

# VACUUM COMPONENTS AND FLANGE FITTINGS

When you buy vacuum pump components from Edwards, you can expect the quality and service that only a leading international supplier can provide. We understand that flanges and fittings are critical to the performance of your vacuum system, and supply only high quality products which meet the highest specification.

- **Convenience of supply:** Single source supplier, able to provide the complete system solution either online or via local supply centres.
- **High quality and reliability:** Precision material control ensures a dependable vacuum performance on sensitive or demanding applications.
- **Comprehensive choice:** Complete range for all common flange sizes in aluminium and stainless steel.

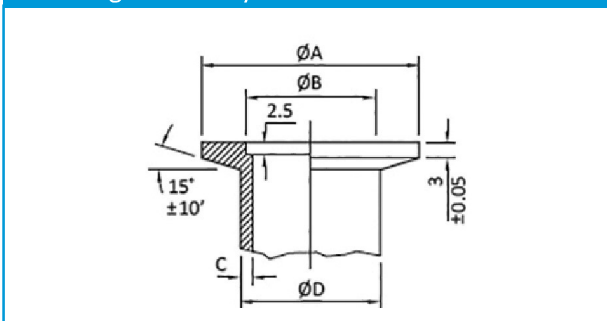
## NW Flange Assembly

NW fittings, otherwise known as ISO-KF, are the industry standard for many applications in the low to high vacuum range. They are ideal for achieving dependable cost effective performance down to  $10^{-7}$  mbar across a range of applications from light to harsh duty. A simple fastening method means that systems can be easily assembled and a leak tight vacuum seal is quickly achieved.

- Manufactured to ISO 2861 and DIN 28403 standards
- Nominal diameters 10 to 50 mm
- Use with either elastomer or formed aluminium seals
- Choice of clamp type depending on application, access, convenience and cost
- For use in high-vacuum applications: pressures  $> 10^{-8}$  mbar

## NW Dimensions

### NW Flange Assembly



	A	B	C	D
NW10	30	12.2	2	14
NW16	30	17.2	2	20
NW20	40	22.2	2	25
NW25	40	26.2	2	28
NW32	55	34.2	2	38
NW40	55	41.2	2	44.5
NW50	75	52.2	2	57

## ISO Flange Assembly

ISO fittings provide high corrosion resistance in semiconductor processing and excellent repeatability across the range of low to high vacuum applications. The flanges are joined using either claw clamps or bolts with a fluoroelastomer or nitrile centring ring and O ring.

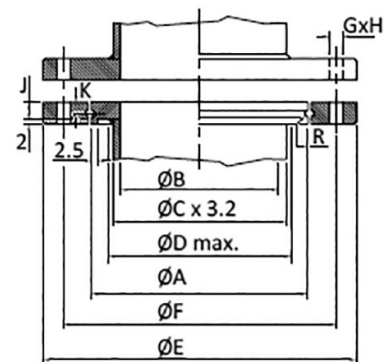
- Manufactured to ISO 1609 and DIN 28404 standards
- Nominal diameters 40-630 mm
- ISO-F flanges have fixed hole patterns
- ISO-K flanges are typically joined with claw clamps and can be converted/connected to ISO-F using a rotatable collar or half claws
- For use in high-vacuum applications: pressures  $> 10^{-8}$  mbar

Double claw clamps slot into a circular groove around the flange (ISO-K figure A) and secured to provide a simple but secure flange connection. The more conventional method is to use a range of bolt holes and nut/bolts with either a rotatable (ISO-F figure B) or fixed collar (figure C) flange.

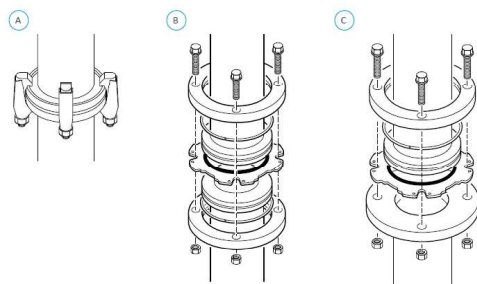
## ISO Dimensions

### ISO-K, ISO-F Dimensions

	A	B	C	D	E	F	G	H	J
ISO40	65	41	48.3	2.5	100	80	9	4	10
ISO63	95	70	76.1	80	130	110	9	4	10
ISO80	110	83	88.9	95	145	125	9	8	10
ISO100	130	102	114.3	115	165	145	9	8	10
ISO160	180	153	160.3	165	225	200	11	8	10
ISO200	240	213	219	225	275	260	11	12	10
ISO250	290	261	261	275	355	310	11	12	10
ISO320	370	318	318	355	425	395	14	12	15
ISO400	450	400	400	435	510	480	14	16	15
ISO500	550	501	501	535	610	580	14	16	15
ISO630	690	630	630	660	750	720	14	20	20



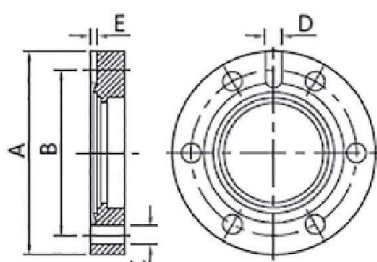
## ISO Flange Assembly



- |   |  |
|---|--|
| A | Two fixed collar flanges with claw clamps          |
| B | Two rotatable flanges                              |
| C | One fixed collar flange, with one rotatable flange |

CF Flange name equivalents table					Flange OD	
					mm	inch
DN16CF	NW16	CF34	NW16CF	1½ inch	34.00	1.33
DN25CF			NW25CF	2½ inch	53.60	2.11
DN40CF	NW35	CF70	NW35CF	2¾ inch	70.00	2.73
DN50CF			NW50CF	3¾ inch	85.70	3.37
DN63CF	NW63	CF114	NW63CF	4½ inch	114.00	4.47
DN80CF			NW75CF	4¾ inch	117.35	4.62
DN100CF	NW100	CF150	NW100CF	6 inch	152.00	5.97
DN125CF			NW130CF	6¾ inch	171.45	6.75
DN160CF	NW150	CF200	NW150CF	8 inch	202.00	7.97
DN200CF	NW200	CF250	NW200CF	10 inch	253.00	9.97
DN250CF	NW250	CF300	NW250CF	12 inch	306.00	13.25

## CF Dimensions



Nominal	A (mm)	A (inch)	B	C	D	E	Bolt Holes
DN16CF	34	1 1/3	27	4.4	-	-	6
DN40CF	70	2 3/4	58.7	6.6	-	-	6
DN63CF	114	4 1/2	92.1	8.4	6	3	8
DN100CF	152	6	130.2	8.4	6	3	16
DN160CF	202	8	181	8.4	6	3	20
DN200CF	253	10	231.8	8.4	6	3	24
DN250CF	306	12	284	8.4	6	3	32

## UHV ConFlat® Flange Assembly

CF fittings have a unique sealing system to achieve a leak tight joint. A copper seal is squeezed axially and radially between two CF flanges, where knife-edges force the copper to cold flow. This flow is severely limited by the vertical flange wall which generates high pressures and fills surface imperfections to prove an extremely tight metal to metal seal.

- Manufactured to ISO 3669 standard
- Nominal diameters 16-350 mm
- Used almost exclusively with copper ring metal seals
- Bakeable up to 450 °C
- Typically used in UHV systems: pressures < 10<sup>-8</sup> mbar

Metric flanges, common in Europe and Asia, use metric tapped holes and bored holes in flanges suitable for metric tubing. Flanges specified in inches, more commonly used in the USA, use UNF flange threads and bored holes compatible with inch sized tube. We offer both options.



## Vacuum components and fittings at a glance

	Description	NW	ISO	CF	Features and benefits
CLAMPS AND CLAMPING RINGS	Stainless Steel Clamping Ring	✓	-	-	<ul style="list-style-type: none"> <li>- Low cost and compact</li> <li>- 304L Stainless Steel</li> </ul>
	Polymer Clamp	✓	-	-	<ul style="list-style-type: none"> <li>- Swing or quick release hinge options</li> <li>- Lightweight, compact and low cost with excellent strength to weight ratio</li> <li>- CX4 crystalline aryl polymer</li> </ul>
	Aluminium Clamp	✓	-	-	<ul style="list-style-type: none"> <li>- Swing or quick release hinge options</li> <li>- Ideal in rugged applications and high temperatures</li> <li>- Aluminium</li> </ul>
	Clamp for Metal Seals	✓	-	-	<ul style="list-style-type: none"> <li>- Suitable for aluminium and indium seals</li> <li>- Wide temperature range</li> <li>- 304L Stainless Steel</li> </ul>
	Bulkhead Clamp	✓	-	-	<ul style="list-style-type: none"> <li>- Secure connection to baseplates or flat chamber walls</li> <li>- Aluminium</li> </ul>
	"C" Clamp	✓	-	-	<ul style="list-style-type: none"> <li>- Secure connection to baseplates or flat chamber walls</li> <li>- 304L Stainless Steel or Nickel plated Brass</li> </ul>
	Claw Clamps and Bolts	-	✓	✓	<ul style="list-style-type: none"> <li>- Extensive range optimised for many applications</li> <li>- High strength CF bolts for UHV flanges</li> <li>- Rotatable and non-rotatable options</li> <li>- 304L Stainless Steel, Aluminium or Plated Mild Steel options</li> </ul>
SEALS	co-seal - Aluminium	✓	-	-	<ul style="list-style-type: none"> <li>- Eliminate crevices and trapped volumes to prevent gas burst and pump down issues</li> <li>- Fluoroelastomer and Nitrile versions</li> <li>- Suitable for vacuum and positive pressure applications (eg. pump exhaust)</li> <li>- Aluminium carrier</li> </ul>
	co-seal - High-Tech Polymer	✓	-	-	<ul style="list-style-type: none"> <li>- Eliminate crevices and trapped volumes to prevent gas burst and pump down issues</li> <li>- Fluoroelastomer and Nitrile versions</li> <li>- Suitable for vacuum and positive pressure applications (eg. pump exhaust)</li> <li>- CX2 crystalline aryl polymer</li> </ul>
	Centring Ring with O Ring - Aluminium	✓	-	-	<ul style="list-style-type: none"> <li>- Fluoroelastomer and Nitrile versions</li> <li>- Aluminium Carrier</li> </ul>
	Centring Ring with O Ring - High-Tech Polymer	✓	-	-	<ul style="list-style-type: none"> <li>- Fluoroelastomer and Nitrile versions</li> <li>- For temperatures up to 100 °C and is unaffected by most common solvents</li> <li>- CX2 crystalline aryl polymer</li> </ul>
	Trapped O Rings	✓	✓	-	<ul style="list-style-type: none"> <li>- ISO option in Aluminium</li> <li>- Fluoroelastomer</li> <li>- Suitable for vacuum and positive pressure applications (eg. pump exhaust)</li> <li>- NW option in 304L Stainless Steel and Aluminium</li> </ul>
	Metal Seals	✓	-	✓	<ul style="list-style-type: none"> <li>- Suitable for high temperature applications</li> <li>- Copper gaskets for UHV seals</li> <li>- Aluminium all metal seals</li> </ul>
	PIPELINE COMPONENTS	Aluminium Components	✓	✓	-
Stainless Steel Components		✓	✓	✓	<ul style="list-style-type: none"> <li>- Extensive range providing flexibility within your vacuum system</li> <li>- NW and ISO fittings in 316L Stainless Steel</li> <li>- CF fittings in 304L Stainless Steel</li> </ul>
BELLOW AND FLEXIBLE PIPELINES	Bellows	✓	✓	✓	<ul style="list-style-type: none"> <li>- Suitable for minimising transfer of vibration from pump to vacuum system</li> <li>- NW and ISO fittings in 316L Stainless Steel</li> <li>- CF fittings in 304L Stainless Steel</li> </ul>
	Flexible Pipelines and Braided Flexible Pipelines	✓	✓	✓	<ul style="list-style-type: none"> <li>- To simplify the connection of two components or correct any misalignment</li> <li>- Use braided version for positive pressure applications (eg. pump exhaust)</li> <li>- NW and ISO fittings in 316L Stainless Steel</li> <li>- CF fittings in 304L Stainless Steel</li> </ul>

Our components and flange fittings are designed to be leak-tight across the range of vacuum applications, and not intended to provide full structural support. When designing any vacuum system, it is essential that consideration is given to the static and dynamic loads imposed on each connection. If necessary, additional mechanical support should be provided and built into the design. Regular inspection including leak-checking and, where appropriate, periodic replacement of components should be considered to ensure system efficiencies and safety is maintained.

