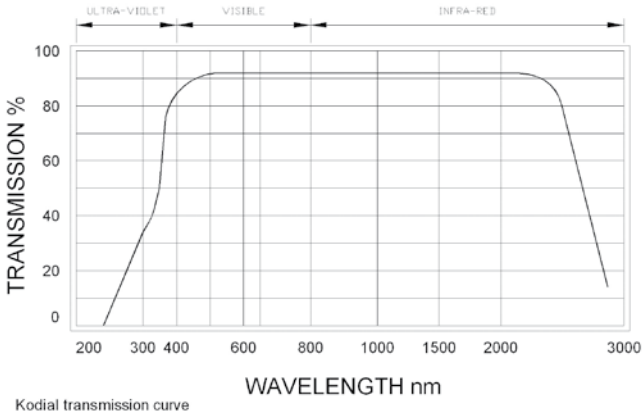
GLASS COMPONENTS

ITL's original business was founded on expertise in the manufacture of glass to metal seals. Today, ITL manufactures glass encapsulated ionisation gauge heads, viewports, glass and ceramic feedthroughs. The rare glass working expertise is available as a resource to our OEM customers. Standard zero length viewports are manufactured using Kodial glass. These viewports are UHV compatible and bakeable to 350 degrees centigrade. Graded seals, adaptors and flanged tubulations are also manufactured. Quartz, Magnesium Fluoride and special exotic material windows optimised for particular wavelength transmissions, plus anti-reflective coatings, can be quoted on request.

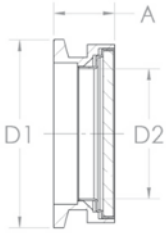
NW **ZERO LENGTH VIEWPORT** - 304L STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2
KVPZ40	NW40	12.7 (0.50	55 (2.17)	31 (1.30)
KVPZ40LA	NW40	15 (0.59)	55 (2.17)	36 (1.42)
KVPZ50LA	NW50	15 (0.59)	75 (2.95)	36 (1.42)

Bakeable to 200°C at not greater than 2-3°C per minute.



Kodial transmission curve

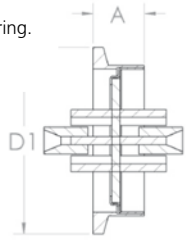


NW **OCTAL BASE FEEDTHROUGH** - 304L STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	No. & TYPE OF CONDUCTORS	CURRENT AMPS	VOLTAGE Kv
OBFGK	NW40	15 (0.59)	36 (1.42)	9 x Kovar	10	5
OBFMK	NW40	26.5 (1.04)	36 (1.42)	9 x Kovar	10	1

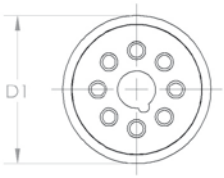
Please note that the OBFGK has Kovar pins sealed into an all glass base. OBFMK has Kovar pins sealed into a metal base with glass beads. Internal and external connectors are available for both (see socket connectors below).

The OBFMK has a KF 'O' ring carrier machined as part of the flange, so it can be sealed with an 'O' ring.
The OBFGK requires an 'O' ring and carrier to seal.
Both are bakeable to 150°C maximum.



SOCKET CONNECTOR

PART NUMBER	D1	CRIMP SOCKET No. x ID mm (Inch)	CURRENT (AMPS)	VOLTAGE	INTERNAL / EXTERNAL
VC8E	32 (1.26)	8 x 2.3 (0.09)	3	1	EXTERNAL
VC8I	32 (1.26)	8 x 2.3 (0.09)	3	1	INTERNAL

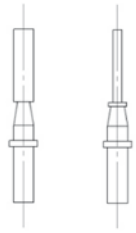


All measurements are in millimetres (inches in brackets)

FEEDTHROUGH CRIMP SET

PART NUMBER	BORE	TYPE	VACUUM COMPATIBLE	PACK QTY
CC23F2	2.3 (0.09)	FEMALE	YES	20
CC23M2	2.3 (0.09)	MALE	NO	20
CC23F	2.3 (0.09)	FEMALE	YES	20

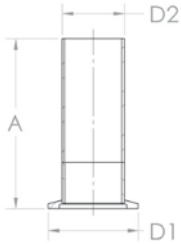
Please note, the non-vacuum compatible crimps should only be used on the atmosphere side of the flange.



