressed air volume	75 cm ³	195 cm ³	570 cm ³
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Housing	Aluminum	Aluminum	Aluminum
Power pilot valve	3.1/2.2 W	3.1/2.2 W	3.1/2.2 W
Conductance for molecular flow	140 l/s	330 l/s	800 l/s
Opening time	300 ms	400 ms	600 ms
Closing time	300 ms	400 ms	650 ms
Service life	1500000 cycles	1500000 cycles	1500000 cycles
Electrical position indicator	Included	Included	Included

Technical data	EVB 063 PA EVB 063 PX	EVB 100 PA EVB 100 PX	EVB 160 PA
Control valve	Included	Included	Included
Electrical position indicator: Rating	250 V AC / 0,125 A ; 50 V DC / 0,25 A	250 V AC / 0,125 A ; 50 V DC / 0,25 A	250 V AC / 0,125 A ; 50 V DC / 0,25 A

Technical data	EVB 063 PA	EVB 100 PA	EVB 160 PA
Bakeout temperature: housing	80 °C	80 °C	80 °C
Weight	4 kg	6.7 kg	11.4 kg

	EVB 063 PA	EVB 100 PA	EVB 160 PA
Supply	24 V AC	24 V AC	24 V AC
Part number	0540227651	0540227656	0540227661
Supply	24 V DC	24 V DC	24 V DC
Part number	0540227652	0540227657	0540227662
Supply	100-115 V AC	100-115 V AC	100-115 V AC
Part number	0540227653	0540227658	0540227663
Supply	200-240 V AC	200-240 V AC	200-240 V AC
Part number	0540227654	0540227659	0540227664

Technical data	EVB 063 PX	EVB 100 PX
Bakeout temperature: housing	150 °C	150 °C
Weight	6.8 kg	11.7 kg

	EVB 063 PX	EVB 100 PX
Supply	24 V AC	24 V AC
Part number	0540227887	0540227892
Supply	24 V DC	24 V DC
Part number	0540227888	0540227893
Supply	100-115 V AC	100-115 V AC
Part number	0540227889	0540227894
Supply	200-240 V AC	200-240 V AC
Part number	0540227890	0540227895

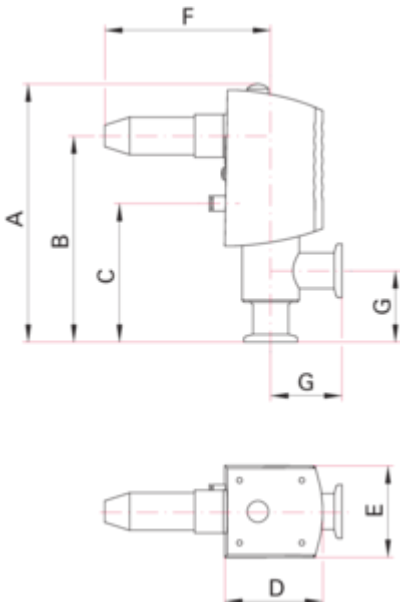
Angle valves, pneumatic, with PI, without PV, DN 16 to 40 ISO-KF



- Bellows-sealed
- With visual position indicator
- Normally closed (n.c.)
- Service life: 10 million operating cycles

AVC = Angle valve with bellows feedthrough
 PA = Pneumatically actuated, aluminum housing
 PX = Pneumatically actuated, stainless steel housing
 PI = Position indicator

Dimensions



	AVC 016 PA	AVC 025 PA	AVC 040 PA
A	142 mm	146,9 mm	199,8 mm
B	112.9 mm	117.8 mm	159.7 mm

	AVC 016 PA	AVC 025 PA	AVC 040 PA
C	75.1 mm	79 mm	114.9 mm
D	55 mm	64.3 mm	81.3 mm
E	51.4 mm	60,1 mm	75.7 mm
F	93.2 mm	97.8 mm	105.3 mm
G	40 mm	50 mm	65 mm

	AVC 016 PX	AVC 025 PX	AVC 040 PX
A	144.5 mm	150.3 mm	191.8 mm
B	115.4 mm	121.2 mm	162.2 mm
C	77.6 mm	82.5 mm	117.9 mm
D	55 mm	64.3 mm	81.3 mm
E	51.4 mm	60,1 mm	75.7 mm
F	93.2 mm	97.8 mm	105.3 mm
G	40 mm	50 mm	65 mm

Technical data	AVC 016 PA AVC 016 PX	AVC 025 PA AVC 025 PX	AVC 040 PA AVC 040 PX
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Bakeout temperature: actuator, pilot valve	50 °C	50 °C	50 °C
Operating pressure max.	2000 hPa (abs.)	2000 hPa (abs.)	2000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	2000 hPa	2000 hPa	2000 hPa
Differential pressure in closing direction	5000 hPa	5000 hPa	5000 hPa
Compressed air (overpressure) max.	8000 hPa	8000 hPa	8000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa	4000 hPa
Compressed air volume	4 cm ³	11 cm ³	35 cm ³
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Conductance for molecular flow	5 l/s	14 l/s	45 l/s
Opening time	100 ms	120 ms	260 ms
Closing time	100 ms	160 ms	540 ms
Service life	10000000 cycles	10000000 cycles	10000000 cycles

Technical data	AVC 016 PA AVC 016 PX	AVC 025 PA AVC 025 PX	AVC 040 PA AVC 040 PX
Electrical position indicator	Included	Included	Included
Electrical position indicator: Rating	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A

	AVC 016 PA	AVC 025 PA	AVC 040 PA
Bakeout temperature: housing	80 °C	80 °C	80 °C
Housing	Aluminum	Aluminum	Aluminum
Weight	0.49 kg	0.68 kg	1.21 kg
Part number	0654228675	0654228691	0654228707

	AVC 016 PX	AVC 025 PX	AVC 040 PX
Bakeout temperature: housing	150 °C	150 °C	150 °C
Housing	Stainless steel	Stainless steel	Stainless steel
Weight	0.52 kg	0.75 kg	1.33 kg
Part number	0654228676	0654228692	0654228708

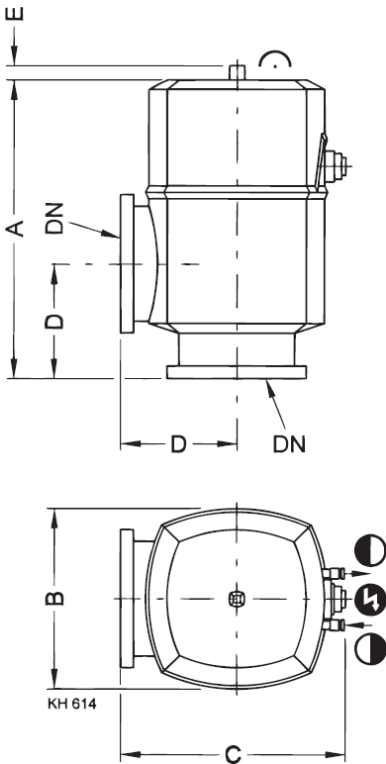
Angle valves, pneumatic, with PI, without PV, DN 63 to 160 ISO-K



- Bellows-sealed
- With visual position indicator
- Normally closed (n.c.)
- Service life: 1.5 million operating cycles

EVB = Angle valve with bellows feedthrough
PA = Pneumatically actuated, aluminum housing
PX = Pneumatically actuated, stainless steel housing
PI = Position indicator

Dimensions



	EVB 063 PA	EVB 100 PA	EVB 160 PA
A	250 mm	282 mm	366 mm
B	124 mm	164 mm	215 mm
C	168 mm	208 mm	264 mm
D	88 mm	108 mm	138 mm
E	14 mm	14 mm	14 mm

	EVB 063 PX	EVB 100 PX
A	250 mm	282 mm
B	124 mm	164 mm
C	168 mm	208 mm
D	88 mm	108 mm
E	14 mm	14 mm

Technical data	EVB 063 PA EVB 063 PX	EVB 100 PA EVB 100 PX	EVB 160 PA
Flange (out)	DN 63 ISO-K	DN 100 ISO-K	DN 160 ISO-K
Flange (in)	DN 63 ISO-K	DN 100 ISO-K	DN 160 ISO-K
Bakeout temperature: actuator, pilot valve	60 °C	60 °C	60 °C
Operating pressure max.	1500 hPa (abs.)	1500 hPa (abs.)	1500 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	1500 hPa	1500 hPa	1500 hPa
Differential pressure in closing direction	1500 hPa	1500 hPa	1500 hPa
Compressed air (overpressure) max.	8000 hPa	8000 hPa	8000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa	4000 hPa
Compressed air volume	75 cm ³	195 cm ³	570 cm ³
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Conductance for molecular flow	140 l/s	330 l/s	800 l/s
Opening time	300 ms	400 ms	600 ms
Closing time	300 ms	400 ms	650 ms
Service life	1500000 cycles	1500000 cycles	1500000 cycles
Electrical position indicator	Included	Included	Included
Electrical position indicator: Rating	250 V AC / 0.125 A ; 50 V DC / 0.25 A	250 V AC / 0.125 A ; 50 V DC / 0.25 A	250 V AC / 0.125 A ; 50 V DC / 0.25 A

	EVB 063 PA	EVB 100 PA	EVB 160 PA
Bakeout temperature: housing	80 °C	80 °C	150 °C
Housing	Aluminum	Aluminum	Aluminum
Weight	4 kg	6.7 kg	11.4 kg
Part number	0540227650	0540227655	0540227660

	EVB 063 PX	EVB 100 PX
Bakeout temperature: housing	150 °C	150 °C
Housing	Stainless steel	Stainless steel
Weight	6.8 kg	11.7 kg
Part number	0540227886	0540227891

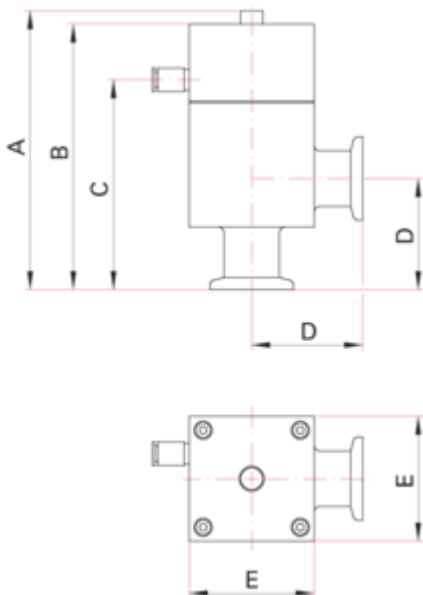
Angle valves, pneumatic, without PI, without PV, DN 16 to 40 ISO-KF



- Bellows-sealed
- With visual position indicator
- Normally closed (n.c.)
- Service life: 10 million operating cycles

AVC = Angle valve with bellows feedthrough
 PA = Pneumatically actuated, aluminum housing
 PX = Pneumatically actuated, stainless steel housing

Dimensions



	AVC 016 PA	AVC 025 PA	AVC 040 PA
A	100.5 mm	108.5 mm	150.5 mm

	AVC 016 PA	AVC 025 PA	AVC 040 PA
B	95,7 mm	102.6 mm	144.7 mm
C	75.6 mm	80.6 mm	116.6 mm
D	40 mm	50 mm	65 mm
E	45 mm	54 mm	69 mm

	AVC 016 PX	AVC 025 PX	AVC 040 PX
A	103 mm	112 mm	153.5 mm
B	98.2 mm	106 mm	147.7 mm
C	78.1 mm	84 mm	119.6 mm
D	40 mm	50 mm	65 mm
E	45 mm	54 mm	69 mm

Technical data	AVC 016 PA AVC 016 PX	AVC 025 PA AVC 025 PX	AVC 040 PA AVC 040 PX
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Bakeout temperature: actuator, pilot valve	120 °C	120 °C	120 °C
Operating pressure max.	2000 hPa (abs.)	2000 hPa (abs.)	2000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	2000 hPa	2000 hPa	2000 hPa
Differential pressure in closing direction	5000 hPa	5000 hPa	5000 hPa
Compressed air (overpressure) max.	8000 hPa	8000 hPa	8000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa	4000 hPa
Compressed air volume	400 cm ³	11 cm ³	35 cm ³
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Conductance for molecular flow	5 l/s	14 l/s	45 l/s
Opening time	100 ms	120 ms	260 ms
Closing time	100 ms	160 ms	540 ms
Service life	10000000 cycles	10000000 cycles	10000000 cycles

	AVC 016 PA	AVC 025 PA	AVC 040 PA
Bakeout temperature: housing	80 °C	80 °C	80 °C
Housing	Aluminum	Aluminum	Aluminum

	AVC 016 PA	AVC 025 PA	AVC 040 PA
Weight	0.38 kg	0.57 kg	1.17 kg
Part number	0654228673	0654228689	0654228705

	AVC 016 PX	AVC 025 PX	AVC 040 PX
Bakeout temperature: housing	150 °C	150 °C	150 °C
Housing	Stainless steel	Stainless steel	Stainless steel
Weight	0.42 kg	0.66 kg	1.28 kg
Part number	0654228674	0654228690	0654228706

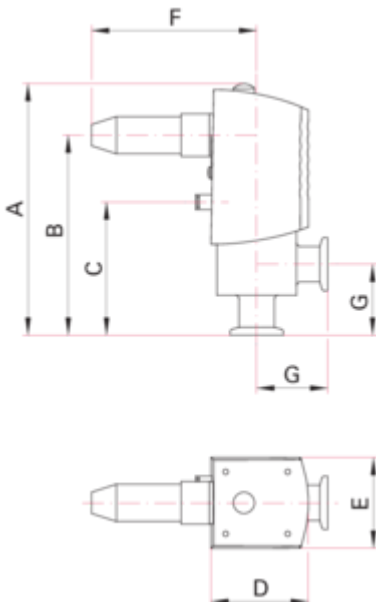
Angle valves, electropneumatic, with PI, with PV, n.o., DN 16 to 40 ISO-KF



- Bellows-sealed
- With visual position indicator
- Normally open (n.o.)
- Service life: 10 million operating cycles

AVC = Angle valve with bellows feedthrough
 PA = Electropneumatically actuated, aluminum housing
 PX = Electropneumatically actuated, stainless steel housing
 DC = Direct current

Dimensions



	AVC 016 PA	AVC 025 PA	AVC 040 PA
A	142 mm	146.9 mm	188.8 mm
B	112.9 mm	117.8 mm	159.7 mm