## Technical Data

### Operating Pressure Range (absolute):

	Minimum	Maximum
Products are designed for vacuum applications however some will withstand a small over-pressure, this is indicated in the table below where appropriate.		
"C" clamp and centring ring	10 <sup>-7</sup> mbar	1 bar
Stainless steel clamping ring and co-seal	10 <sup>-7</sup> mbar	10 bar
Stainless steel clamp and metal seal	10 <sup>-8</sup> mbar	3 bar
Stainless steel clamp and co-seal (all sizes)	10 <sup>-7</sup> mbar	10 bar
Polymer and aluminium clamps and co-seal		
NW10 to NW25	10 <sup>-7</sup> mbar	10 bar
NW40 to NW50	10 <sup>-7</sup> mbar	10 bar
NW trapped O ring	10 <sup>-7</sup> mbar	10 bar
ISO trapped O ring	10 <sup>-7</sup> mbar	1 bar
O ring and centring-ring (vacuum use only)	10 <sup>-7</sup> mbar	1 bar
Bellows	10 <sup>-7</sup> mbar	1 bar
Flexible pipelines*	10 <sup>-7</sup> mbar	1.5 bar
Braided flexible pipelines*	10 <sup>-7</sup> mbar	10 bar

\*Depends on size

### Stainless Steel Equivalents:

ANSI Number	DIN Standard	Composition
304L	1.4306	X2 CrNi 19 10
316L	1.4404	X2 CrNiMo 17 13 2

### Operating Temperature:

Products are designed for vacuum applications however some will withstand a small over-pressure, this is indicated in the table below where appropriate.	
Polymer co-seal	-10 to 80 °C
Aluminium co-seal and nitrile seal	-10 to 100 °C
Aluminium co-seal and fluoroelastomer seal	-10 to 150 °C
Polymer centring-ring and nitrile O-ring	-10 to 100 °C
Polymer centring-ring and fluoroelastomer seal	-10 to 125 °C
Nitrile O-ring	-10 to 100 °C
Fluoroelastomer O-ring	-10 to 200 °C
Constant vacuum use	-10 to 100 °C
Intermittent vacuum use	-10 to 125 °C
Stainless steel clamping ring	-10 to 125 °C
Aluminium swing/hinge clamp	-10 to 200 °C
Stainless steel clamp	-10 to 200 °C

The maximum temperature for continuous operation with fluoroelastomer is 150 °C. It may be intermittently baked to 200 °C.

### Chemical Resistance:

Material	Generally resistant to	Generally attacked by
<b>Nitrile</b> Butadiene Acrylonitrile copolymer	Many hydrocarbons fats, oils greases, hydraulic fluids	Ozone, ketones, esters, aldehydes, chlorinated and nitro hydrocarbons
<b>Neoprene</b> Chloroprene polymer	Moderate chemicals and acids, ozone, oily fats, greases, many oils and solvents	Strong oxidizing acids and esters, ketones, chlorinated aromatic and nitro hydrocarbons
<b>Fluoroelastomer</b> Fluorocarbon polymer	All aliphatic, aromatic and halogenated hydrocarbons, acids, animal and vegetable fats	Ketones, low molecular weight esters and nitro containing compounds
<b>Aluminium</b>	Organic acids, fatty acids, freons, nitric acid	Strong acids, alkalis chlorinated solvents, mercury
<b>Stainless Steel</b>	Organic acids, alkalis, nitric acid. Sulphuric acid (10%)	Oxidizing chlorines, some organic acids, hydrochloric acid, hydrofluoric acid
<b>Polymer</b> Liquid crystal polymer	Organic acids, glycols, chlorinated solvents, ketones, mineral and oxidising acids, caustic solutions freons	Sodium hydroxide, sulphuric acid (70%)

This information is provided as a general guide only. Further guidance should be sought with respect to specific chemicals and their applications.



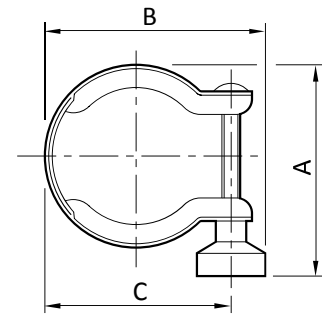
Description						Features
		Semiconductor	Scientific	R & D	Industrial	
Clamps	Clamping Ring	-	•	•	•	Low cost, compact Stainless steel
	Polymer Clamp	-	•	•	•	Low cost, lightweight Neat appearance
	Aluminium Clamp	•	•	•	•	Rugged Pneurop standard Competitive price
	Metal Clamp	-	-	•	•	Suitable for aluminium and indium seals Wide temperature range
	Claw Clamps and Bolts	•	•	•	•	Wide range optimised for many applications High strength CF bolts for UHV flanges
Seals	Polymer Centring Ring	-	•	•	•	Low cost Gas vents – no gas bursts Resistant to solvents
	Trapped O-Rings	•	•	•	•	No gas bursts
	Polymer co-seal	-	•	•	•	No gas bursts Suitable for up to 10 bar
	Metal Centring Ring	•	•	•	•	Stainless steel and aluminium carrier Pneurop standard Fluoroelastomer and nitrile versions
	Metal Seal	-	•	•	•	Aluminium all metal seals Copper gaskets for UHV seals
Pipeline Components	Aluminium	-	•	•	•	NW10 to NW50 components
	Stainless Steel	•	•	•	•	NW10 to NW50 components NW and ISO fittings in 316L for corrosion CF fittings in 304L for cost effectiveness resistance
Bellows and Flexible Pipelines	Bellows	•	•	•	•	NW and ISO fittings in 316L, CF fittings in 304L Suitable for minimising transfer of vibration from pump to vacuum systems
	Flexible Pipelines	-	•	•	•	Use to simplify connection of two components or correct misalignment Use braided versions for positive pressure applications (like dry pump exhausts)

# NW Fittings

Size	A	B	C	Order no:	Clamping Ring
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Stainless steel (red wing nut)

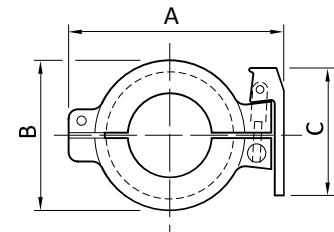
NW10/16	44	46	34	C10512401	
NW20/25	60	60	48	C10514401	
NW32/40	73	75	63	C10516401	
NW50	90	96	84	C10517401	
Copper free (black wing nut)					
NW10/16	44	46	34	C10512501	
NW20/25	60	60	48	C10514501	
NW32/40	73	75	63	C10516501	
NW50	90	96	84	C10517501	



Size	A	B	C	Order no:	Hinged Clamp
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Aluminium

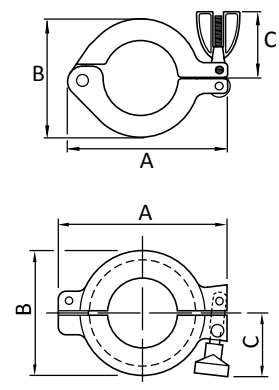
NW10/16	68	40	57	C10512402	
NW20/25	80	50	57	C10514402	
NW32/40	95	66	57	C10516402	
Polymer					
NW10/16	68	40	57	C10512303	
NW20/25	80	50	57	C10514303	
NW32/40	95	66	57	C10516303	



Size	A	B	C	Order no:	Swing Clamp
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Aluminium

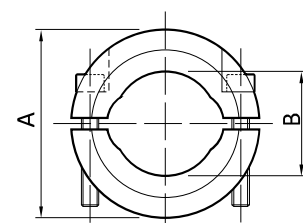
NW10/16	62	40	35	C10512403	
NW20/25	75	50	35	C10514403	
NW32/40	90	66	35	C10516403	
NW50	120	86	35	C10517403	
Polymer					
NW10/16	62	40	35	C10512304	
NW20/25	75	50	35	C10514304	
NW32/40	90	66	35	C10516304	
NW50	120	86	35	C10517304	



Size	A	B	Order no:	Clamp for Metal Seals
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Stainless steel

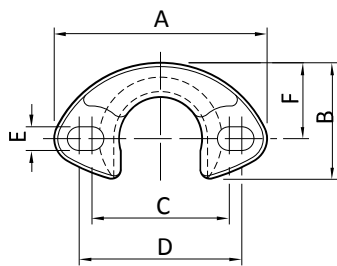
NW10/16	54	22	C10512404
NW20/25	64	32	C10514404
NW32/40	82	47	C10516404
NW50	112	62	C10517404



We recommend the use of thread lubricant, 1764 00030.



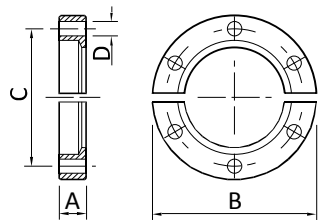
**"C" Clamp**



Size	A	B	C	D	E	F	Order no:
Nickel plated brass including screw pack							
NW10/16	59	35	38	45	6.3	22	C11002340
NW25	70	44	54	54 <sup>†</sup>	8.3	25.4	C11004340
NW40*	100	73.5	79	81	8.3	50	C11005340

Stainless steel; <sup>†</sup> Non slotted

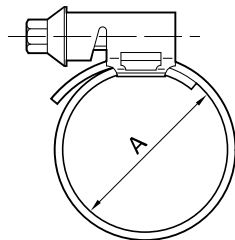
**Bulkhead Clamp**



Size	A	B	C	D	Order no:	
Aluminium					Europe	N.America
NW10/16	9.2	50.8	38.1	5.1	C10512007	C90512007
NW25	9.8	60.3	48.0	5.1	C10514007	C90514007
NW40	9.3	74.6	62.0	5.1	C10516007	C90516007
NW50	10.3	95.2	83.0	5.1	C10517007	C90517007

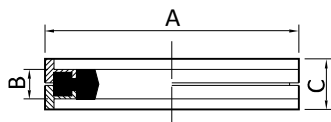
All sizes supplied with  
6 x 10-32 UNF x 3/8" hex head stainless steel bolts  
6 x 10-32 UNF stainless steel plain washers

**PVC Hose Clamp**



Size	A	Order no:
Stainless steel		
NW10/16	25	C10512408
NW25	36	C10514408
NW40	50	C10516408
NW50	60	C10517408

**co-seal**

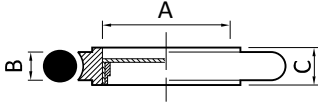


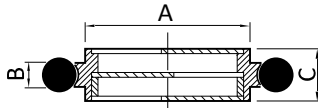
Size	A	B	C	Order no:
Nitrile/aluminium carrier				
NW10/16	32	3.9	7	B27158480
NW20/25	42	3.9	7	B27158490
NW32/40	57	3.9	7	B27158500
Nitrile/polymer carrier				
NW10/16	32	3.9	7	B27158426
NW20/25	42	3.9	7	B27158447
NW32/40	57	3.9	7	B27158454
NW50	77.5	3.9	7	B27158467
Fluoroelastomer/aluminium carrier				
NW10/16	32	3.9	7	B27158481
NW20/25	42	3.9	7	B27158491
NW32/40	57	3.9	7	B27158501
Fluoroelastomer/polymer carrier				
NW10/16	32	3.9	7	B27158427
NW20/25	42	3.9	7	B27158448
NW32/40	57	3.9	7	B27158453
NW50	77.5	3.9	7	B27158466