NW **KODIAL TUBULATION** - 304L STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2
KF16T13	NW16	100 (3.94)	30 (1.18)	13 (0.50)
KF25T19	NW25	100 (3.94)	40 (1.57)	19 (0.75)
KF25T25	NW25	100 (3.94)	40 (1.57)	25 (1.00)
KF40T25	NW40	100 (3.94)	55 (2.17)	25 (1.00)
KF40T38	NW40	100 (3.94)	55 (2.17)	38 (1.50)

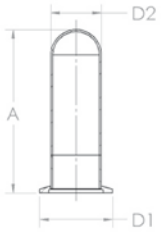
Bakeable to 200°C at not greater than 2-3°C per minute.
Quartz tubulations available on request.
NOTE: Dimensions subject to raw material supplier tolerances.



NW **DOMED KODIAL TUBULATION** - 304L STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2
KF16DT13	NW16	100 (3.94)	30 (1.18)	13 (0.50)
KF25DT25	NW25	100 (3.94)	40 (1.57)	25 (1.00)
KF40DT38	NW40	100 (3.94)	55 (2.17)	38 (1.50)

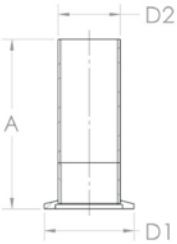
Bakeable to 200°C at not greater than 2-3°C per minute.
Quartz tubulations available on request.
NOTE: Dimensions subject to raw material supplier tolerances.



NW **PYREX TUBULATION** - 304L STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2
KF16T13P	NW16	100 (3.94)	30 (1.18)	13 (0.50)
KF25T19P	NW25	100 (3.94)	40 (1.57)	19 (0.75)
KF25T25P	NW25	100 (3.94)	40 (1.57)	25 (1.00)
KF40T25P	NW40	100 (3.94)	55 (2.17)	25 (1.00)
KF40T38P	NW40	100 (3.94)	55 (2.17)	38 (1.50)

Graded seal tubulation terminating in a length of pyrex bakeable to 200°C at not greater than 2-3°C per minute.
NOTE: Dimensions subject to raw material supplier tolerances.

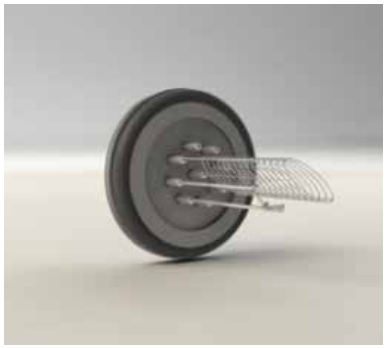


All measurements are in millimetres (inches in brackets)

KF **IONISATION GAUGE** - STAINLESS STEEL

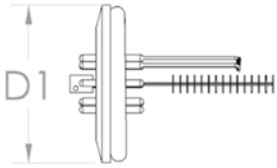
PART NUMBER	PNEUROP	FILAMENT TYPE	FILAMENT VOLTAGE
IGH8K/IR	NW40	Single thoriated iridium	8V

Other characteristics are: Collector voltage -50V; Grid voltage 150V; Sensitivity 8mbar^{-1}



IONISATION GAUGE CONNECTORS AND LEAD

PART NUMBER	DESCRIPTION	TO FIT GAUGE HEAD
IGL8B	2m Bakeable lead set	IGH8 Series
IGL8	2m Non-bakeable lead set	IGH8 Series
IGPB	Non-bakeable connector	IGH8 Series



IONISATION GAUGE FILAMENT KITS

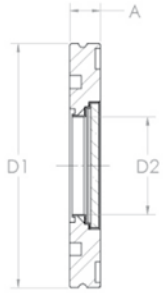
PART NUMBER	FILAMENT TYPE	TO FIT GAUGE HEAD
FK8I1	Single thoriated iridium	IGH8 Series
FK8I2	Twin helical thoriated iridium	IGH8 Series

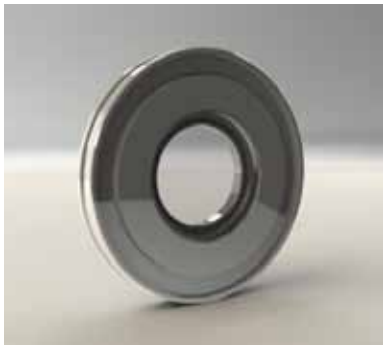
The IGH8 series of ionisation gauge heads are built on a glass to metal sealed base and are suitable for use in the range 10^{-3} to 10^{-9} mbar.