	AVC 016 PA	AVC 025 PA	AVC 040 PA
C	75.1 mm	79 mm	114.9 mm
D	55 mm	64.3 mm	81.3 mm
E	51.4 mm	60.1 mm	75.7 mm
F	93.2 mm	97.8 mm	105.3 mm
G	40 mm	50 mm	65 mm

	AVC 016 PX	AVC 025 PX	AVC 040 PX
A	144.5 mm	150.3 mm	191.8 mm
B	115.4 mm	121.2 mm	162.7 mm
C	77.6 mm	82.5 mm	117.9 mm
D	55 mm	64.3 mm	81.3 mm
E	51.4 mm	60.1 mm	75.7 mm
F	93.2 mm	97.8 mm	105.3 mm
G	40 mm	50 mm	65 mm

Technical data	AVC 016 PA AVC 016 PX	AVC 025 PA AVC 025 PX	AVC 040 PA AVC 040 PX
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Bakeout temperature: actuator, pilot valve	50 °C	50 °C	50 °C
Operating pressure max.	2000 hPa (abs.)	2000 hPa (abs.)	2000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	2000 hPa	2000 hPa	2000 hPa
Differential pressure in closing direction	5000 hPa	5000 hPa	5000 hPa
Compressed air (overpressure) max.	8000 hPa	8000 hPa	8000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa	4000 hPa
Compressed air volume	4 cm ³	11 cm ³	35 cm ³
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Power pilot valve	2.5 W	2.5 W	2.5 W
Conductance for molecular flow	5 l/s	14 l/s	45 l/s
Opening time	100 ms	120 ms	260 ms
Closing time	100 ms	160 ms	540 ms
Service life	10000000 cycles	10000000 cycles	10000000 cycles

Technical data	AVC 016 PA AVC 016 PX	AVC 025 PA AVC 025 PX	AVC 040 PA AVC 040 PX
Electrical position indicator	Included	Included	Included
Electrical position indicator: Rating	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A
Control valve	Included	Included	Included
Supply	24 V DC	24 V DC	24 V DC

	AVC 016 PA	AVC 025 PA	AVC 040 PA
Bakeout temperature: housing	80 °C	80 °C	80 °C
Housing	Aluminum	Aluminum	Aluminum
Weight	0.49 kg	0.68 kg	1.21 kg
Part number	0654228680	0654228696	654228712

	AVC 016 PX	AVC 025 PX	AVC 040 PX
Bakeout temperature: housing	150 °C	150 °C	150 °C
Housing	Stainless steel	Stainless steel	Stainless steel
Weight	0.52 kg	0.75 kg	1.33 kg
Part number	0654228682	0654228698	0654228714

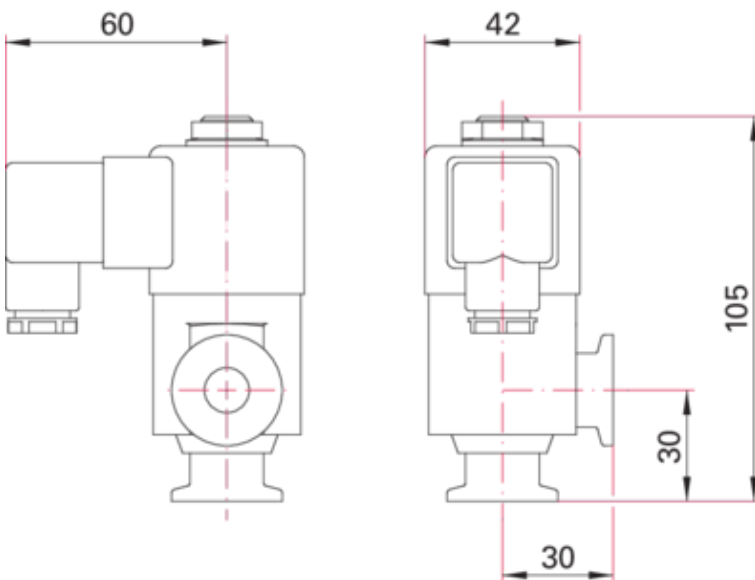
Angle valves, solenoid actuated, without PI, DN 10 ISO-KF



- Flange size DN 10 ISO-KF
- Housing material: Aluminum
- Solenoid actuated, without vacuum feedthrough
- Normally closed (n.c.)
- Service life: 1.5 million operating cycles

EVC = Angle valve without vacuum feedthrough
DC = Direct current

Dimensions



Technical data	EVC 110 M
Flange (out)	DN 10 ISO-KF
Flange (in)	DN 10 ISO-KF
Pickup/holding power	35/15 W
Bakeout temperature: actuator	80 °C
Bakeout temperature: housing	150 °C
Operating pressure max.	1000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³

Technical data	EVC 110 M
Seal	FKM
Differential pressure in opening direction	1000 hPa
Differential pressure in closing direction	1000 hPa
Housing	Aluminum
Weight	0.46 kg
Conductance for molecular flow	1 l/s
Can be opened to a pressure difference of	2000 hPa
Opening time	45 ms
Switching frequency	50 min ⁻¹
Closing time	60 ms
Service life	1500000 cycles

Supply	Part number
24 V, 50/60 Hz	0540228667
24 V DC	0540228668
115 V, 50/60 Hz	0540228669
230 V, 50/60 Hz	0540228670

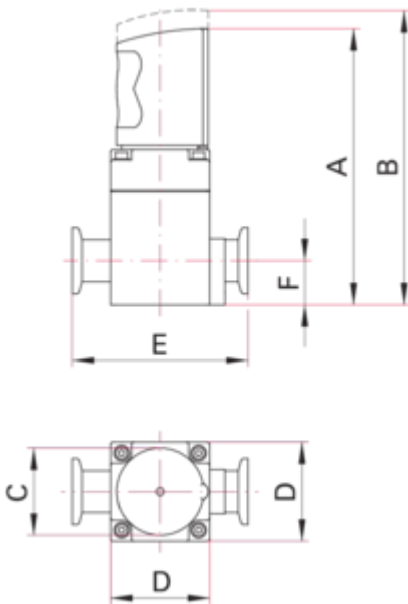
Inline-valves, manual, DN 16 to 40 ISO-KF



- Quick opening by partly turning the rotary knob
- Bellows-sealed
- With visual indication of open and closed positions
- Service life: 10000 operating cycles

DVC = Inline valve with bellows feedthrough
 SX = Manually actuated, stainless steel housing

Dimensions



	DVC 016 SX	DVC 025 SX	DVC 040 SX
A	125.4 mm	132 mm	166.5 mm
B	133.6 mm	142.4 mm	181.7 mm
C	39.6 mm	39.6 mm	50 mm
D	45 mm	54 mm	69 mm
E	80 mm	100 mm	139 mm
F	20 mm	31.8 mm	40.8 mm

Technical data	DVC 016 SX	DVC 025 SX	DVC 040 SX
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Actuator	Rotary knob	Rotary knob	Rotary knob
Bakeout temperature: actuator	50 °C	50 °C	50 °C
Bakeout temperature: housing	150 °C	150 °C	150 °C
Operating pressure max.	2000 hPa (abs.)	2000 hPa (abs.)	1500 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	2000 hPa	2000 hPa	1500 hPa
Differential pressure in closing direction	4000 hPa	4000 hPa	2000 hPa
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Housing	Stainless steel	Stainless steel	Stainless steel
Weight	0.71 kg	1.09 kg	1.83 kg
Conductance for molecular flow	2.5 l/s	7 l/s	20 l/s
Service life	10000 cycles	10000 cycles	10000 cycles

Part number			
Inline valves	0654228723	0540228734	0540228745

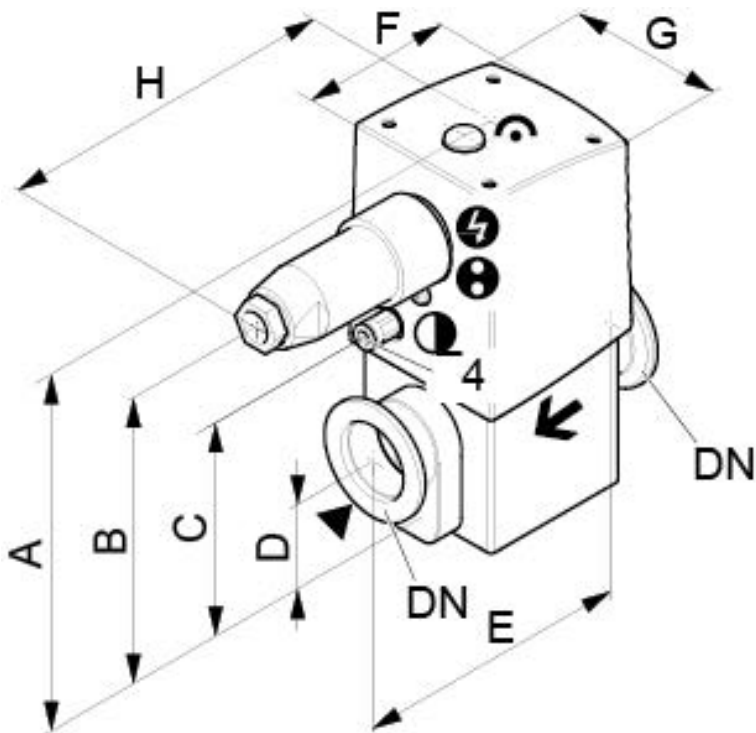
Inline-valves, electropneumatic, with PI, with PV, DN 16 to 40 ISO-KF



- Bellows-sealed
- With visual position indicator
- Normally closed (n.c.)
- With electrical position indicator
- Service life: 10 million operating cycles

DVC = Inline valve with bellows feedthrough
PX = Electropneumatically actuated, stainless steel housing
AC = Alternating current
DC = Direct current
PI = Position indicator
PV = Pilot valve

Dimensions



	DVC 016 PX	DVC 025 PX	DVC 040 PX
A	126.1 mm	133.6 mm	169.1 mm
B	97 mm	104.5 mm	140 mm
C	59.2 mm	65.7 mm	95.2 mm
D	20 mm	31.8 mm	40.8 mm
E	80 mm	100 mm	130 mm
F	55 mm	64.3 mm	81.3 mm
G	51.4 mm	60.1 mm	75.7 mm
H	93.2 mm	97.8 mm	105.3 mm

Technical data	DVC 016 PX	DVC 025 PX	DVC 040 PX
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Bakeout temperature: actuator, pilot valve	50 °C	50 °C	50 °C
Bakeout temperature: housing	150 °C	150 °C	150 °C
Operating pressure max.	2000 hPa (abs.)	2000 hPa (abs.)	2000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	2000 hPa	2000 hPa	2000 hPa
Differential pressure in closing direction	5000 hPa	5000 hPa	5000 hPa
Compressed air (overpressure) max.	8000 hPa	8000 hPa	8000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa	4000 hPa
Compressed air volume	4 cm ³	11 cm ³	35 cm ³
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Housing	Stainless steel	Stainless steel	Stainless steel
Weight	0.89 kg	1.35 kg	2.2 kg
Conductance for molecular flow	2.5 l/s	7 l/s	20 l/s
Opening time	100 ms	120 ms	260 ms
Closing time	100 ms	160 ms	540 ms
Service life	10000000 cycles	10000000 cycles	10000000 cycles
Electrical position indicator	Included	Included	Included
Electrical position indicator: Rating	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A
Control valve	Included	Included	Included

	DVC 016 PX	DVC 025 PX	DVC 040 PX
Supply	24 V AC	24 V AC	24 V AC
Power pilot valve	4.8/3.6 W	4.8/3.6 W	4.8/3.6 W
Part number	0654228726	0654228737	0654228748
Supply	24 V DC	24 V DC	24 V DC
Power pilot valve	2.5 W	2.5 W	2.5 W
Part number	0654228728	0654228739	0654228750
Supply	100-115 V AC	100-115 V AC	100-115 V AC
Power pilot valve	4.8/3.6 W	4.8/3.6 W	4.8/3.6 W
Part number	0654228730	0654228741	0654228752
Supply	200-230 V AC	200-230 V AC	200-230 V AC
Power pilot valve	4.8/3.6 W	4.8/3.6 W	4.8/3.6 W
Part number	0654228732	0654228743	0654228754

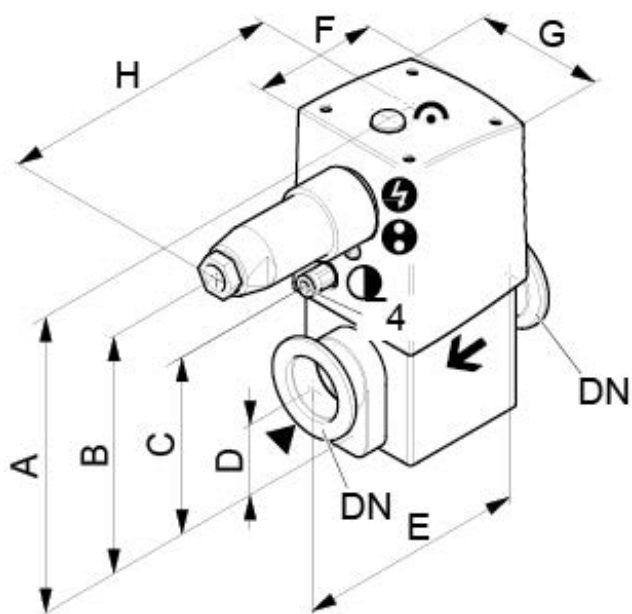
Inline-valves, pneumatic, with PI, without PV, DN 16 to 40 ISO-KF



- Bellows-sealed
- With visual position indicator
- Normally closed (n.c.)
- Service life: 10 million operating cycles

DVC = Inline valve with bellows feedthrough
 PX = Pneumatically actuated, stainless steel housing

Dimensions



	DVC 016 PX	DVC 025 PX	DVC 040 PX
A	126.1 mm	133.6 mm	169.1 mm
B	97 mm	104.5 mm	140 mm
C	59.2 mm	65.7 mm	95.2 mm

	DVC 016 PX	DVC 025 PX	DVC 040 PX
D	20 mm	31.8 mm	40.8 mm
E	80 mm	100 mm	130 mm
F	55 mm	64.3 mm	81.3 mm
G	51.4 mm	60.1 mm	75.7 mm
H	93.2 mm	97.8 mm	105.3 mm