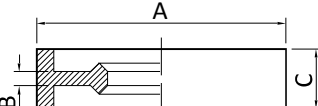
Size	A	B	C	Order no:	Centring Ring with O-Ring
Fluoroelastomer/stainless steel carrier					
NW10	12	3.9	8	C10511395	
NW16	17	3.9	8	C10512395	
NW25	26	3.9	8	C10514395	
NW40	41	3.9	8	C10516395	
NW50	52	3.9	8	C10517395	
Fluoroelastomer/aluminium carrier					
NW10	12	3.9	8	C10511397	
NW16	17	3.9	8	C10512397	
NW25	26	3.9	8	C10514397	
NW40	41	3.9	8	C10516397	
Fluoroelastomer/polymer carrier					
NW10	12	3.9	8	C10511394	
NW16	17	3.9	8	C10512394	
NW25	26	3.9	8	C10514394	
NW40	41	3.9	8	C10516394	
Nitrile/stainless steel carrier					
NW10	12	3.9	8	C10511396	
NW16	17	3.9	8	C10512396	
NW25	26	3.9	8	C10514396	
NW40	41	3.9	8	C10516396	
NW50	52	3.9	8	C10517396	
Nitrile/aluminium carrier					
NW10	12	3.9	8	C10511398	
NW16	17	3.9	8	C10512398	
NW25	26	3.9	8	C10514398	
NW40	41	3.9	8	C10516398	
Nitrile/polymer carrier					
NW10	12	3.9	8	C10511393	
NW16	17	3.9	8	C10512393	
NW25	26	3.9	8	C10514393	
NW40	41	3.9	8	C10516393	

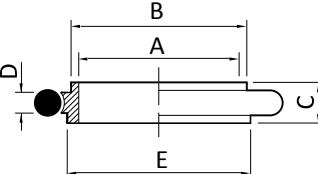


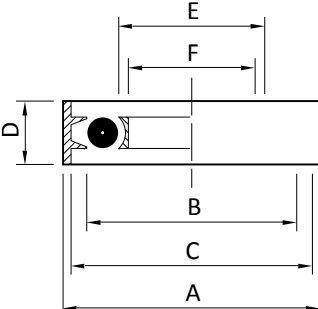
Centring Ring with Screen	Size	A	B	C	Order no:
	Fluoroelastomer/Stainless Steel AISI 316L DIN 1.4404 Stainless Steel wire $\varnothing 0.5$ Aperture size 1 mm <sup>2</sup>				
	NW16	9.5	3.9	8	C10512085
	NW25	19.5	3.9	8	C10514085
	NW40	32	3.9	8	C10516085
	NW50	43	3.9	8	C10517085

Centring Ring with Optical Baffle	Size	A	B	C	Order no:
	Fluoroelastomer/stainless steel AISI 304L DIN 1.4301				
	NW25	26	3.9	8.5	D02110000

Centring Ring Sintered Filter	Size	Order no:
NW10	D02158020	

Metal Seals	Size	A	B	C	Order no:
	Aluminium Use with clamps (metal seals) C105-XX-404.				
	NW10/16	32	2.0	7	C27159004
	NW20/25	42	2.0	7	C27159005
	NW32/40	57	2.0	7	C27159006
	NW50	77	2.0	7	C27159007

Adapting Centring Ring with O-Ring	Size	A	B	C	D	E	Order no:
	Nitrile						
	NW10/16 stainless steel	10	12	8	3.9	17	C10512346
	NW10/16 polymer	10	12	8	3.9	17	C10512349
	Fluoroelastomer						
	NW10/16 stainless steel	10	12	8	3.9	17	C10512345
	NW10/16 polymer	10	12	8	3.9	17	C10512350

NW Trapped O-Ring	Size	A	B	C	D	E	F	Order no:
	Fluoroelastomer/stainless steel/aluminium							
	NW10/16	32.5	27.5	30.2	7	18.5	16	C10512490
	NW25	42.5	37.5	40.2	7	28.5	25	C10514490
	NW40	57.5	52.0	55.2	7	43	40	C10516490
	NW50	77.5	64.5	75.2	7	55.5	50	C10517490

Size	A	B	Order no:	O-Ring (Pack of 5)
Fluoroelastomer				
NW10	15	5	H02124032	
NW16	18	5	H02124033	
NW25	28	5	H02124035	
NW40	42	5	H02124037	
NW50	50	5	H02124038	

Size	A	B	Order no:	O-Ring (Pack of 10)
Nitrile				
NW10	15	5	H02124012	
NW16	18	5	H02124013	
NW25	28	5	H02124015	
NW40	42	5	H02124017	
NW50	50	5	H02124018	

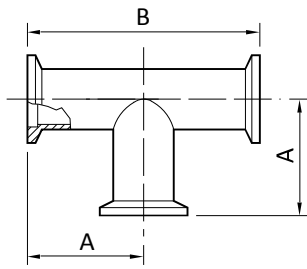
Size	A	Order no:	Elbow 45°
Stainless Steel AISI 316L DIN 1.4404			
NW16	23.2	C10512405	
NW25	28.5	C10514405	
NW40	42.7	C10516405	
NW50	50.6	C10517405	

Size	A	Order no:	Elbow 90°	
Aluminium BS LM25 DIN 3.2371				
NW10	30	C10511410		
NW16	40	C10512410		
NW25	50	C10514410		
NW40	65	C10516410		
Stainless Steel AISI 316L DIN 1.4404				
NW10	30	C10511420		
NW16	40	C10512420		
NW25	50	C10514420		
NW40	65	C10516420		
NW50	70	C10517420		

Size	A	Order no:	Long Radius Elbow
Stainless Steel AISI 316L DIN 1.4404			
NW40	130	C10516406	
NW50	140	C10517406	

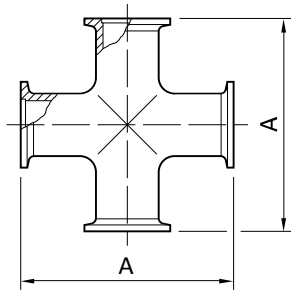


T-Piece



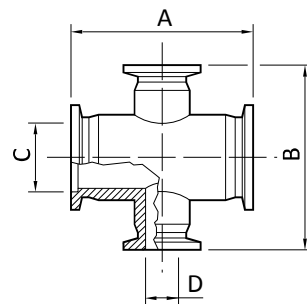
Size	A	B	Order no:
Aluminium BS LM25 DIN 3.2371			
NW10	30	60	C10511411
NW16	40	80	C10512411
NW25	50	100	C10514411
NW40	65	130	C10516411
Stainless Steel AISI 316L DIN 1.4404			
NW10	30	60	C10511421
NW16	40	80	C10512421
NW25	50	100	C10514421
NW40	65	130	C10516421
NW50	70	140	C10517421

Cross Piece



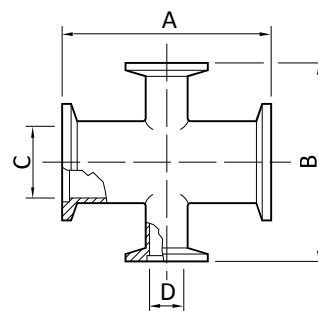
Size	A	Order no:
Aluminium BS LM25 DIN 3.2371		
NW10 60	60	C10511412
NW16	80	C10512412
NW25	100	C10514412
NW40	130	C10516412
Stainless Steel AISI 316L DIN 1.4404		
NW10	60	C10511422
NW16	80	C10512422
NW25	100	C10514422
NW40	130	C10516422
NW50	140	C10517422

Reducing Cross

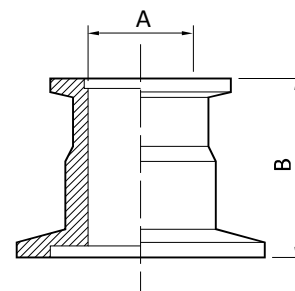


Size	A	B	C	D	Order no:
Aluminium ISO 6082 DIN 3.2315					
NW25/10	70	70	26.2	12.2	C10514413
NW40/10	80	90	41.2	12.2	C10516413

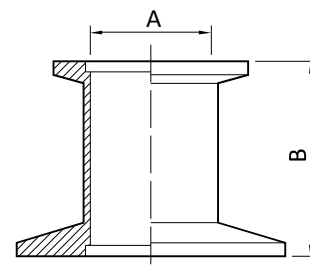
Size	A	B	C	D	Order no:	Reducing Cross
Stainless Steel AISI 316L DIN 1.4404						
NW25/10	70	70	26.2	12.2	C10514423	
NW25/16	100	80	26.2	17.2	C10514424	
NW40/16	130	80	41.2	17.2	C10516424	
NW40/25	130	100	41.2	26.2	C10516425	
NW50/25	140	100	52.2	26.2	C10517425	



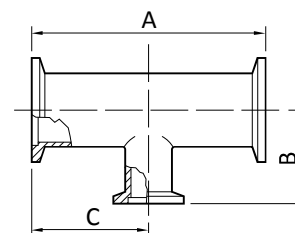
Size	A	B	Order no:	Reducing Piece
Aluminium ISO 6082 DIN 3.2315				
NW25/10	10	40	C10514436	
NW25/16	16	40	C10514437	
NW40/25	24	40	C10516439	
NW40/16	16	40	C10516438	
NW50/16	16	40	C10517040	
NW50/25	24	40	C10517043	
NW50/40	41	40	C10517041	



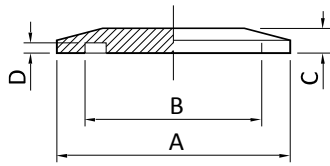
Stainless Steel AISI 316L DIN 1.4404				
NW25/10	10	40	C10514446	
NW25/16	16	28	C10514447	
NW40/16	16	28	C10516448	
NW40/25	24	28	C10516449	
NW50/16	16	28	C10517450	
NW50/25	24	40	C10517051	
NW50/40	40	28	C10517452	



Size	A	B	C	Order no:	Reducing T-Piece
Stainless Steel AISI 316L DIN 1.4404					
NW25/16	100	40	50	C10514427	
NW40/16	130	40	65	C10516428	
NW40/25	130	50	65	C10516429	
NW50/16	140	50	70	C10517430	
NW50/25	140	65	70	C10517431	

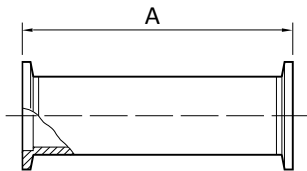


Blanking Flange	Size	A	B	C	D	Order no:
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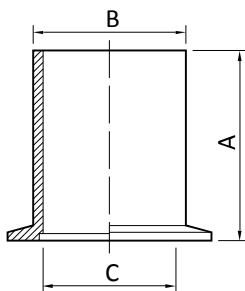
Aluminium BS LM 25 DIN 3.2371						
NW10	30	12.2	6	2.5		C10511368
NW16	30	17.2	6	2.5		C10512368
NW25	40	26.2	6	2.5		C10514368
NW40	55	41.2	6	2.5		C10516368
Stainless Steel AISI 316L DIN 1.4404						
NW10	30	12.2	6	2.5		C10511366
NW16	30	17.2	6	2.5		C10512366
NW25	40	26.2	6	2.5		C10514366
NW40	55	41.2	6	2.5		C10516366
NW50	75	52.2	6	2.5		C10517366

Full Nipple	Size	A	Order no:
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Aluminium BS LM 25 DIN 3.2371			
NW10	60		C10511409
NW16	80		C10512409
NW25	100		C10514409
NW40	130		C10516409
Stainless Steel AISI 316L DIN 1.4404			
NW10	60		C10511433
NW16	80		C10512433
NW25	100		C10514433
NW40	130		C10516433
NW50	140		C10517433

Long Flange Weld Stub	Size	A	B	C	D	Order no:
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Stainless Steel AISI 316L DIN 1.4404						
For metric tube						
NW10	70	15	10			C10511316
NW16	70	20	16			C10512316
NW25	70	28	24			C10514316
NW40	70	44.5	41			C10516616
NW50	70	57	51			C10517316
For inch tube						
NW10	40	12.7	9.3	½		C10504080
NW16	40	19.1	15.7	¾		C10504101
NW25	40	25.4	22	1		C10504223
NW40	40	38.1	34.7	1½		C10504324
NW50	40	50.8	47.4	2		C10504351

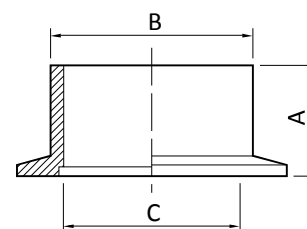
For inch tube: D= tube OD

Size	A	B	C	D	Order no:	Short Flange Weld Stub
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Stainless Steel AISI 316L DIN 1.4404