ISO **ZERO LENGTH VIEWPORT** - 304L STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2
ISO100VPZ	ISO100	12 (0.47)	130 (5.12)	63 (2.48)
ISO160VPZ	ISO160	12 (0.47)	180 (7.09)	89 (3.50)
IS0200VPZ	ISO200	12 (0.47)	240 (9.45)	136 (5.35)
ISO250VPZ	ISO250	12 (0.47)	290 (11.42)	136 (5.35)

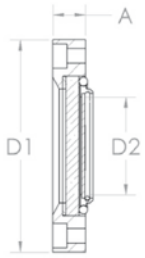
Bakeable to 200°C at not greater than 2-3°C per minute.
Quartz and Sapphire assembly available on request.





ISO **SIGHT GLASS**

PART NUMBER	PNEUROP	A	D1	D2
ISO63SGV	ISO63	20 (0.79)	130 (5.12)	60 (2.36)
ISO100SGV	ISO100	22 (0.87)	165 (6.50)	92 (3.62)
ISO160SGV	ISO160	30 (1.18)	225 (8.86)	142 (5.59)



All measurements are in millimetres (inches in brackets)

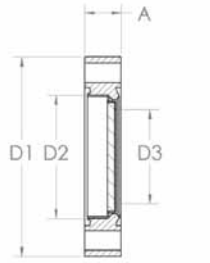
CF **ZERO LENGTH VIEWPORT** - STAINLESS STEEL

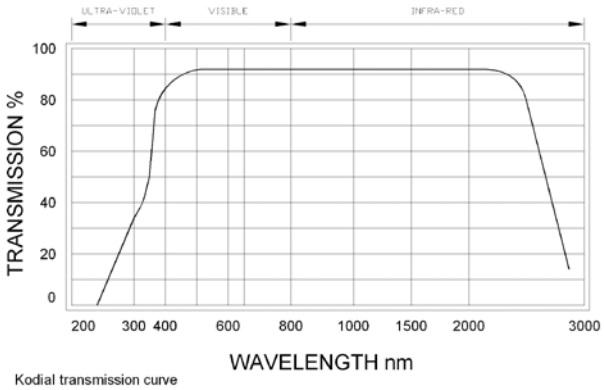
PART NUMBER	PNEUROP	A	D1	D2	D3
VPZ16	NW16	12.7 (0.50)	34 (1.30)	18 (0.71)	16 (0.63)
VPZ38	NW35	12.7 (0.50)	70 (2.75)	42 (1.65)	33 (1.30)
VPZ38LA	NW35	12.7 (0.50)	70 (2.75)	48 (1.89)	39 (1.54)
VPZ64	NW63	17.4 (0.69)	114 (4.50)	72 (2.83)	63 (2.48)
VPZ100	NW100	19.9 (0.78)	152 (6.00)	106 (4.17)	89 (3.50)
VPZ150	NW150	22.3 (0.88)	203 (8.00)	156 (6.14)	136 (5.35)

PART NUMBER
VPZ16LN
VPZ38LN
VPZ38LALN
VPZ64LN
VPZ100LN
VPZ150LN

Bakeable to 350°C at not greater than 2-3°C per minute.
To be used with annealed copper gaskets.

316LN flange, Kovar weld ring.



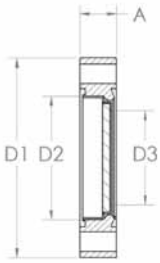


Kodial transmission curve

CF **ZERO LENGTH NON-MAGNETIC VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	D3
VPZ16LN-NM	NW16	12.7 (0.50)	34 (1.30)	18 (0.71)	16 (0.63)
VPZ38LN-NM	NW35	12.7 (0.50)	70 (2.75)	42 (1.65)	33 (1.30)
VPZ64LN-NM	NW63	17.4 (0.69)	114 (4.50)	72 (2.83)	63 (2.48)
VPZ100LN-NM	NW100	19.9 (0.78)	152 (6.00)	106 (4.17)	89 (3.50)
VPZ150LN-NM	NW150	22.3 (0.88)	203 (8.00)	156 (6.14)	136 (5.35)

Supplied with 316LN flange, tantalum welding ring, Bakeable to 120°C at not greater than 2-3°C per minute. To be used with annealed copper gaskets.