Technical data	DVC 016 PX	DVC 025 PX	DVC 040 PX
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Bakeout temperature: actuator, pilot valve	50 °C	50 °C	50 °C
Bakeout temperature: housing	150 °C	150 °C	150 °C
Operating pressure max.	2000 hPa (abs.)	2000 hPa (abs.)	2000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	2000 hPa	2000 hPa	2000 hPa
Differential pressure in closing direction	5000 hPa	5000 hPa	5000 hPa
Compressed air (overpressure) max.	8000 hPa	8000 hPa	8000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa	4000 hPa
Compressed air volume	4 cm ³	11 cm ³	35 cm ³
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Housing	Stainless steel	Stainless steel	Stainless steel
Weight	0.89 kg	1.35 kg	2.2 kg
Conductance for molecular flow	2.5 l/s	7 l/s	20 l/s
Opening time	100 ms	120 ms	260 ms
Closing time	100 ms	160 ms	540 ms
Service life	10000000 cycles	10000000 cycles	10000000 cycles
Electrical position indicator	Included	Included	Included
Electrical position indicator: Rating	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A

Part number			
Inline valves	0654228724	0654228735	0654228746

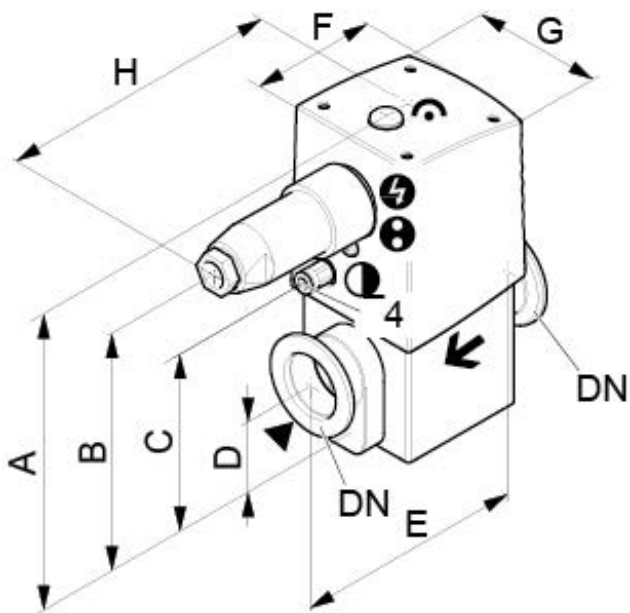
Inline-valves, electropneumatic with PI, with PV, n.o., DN 16 to 40 ISO-KF



- Bellows-sealed
- With visual position indicator
- Normally open (n.o.)
- Service life: 10 million operating cycles

DVC = Inline valve with bellows feedthrough
 PX = Electropneumatically actuated, stainless steel housing

Dimensions



	DVC 016 PX	DVC 025 PX	DVC 040 PX
A	126.1 mm	133.6 mm	169.1 mm
B	97 mm	104.5 mm	140 mm
C	59.2 mm	65.7 mm	95.2 mm
D	20 mm	31.8 mm	40.8 mm

	DVC 016 PX	DVC 025 PX	DVC 040 PX
E	80 mm	100 mm	130 mm
F	55 mm	64.3 mm	81.3 mm
G	51.4 mm	60.1 mm	75.7 mm
H	93.2 mm	97.8 mm	105.3 mm

Technical data	DVC 016 PX	DVC 025 PX	DVC 040 PX
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Bakeout temperature: actuator, pilot valve	50 °C	50 °C	50 °C
Bakeout temperature: housing	150 °C	150 °C	150 °C
Operating pressure max.	2000 hPa (abs.)	2000 hPa (abs.)	2000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure in opening direction	2000 hPa	2000 hPa	2000 hPa
Differential pressure in closing direction	5000 hPa	5000 hPa	5000 hPa
Compressed air (overpressure) max.	8000 hPa	8000 hPa	8000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa	4000 hPa
Compressed air volume	4 cm ³	11 cm ³	35 cm ³
Feedthrough	Bellows, stainless steel	Bellows, stainless steel	Bellows, stainless steel
Housing	Stainless steel	Stainless steel	Stainless steel
Weight	0.89 kg	1.35 kg	2.2 kg
Power pilot valve	2.5 W	2.5 W	2.5 W
Conductance for molecular flow	2.5 l/s	7 l/s	20 l/s
Opening time	100 ms	120 ms	260 ms
Closing time	100 ms	160 ms	540 ms
Service life	10000000 cycles	10000000 cycles	10000000 cycles
Electrical position indicator	Included	Included	Included
Electrical position indicator: Rating	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A	250 V AC / 0.1 A ; 50 V DC / 0.25 A
Control valve	Included	Included	Included
Supply	24 V AC	24 V DC	24 V DC

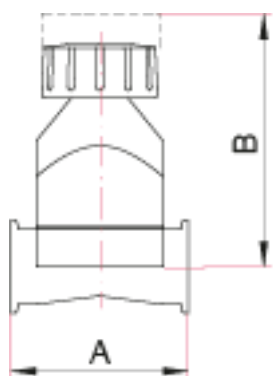
Part number			
Inline valves	0654228729	0654228740	0654228751

Diaphragm valves, manual



- Robust vacuum valve for venting, rough-metering and locking
- Service life: 100000 operating cycles
- The membrane seals the valve seat and the housing
- With visual indication of open and closed positions

Dimensions



	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
A	52 mm	80 mm	105 mm
B	66.5 mm	111 mm	132 mm

Technical Data	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Actuator	Spindle	Spindle	Spindle
Bakeout temperature: actuator	50 °C	50 °C	50 °C
Bakeout temperature: housing	100 °C	100 °C	100 °C
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-7}$
Seal: Valve plate	FKM	FKM	FKM
Pressure range	$1 \cdot 10^{-7}$	$1 \cdot 10^{-7}$	$1 \cdot 10^{-7}$

Technical Data	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Housing	Aluminum	Aluminum	Aluminum
Conductance for molecular flow	2 l/s	5 l/s	17 l/s

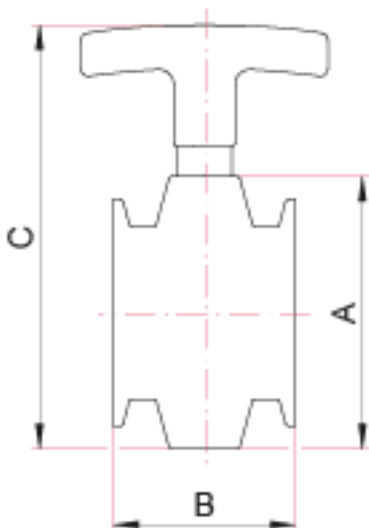
Part number			
Diaphragm valves	0544227019	0544227020	0544227021

Butterfly valves, manual, aluminum, DN 16 to 50 ISO-KF



- Swivel valve plate with FKM seal
- Service life: 3000 operating cycles
- Valve position indicated by T-handle
- Nearly free clearance in open position
- Double valve head seal made from FKM

Dimensions



	DN 16 ISO- KF	DN 25 ISO- KF	DN 40 ISO- KF	DN 50 ISO- KF
A	80 mm	80 mm	80 mm	90 mm
B	60 mm	60 mm	50 mm	60 mm
C	123 mm	123 mm	123 mm	140 mm

Technical Data	DN 16 ISO- KF	DN 25 ISO- KF	DN 40 ISO- KF	DN 50 ISO- KF
Flange (out)	DN 16 ISO- KF	DN 25 ISO- KF	DN 40 ISO- KF	DN 50 ISO- KF
Flange (in)	DN 16 ISO- KF	DN 25 ISO- KF	DN 40 ISO- KF	DN 50 ISO- KF
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³

Technical Data	DN 16 ISO- KF	DN 25 ISO- KF	DN 40 ISO- KF	DN 50 ISO- KF
Seal	FKM	FKM	FKM	FKM
Pressure range	1 · 10 ⁻⁸	1 · 10 ⁻⁸	1 · 10 ⁻⁸	1 · 10 ⁻⁸
Housing	Aluminum	Aluminum	Aluminum	Aluminum
Temperature range	-15 to 130 °C	-15 to 130 °C	-15 to 130 °C	-15 to 130 °C

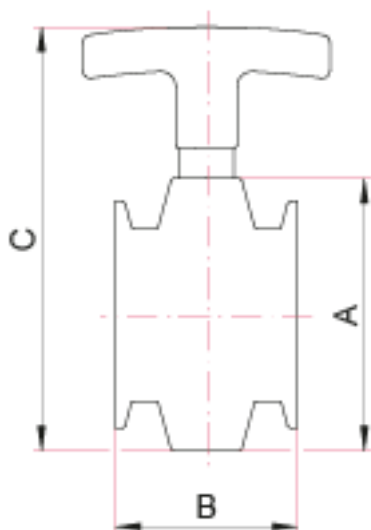
Part number				
Butterfly valves	0544227022	0544227023	0544227024	0544227025

Butterfly valves, manual, stainless steel, DN 16 to 50 ISO-KF



- Swivel valve plate with FKM seal
- Service life: 3000 operating cycles
- Valve position indicated by T-handle
- Nearly free clearance in open position
- Double valve head seal made from FKM

Dimensions



	DN 16 ISO- KF	DN 25 ISO- KF	DN 40 ISO- KF	DN 50 ISO- KF
A	80 mm	80 mm	80 mm	90 mm
B	60 mm	60 mm	60 mm	60 mm
C	123 mm	123 mm	123 mm	140 mm

Technical data	DN 16 ISO- KF	DN 25 ISO- KF	DN 40 ISO- KF	DN 50 ISO- KF
Flange (out)	DN 16 ISO- KF	DN 25 ISO- KF	DN 40 ISO- KF	DN 50 ISO- KF
Flange (in)	DN 40 ISO- KF	DN 25 ISO- KF	DN 40 ISO- KF	DN 50 ISO- KF
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³

Technical data	DN 16 ISO- KF	DN 25 ISO- KF	DN 40 ISO- KF	DN 50 ISO- KF
Seal	FKM	FKM	FKM	FKM
Pressure range	1 · 10 ⁻⁸	1 · 10 ⁻⁸	1 · 10 ⁻⁸	1 · 10 ⁻⁸
Housing	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Temperature range	-15 to 130 °C	-15 to 130 °C	-15 to 130 °C	-15 to 130 °C

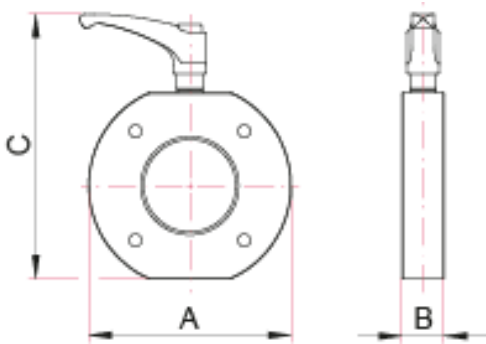
Part number	DN 16 ISO- KF	DN 25 ISO- KF	DN 40 ISO- KF	DN 50 ISO- KF
Butterfly valves	0544227339	0544227340	0544227341	0544227342

Butterfly valves, manual, aluminum, DN 63 ISO-F



- Swivel valve plate with FKM seal
- Service life: 3000 operating cycles
- Nearly free clearance in open position
- Valve position indicated by handle
- Double valve head seal made from FKM

Dimensions



DN 63 ISO-F	
A	145 mm
B	30 mm
C	190 mm

Technical data	DN 63 ISO-F
Flange (out)	DN 63 ISO-F
Flange (in)	DN 63 ISO-F
Tightness	$1 \cdot 10^{-10} \text{ Pa m}^3$
Seal	FKM
Pressure range	$1 \cdot 10^{-8}$
Housing	Aluminum
Scope of delivery	with set of M8 x 75 screws
Temperature range	-15 to 130 °C

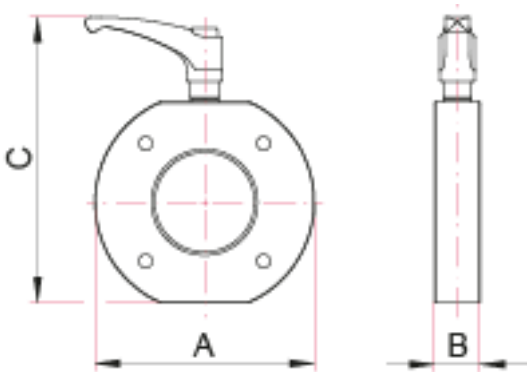
Part number	
Butterfly valves	0544228591

Butterfly valves, manual, stainless steel, DN 63 ISO-F



- Swivel valve plate with FKM seal
- Service life: 3000 operating cycles
- Nearly free clearance in open position
- Valve position indicated by handle
- Double valve head seal made from FKM

Dimensions



DN 63 ISO-F	
A	145 mm
B	30 mm
C	190 mm

Technical data	DN 63 ISO-F
Flange (out)	DN 63 ISO-F
Flange (in)	DN 63 ISO-F
Tightness	$1 \cdot 10^{-10} \text{ Pa m}^3$
Seal	FKM
Pressure range	$1 \cdot 10^{-8}$
Housing	Stainless steel
Temperature range	-15 to 130 °C