For metric tube

NW10	30	15	10			C10511311
NW16	30	20	16			C10512311
NW25	30	28	24			C10514311
NW40	30	44.5	41			C10516611
NW50	30	57	51			C10517311



For inch tube

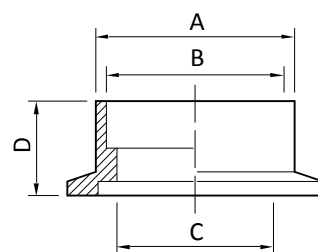
NW10	12.7	12.7	9.3	½		C10504079
NW16	12.7	19.1	15.7	¾		C10504100
NW25	12.7	25.4	22	1		C10504222
NW40	19.1	38.1	34.7	1½		C10504323
NW50	19.1	50.8	47.4	2		C10504350

For inch tube: D= tube OD

Size	A	B	C	D	E	F	Order no:	Weld Socket Flange for Inch Tube
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Stainless Steel AISI 316L DIN 1.4404

NW10	15.5	13	11.4	12.7	12.7	½	C10504102
NW16	22.1	19.3	17.3	12.7	19.1	¾	C10504103
NW25	28.6	25.9	22.1	12.7	25.4	1	C10504224
NW40	44.5	38.6	34.9	12.7	38.1	1½	C10504325
NW50	57.2	51.3	47.5	12.7	50.8	2	C10504353

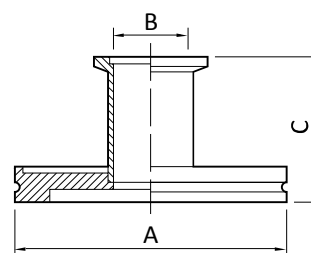


E= tube OD, mm  
F= tube OD, inches

Size	A	B	C	Order no:	Adaptor NW/ISO
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Stainless Steel AISI 316L DIN 1.4404

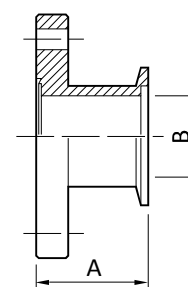
NW25/ISO63	95	25	50		C10007115
NW40/ISO63	95	40	50		C10007116
NW40/ISO80	110	40	118		C10008002
NW40/ISO100	130	40	50		C10009122
NW50/ISO63	95	50	50		C10007118
NW50/ISO80	110	50	118		C10008003
NW50/ISO100	130	50	50		C10009123



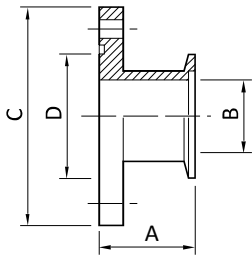
Size	A	B	Order no:	Adaptor NW/CF
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Stainless Steel AISI 316L DIN 1.4404

NW16/DN16CF/1½	52.7	15.8		C10503104
NW16/DN40CF/2½	45.3	15.8		C10503105
NW25/DN40CF/2½	45.3	22		C10503207
NW40/DN40CF/2½	45.3	40		C10503305
NW50/DN63CF/4½	49.5	50		C10503405

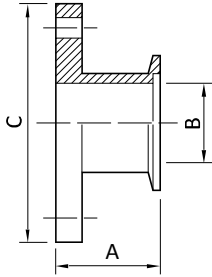


Adaptor NW/ASA with O-Ring Groove



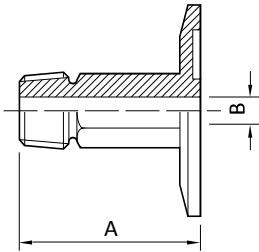
Size	A	B	C	D	Order no:
Stainless Steel AISI 316L DIN 1.4404					
NW40/2 inch ASA	46	40	152	86.9	C10503310
NW40/3 inch ASA	46	40	190	118	C10503311
NW50/2 inch ASA	46	50	152	86.9	C10503410

Adaptor NW/ASA without O-Ring Groove



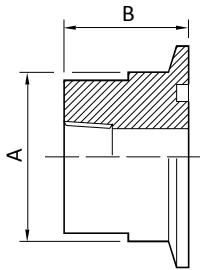
Size	A	B	C	Order no:
Stainless Steel AISI 316L DIN 1.4404				
NW40/1½ inch ASA	46	40	127	C10503303
NW40/2 inch ASA	46	40	152	C10503300
NW50/2 inch ASA	46	50	152	C10503400

Adaptor NW/NPT Threaded Pipe Male



Size	A	B	Order no:
Stainless Steel AISI 316L DIN 1.4404			
NW16/⅛ inch NPT male	40	4.7	C10501102
NW16/¼ inch NPT male	50	7.1	C10501103
NW25/⅛ inch NPT male	40	4.7	C10501217
NW25/¼ inch NPT male	50	7.1	C10501218
NW25/½ inch NPT male	75	11.9	C10501219
NW25/¾ inch NPT male	75	15.9	C10501220
NW40/¼ inch NPT male	50	7.1	C10501303
NW40/½ inch NPT male	75	11.9	C10501304
NW40/¾ inch NPT male	75	15.9	C10501305
NW40/1 inch NPT male	75	22.2	C10501306
NW50/½ inch NPT male	75	11.9	C10501501
NW50/1 inch NPT male	75	22.2	C10501503

Adaptor NW/NPT Threaded Pipe Female

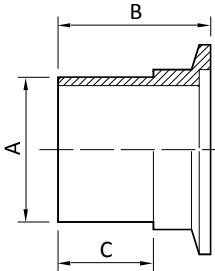


Size	A	B	Order no:
Aluminium ISO 6082 DIN 3.2315			
NW10/⅛ inch NPT female	15.8	19.1	C10501070
NW16/⅛ inch NPT female	15.8	19.1	C10501104
NW25/⅛ inch NPT female	22.4	19.1	C10501221
NW40/⅛ inch NPT female	31.8	25.4	C10501307
NW10/¼ inch NPT female	15.8	19.1	C10501071
NW16/¼ inch NPT female	15.8	19.1	C10501105
NW25/¼ inch NPT female	22.4	19.1	C10501222
NW40/¼ inch NPT female	31.8	25.4	C10501308
Stainless Steel AISI 316L DIN 1.4404			
NW10/⅛ inch NPT female	15.8	19.1	C10501072
NW16/⅛ inch NPT female	15.8	19.1	C10501106
NW25/⅛ inch NPT female	22.4	19.1	C10501223
NW40/⅛ inch NPT female	31.8	25.4	C10501309
NW10/¼ inch NPT female	15.8	19.1	C10501073
NW16/¼ inch NPT female	15.8	19.1	C10501107
NW25/¼ inch NPT female	22.4	19.1	C10501224
NW40/¼ inch NPT female	31.8	25.4	C10501310



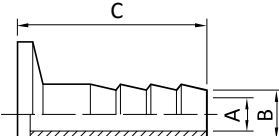
Size	A	B	Order no:	Adaptor NW/VCR Male
Stainless Steel AISI 316L DIN 1.4404				
NW16/¼ inch VCR male	35.6	4.8	C10501108	
NW16/½ inch VCR male	41.4	10.4	C10501110	
NW25/¼ inch VCR male	35.6	4.8	C10501225	
NW25/½ inch VCR male	40.6	10.4	C10501227	
NW40/¼ inch VCR male	35.6	4.8	C10501311	
NW40/½ inch VCR male	40.6	10.4	C10501313	
NW50/¼ inch VCR male	35.6	4.8	C10501508	

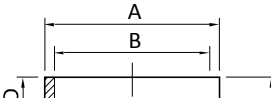
Size	A	B	Order no:	Adaptor NW/VCR Female
Stainless Steel AISI 316L DIN 1.4404				
NW16/¼ inch VCR female	35.6	4.8	C10501109	
NW16/½ inch VCR female	41.4	10.4	C10501111	
NW25/¼ inch VCR female	35.6	4.8	C10501226	
NW25/½ inch VCR female	40.6	10.4	C10501228	
NW25/¾ inch VCR female	54.4	15.7	C10501230	
NW40/¼ inch VCR female	35.6	4.8	C10501312	
NW40/½ inch VCR female	40.6	10.4	C10501314	

Size	A	B	C	D	Order no:	Adaptor PVC Hose
Stainless Steel AISI 316L DIN 1.4404						
NW10/¼ inch hose	12.7	32	20	12.7	C10504081	
NW16/¼ inch hose	12.7	32	20	12.7	C10504104	
NW16/½ inch hose	19.1	32	20	19.1	C10504105	
NW25/¼ inch hose	19.1	38.1	26	19.1	C10504266	
NW25/1 inch hose	25.4	38.1	26	25.4	C10504225	
NW40/1½ inch hose	38.1	50	38.1	38.1	C10504326	
NW50/2 inch hose	47.4	55	41	50.8	C10504352	

D= hose internal diameter

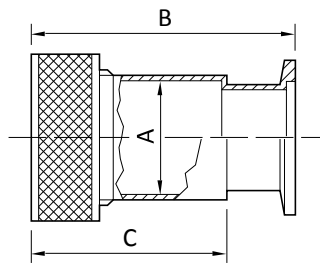
Size	A	B	C	Order no:	Compression Fitting
Aluminium					
NW10	44	43	14/15	C10520050	

Size	A	B	C	Order no:	Nozzle
Aluminium ISO 6082 DIN 3.2315					
NW10	7	12	40	C10511645	
NW25	7	12	40	C10514645	
NW40	7	12	40	C10516645	

Size	A	B	C	D	Order no:	Coupling Body Brass
NW10	18	15.2	13	6	C10511328	
NW25	32	28.2	20	8	C10514328	
NW40	46	42.2	18	8	C10516628	



Gauge Tube Adaptor and Compression O-Ring



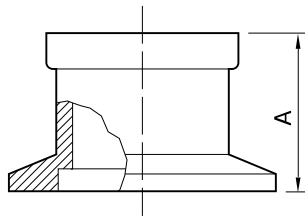
Size	A	B	C	D	E	Order no:
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Stainless Steel AISI 316L DIN 1.4404 Fluoroelastomer O-ring

NW10	13.1	50	33	12.7	½	C10502001
NW16	6.7	32	-	6.4	¼	C10502101
NW16	13.1	50	33	12.7	½	C10502102
NW16	19.4	56	40	19.1	¾	C10502103
NW25	13.1	50	33	12.7	½	C10502201
NW25	19.4	58	40	19.1	¾	C10502202
NW25	25.8	62	46	25.4	1	C10502203
NW40	13.1	58	33	12.7	½	C10502300
NW40	19.4	63.5	40	19.1	¾	C10502301
NW40	25.8	71	46	25.4	1	C10502302
NW40	29	74	49	28.6	1 ¼	C10502303
NW40	38.4	84	63.5	38.1	1 ½	C10502304
NW50	19.4	63.5	40	19.1	¾	C10502400
NW50	25.8	71	46	25.4	1	C10502401
NW50	51.1	87	66	50.8	2	C10502404

D= tube od in mm  
E= tube OD in inches

NW Optical Viewpoint



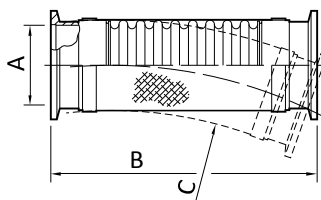
Size	A	Order no:
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Body: Stainless Steel AISI 316L DIN 1.4404; Mounting: Nilo K; Glass: Borosilicate (8250 Schott)

NW40	23.6	C10516407
NW50	31.8	C10517407

Temperature range -40 to 380 °C  
Temperature gradient <3 °C min<sup>-1</sup>

Braided Flexible Exhaust Pipeline



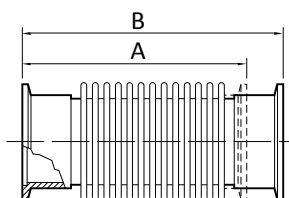
Size	A	B	C	D	E	Order no:
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Stainless Steel AISI 316L DIN 1.4404

NW25	26.2	135	50	320	10.0	C10514294
NW40	41.2	135	80	400	10.0	C10516294
NW50	52.2	135	100	450	10.0	C10517294
NW25	26.2	250	50	320	10.0	C10514295
NW40	41.2	250	80	400	10.0	C10516295
NW50	52.2	250	100	450	10.0	C10517295
NW25	26.2	500	50	320	10.0	C10514296
NW40	41.2	500	80	400	10.0	C10516296
NW50	52.2	500	100	450	10.0	C10517296
NW25	26.2	1000	50	320	10.0	C10514297
NW40	41.2	1000	80	400	10.0	C10516297
NW50	52.2	1000	100	450	10.0	C10517297

C= minimum bend radius, static  
D= minimum bend radius, dynamic  
E= maximum operating pressure, bar absolute

Flexible Bellows



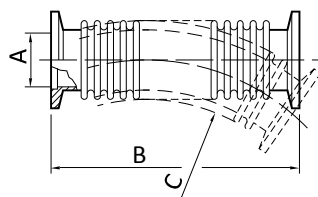
Size	A	B	C	Order no:
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Stainless Steel AISI 316L DIN 1.4404

NW10	102	123	1.2	C10511670
NW16	102	123	1.2	C10512670
NW25	102	123	1.2	C10514670
NW40	102	123	1.2	C10516670
NW50	102	123	1.2	C10517670

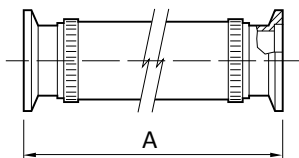
C= maximum operating pressure, bar absolute

Size	A	B	C	D	E	Order no:	Flexible Pipelines
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Stainless Steel AISI 316L DIN 1.4404							
NW10	12.2	250	30	100	1.5	C10511285	
NW16	17.2	250	30	130	1.5	C10512285	
NW25	26.2	250	50	210	1.5	C10514285	
NW40	41.2	250	80	260	1.5	C10516285	
NW50	52.2	250	100	320	1.5	C10517285	
NW10	12.2	500	30	100	1.5	C10511286	
NW16	17.2	500	30	130	1.5	C10512286	
NW25	26.2	500	50	210	1.5	C10514286	
NW40	41.2	500	80	260	1.5	C10516286	
NW50	52.2	500	100	320	1.5	C10517286	
NW10	12.2	750	30	100	1.5	C10511300	
NW16	17.2	750	30	130	1.5	C10512300	
NW25	26.2	750	50	210	1.5	C10514300	
NW40	41.2	750	80	260	1.5	C10516300	
NW50	52.2	750	100	320	1.5	C10517300	
NW10	12.2	1000	30	100	1.5	C10511287	
NW16	17.2	1000	30	130	1.5	C10512287	
NW25	26.2	1000	50	210	1.5	C10514287	
NW40	41.2	1000	80	260	1.5	C10516287	
NW50	52.2	1000	100	320	1.5	C10517287	

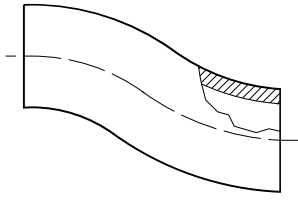
C= minimum bend radius, static  
D= minimum bend radius, dynamic  
E= maximum operating pressure, bar absolute

Size	A	Order no:	Reinforced PVC Tube with NW Flanges and Hose Clamps
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Stainless Steel AISI 316L DIN 1.4404			
NW10	500	C10511055	
NW16	500	C10512055	
NW25	500	C10514055	
NW40	500	C10516055	
NW50	500	C10517055	
NW10	1000	C10511155	
NW16	1000	C10512155	
NW25	1000	C10514155	
NW40	1000	C10516155	
NW50	1000	C10517155	

Maximum operating pressure 1 bar absolute, Temperature 5 to 60 °C

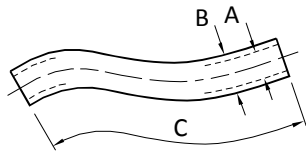


**Reinforced PVC Tube**

**Size**
**Order no:**

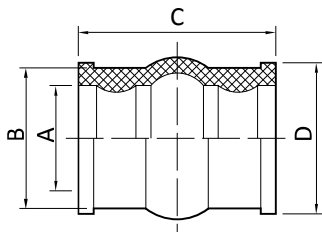
	Europe	N. America
½ inch ID tube	N/A	A63012220
¾ inch ID tube	H02100016	U30002173
1 inch ID tube	H02100017	A63012343
1½ inch ID tube	H02100018	U30000484
2 inch ID tube	H02100019	U30003837

Maximum operating pressure 1 bar absolute, Temperature 5 to 60 °C

Note: Europe 1 metre, N. America 1 foot

**Neoprene Rubber Tube**

**Size**
**A**
**B**
**C**
**Order no:**

5 × 19 mm	5	19	1000	H02100002
7 × 17 mm	7	17	1000	H02100003
9 × 25 mm	9	25	1000	H02100004
12 × 28 mm	12	28	1000	H02100005
20 mm × 34 mm	20	34	1000	H02100006
Reinforced hose	25	32	305	C06600025

**Moulded Sleeve**

**Size**
**A**
**B**
**C**
**D**
**Order no:**

Neoprene					
NW10	13	21	38	23	C26501002
NW25	27	36	55	38	C26501004

# ISO Fittings

Size	A	B	C	D	E	Order no:	Rotatable Flange with Fitting Kit
Mild steel nickel plated							
ISO63	130	110	95.5	Ø9,4	12	C10007010	
ISO80	145	125	110	Ø9,8	12	C10008012	
ISO100	165	145	130.5	Ø9,8	12	C10009010	
ISO160	225	200	180.7	Ø11,8	16	C10011010	
ISO200	285	260	240.7	Ø11,12	16	C10012010	
ISO250	335	310	290.7	Ø11,12	16	C10013010	
ISO320	425	395	371	Ø14,12	20	C10014012	

n= number of holes

Size	A	B	C	D	Order no:	Half Claw Clamp for use with Centring Ring (Tapped Holes)
Nickel plated mild steel body, stainless steel bolt						
ISO63	22.5	35	M8	4	C10007151	
ISO100	22.5	35	M8	8	C10007151	
ISO160	23	40	M10	8	C10011151	
ISO200	23	40	M10	12	C10011151	
ISO250	23	45	M10	12	C10011151	
ISO320	36.5	60	M12	12	C10014151	
ISO400	36.5	60	M12	16	C10014151	
ISO500	36.5	60	M12	16	C10014151	

D= number required

Size	A	B	C	D	Order no:	Half Claw Clamp for use with Centring Ring (Clear Holes)
Nickel plated mild steel body, stainless steel bolt						
ISO63	22.5	35	M8	4	C10007150	
ISO100	22.5	35	M8	8	C10007150	
ISO160	23	40	M10	8	C10011150	
ISO200	23	40	M10	12	C10011150	
ISO250	23	45	M10	12	C10011150	
ISO320	30.5	60	M12	12	C10014150	
ISO400	30.5	60	M12	16	C10014150	
ISO500	30.5	60	M12	16	C10014150	

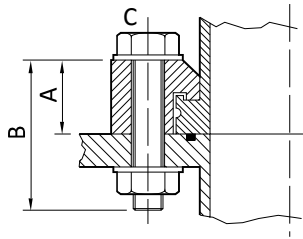
D= number required

Size	A	B	C	D	Order no:	Half Claw Clamp for use with O-ring groove (tapped holes)
Nickel plated mild steel body, stainless steel bolt						
ISO63	18.6	35	M8	4	C10007093	
ISO100	18.6	35	M8	8	C10007093	
ISO160	19	40	M10	8	C10011093	
ISO200	19	40	M10	12	C10011093	
ISO250	19	40	M10	12	C10011093	
ISO320	31	50	M12	12	C10014093	
ISO400	31	50	M12	16	C10014093	
ISO500	31	50	M12	16	C10014093	

D= number required



Half Claw Clamp for use with O-ring Groove (Clear Holes)



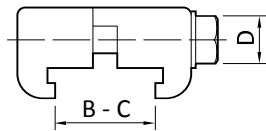
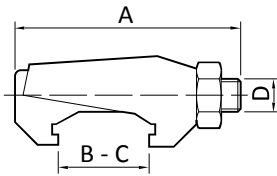
Size	A	B	C	D	Order no:
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Nickel plated mild steel body, stainless steel bolt

ISO63	18.6	45	M8	4	C10007149
ISO100	18.6	45	M8	8	C10007149

D= number required

Claw Clamps



Size	A	B	C	D	Order no:
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Nickel plated 1.1181 steel

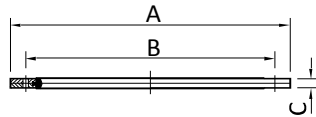
ISO63/ISO250	60	17	27	M10	C10007090
ISO320/ISO500	75	28	39	M12	C10014090

ISO63 requires 4 clamps; ISO80-160 requires 4-8 clamps; ISO200-320 requires 6-12 clamps; ISO400-500 requires 8-16 clamps

Aluminium

ISO63/100	-	22	33	M8	C10007156
ISO160/250	-	24	38	M10	C10011094
ISO320/500	-	35	56	M12	C10014094

co-seal



Size	A	B	C	Order no:
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Nylon, nitrile

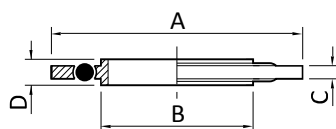
ISO40	101	80	4.2	B27158458
ISO63	116	110	4.2	B27158063
ISO100	151	145	4.2	B27158070
ISO160	200	190	5.7	B27158073

Fluoroelastomer

ISO40	101	80	4.2	B27158457
ISO63	116	110	4.2	B27158064
ISO100	151	145	4.2	B27158071
ISO160	200	190	5.7	B27158074

Use ISO polymer co-seals only for high vacuum applications (<10<sup>-6</sup> mbar). In other applications, use the trapped O-ring seal; O-ring seals have higher mechanical strength.

Trapped O-Ring



Size	A	B	C	D	Order no:
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Aluminium centring-ring, aluminium outer ring

Fluoroelastomer

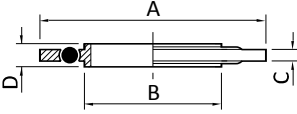
ISO63	95	70	3.9	8	C10521001
ISO100	128	102	3.9	8	C10523001
ISO160	179	153	3.9	8	C10524001

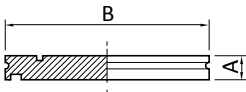
Size	A	B	C	Order no:	Centring-ring with O-Ring
Stainless steel AISI 316L centring-ring					
Nitrile					
ISO63	70	3.9	8	C10007173	
ISO80	83	3.9	8	C10008173	
ISO100	102	3.9	8	C10009173	
ISO160	153	3.9	8	C10011173	
ISO200	213	3.9	8	C10012173	
ISO250	261	3.9	8	C10013173	
ISO320	318	5.6	14	C10014173	
ISO400	400	5.6	14	C10015173	
ISO500	501	5.6	14	C10016173	
Fluoroelastomer					
ISO63	70	3.9	8	C10007174	
ISO80	83	3.9	8	C10008174	
ISO100	102	3.9	8	C10009174	
ISO160	153	3.9	8	C10011174	
ISO200	213	3.9	8	C10012174	
ISO250	261	3.9	8	C10013174	
ISO320	318	5.6	14	C10014174	
ISO400	400	5.6	14	C10015174	
ISO500	501	5.6	14	C10016174	

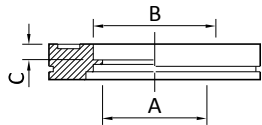
Size	A	B	C	Order no:	Centring-ring and Screen
Stainless steel AISI 316l DIN 1.4404 Mesh Ø3.3 mm aperture, Ø0.9 mm wire					
Fluoroelastomer O-ring					
ISO63	70	3.9	8	C10521085	
ISO80	83	3.9	8	C10522085	
ISO100	102	3.9	8	C10523085	
ISO160	153	3.9	8	C10524085	

Size	A	B	C	D	E	Order no:	Collar Weld Stub
Stainless steel AISI 316L DIN 1.4404							
ISO63	95	76	70	100	3.2	C10007032	
ISO80	110	76	83	100	3.2	C10008013	
ISO100	130	108	102	100	3.2	C10009032	
ISO160	180	159	153	100	3.2	C10011032	
ISO200	240	219.1	213	100	3.2	C10012032	
ISO250	290	267	261	100	3.2	C10013032	