Part number	
Butterfly valves	0544228610

HV gate valve, manual, DN 16 to 40 ISO-KF

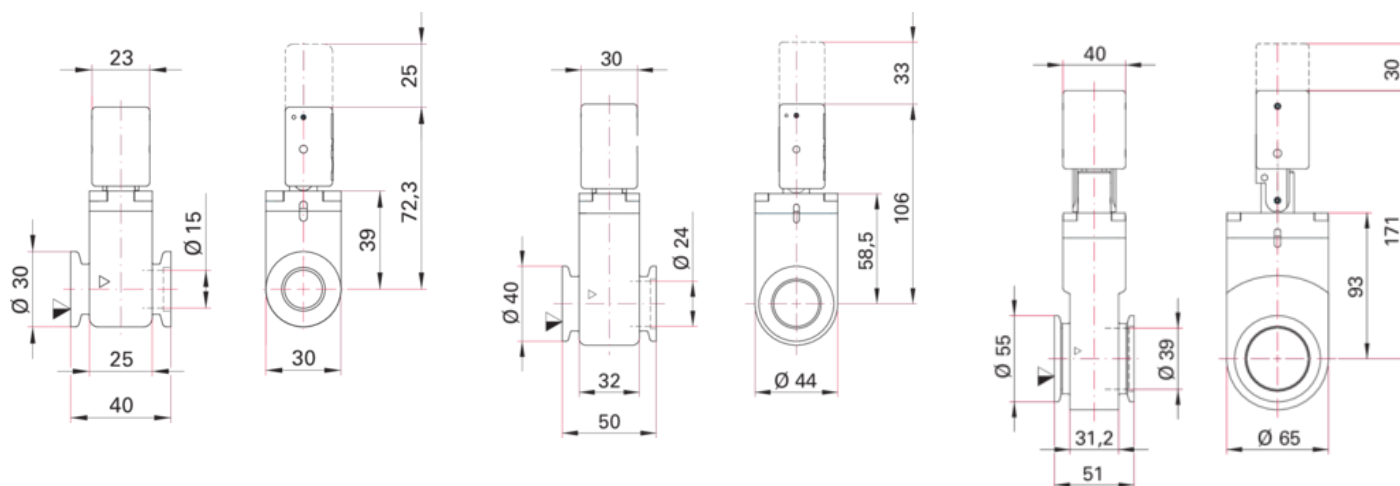


- High conductance due to free clearance
- Vulcanized valve disk seal
- Service life: 50000 operating cycles

SVV = Gate valve

HA = Manually actuated, aluminum housing

Dimensions



SVV 016 HA

SVV 025 HA

SVV 040 HA

Technical data	SVV 016 HA	SVV 025 HA	SVV 040 HA
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Actuator	Toggle lever	Toggle lever	Toggle lever
Bakeout temperature: actuator	80 °C	80 °C	80 °C
Bakeout temperature: housing	100 °C	100 °C	100 °C
Tightness	$1 \cdot 10^{-10} \text{ Pa m}^3$	$1 \cdot 10^{-10} \text{ Pa m}^3$	$1 \cdot 10^{-10} \text{ Pa m}^3$
Seal: Housing	FKM	FKM	FKM
Seal: Valve seat	FKM	FKM	FKM

Technical data	SVV 016 HA	SVV 025 HA	SVV 040 HA
Differential pressure in opening direction	1000 hPa	1000 hPa	1000 hPa
Differential pressure in closing direction	1000 hPa	1000 hPa	1000 hPa
Pressure max.	2000 hPa	2000 hPa	2000 hPa
Pressure min.	$1 \cdot 10^{-7}$	$1 \cdot 10^{-7}$	$1 \cdot 10^{-7}$
Feedthrough	Shaft feedthrough	Shaft feedthrough	Shaft feedthrough
Housing	Aluminum	Aluminum	Aluminum
Weight	0.4 kg	0.4 kg	0.7 kg
Conductance for molecular flow	10 l/s	34 l/s	140 l/s
Can be opened to a pressure difference of	30 hPa	30 hPa	30 hPa
Service life	50000 cycles	50000 cycles	50000 cycles
Valve plate	Stainless steel	Stainless steel	Stainless steel

Part number			
HV gate valves	0540228722	0540228733	0540228744

HV gate valve, manual, DN 63 to 160 ISO-F

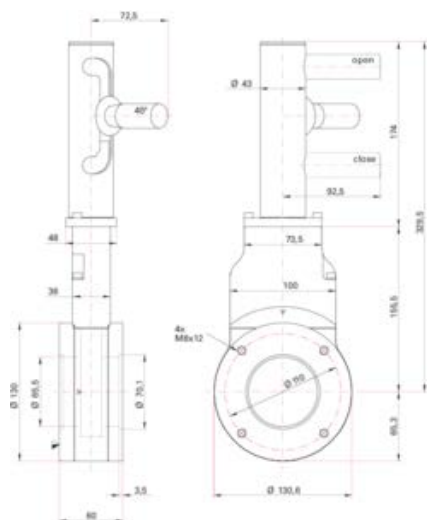


- High conductance due to free clearance
- Service life: up to 200000 operating cycles

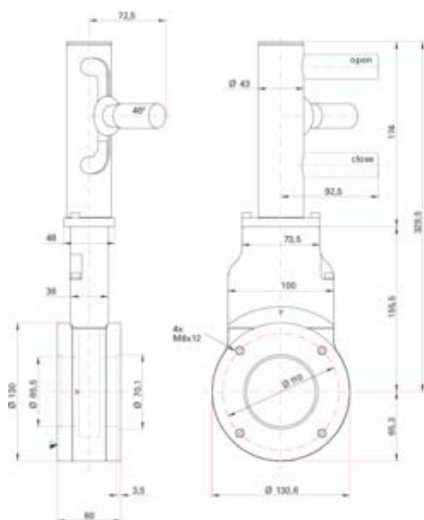
SVV = Gate valve

HA = Manually actuated, aluminum housing

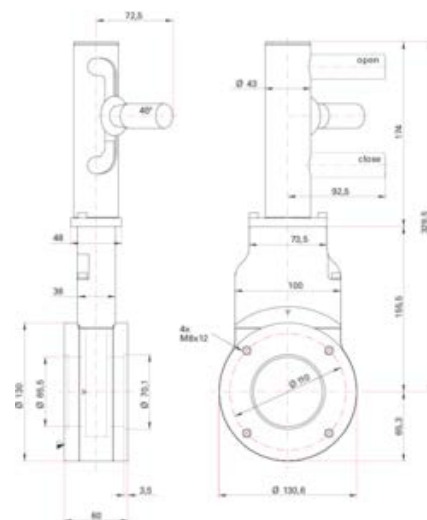
Dimensions



SVV 063 HA



SVV 100 HA



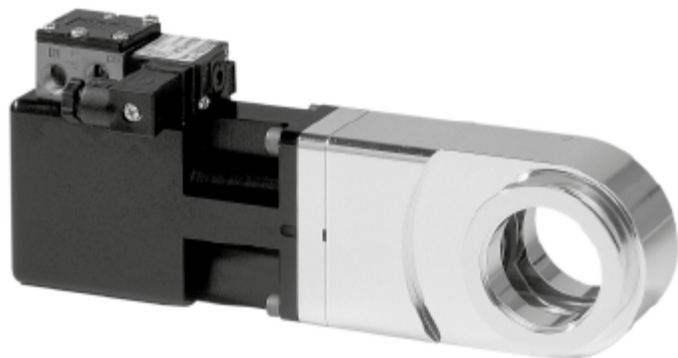
SVV 160 HA

Technical data	SVV 063 HA	SVV 100 HA	SVV 160 HA
Flange (out)	DN 63 ISO-F	DN 100 ISO-F	DN 160 ISO-F
Flange (in)	DN 63 ISO-F	DN 100 ISO-F	DN 160 ISO-F
Actuator	Connecting rod	Connecting rod	Connecting rod
Bakeout temperature: actuator	80 °C	80 °C	80 °C
Bakeout temperature: housing	120 °C	120 °C	120 °C
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal: Housing	FKM	FKM	FKM
Seal: Valve seat	FKM	FKM	FKM
Differential pressure in opening direction	1600 hPa	1600 hPa	1600 hPa
Differential pressure in closing direction	1600 hPa	1600 hPa	1600 hPa
Pressure max.	1600 hPa (abs.)	1600 hPa (abs.)	1600 hPa (abs.)
Pressure min.	$1 \cdot 10^{-7}$	$1 \cdot 10^{-7}$	$1 \cdot 10^{-7}$
Feedthrough	Shaft feedthrough	Shaft feedthrough	Shaft feedthrough

Technical data	SVV 063 HA	SVV 100 HA	SVV 160 HA
Housing	Aluminum	Aluminum	Aluminum
Weight	3 kg	4.5 kg	9 kg
Conductance for molecular flow	550 l/s	2000 l/s	6000 l/s
Can be opened to a pressure difference of	30 hPa	30 hPa	30 hPa
Service life	200000 cycles	200000 cycles	100000 cycles
Valve plate	Stainless steel	Stainless steel	Stainless steel

Part number			
HV gate valves	0540228755	0540228759	0540228763

HV gate valve, electropneumatic, with PI, with PV, DN 16 to 40 ISO-KF



- High conductance due to free clearance
- Vulcanized valve disk seal
- With visible indication of open and closed positions
- Service life: 50000 operating cycles

SVV = Gate valve

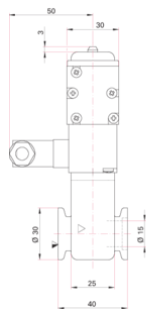
PA = Electropneumatically actuated, aluminum housing

DC = Direct current

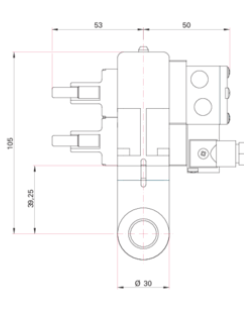
PI = Position indicator

PV = Pilot valve

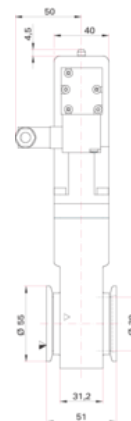
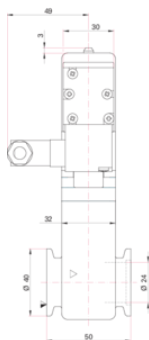
Dimensions



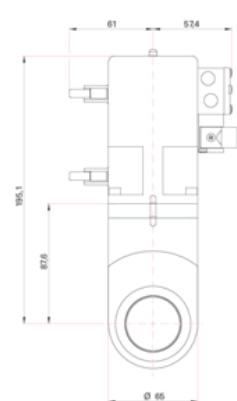
SVV 016 PA



SVV 025 PA



SVV 040 PA



Technical data	SVV 016 PA	SVV 025 PA	SVV 040 PA
Flange (out)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Actuator	Electropneumatic	Electropneumatic	Electropneumatic
Bakeout temperature: actuator	50 °C	50 °C	50 °C
Bakeout temperature: housing	100 °C	100 °C	100 °C
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal: Housing	FKM	FKM	FKM
Seal: Valve seat	FKM	FKM	FKM
Differential pressure in opening direction	1000 hPa	1000 hPa	1000 hPa
Differential pressure in closing direction	1000 hPa	1000 hPa	1000 hPa

Technical data	SVV 016 PA	SVV 025 PA	SVV 040 PA
Compressed air (overpressure) max.	7000 hPa	7000 hPa	7000 hPa
Compressed air (overpressure) min.	4500 hPa	4500 hPa	4500 hPa
Compressed air volume	10 cm ³	30 cm ³	70 cm ³
Pressure max.	1000 hPa (abs.)	1000 hPa (abs.)	1000 hPa (abs.)
Pressure min.	1 · 10 ⁻⁷	1 · 10 ⁻⁷	1 · 10 ⁻⁷
Feedthrough	Shaft feedthrough	Shaft feedthrough	Shaft feedthrough
Housing	Aluminum	Aluminum	Aluminum
Weight	0.8 kg	0.8 kg	1.2 kg
Position feedback: Load capacity	50 V / 0.5 A / 10 W	50 V / 0.5 A / 10 W	50 V / 0.5 A / 10 W
Power consumption	24 V DC / 5.4 W	24 V DC / 5.4 W	24 V DC / 5.4 W
Conductance for molecular flow	10 l/s	34 l/s	140 l/s
Can be opened to a pressure difference of	30 hPa	30 hPa	30 hPa
Closing/opening time	0.8 s	1.1 s	1.2 s
Service life	50000 cycles	50000 cycles	50000 cycles
Valve plate	Stainless steel	Stainless steel	Stainless steel

	SVV 016 PA	SVV 025 PA	SVV 040 PA
Supply	24 V DC	24 V DC	24 V DC
Part number	0540228727	0540228738	0540228749
Supply	24 V, 50 Hz	24 V, 50 Hz	24 V, 50 Hz
Part number	0540228725	0540228736	0540228747
Supply	230 V, 50 Hz	230 V, 50 Hz	230 V, 50 Hz
Part number	0540228731	0540228742	0540228753

HV gate valve, electropneumatic, with PI, with PV, ISO-F Aluminum, DN 63 to 250 ISO-F



- High conductance due to free clearance
- With visual indication of open and closed positions
- Service life: up to 200000 operating cycles

SVV = Gate valve

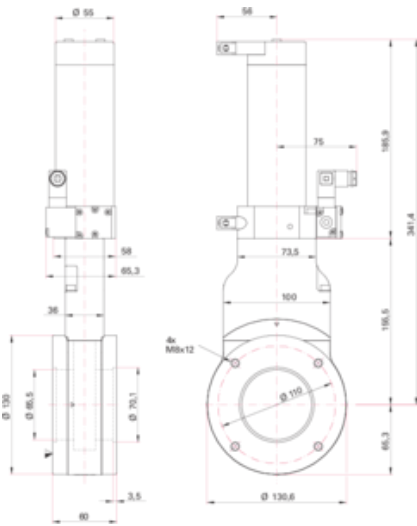
PA = Electropneumatically actuated

DC = Direct current

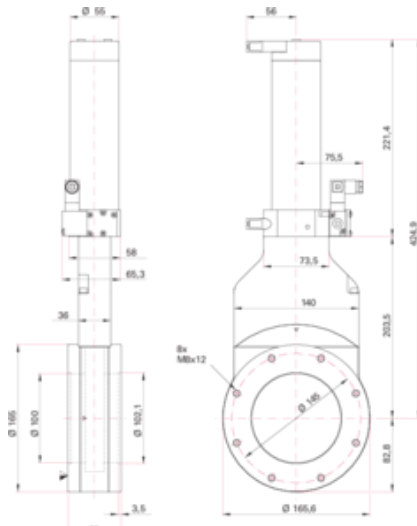
PI = Position indicator

PV = Pilot valve

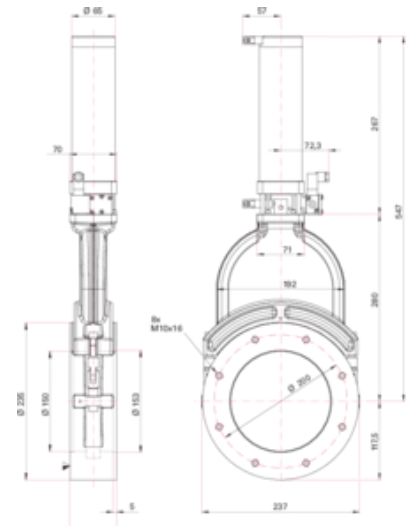
Dimensions



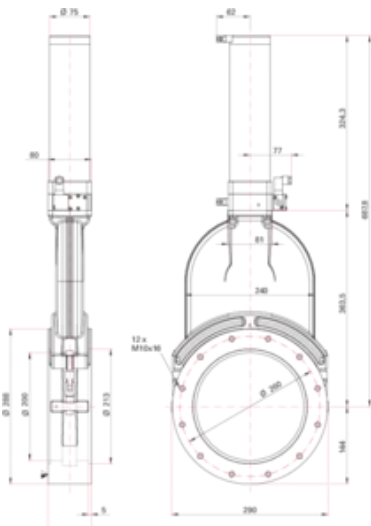
SVV 063 PA



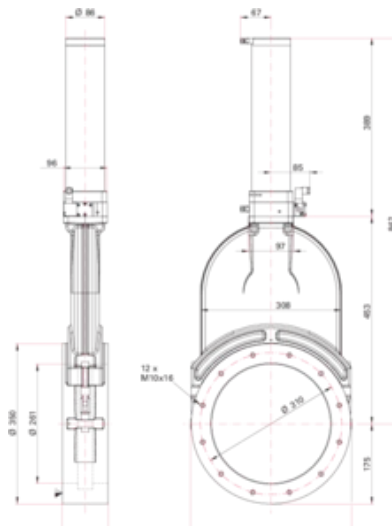
SVV 100 HA



SVV 160 PA



SVV 200 PA



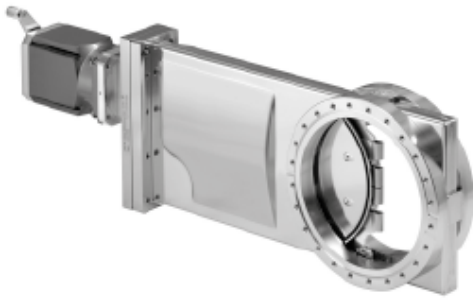
SVV 250 PA

Technical data	SVV 063 PA	SVV 100 PA	SVV 160 PA	SVV 200 PA	SVV 250 PA
Flange (out)	DN 63 ISO-F	DN 100 ISO-F	DN 160 ISO-F	DN 200 ISO-F	DN 250 ISO-F
Flange (in)	DN 63 ISO-F	DN 100 ISO-F	DN 160 ISO-F	DN 200 ISO-F	DN 250 ISO-F
Actuator	Electropneumatic	Electropneumatic	Electropneumatic	Electropneumatic	Electropneumatic
Bakeout temperature: actuator	50 °C	50 °C	50 °C	50 °C	50 °C
Bakeout temperature: housing	120 °C	120 °C	120 °C	120 °C	120 °C
Tightness	$1 \cdot 10^{-10} \text{ Pa m}^3$	$1 \cdot 10^{-10} \text{ Pa m}^3$	$1 \cdot 10^{-10} \text{ Pa m}^3$	$1 \cdot 10^{-10} \text{ Pa m}^3$	$1 \cdot 10^{-10} \text{ Pa m}^3$
Seal: Housing	FKM	FKM	FKM	FKM	FKM
Seal: Valve seat	FKM	FKM	FKM	FKM	FKM

Technical data	SVV 063 PA	SVV 100 PA	SVV 160 PA	SVV 200 PA	SVV 250 PA
Differential pressure in opening direction	1600 hPa	1600 hPa	1600 hPa	1600 hPa	1200 hPa
Differential pressure in closing direction	1600 hPa	1600 hPa	1600 hPa	1600 hPa	1200 hPa
Compressed air (overpressure) max.	7000 hPa	7000 hPa	7000 hPa	7000 hPa	7000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa	4000 hPa	4000 hPa	4000 hPa
Compressed air volume	160 cm ³	220 cm ³	500 cm ³	9000 cm ³	1500 cm ³
Pressure max.	1600 hPa (abs.)	1600 hPa (abs.)	1600 hPa (abs.)	160 hPa (abs.)	1200 hPa (abs.)
Pressure min.	1 · 10 ⁻⁷	1 · 10 ⁻⁷	1 · 10 ⁻⁷	1 · 10 ⁻⁷	1 · 10 ⁻⁷
Feedthrough	Shaft feedthrough	Shaft feedthrough	Shaft feedthrough	Shaft feedthrough	Shaft feedthrough
Housing	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Weight	3 kg	4.5 kg	9 kg	18 kg	25 kg
Position feedback: Load capacity	250 V AC / 2 A ; 50 V DC / 1.2 A	250 V AC / 2 A ; 50 V DC / 1.2 A	250 V AC / 2 A ; 50 V DC / 1.2 A	250 V AC / 2 A ; 50 V DC / 1.2 A	250 V AC / 2 A ; 50 V DC / 1.2 A
Power consumption	24 V DC / 5.4 W	24 V DC / 5.4 W	24 V DC / 5.4 W	24 V DC / 5.4 W	24 V DC / 5.4 W
Conductance for molecular flow	550 l/s	2000 l/s	6000 l/s	12000 l/s	22000 l/s
Can be opened to a pressure difference of	30 hPa	30 hPa	30 hPa	30 hPa	30 hPa
Closing/opening time	1.5 s	2 s	2 s	3 s	5 s
Service life	200000 cycles	200000 cycles	100000 cycles	100000 cycles	100000 cycles
Valve plate	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel

	SVV 063 PA	SVV 100 PA	SVV 160 PA	SVV 200 PA	SVV 250 PA
Supply	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Part number	0540228757	0540228761	0540228765	0540228769	0540228777
Supply	24 V, 50 Hz	24 V, 50 Hz	24 V, 50 Hz	24 V, 50 Hz	24 V, 50 Hz
Part number	0540228756	0540228760	0540228764	0540228767	0540228773
Supply	230 V, 50 Hz	230 V, 50 Hz	230 V, 50 Hz	230 V, 50 Hz	230 V, 50 Hz
Part number	0540228758	0540228762	0540228766	0540228771	0540228782

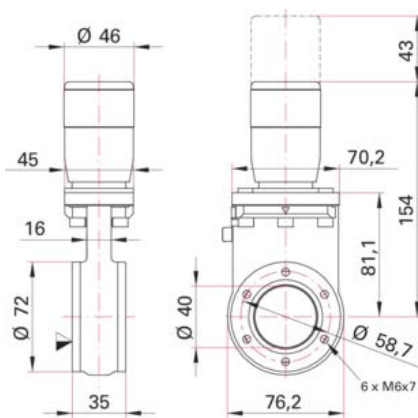
UHV gate valve, manual, DN 40 to 200 CF



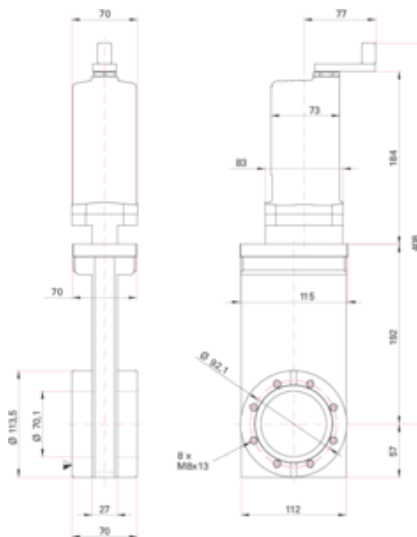
- Metal-sealed stainless steel housing
- Vulcanized, cavity-free valve disk seal
- Bellows-sealed
- Lubricant-free mechanics
- High conductance due to free clearance
- Service life: 50000 operating cycles

SVV = Gate valve
HF/HM = Manually actuated

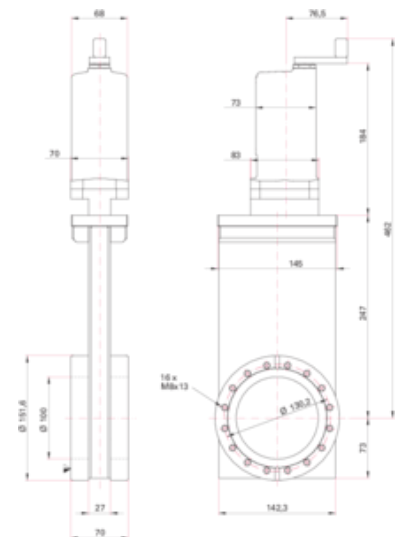
Dimensions



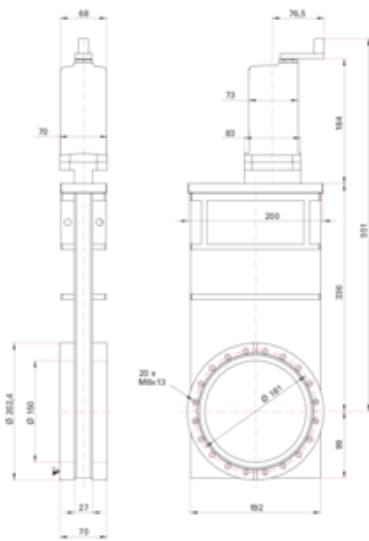
SVV 040 HM



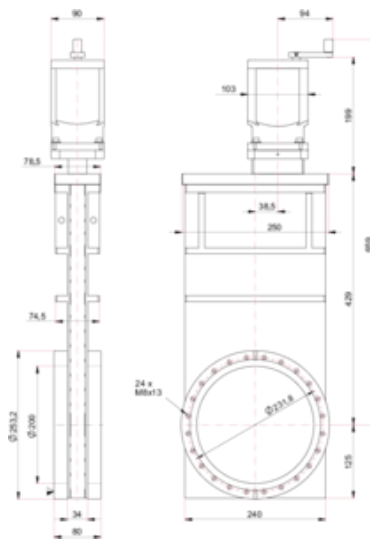
SVV 063 HF



SVV 100 HF



SVV 160 HF



SVV 200 HF

Technical data	SVV 040 HM	SVV 063 HF	SVV 100 HF
Flange (out)	DN 40 CF-F	DN 63 CF-F	DN 100 CF-F
Flange (in)	DN 40 CF-F	DN 63 CF-F	DN 100 CF-F
Actuator	Hand wheel	Hand wheel	Hand wheel
Bakeout temperature: Valve open, under vacuum	250 °C	250 °C	250 °C
Bakeout temperature: Valve closed	200 °C	200 °C	200 °C
Tightness: Housing	$5 \cdot 10^{-11}$ Pa m ³	$5 \cdot 10^{-11}$ Pa m ³	$5 \cdot 10^{-11}$ Pa m ³
Tightness: Valve seat	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal: Housing	Metal	Metal	Metal
Seal: Valve seat	FKM	FKM	FKM
Differential pressure in opening direction	2000 hPa	1600 hPa	1600 hPa
Differential pressure in closing direction	2000 hPa	1600 hPa	1600 hPa
Pressure max.	2000 hPa (abs.)	1600 hPa (abs.)	1600 hPa (abs.)
Pressure min.	$1 \cdot 10^{-10}$	$1 \cdot 10^{-10}$	$1 \cdot 10^{-10}$
Feedthrough	Bellows	Bellows	Bellows
Housing	Stainless steel	Stainless steel	Stainless steel
Weight	1.8 kg	9 kg	12 kg
Conductance for molecular flow	220 l/s	600 l/s	1700 l/s
Can be opened to a pressure difference of	30 hPa	30 hPa	30 hPa
Service life	50000 cycles	50000 cycles	50000 cycles
Valve plate	Stainless steel	Stainless steel	Stainless steel

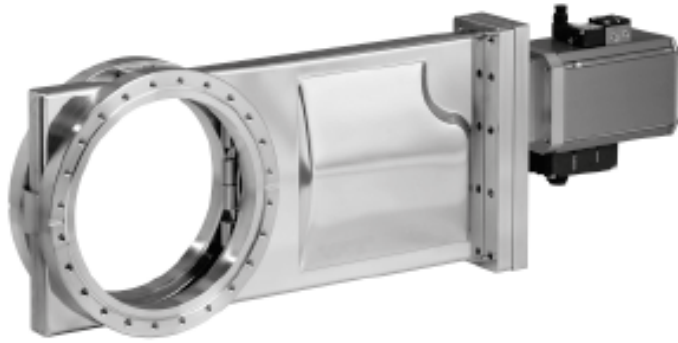
Part number			
UHV gate valves	0540228786	0540228916	0540228920

Technical data	SVV 160 HF	SVV 200 HF
Flange (out)	DN 160 CF-F	DN 200 CF-F
Flange (in)	DN 160 CF-F	DN 200 CF-F
Actuator	Hand wheel	Hand wheel
Bakeout temperature: Valve open, under vacuum	250 °C	250 °C
Bakeout temperature: Valve closed	200 °C	200 °C
Tightness: Housing	$5 \cdot 10^{-11}$ Pa m ³	$5 \cdot 10^{-11}$ Pa m ³
Tightness: Valve seat	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal: Housing	Metal	Metal
Seal: Valve seat	FKM	FKM
Differential pressure in opening direction	1600 hPa	1600 hPa

Technical data	SVV 160 HF	SVV 200 HF
Differential pressure in closing direction	1600 hPa	1600 hPa
Pressure max.	1600 hPa (abs.)	1600 hPa (abs.)
Pressure min.	$1 \cdot 10^{-10}$	$1 \cdot 10^{-10}$
Feedthrough	Bellows	Bellows
Housing	Stainless steel	Stainless steel
Weight	18 kg	24 kg
Conductance for molecular flow	6000 l/s	12000 l/s
Can be opened to a pressure difference of	30 hPa	30 hPa
Service life	50000 cycles	50000 cycles
Valve plate	Stainless steel	Stainless steel