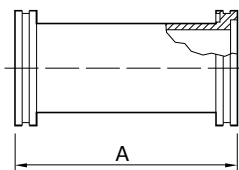


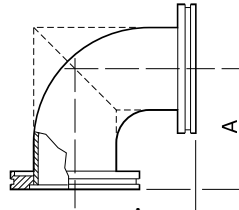
Trapped O-Ring	Size	A	B	C	D	Order no:
	Stainless steel AISI 316L centring ring with aluminium outer ring					
	Nitrile					
	ISO40	63	41	3.9	8	B27158175
	ISO63	95	70	3.9	8	B27158176
	ISO80	109	83	3.9	8	B27158169
	ISO100	128	102	3.9	8	B27158177
	ISO160	179	153	3.9	8	B27158178
	ISO200	239	213	3.9	8	B27158080
	ISO250	287	261	3.9	8	B27158180
	ISO320	358	318	5.6	14	B27158182
	ISO400	440	400	5.6	14	B27158183
	ISO500	541	501	5.6	14	B27158184
	Fluoroelastomer					
	ISO40	63	41	3.9	8	B27158165
	ISO63	95	70	3.9	8	B27158170
	ISO80	109	83	3.9	8	B27158181
	ISO100	128	102	3.9	8	B27158171
	ISO160	179	153	3.9	8	B27158172
	ISO200	239	213	3.9	8	B27158081
	ISO250	287	261	3.9	8	B27158143
	ISO320	358	318	5.6	14	B27158166
	ISO400	440	400	5.6	14	B27158167
	ISO500	541	501	5.6	14	B27158168

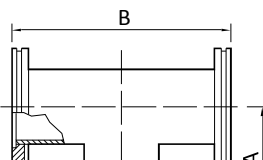
Blanking Flange for use with Collar Flange	Size	A	B	Size	Order no:
	Stainless steel AISI 316L DIN 1.4404				
	ISO63	12	95		C10007049
	ISO80	12	110		C10008015
	ISO100	12	130		C10009049
	ISO160	12	180		C10011049
	ISO200	12	240		C10012049
	ISO250	12	290		C10013049
	ISO320	17	370		C10014003
	ISO500	17	550		C10016003

Bored Flange	Size	A	B	C	Order no:
	Stainless steel AISI 316L DIN 1.4404				
	ISO63	60.2	63.5	5.5	C10007138
	ISO100	98.3	102	5.5	C10009157
	ISO160	148	152	5.5	C10011068
	ISO200	197	203	5.5	C10012053
	ISO250	248	254	5.5	C10013059

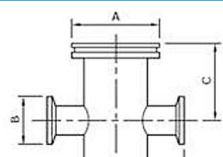


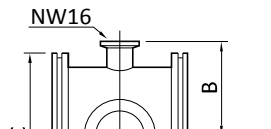
Size	A	Order no:	Nipple
Stainless steel AISI 316L DIN 1.4404			
ISO63	176	C10007140	
ISO100	216	C10009160	
ISO160	276	C10011071	
ISO200	356	C10012054	
ISO250	416	C10013060	

Size	A	Order no:	Elbow 90°
Stainless steel AISI 316L DIN 1.4404			
ISO63	88	C10007203	
ISO100	108	C10009203	
ISO1601	138	C10011203	
ISO2001	178	C10012203	
ISO2501	208	C10013203	

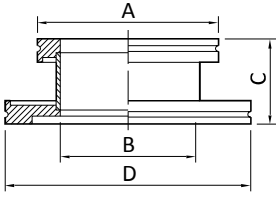
Size	A	B	Order no:	T-piece
Stainless steel AISI 316L DIN 1.4404				
ISO63	88	176	C10007207	
ISO100	108	216	C10009207	
ISO160	138	276	C10011207	
ISO200	178	356	C10012207	

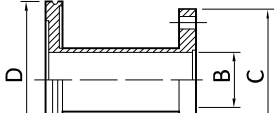
Size	A	B	Order no:	Cross Piece
Stainless steel AISI 316L DIN 1.4404				
ISO63	88	176	C10007211	
ISO100	108	216	C10009211	

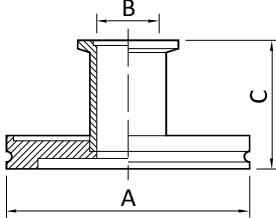
Size	A	B	C	D	Order no:	ISO to NW Reducing Cross
Stainless steel AISI 316L DIN 1.4404						
ISO63/NW40	95	55	102	76	C10007232	
ISO100/NW25	130	40	130	98	C10009231	
ISO160/NW40	180	55	160	121	C10011232	

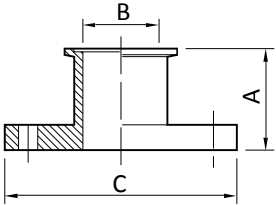
Size	A	B	C	Order no:	Connector with Two Lateral Flanges
Stainless steel AISI 316L DIN 1.4404					
ISO63	88	60	95	C10007215	
ISO100	108	75	130	C10009215	
ISO160	138	100	180	C10011215	

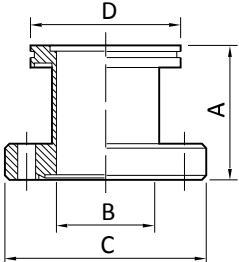


ISO/ISO Adapting Piece	Size	A	B	C	D	E	Order no:
	Stainless steel AISI 316L DIN 1.4404						
	ISO80/ISO63	95	60	105	110	95	C10008021
	ISO80/ISO100	110	73	105	130	110	C10009158
	ISO100/ISO63	95	70	50	130	95	C10009111
	ISO160/ISO63	95	70	50	180	95	C10011110
	ISO160/ISO80	110	73	242	180	110	C10011069
ISO160/ISO100	130	102	50	180	130	C10011111	

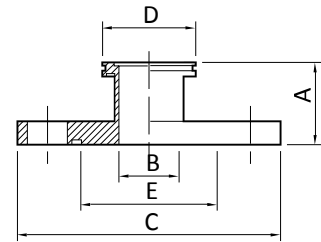
Adaptor ISO Bolted/ISO Collar	Size	A	B	C	D	Order no:
	Stainless steel AISI 316L DIN 1.4404					
	ISO40 bolted/ISO63	106	41	100	95	C10007087
	ISO63 bolted/ISO63	160	70	130	95	C10007155
Supplied with bolts for tapped holes and bolts plus nuts and washers for plain holes						

Adaptor ISO/NW	Size	A	B	C	Order no:
	Stainless steel AISI 316L DIN 1.4404				
	ISO63/NW25	95	25	50	C10007115
	ISO63/NW40	95	40	50	C10007116
	ISO100/NW40	130	40	50	C10009122
	ISO63/NW50	95	50	50	C10007118
	ISO80/NW50	110	50	118	C10008003
	ISO100/NW50	130	50	50	C10009123
ISO80/NW40	110	40	118	C10008002	

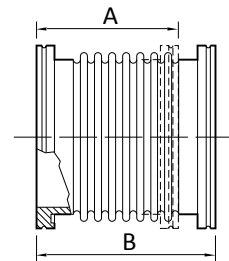
Adaptor ISO Bolted/NW	Size	A	B	C	Order no:		
	Stainless steel AISI 316L DIN 1.4404					Europe	N. America
	ISO40 bolted/NW50*	50	41	100	C10005080	C10005080	
	ISO40 bolted/NW40	69	40	100	No bolts supplied	N/A	A1516
	ISO63 bolted/NW50	50	50	130	No bolts supplied	N/A	A1509
	ISO63 bolted/NW40	68	40	130	No bolts supplied	N/A	A1448
	ISO63 bolted/NW40	50	40	130	No bolts supplied	N/A	A1574
	ISO40/ISO63 bolt kit for clear and tapped holes						N/A
* Supplied with bolts for tapped holes and bolts plus nuts and washers for plain holes							

Adaptor ISO/CF	Size	A	B	C	D	Order no:
	Stainless steel AISI 316L DIN 1.4404					
	ISO63/DN63CF/4½	110	60	114	95	C10007130
	ISO100/DN100CF/6	111	98	152	130	C10009149
	ISO100/DN160CF/8	113	148	203	180	C10011063

Size	A	B	C	D	E	Order no:	Adaptor ISO/ASA
Stainless steel AISI 316L DIN 1.4404							
Without O-ring groove							
ISO63/2 inch ASA	106	60.2	152	95		C10007131	
ISO80/3 inch ASA	106	72.9	190	110		C10008011	
ISO100/3 inch ASA	106	98.3	190	130		C10009152	
ISO100/4 inch ASA	106	98.3	229	130		C10009154	
ISO160/6 inch ASA	112	148	279	180		C10011066	
With O-ring groove							
ISO63/2 inch ASA	106	60.2	152	95	88.5	C10007132	
ISO63/3 inch ASA	106	60.2	190	95	114.5	C10007134	

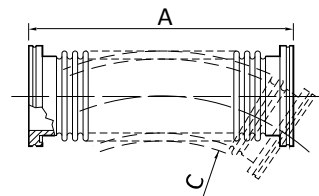


Size	A	B	C	Order no:	Flexible Bellows
Stainless steel AISI 316L DIN 1.4404					
ISO63	106	127	1.5	C10007670	
ISO80	106	127	1.5	C10008028	
ISO100	107	127	1.5	C10009670	
ISO160	170	220	1.5	C10011670	
ISO200	170	220	1.5	C10012670	
ISO250	170	220	1.5	C10013670	



C= maximum pressure, bar absolute

Size	A	B	C	D	Order no:	Flexible Pipelines
Stainless steel AISI 316L DIN 1.4404						
ISO63	250	140	360	1.4	C10007285	
ISO100	250	200	550	1.3	C10009285	
ISO63	500	140	360	1.4	C10007286	
ISO100	500	200	550	1.3	C10009286	
ISO63	750	140	360	1.4	C10007288	
ISO80	750	160	420	1.4	C10008024	
ISO100	750	200	550	1.3	C10009288	
ISO63	1000	140	360	1.4	C10007287	
ISO100	1000	200	550	1.3	C10009287	



C= minimum band radius, static  
D= minimum band radius, dynamic  
E= maximum pressure, bar absolute





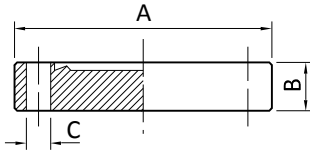
Product Description	Order no:
ISO63 Straight entry, no Gate Valve	KIT710063
ISO100 Straight entry, no Gate Valve	KIT710100
ISO63 Straight entry with test port, BGV Mk2 Pneumatic Gate Valve	KIT712064
ISO100 Straight entry with test port, BGV Mk2 Pneumatic Gate Valve	KIT712101
ISO100 Deadleg entry with test port, BGV Mk2 Pneumatic Gate Valve	KIT713101
ISO100 Inlet Catchpot with test port, BGV Mk2 Pneumatic Gate Valve	KIT714101
ISO100 Deadleg entry with test port, BGV Mk2 Pneumatic Gate Valve, water cooled trap at exhaust	KIT715101

### Pump Hook-Up Kits

- We offer a number of standard hook-up kits to simplify the installation of your dry vacuum pump.
- Each kit has the required components, bellows, seals and claw-clamps for direct connection of the pump to the appropriate size foreline. All exhaust lines include NW40 braided flexible pipelines.
- Kits are available with BGV pneumatic gate valves and can include a dead leg to reduce particulates from falling directly into the pump inlet. For greater protection KIT714101 includes an ITO catchpot.
- KIT715101 can be used with (but does not include) a Water Cooled Trap.
- For more information on the safe installation of your vacuum pump and equipment contact Edwards.