Part number		
UHV gate valves	0540228924	0540228928

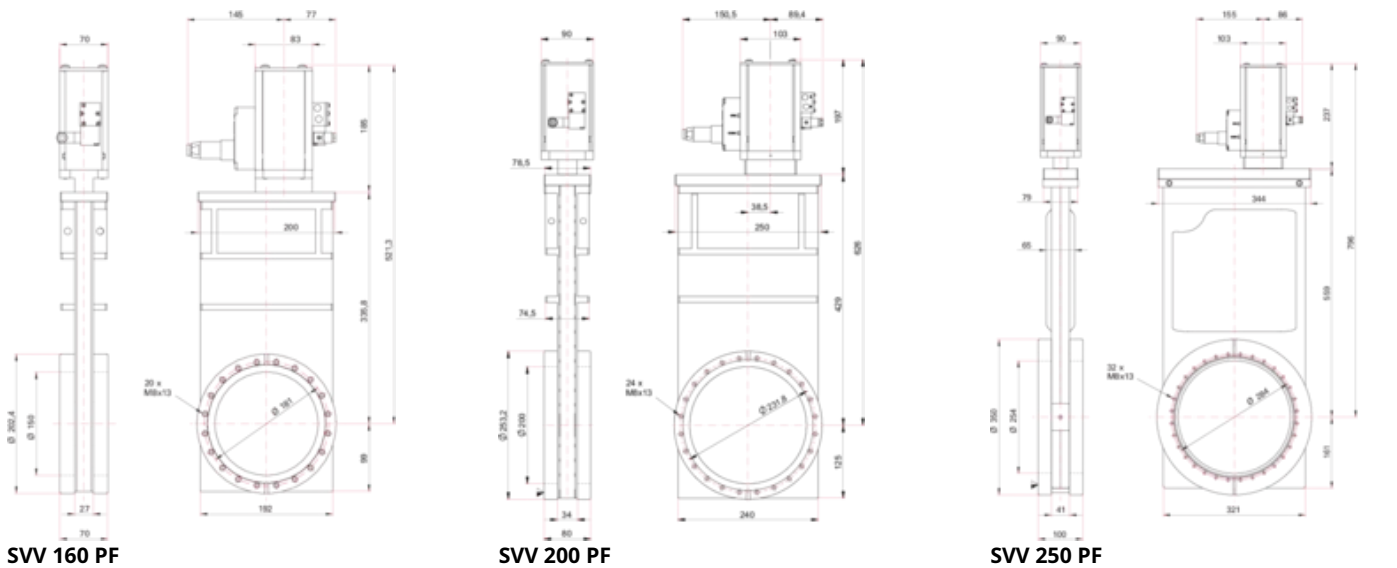
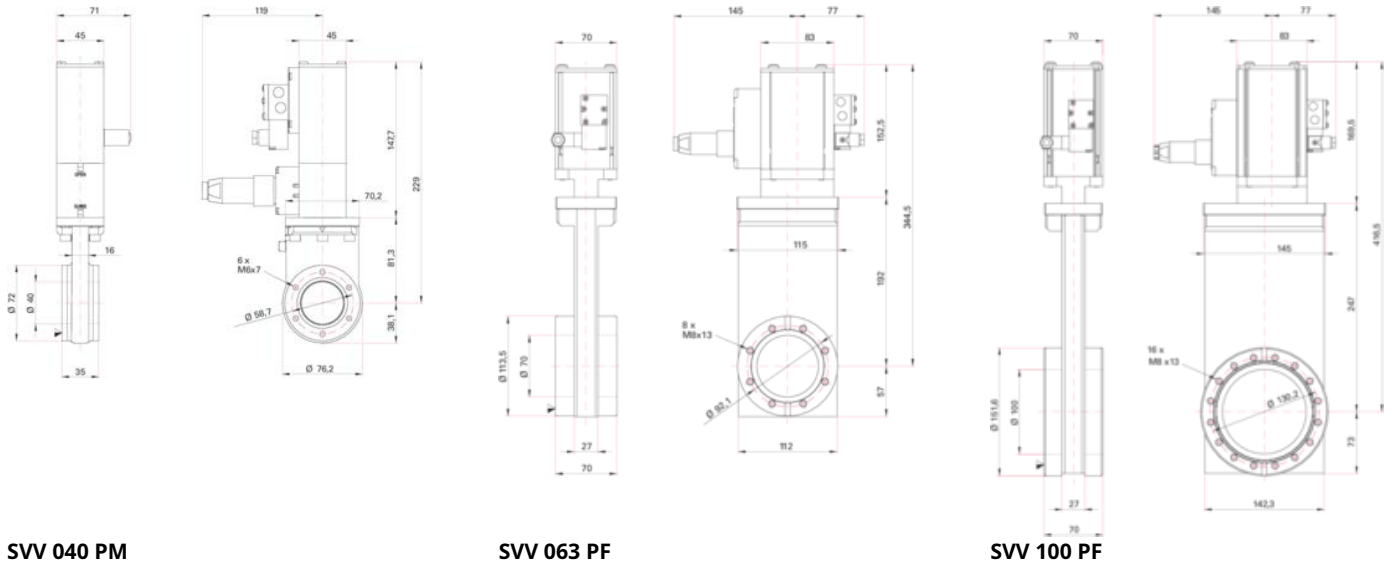
UHV gate valve, electropneumatic, with PI, with PV, DN 40 to 250 CF



- Metal-sealed stainless steel housing
- Vulcanized, cavity-free valve disk seal (up to DN 200 CF)
- Bellows-sealed
- Lubricant-free mechanics
- Service life: 50000 operating cycles

SVV = Gate valve
 PM/PF = Electropneumatically actuated
 DC = Direct current

Dimensions



General technical data	
Actuator	Electropneumatic
Bakeout temperature: actuator	200 °C (position indicator 80 °C, pilot valve 50 °C)
Bakeout temperature: Valve open, under vacuum	250 °C
Bakeout temperature: Valve closed	200 °C
Tightness: Housing	$5 \cdot 10^{-11}$ Pa m ³
Tightness: Valve seat	$1 \cdot 10^{-10}$ Pa m ³
Seal: Housing	Metal
Seal: Valve seat	FKM
Compressed air (overpressure) max.	7000 hPa
Pressure min.	$1 \cdot 10^{-10}$
Feedthrough	Bellows
Housing	Stainless steel
Power consumption	24 V DC / 5.4 W
Can be opened to a pressure difference of	30 hPa
Service life	50000 cycles
Valve plate	Stainless steel

Technical data	SVV 040 PM	SVV 063 PF	SVV 100 PF
Flange (out)	DN 40 CF-F	DN 63 CF-F	DN 100 CF-F
Flange (in)	DN 40 CF-F	DN 63 CF-F	DN 100 CF-F
Compressed air (overpressure) min.	5000 hPa	4000 hPa	4000 hPa
Compressed air volume	60 cm ³	80 cm ³	110 cm ³
Pressure max.	2000 hPa	1600 hPa	1600 hPa
Weight	1.8 kg	9 kg	12 kg
Position feedback: Load capacity	250 V AC / 5 A ; 50 V DC / 3 A	250 V AC / 2 A ; 50 V DC / 1.2 A	250 V AC / 2 A ; 50 V DC / 1.2 A
Conductance for molecular flow	220 l/s	600 l/s	1700 l/s
Closing/opening time	0.7 s	1 s	1.2 s

	SVV 040 PM	SVV 063 PF	SVV 100 PF
Supply	24 V DC	24 V DC	24 V DC
Part number	0540228914	0540228918	0540228922
Supply	24 V, 50 Hz	24 V, 50 Hz	24 V, 50 Hz
Part number	0540228913	0540228917	0540228921

	SVV 040 PM	SVV 063 PF	SVV 100 PF
Supply	230 V, 50 Hz	230 V, 50 Hz	230 V, 50 Hz
Part number	0540228915	0540228919	0540228923

Technical data	SVV 160 PF	SVV 200 PF	SVV 250 PF
Flange (out)	DN 160 CF-F	DN 200 CF-F	DN 250 CF-F
Flange (in)	DN 160 CF-F	DN 200 CF-F	DN 250 CF-F
Compressed air (overpressure) min.	4000 hPa	4000 hPa	5000 hPa
Compressed air volume	140 cm ³	250 cm ³	350 cm ³
Pressure max.	1600 hPa	1600 hPa	1200 hPa
Weight	18 kg	24 kg	42 kg
Position feedback: Load capacity	250 V AC / 2 A ; 50 V DC / 1.2 A	250 V AC / 2 A ; 50 V DC / 1.2 A	250 V AC / 2 A ; 50 V DC / 1.2 A
Conductance for molecular flow	6000 l/s	12000 l/s	26000 l/s
Closing/opening time	1.5 s	2 s	4 s

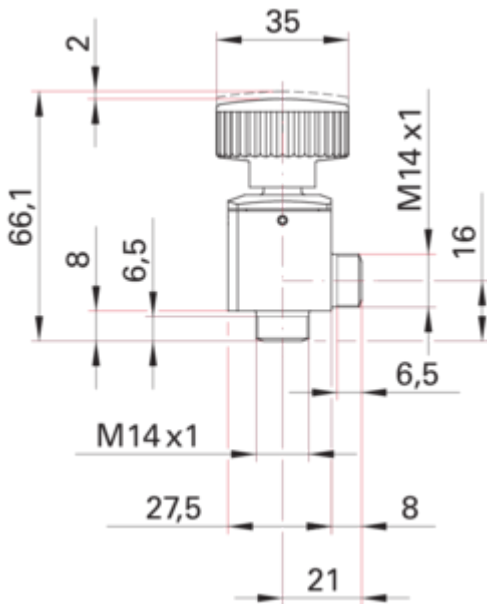
	SVV 160 PF	SVV 200 PF	SVV 250 PF
Supply	24 V DC	24 V DC	24 V DC
Part number	0540228926	0540228962	0540228963
Supply	24 V, 50 Hz	24 V, 50 Hz	24 V, 50 Hz
Part number	0540228925	0540228948	0540228949
Supply	230 V, 50 Hz	230 V, 50 Hz	230 V, 50 Hz
Part number	0540228927	0540228964	0540228965

Mini angle valves, manual, DN 5



- Two connections required as accessories
- Bellows-sealed
- Service life: 1.5 million operating cycles

Dimensions



Technical data	EVI 005 S
Flange (out)	DN 5 mm M14x1
Flange (in)	DN 5 mm M14x1
Bakeout temperature: actuator	70 °C
Bakeout temperature: housing	150 °C
Operating pressure max.	4000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM
Differential pressure in opening direction	4000 hPa
Differential pressure in closing direction	4000 hPa
Feedthrough	Bellows, stainless steel
Housing	Stainless steel
Weight	150 g
Conductance for laminar flow	4 l/s

Technical data		EVI 005 S
Conductance for molecular flow		0.4 l/s
Can be opened to a pressure difference of		4000 hPa
Service life		1500000 cycles
Ambient temperature		5-70 °C
Valve plate		Stainless steel

Part number	
Mini angle valves	0540228966

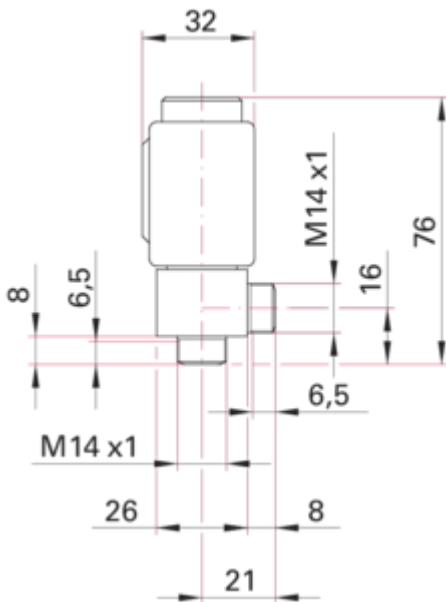
Accessories	
Connection, for ¼" tube O.D.	0456228998
Connection, for 6 mm tube O.D.	0456228999
Connection, DN 10 ISO-KF	0450228997

Mini angle valves, solenoid actuated, without position indicator (PI), DN 5



- Two connections required as accessories
- Normally closed (n.c.)
- Service life: 2 million operating cycles

Dimensions



Technical data	EVI 005 M
Flange (out)	DN 5 mm M14x1
Flange (in)	DN 5 mm M14x1
Actuator	Solenoid actuated

Technical data		EVI 005 M
Version	Normally closed (n.c.)	
Bakeout temperature: actuator	120 °C	
Bakeout temperature: housing	150 °C	
Operating pressure max.	1500 hPa (abs.)	
Operating pressure min.	$1 \cdot 10^{-8}$	
Tightness	$1 \cdot 10^{-10}$ Pa m ³	
Seal	FKM	
Differential pressure in opening direction	1500 hPa	
Differential pressure in closing direction	5000 hPa	
Housing	Stainless steel	
Weight	300 g	
Conductance for laminar flow	3 l/s	
Conductance for molecular flow	0.3 l/s	
Can be opened to a pressure difference of	1000 hPa	
Switching frequency	300 min ⁻¹	
Closing/opening time	7/30 ms	
Protection acc. to DIN 40050	IP 65	
Service life	2000000 cycles	
Ambient temperature	5-40 °C	
Supply	24 V DC	
Supply: Power consumption max.	10 W	

Part number	
Mini angle valves	0540228967

Accessories	
Connection, for ¼" tube O.D.	0456228998
Connection, for 6 mm tube O.D.	0456228999
Connection, DN 10 ISO-KF	0450228997

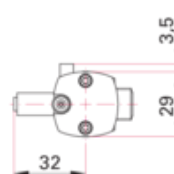
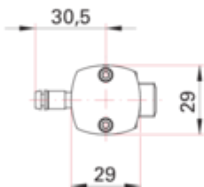
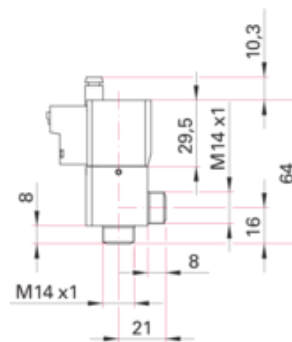
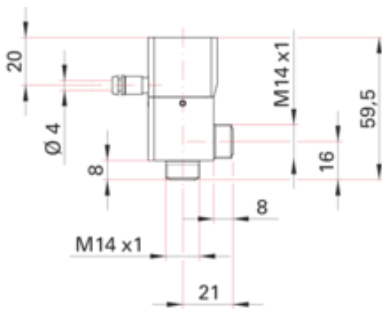
Mini angle valves, pneumatic and electropneumatic, without position indicator (PI), DN 5



- Bellows-sealed
- Normally closed (n.c.)
- Two connections required as accessories
- Service life: 1.5 million operating cycles
- Variants:
 - EVI 005 P = pneumatic (without pilot valve);
 - EVI 105 P = electropneumatic (with pilot valve)

EVI = Mini angle valve with bellows feedthrough

Dimensions



EVI 005 P, Mini angle valve, without control valve

EVI 105 P, Mini angle valve, with control valve

Technical data	EVI 005 P	EVI 105 P
Flange (out)	DN 5 mm M14x1	DN 5 mm M14x1
Flange (in)	DN 5 mm M14x1	DN 5 mm M14x1
Bakeout temperature: actuator	80 °C	80 °C
Bakeout temperature: housing	150 °C	150 °C
Operating pressure max.	4000 hPa (abs.)	4000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM
Differential pressure in opening direction	3000 hPa	3000 hPa
Differential pressure in closing direction	3000 hPa	3000 hPa
Compressed air (overpressure) max.	8000 hPa	8000 hPa
Compressed air (overpressure) min.	4000 hPa	4000 hPa
Feedthrough	Bellows, stainless steel	Bellows, stainless steel
Housing	Stainless steel	Stainless steel
Weight	200 g	200 g
Conductance for laminar flow	4 l/s	4 l/s
Conductance for molecular flow	0.4 l/s	0.4 l/s
Can be opened to a pressure difference of	3000 hPa	3000 hPa
Switching frequency	150 min ⁻¹	150 min ⁻¹
Closing/opening time	35/35 ms	35/35 ms
Protection acc. to DIN 40050	IP 65	IP 65
Service life	1500000 cycles	1500000 cycles
Control valve	-	Included
Ambient temperature	5-80 °C	5-40 °C
Supply	-	24 V DC
Supply: Power consumption max.	-	1 W

Part number		
Mini angle valves	0540228970	0540228971

Accessories		
Connection, for ¼" tube O.D.	0456228998	0456228998
Connection, for 6 mm tube O.D.	0456228999	0456228999
Connection, DN 10 ISO-KF	0450228997	0450228997

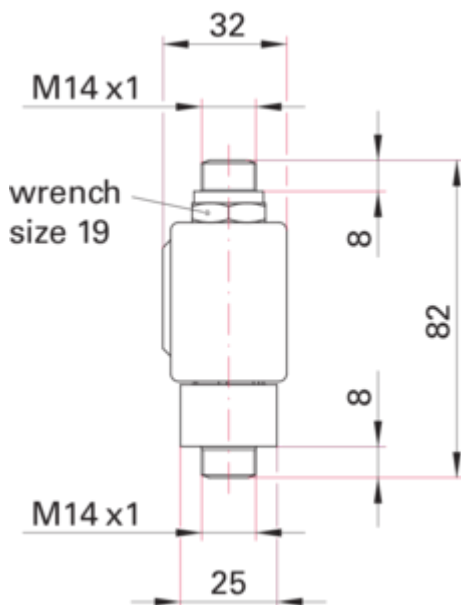
Mini-Inline-Valve, solenoid actuated, without position indicator (PI), n.c. and n.o., DN 5



- Two connections required as accessories
- Service life: 2 million operating cycles
- Variants:
 - DVI 005 M = normally closed (n.c.);
 - DVI 205 M = normally open (n.o.)

DVI = Mini inline valve with bellows feedthrough
M = Solenoid actuated

Dimensions



Technical data	DVI 005 M	DVI 205 M
Flange (out)	DN 5 mm M14x1	DN 5 mm M14x1
Flange (in)	DN 5 mm M14x1	DN 5 mm M14x1
Actuator	Solenoid actuated	Solenoid actuated
Version	Normally closed	Normally open
Bakeout temperature: actuator	120 °C	120 °C
Bakeout temperature: housing	150 °C	150 °C
Operating pressure max.	1000 hPa (abs.)	2000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM	FKM
Differential pressure in opening direction	1500 hPa	2000 hPa
Differential pressure in closing direction	5000 hPa	4000 hPa
Housing	Stainless steel	Stainless steel
Weight	300 g	300 g
Conductance for laminar flow	2 l/s	2 l/s
Conductance for molecular flow	0.2 l/s	0.2 l/s
Can be opened to a pressure difference of	1000 hPa	4000 hPa
Switching frequency	300 min ⁻¹	300 min ⁻¹
Closing/opening time	7/30 ms	30/10 ms
Protection acc. to DIN 40050	IP 65	IP 65
Service life	2000000 cycles	2000000 cycles
Ambient temperature	5-40 °C	5-40 °C
Supply	24 V DC	24 V DC
Supply: Power consumption max.	10 W	10 W

Part number		
Mini inline valves	0654228968	0654228969

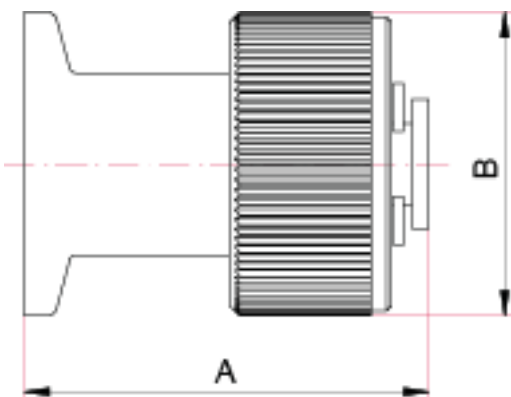
Accessories		
Connection, for ¼" tube O.D.	0456228998	0456228998
Connection, for 6 mm tube O.D.	0456228999	0456228999
Connection, DN 10 ISO-KF	0450228997	0450228997

Venting valve, manual, DN 10 ISO-KF



- Manually operated screw cap for venting with ambient air

Dimensions



	Venting valve, manually actuated, stainless steel	Venting valve, manually actuated, brass, nickel-plated
A	40 mm	40 mm
B	30 mm	30 mm

Technical data	Venting valve, manually actuated, stainless steel	Venting valve, manually actuated, brass, nickel-plated
Flange (in)	DN 10 ISO-KF	DN 10 ISO-KF
Tightness	$1 \cdot 10^{-10}$ Pa m ³	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM (valve seal)	FKM (valve seal)

Technical data	Venting valve, manually actuated, stainless steel	Venting valve, manually actuated, brass, nickel-plated
Pressure range	1 · 10 ⁻⁸	1 · 10 ⁻⁸
Materials	Stainless steel	Brass, nickel-plated
Temperature range	-30 to 130 °C	-30 to 130 °C

Flanges according to ISO 2861

Part number		
Venting valves	0540227328	0540227497

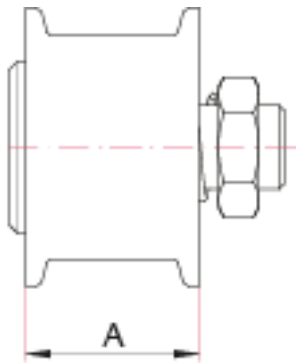
Accessories		
Reducer Centering Ring, Stainless Steel 304/ 1.4301, DN 10/16 ISO-KF	0450227469	0450227469

Pressure relief valves, DN 16 and 40 ISO-KF



- Protects vacuum systems from over pressures
- Housing material: Stainless steel
- Response pressure: 1200 to 1500 hPa (abs.)
- 120VUS016 and 120VUS040 with modifiable differential pressure to app. +/- 100 hPa

Dimensions



Technical data	VA 016 X	Pressure Relief Valve, DN 16 ISO-KF	Pressure Relief Valve, DN 40 KF
Flange (out)	G 1/8"	DN 16 ISO-KF	DN 40 ISO-KF
Flange (in)	DN 16 ISO-KF	DN 16 ISO-KF	DN 40 ISO-KF
Tightness	$1 \cdot 10^{-9}$ Pa m ³	$1 \cdot 10^{-9}$ Pa m ³	$1 \cdot 10^{-9}$ Pa m ³
Seal	FKM	FKM	FKM
Differential pressure	not modifiable	modifiable to app. +/- 100 hPa	modifiable to app. +/- 100 hPa
Pressure range	$1 \cdot 10^{-8}$	$1 \cdot 10^{-7}$	$1 \cdot 10^{-7}$
Flow rate max.	6 l/min		
Housing	Stainless steel	Stainless steel	Stainless steel
Can be opened to a pressure difference of	200 to 500 hPa	app. 400 hPa	app. 200 hPa
Temperature range	0 to 50 °C	5 to 60 °C	5 to 60 °C

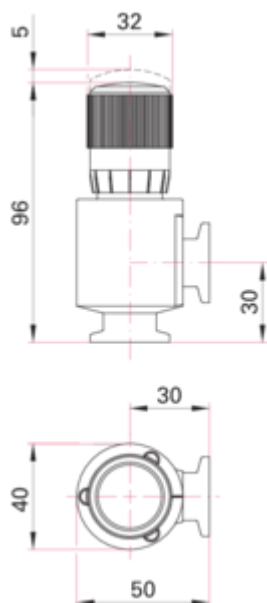
Part number			
Pressure relief valves	0540228981	0540227343	0540227344

Coarse gas dosing valve, manual, DN 10 ISO-KF



- For slow, manual venting
- Service life: 200000 operating cycles

Dimensions



Technical data	EVD 010 H
Flange (in)	DN 10 ISO-KF
Flange (out)	DN 10 ISO-KF
Bakeout temperature	100 °C

Technical data		EVD 010 H
Operating pressure max.		3000 hPa (abs.)
Operating pressure min.		$1 \cdot 10^{-7}$
Tightness		$1 \cdot 10^{-9}$ Pa m ³
Seal		FKM
Gas flow max. controllable		$1.7 \cdot 10^3$ hPa l/s
Gas flow min. controllable		40 hPa l/s
Housing		Aluminum
Weight		0.2 kg
Can be opened to a pressure difference of		3000 hPa

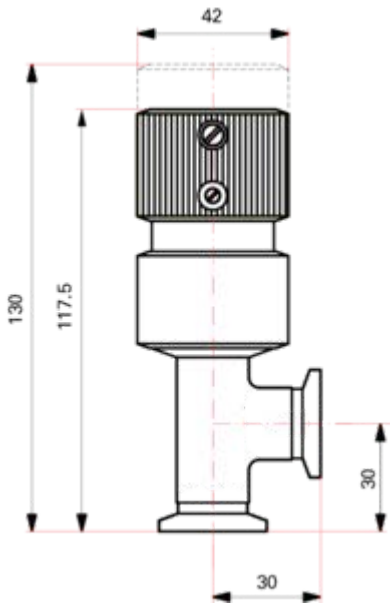
Part number	
Gas dosing valves	0543228980

Gas dosing valve with separate shut-off valve, manual, DN 16 ISO-KF



- Closable without changing the gas flow setting
- Optimum characteristic
- Digital position display
- Excellent reproducibility
- Extremely small dead volume
- Very broad regulating range

Dimensions



Technical data	EVN 116
Flange (out)	DN 16 ISO-KF
Flange (in)	DN 16 ISO-KF
Bakeout temperature: flanges	150 °C
Tightness	$1 \cdot 10^{-10}$ Pa m ³
Seal	FKM
Differential pressure	2500 hPa
Dosing sleeve	Fluorplastomer
Gas flow max. controllable	1000 hPa l/s
Gas flow min. controllable	$5 \cdot 10^{-6}$
Housing/needle/filter	Stainless steel

Technical data		EVN 116
Weight		0.4 kg
Temperature: Operating		80 °C
Dead volume		0.032 cm ³

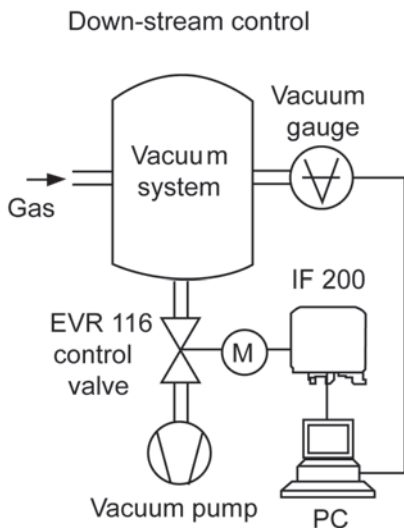
Part number	
Gas dosing valves	0543228982

Gas regulating valve EVR 116, motorized, DN 16 ISO-KF

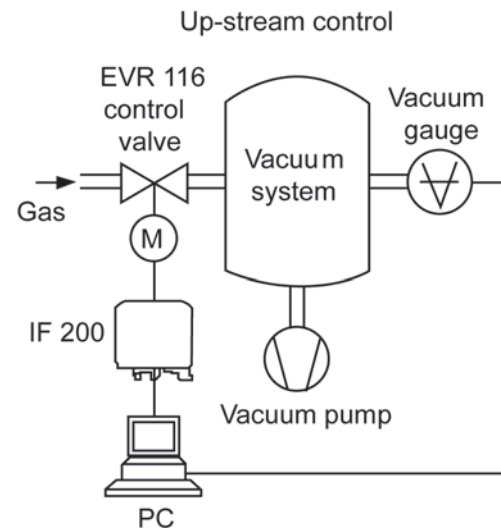


- Gas regulating valve EVR 116, motorized, DN 16 ISO-KF
- High gas throughput
- Very broad regulating range
- With integrated motor control electronics

Characteristic

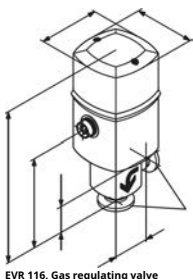


IF 200, Interface for EVR 116

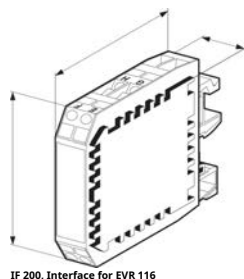


IF 200, Interface for EVR 116

Dimensions



EVR 116, Gas regulating valve



IF 200, Interface for EVR 116

Technical data	EVR 116	IF 200, Interface for EVR 116
Connection		Terminals
Flange (out)	DN 16 ISO-KF	
Flange (in)	DN 16 ISO-KF	
Control	RVC 300 or IF 200	
Bakeout temperature: actuator	60 °C	
Bakeout temperature: housing	80 °C	
Fixation		Mounting rail
Operating pressure max.	2500 hPa (abs.)	
Operating pressure min.	$1 \cdot 10^{-8}$	
Tightness	$1 \cdot 10^{-10}$ Pa m ³	
Seal	FKM	
Dosing sleeve	Fluorplastomer	
Gas flow max. controllable	1250 hPa l/s	
Gas flow min. controllable	$5 \cdot 10^{-6}$	
Housing/needle/filter	Stainless steel	
Weight	0.75 kg	40 g
Control voltage	0-10 V DC	
Closing/opening time	< 3 / 4 s	
Interface		RS-232-C
Ambient temperature	5-40 °C	
Supply	24 V DC	24 V DC
Supply: Voltage	12 W	