# CF Fittings

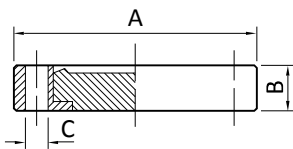
## Blank Flange Non-Rotatable Clear



Size	A	B	C	D	Order no:	
Stainless steel AISI 304L DIN 1.4306						
Metric	Inch					
DN16CF	1½	34	7.6	4.3	6	C10001200
DN40CF	2¾	70	12.7	6.7	6	C10005200
DN63CF	4½	114	17.4	8.3	8	C10007400
DN100CF	6	152	19.9	8.3	16	C10009400
DN160CF	8	203	22.3	8.3	20	C10011300
DN200CF	10	254	24.6	8.3	24	C10012300

D number of bolts

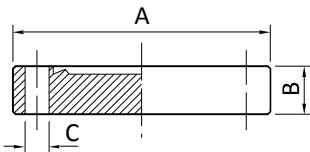
## Blank Flange Rotatable Clear



Size	A	B	C	D	Order no:	
Stainless steel AISI 304L DIN 1.4306						
Metric	Inch					
DN16CF	1½	34	7.6	4.3	6	C10001201
DN40CF	2¾	70	12.7	6.7	6	C10005201
DN100CF	6	152	19.9	8.3	16	C10009401

D number of bolts

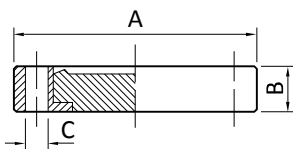
## Blank Flange Non-Rotatable Tapped



Size	A	B	C	D	E	Order no:	
Stainless steel AISI 304L DIN 1.4306							
Metric	Inch						
DN16CF	1½	34	7.6	4.3	6	M4	C10001202
DN40CF	2¾	70	12.7	6.7	6	M6	C10005202
DN63CF	4½	114	17.4	8.3	8	M8	C10007402
DN100CF	6	152	19.9	8.3	16	M8	C10009402

D – number of bolts, E – size of bolts

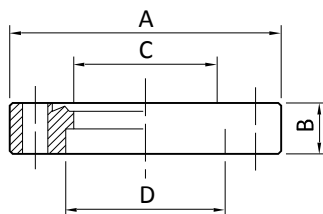
## Blank Flange Rotatable Tapped



Size	A	B	C	D	E	Order no:	
Stainless steel AISI 304L DIN 1.4306							
Metric	Inch						
DN100CF	6	152	19.9	8.3	16	M8	C10009403
DN160CF	8	203	22.3	8.3	20	M8	C10011303

D – number of bolts, E – size of bolts

## Bored Weld Flange Non-Rotatable Clear



Size	A	B	C	D	E	Order no:	
Stainless steel AISI 304L DIN 1.4306							
For metric tube							
Metric	Inch						
DN40CF	2¾	70	12.7	36.9	38.2	C10005207	
DN40CF	2¾	70	12.7	40.1	41.3	C10005208	
DN63CF	4½	114	17.4	49.6	51.1	C10007405	
DN100CF	6	152	19.9	99.4	101.9	C10009405	
DN200CF	10	254	24.6	200.4	203.5	C10012305	
For inch tube							
Metric	Inch						
DN63CF	4½	114	17.4	1.875	2.01	2	C10007405
DN100CF	6	152	19.9	3.81	4.01	4	C10009405
DN200CF	10	254	24.6	7.812	8.02	8	C10012305

For inch tube: C,D,E – dimensions in inches

For inch tube: E – tube OD



Size	A	B	C	D	E	F	Order no:	Bored Weld Flange Rotatable Clear
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Stainless steel AISI 304L DIN 1.4306

For metric tube

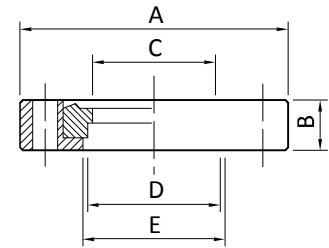
Metric	Inch	A	B	C	D	E	F	Order no:
DN40CF	2 3/4	70	12.7	36.9	38.2	38.7		C10005213
DN63CF	4 1/2	114	17.4	49.6	51.1	68.0		C10007407
DN63CF	4 1/2	114	17.4	61.2	63.6	68.0		C10007408

For inch tube

Metric	Inch	A	B	C	D	E	F	Order no:
DN40CF	2 3/4	70	12.7	1.375	1.51	38.7	1 1/2	C10005213
DN63CF	4 1/2	114	17.4	1.875	2.01	68.0	2	C10007407
DN63CF	4 1/2	114	17.4	2.375	2.51	68.0	2 1/2	C10007408

For inch tube: C, D, F – dimensions in inches

For inch tube: F – tube OD



Size	A	B	C	D	E	Order no:	Bored Weld Flange Non-Rotatable Tapped
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Stainless steel AISI 304L DIN 1.4306

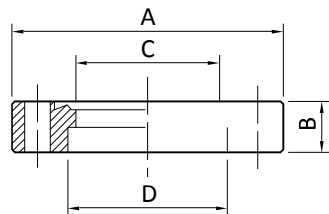
For metric tube

Metric	Inch	A	B	C	D	E	Order no:
DN16CF	1 1/2	34	7.6	12.7	12.7	M4	C10001218
DN40CF	2 3/4	70	12.7	36.9	38.2	M6	C10005219
DN40CF	2 3/4	70	12.7	40.1	41.3	M6	C10005220
DN63CF	4 1/2	114	17.4	49.6	51.1	M8	C10007409
DN100CF	6	152	19.9	99.4	101.9	M8	C10009407
DN160CF	8	203	22.3	149.7	152.6	M8	C10011307

For inch tube: C,D,F – dimensions in inches

E – size of bolts

For inch tube: F – tube OD



Size	A	B	C	D	E	F	Order no:	Bored Weld Flange Rotatable Tapped
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Stainless steel AISI 304L DIN 1.4306

For metric tube

Metric	Inch	A	B	C	D	E	F	Order no:
DN40CF	2 3/4	70	12.7	36.9	38.2	38.7	M6	C10005227
DN63CF	4 1/2	114	17.4	61.2	63.6	68.0	M8	C10007414

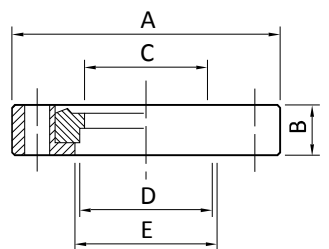
For inch tube

Metric	Inch	A	B	C	D	E	F	Order no:
DN63CF	4 1/2	114	17.4	1.875	2.01	68.0	5/16-24	C10007415
DN100CF	6	152	19.9	3.81	4.01	104.9	5/16-24	C10009410

For inch tube: C,D – dimensions in inches

F – size of bolts

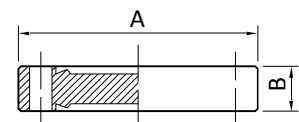
Dimensions of suitable inch tube are shown in the table for non-rotatable tapped flanges (above)



Size	A	B	Order no:	Double-Sided Blank Flange Clear
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Stainless steel AISI 304L DIN 1.4306

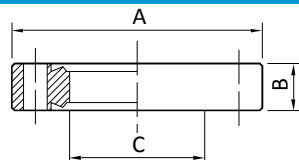
Metric	Inch	A	B	Order no:
DN16CF	1 1/2	34	7.6	C10001233
DN40CF	2 3/4	70	12.7	C10005233



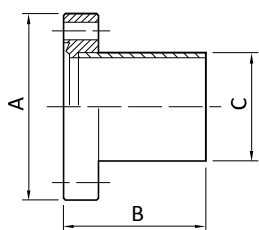
Size	A	B	C	Order no:	Double-Sided Bored Flange Clear
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Stainless steel AISI 304L DIN 1.4306

Metric	Inch	A	B	C	Order no:
DN100CF	6	152	19.8	99.4	C10009412

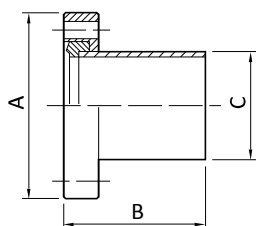


### Half-Nipple Non-Rotatable Clear



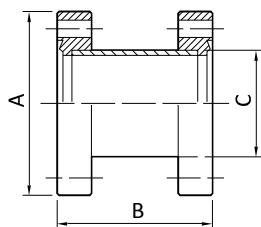
Size	A	B	C	Order no:	
Stainless steel AISI 304L DIN 1.4306					
Metric	Inch				
DN16CF	1½	34	38	19	C10001250
DN40CF	2¾	70	63	38	C10005250
DN63CF	4½	114	105	64	C10007450
DN100CF	6	152	135	102	C10009450
DN160CF	8	203	167	152	C10011450

### Half-Nipple Rotatable Clear



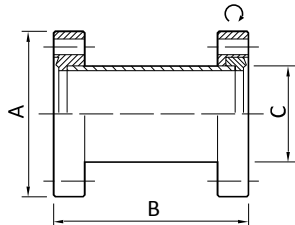
Size	A	B	C	Order no:	
Stainless steel AISI 304L DIN 1.4306					
Metric	Inch				
DN40CF	2¾	70	63	38	C10005251
DN63CF	4½	114	105	64	C10007451
DN100CF	6	152	135	102	C10009451
DN160CF	8	203	167	152	C10011451

### Full-Nipple Non-Rotatable Clear



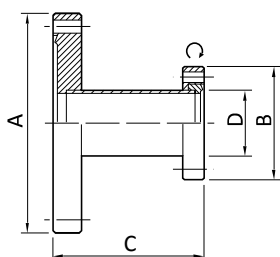
Size	A	B	C	Order no:	
Stainless steel AISI 304L DIN 1.4306					
Metric	Inch				
DN40CF	2¾	70	126	38	C10005260

### Full-Nipple Rotatable Clear



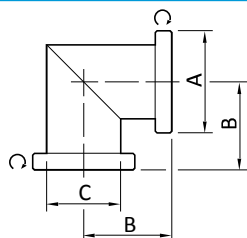
Size	A	B	C	Order no:	
Stainless steel AISI 304L DIN 1.4306					
Metric	Inch				
DN40CF	2¾	70	126	38	C10005261
DN63CF	4½	114	210	64	C10007461
DN100CF	6	152	270	102	C10009461

### Reducing Nipple Rotatable Clear



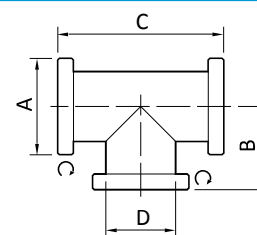
Size	A	B	C	D	Order no:	
Stainless steel AISI 304L DIN 1.4306						
Metric	Inch					
DN40/16CF	2¾/1½	70	34	70	19	C10005370
DN63/40CF	4½/2¾	114	70	70	38	C10007570
DN100/40CF	6/2¾	152	70	70	38	C10009570

### Elbow 90° Rotatable

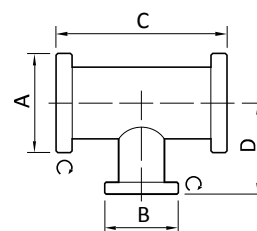


Size	A	B	C	Order no:	
Stainless steel AISI 304L DIN 1.4306					
Metric	Inch				
DN16CF	1½	34	38	19	C10001300
DN40CF	2¾	70	63	38	C10005300
DN63CF	4½	114	105	64	C10007500

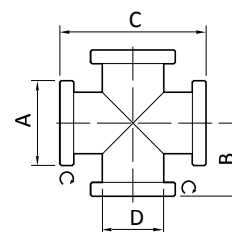
Size	A	B	C	D	Order no:	Tee Rotatable
Stainless steel AISI 304L DIN 1.4306						
Metric	Inch					
DN40CF	2¾	70	63	126	38	C10005310
DN63CF	4½	114	105	210	64	C10007510



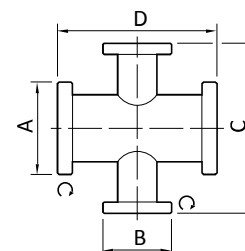
Size	A	B	C	D	Order no:	Reducing Tee Rotatable
Stainless steel AISI 304L DIN 1.4306						
Metric	Inch					
DN40/16CF	2¾/1½	70	34	126	60	C10005350
DN63/40CF	4½/2¾	114	70	210	77	C10007551
DN100/40CF	6/2¾	152	70	270	95	C10009551
DN160/63CF	8/4½	203	114	334	120	C10011552



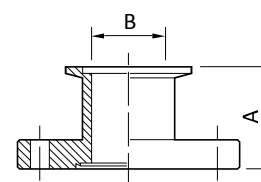
Size	A	B	C	D	Order no:	4-Way Cross Rotatable
Stainless steel AISI 304L DIN 1.4306						
Metric	Inch					
DN40CF	2¾	70	63	126	38	C10005320