Part number		
Gas regulating valves	0540228983	0643228972

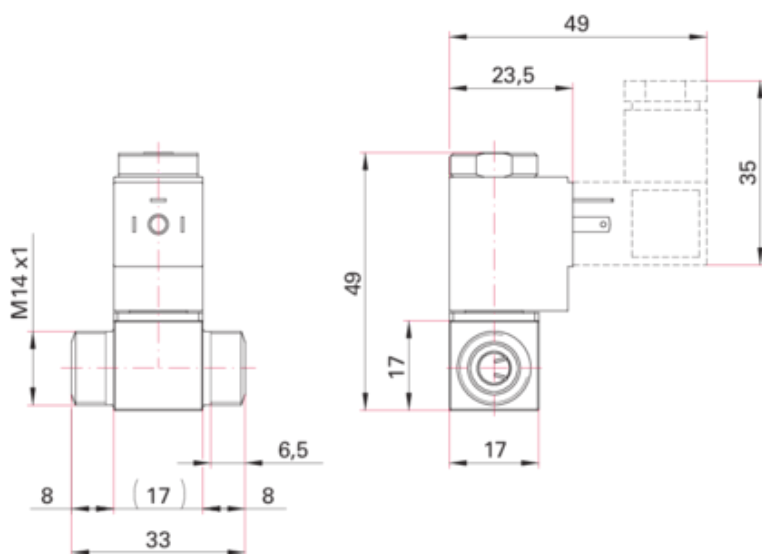
Accessories		
RVC-EVR, connection cable, 3 m	0671229000	0671229000
RVC-EVR, connection cable, 5 m	0671229001	0671229001
RVC-EVR, connection cable, 10 m	0671229002	0671229002
RVC-EVR, connection cable, 15 m	0671229003	0671229003
RVC-EVR, connection cable, 20 m	0671229004	0671229004

Gas regulating valves, solenoid actuated, RME 005 A, DN 5



- Two connections required as accessories
- Including connector
- Drive: Solenoid
- Regulating range from 0.85 to 85 hPa l/s
- Normally closed (n.c.)

Dimensions



Technical data	RME 005 A
Flange (in)	DN 5 mm M14x1
Flange (out)	DN 5 mm M14x1
Response time	< 30 ms
Control	RVC 300
Bakeout temperature: actuator, powerless	80 °C
Operating pressure max.	2000 hPa (abs.)
Operating pressure min.	$1 \cdot 10^{-8}$

Technical data		RME 005 A	
Tightness		1 · 10 ⁻¹⁰ Pa m ³	
Seal		FKM	
Mounting orientation		Any, preferably perpendicular	
Duty cycle (ED)		100 %	
Housing		Stainless steel	
Weight		96 g	
Control voltage		0-24 V DC	
Ambient temperature		5-50 °C	
Supply: Power consumption max.		2.5 W	

		RME 005 A	
Gas flow max. controllable 1		85 hPa l/s	
Gas flow min. controllable 1		0.85 hPa l/s	
Part number		0540228974	
Gas flow max. controllable 2		17 hPa l/s	
Gas flow min. controllable 2		0.17 hPa l/s	
Part number		0540228975	
Gas flow max. controllable 3		8.5 hPa l/s	
Gas flow min. controllable 3		0.085 hPa l/s	
Part number		0540228976	
Gas flow max. controllable 4		1.7 hPa l/s	
Gas flow min. controllable 4		0.017 hPa l/s	
Part number		0540228977	
Gas flow max. controllable 5		0.8 hPa l/s	
Gas flow min. controllable 5		0.008 hPa l/s	
Part number		0540228978	
Gas flow max. controllable 6		0.17 hPa l/s	
Gas flow min. controllable 6		0.0017 hPa l/s	
Part number		0540228979	

Accessories			
Connection, for ¼" tube O.D.		0456228998	
RVC 300 - RME 005, connection cable, 5 m		0456228999	
Connection, DN 10 ISO-KF		0450228997	

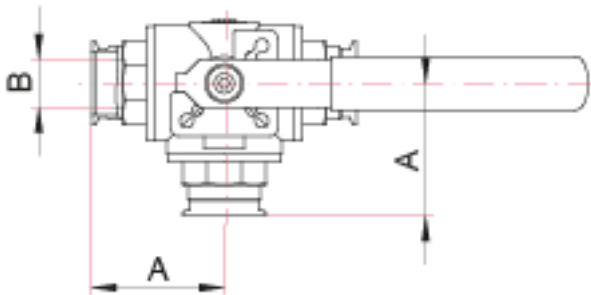
Accessories	
RVC 300 - RME 005, connection cable, 3 m	0671228987
RVC 300 - RME 005, connection cable, 5 m	0671228988
RVC 300 - RME 005, connection cable, 10 m	0671228989
RVC 300 - RME 005, connection cable, 15 m	0671228990
RVC 300 - RME 005, connection cable, 20 m	0671228991
RVC 300 - RME 005, connection cable, 25 m	0671228992

Ball valve, 3-way, manual, DN 16 to 40 ISO-KF



- Ball made from stainless steel (1.4401) with a T- or L-shaped through hole
- Ball valve with large-scale free clearance
- Not overlap-free

Dimensions



	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
A	60 mm	75 mm	87.5 mm
B	11 mm	20 mm	32 mm

Technical data	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Actuator	90° turning of handle	90° turning of handle	90° turning of handle
Tightness	$< 1 \cdot 10^{-7} \text{ Pa m}^3$	$< 1 \cdot 10^{-7} \text{ Pa m}^3$	$< 1 \cdot 10^{-7} \text{ Pa m}^3$
Seal	Ball: PTFE (reinforced with fiberglass); Stem: PTFE/FKM	Ball: PTFE (reinforced with fiberglass); Stem: PTFE/FKM	Ball: PTFE (reinforced with fiberglass); Stem: PTFE/FKM
Pressure range	$1 \cdot 10^{-5}$	$1 \cdot 10^{-5}$	$1 \cdot 10^{-5}$
Flange	Stainless steel 1.4301	Stainless steel 1.4301	Stainless steel 1.4301
Housing	Stainless steel 1.4408	Stainless steel 1.4408	Stainless steel 1.4408
Nominal diameter	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF

Technical data	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Service life	20000 Cycles	20000 Cycles	20000 Cycles
Temperature range	-20 to 80 °C media temperature	-20 to 80 °C media temperature	-20 to 80 °C media temperature

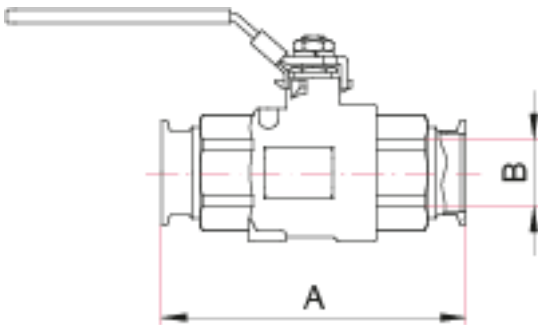
Part number	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Ball valves	0544227329	0544227331	0544227333
Ball valves	0544227330	0544227332	0544227334

Ball valve, manual, stainless steel, DN 10 to 40 ISO-KF



- Ball valve with large-scale free clearance
- Ball made from stainless steel (1.4401)

Dimensions



	DN 10 ISO-KF	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
A	100 mm	110 mm	130 mm	160 mm
B	10 mm	15 mm	24 mm	36 mm

Technical data	DN 10 ISO-KF	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Actuator	90° turning of handle	90° turning of handle	90° turning of handle	90° turning of handle
Tightness	$< 1 \cdot 10^{-7} \text{ Pa m}^3$	$< 1 \cdot 10^{-7} \text{ Pa m}^3$	$< 1 \cdot 10^{-7} \text{ Pa m}^3$	$< 1 \cdot 10^{-7} \text{ Pa m}^3$
Seal	PTFE (glass fiber reinforced)	PTFE (glass fiber reinforced)	PTFE (glass fiber reinforced)	PTFE (glass fiber reinforced)
Pressure range	$1 \cdot 10^{-5}$	$1 \cdot 10^{-5}$	$1 \cdot 10^{-5}$	$1 \cdot 10^{-5}$
Flange	Stainless steel 1.4301	Stainless steel 1.4301	Stainless steel 1.4301	Stainless steel 1.4301
Housing	Stainless steel 1.4408	Stainless steel 1.4408	Stainless steel 1.4408	Stainless steel 1.4408
Nominal diameter	DN 10 ISO-KF	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF

Technical data	DN 10 ISO-KF	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Service life	20000 Cycles	20000 Cycles	20000 Cycles	20000 Cycles
Temperature range	-20 to 80 °C media temperature	-20 to 80 °C media temperature	-20 to 80 °C media temperature	-20 to 80 °C media temperature

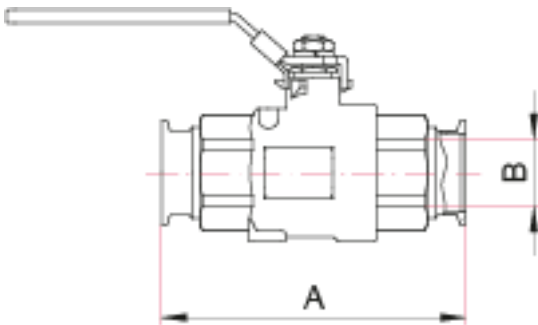
Part number				
Ball valves	0544227335	0544227336	0544227337	0544227338

Ball valve, manual, brass, nickel-plated, DN 10 to 40 ISO-KF



- Ball valve with large-scale free clearance
- Ball made from brass, hard-chrome plated

Dimensions



	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
A	90 mm	110 mm	135 mm
B	15 mm	24 mm	40 mm

Technical data	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Actuator	90° turning of handle	90° turning of handle	90° turning of handle
Tightness	$< 1 \cdot 10^{-7} \text{ Pa m}^3$	$< 1 \cdot 10^{-7} \text{ Pa m}^3$	$< 1 \cdot 10^{-7} \text{ Pa m}^3$
Seal	Ball: PTFE; Stem: FKM/ NBR	Ball: PTFE; Stem: FKM/ NBR	Ball: PTFE; Stem: FKM/ NBR
Pressure range	$1 \cdot 10^{-5}$	$1 \cdot 10^{-5}$	$1 \cdot 10^{-5}$
Flange	Stainless steel 1.4301	Stainless steel 1.4301	Stainless steel 1.4301
Housing	Brass, nickel plated	Brass, nickel plated	Brass, nickel plated
Nominal diameter	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF

Technical data	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Service life	20000 Cycles	20000 Cycles	20000 Cycles
Temperature range	-20 to 80 °C media temperature	-20 to 80 °C media temperature	-20 to 80 °C media temperature
Part number			
Ball valves	0544227498	0544227499	0544227500

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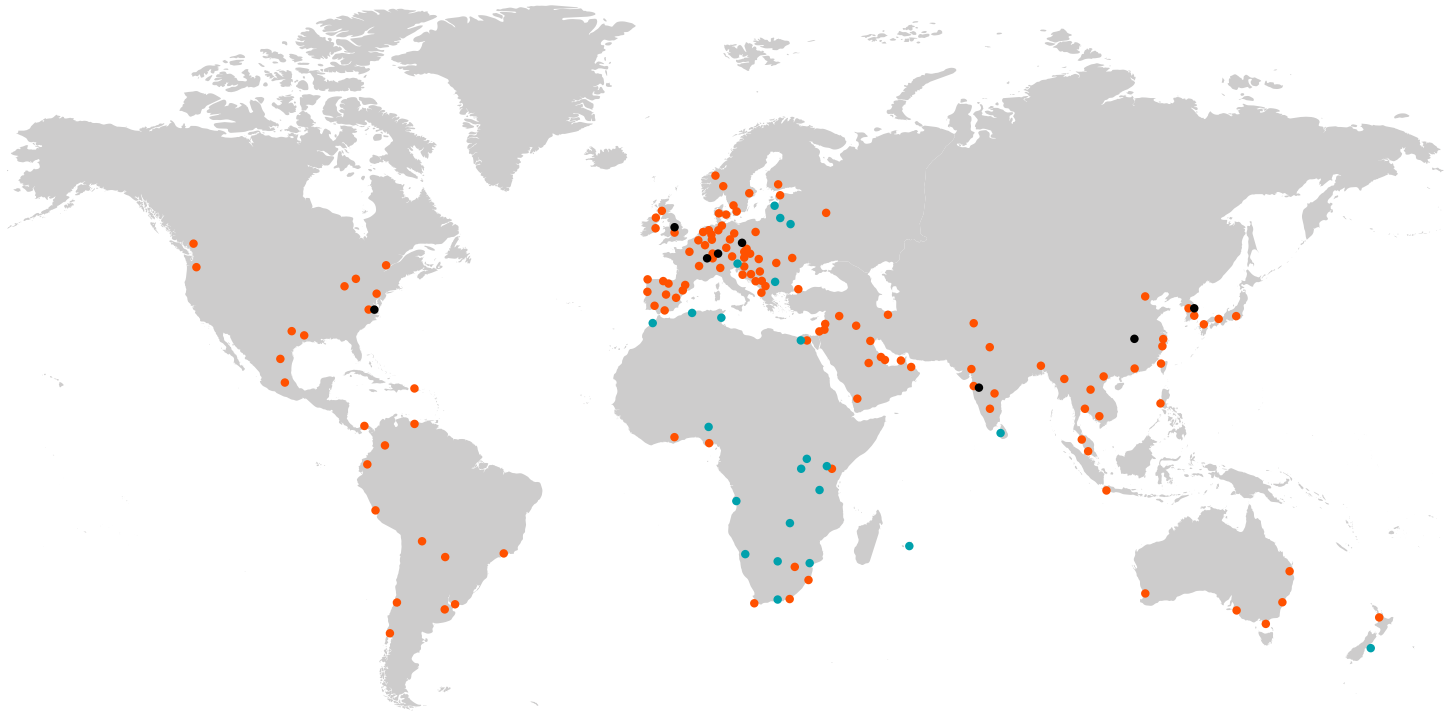
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