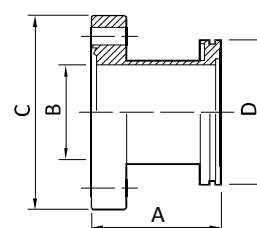
Size	A	B	C	D	Order no:	Reducing Cross Rotatable
Stainless steel AISI 304L DIN 1.4306						
Metric	Inch					
DN40/16CF	2¾/1½	70	34	120	126	C10005360
DN100/40CF	6/2¾	152	70	190	270	C10009561



Size	A	B	Order no:	Adaptors NW/CF
Stainless steel AISI 316L DIN 1.4404				
Metric	Inch			
NW16/DN16CF	1½	52.7	15.8	C10503104
NW16/DN40CF	2¾	45.3	15.8	C10503105
NW25/DN40CF	2¾	45.3	22	C10503207
NW40/DN40CF	2¾	45.3	40	C10503305
NW50/DN63CF	4½	49.5	50	C10503405

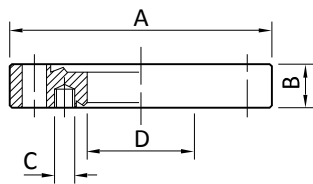


Size	A	B	C	D	Order no:	Adaptors ISO/CF
Stainless steel AISI 316L DIN 1.4404						
Metric	Inch					
ISO63/DN63CF	4½	110	60	114	95	C10007130
ISO100/DN100CF	6	111	98	152	130	C10009149
ISO160/DN160CF	8	113	148	203	180	C10011063



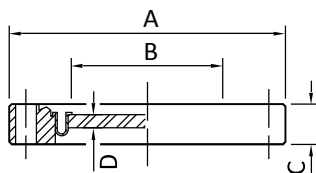


Zero Length Adaptor Major Clear /Minor Tapped



Size	A	B	C	D	Order no:	
Stainless steel AISI 304L DIN 1.4306						
Metric	Inch					
DN40/16CF	2¾/1½	70	12.7	M4	13.2	C10005240
DN63/40CF	4½/2¾	114	17.5	M6	36.9	C10007440
DN100/40CF	6/2¾	152	19.9	M6	36.9	C10009440
DN100/63CF	6/4½	152	19.9	M8	61.2	C10009441
DN63/40CF	4½/2¾	114	17.5	¼-28	36.9	C10007441

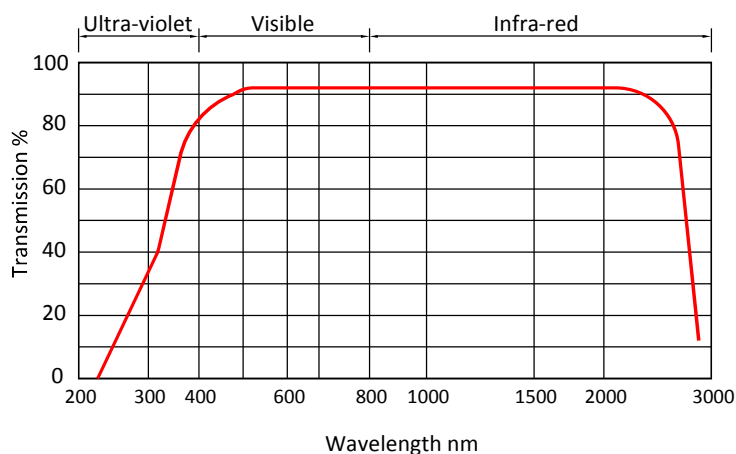
Zero Length Kodial Viewport



Size	A	B	C	D	Order no:	
Stainless steel AISI 304L DIN 1.4306						
Metric	Inch					
DN16CF	1½	34	16	12.7	1	C10001600
DN40CF	2¾	70	38	12.7	2.5	C10005600
DN63CF	4½	114	63	17.4	3	C10007600
DN100CF	6	152	89	19.9	4	C10009600
DN160CF	8	203	136	22.3	6.5	C10011600

Bakeable to 350 °C, at no greater than 2 to 3 °C per minute. Use annealed copper gaskets.

Kodial transmission curve

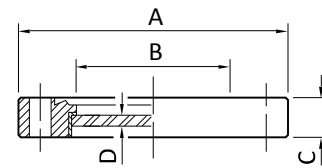


Size	A	B	C	D	Order no:	Zero Length Quartz Viewport
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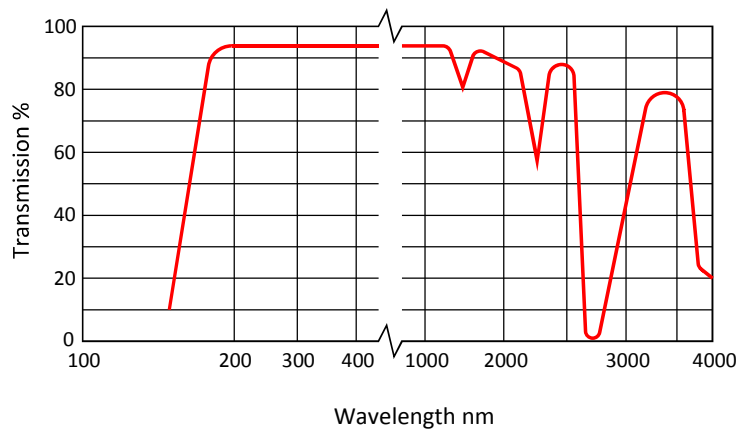
Stainless steel AISI 304L DIN 1.4306

Metric	Inch					
DN40CF	2 $\frac{3}{4}$	70	29.5	12.7	4	C10005610
DN63CF	4 $\frac{1}{2}$	114	60	17.3	5	C10007610

Bakeable to 200 °C, at no greater than 2 to 3 °C per minute. Use annealed copper gaskets.



### Quartz transmission curve

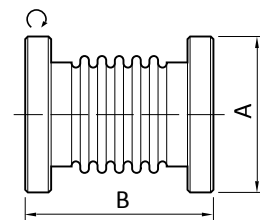


Size	A	B	C	Order no:	Hydroformed Bellows Rotatable
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Stainless steel AISI 304L DIN 1.4306

Metric	Inch				
DN16CF	1 $\frac{1}{2}$	34	110	1.2	C10001340
DN40CF	2 $\frac{3}{4}$	70	160	1.2	C10005340

C – maximum pressure, bar absolute

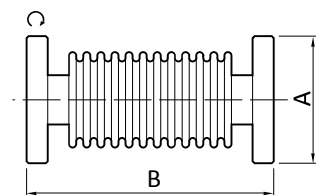


Size	A	B	C	D	E	Order no:	Flexible Pipeline Rotatable
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Stainless steel AISI 304L DIN 1.4306

Metric	Inch						
DN40CF	2 $\frac{3}{4}$	70	250	80	260	1.5	C10005330
DN63CF	4 $\frac{1}{2}$	114	250	140	360	1.5	C10007530
DN16CF	1 $\frac{1}{2}$	34	500	30	130	1.5	C10001331
DN40CF	2 $\frac{3}{4}$	70	500	80	260	1.5	C10005331
DN63CF	4 $\frac{1}{2}$	114	500	140	360	1.5	C10007531
DN100CF	6	152	750	200	550	1.5	C10009532
DN40CF	2 $\frac{3}{4}$	70	1000	80	260	1.5	C10005333
DN63CF	4 $\frac{1}{2}$	114	1000	140	360	1.5	C10007533

C – Minimum bend radius, static  
D – Minimum bend radius, dynamic  
E – Maximum pressure, bar absolute



Copper Gaskets		Size	A	B	C	D	E	F	Order no:
	Metric	Inch							
	DN16CF	1½	21	16	2	34	1.33	10	C10001290
	DN40CF	2¾	48	37	2	70	2.75	10	C10005290
	DN63CF	4½	82	63	2	114	4.5	10	C10007490
	DN100CF	6	120	101	2	152	6	10	C10009290
	DN160CF	8	171	152	2	203	8	5	C10011290
	DN200CF	10	222	203	2	254	10	5	C10012290
	DN250CF	12	270	254	2	304	12	5	C10013290

D – For flange OD, mm; E – For flange OD, inch  
F – Number per pack

Annealed Copper Gaskets		Size	A	B	C	D	E	F	Order no:
	Metric	Inch							
	DN16CF	1½	21	16	2	34	1.33	5	C10001270
	DN40CF	2¾	48	37	2	70	2.75	5	C10005270
	DN63CF	4½	82	63	2	114	4.5	5	C10007270
	DN100CF	6	120	101	2	152	6	5	C10009270
	DN160CF	8	171	152	2	203	8	5	C10011270
	DN200CF	10	222	203	2	254	10	5	C10012270
	DN250CF	12	270	254	2	304	12	5	C10013270

D – For flange OD, mm; E – For flange OD, inch  
F – Number per pack

Silver Plated Copper Gaskets		Size	A	B	C	D	E	F	Order no:
	Metric	Inch							
	DN16CF	1½	21	16	2	34	1.33	5	C10001280
	DN40CF	2¾	48	37	2	70	2.75	5	C10005280
	DN63CF	4½	82	63	2	114	4.5	5	C10007280
	DN100CF	6	120	101	2	152	6	5	C10009280
	DN160CF	8	171	152	2	203	8	5	C10011280
	DN200CF	10	222	203	2	254	10	5	C10012280

D – For flange OD, mm; E – For flange OD, inch  
F – Number per pack

Fluoroelastomer Gaskets		Size	A	B	C	D	E	F	Order no:
	Metric	Inch							
	DN16CF	1½	29	19	2	34	1.33	2	C10001620
	DN40CF	2¾	50	38	3	70	2.75	2	C10005620
	DN63CF	4½	76	64	3	114	4.5	2	C10007620
	DN100CF	6	112	100	3	152	6	2	C10009620
	DN160CF	8	162	150	3	203	8	2	C10011620

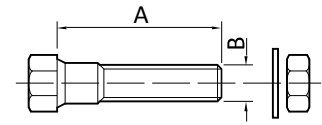
D – For flange OD, mm; E – For flange OD, inch  
F – Number per pack



Size	A	B	C	Order no:	HEX Head Nut, Bolt and Washers for Clear Hole CF Flanges
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Standard

Metric	Inch	A	B	C	Order no:
DN16CF	1½	20	M4	25	C10001630
DN40CF	2¾	35	M6	25	C10005630
DN63CF	4½	45	M8	25	C10007630
DN100CF	6	50	M8	25	C10009630
DN160CF	8	60	M8	25	C10011630
DN200CF	10	60	M8	25	C10012630
DN40CF	2¾	35	¼-28	25	C10005640
DN200CF	10	60	5/16-24	25	C10012640



Silver Plated

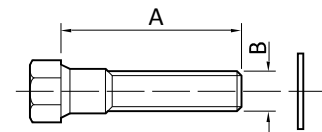
Metric	Inch	A	B	C	Order no:
DN40CF	2¾	35	M6	25	C10005650
DN63CF	4½	45	M8	25	C10007650
DN100CF	6	50	M8	25	C10009650
DN160CF	8	60	M8	25	C10011650
DN200CF	10	60	M8	25	C10012650

C – number per pack

Size	A	B	C	Order no:	HEX Head Bolt and Washers for Tapped Hole CF Flanges
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Standard

Metric	Inch	A	B	C	Order no:
DN40CF	2¾	25	M6	25	C10005670
DN63CF	4½	30	M8	25	C10007730



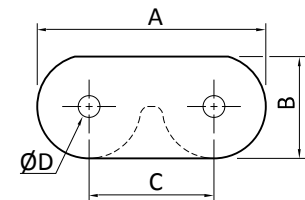
Silver Plated

Metric	Inch	A	B	C	Order no:
DN40CF	2¾	25	M6	25	C10005690
DN63CF	4½	30	M8	25	C10007690
DN100CF	6	35	M8	25	C10009690

C – number per pack

Size	A	B	C	D	E	Order no:	Plate Nuts
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Metric	Inch	A	B	C	D	E	Order no:
DN40CF	2¾	41	11	29	M6	25	C10005710
DN63CF	4½	51	12	35	M8	25	C10007710
DN40CF	2¾	41	11	29	¼-28	25	C10005720



E – number per pack