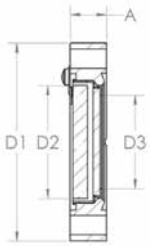
CF **ZERO LENGTH VIEWPORT WITH FITTED LEAD GLASS DISC** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	D3
VPZ16LG	NW16	12.7 (0.50)	34 (1.30)	18 (0.71)	16 (0.63)
VPZ38LG	NW35	12.7 (0.50)	70 (2.75)	42 (1.65)	33 (1.30)
VPZ64LG	NW63	17.4 (0.69)	114 (4.50)	72 (2.83)	63 (2.48)
VPZ100LG	NW100	19.9 (0.78)	152 (6.00)	106 (4.17)	89 (3.50)
VPZ150LG	NW150	22.3 (0.88)	203 (8.00)	156 (6.14)	136 (5.35)

PART NUMBER
VPZ16LGLN
VPZ38LGLN
VPZ64LGLN
VPZ100LGLN
VPZ150LGLN

Bakeable to 350°C at not greater than 2-3°C per minute. To be used with annealed copper gaskets.

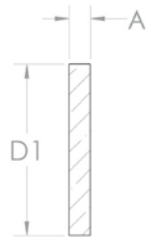
316LN flange, Kovar weld ring.

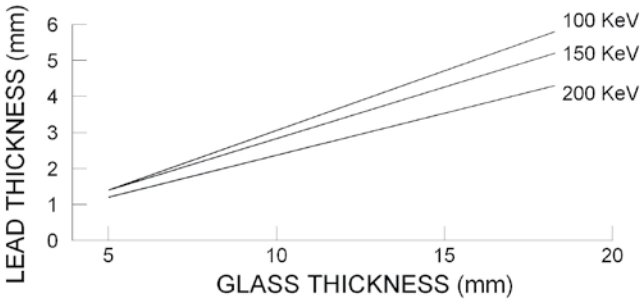


All measurements are in millimetres (inches in brackets)

CF **REPLACEMENT GLASS X-RAY LEAD GLASS PROTECTION DISCS**

PART NUMBER	PNEUROP	TO FIT	A	D1
LG16	NW16	VPZ16	5 (0.20)	17 (0.67)
LG38	NW35	VPZ38	5 (0.20)	40 (1.57)
LG64	NW63	VPZ64	5 (0.20)	70 (2.76)
LG100	NW100	VPZ100	5 (0.20)	93 (3.66)
LG150	NW150	VPZ150	5 (0.20)	143 (5.63)

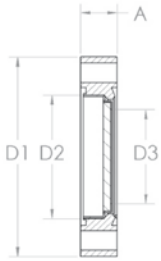




CF **ANTI-REFLECTIVE COATED ZERO LENGTH VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	D3
VPZ16AR	NW16	12.7 (0.50)	34 (1.30)	18 (0.71)	16 (0.63)
VPZ38AR	NW35	12.7 (0.50)	70 (2.75)	42 (1.65)	33 (1.30)
VPZ38LAAR	NW35	12.7 (0.50)	70 (2.75)	48 (1.89)	39 (1.54)
VPZ64AR	NW63	17.4 (0.69)	114 (4.50)	72 (2.83)	63 (2.48)
VPZ100AR	NW100	19.9 (0.78)	152 (6.00)	106 (4.17)	89 (3.50)
VPZ150AR	NW150	22.3 (0.88)	203 (8.00)	156 (6.14)	136 (5.35)

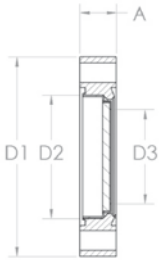
Zero length viewport with a MgF_2 anti-reflective coating on both side. Multi-layer coating available on request.



CF **$InSnO_2$ COATED ZERO LENGTH VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	D3
VPZ16ITO	NW16	12.7 (0.50)	34 (1.30)	18 (0.71)	16 (0.63)
VPZ38ITO	NW35	12.7 (0.50)	70 (2.75)	42 (1.65)	33 (1.30)
VPZ64ITO	NW63	17.4 (0.69)	114 (4.50)	72 (2.83)	63 (2.48)
VPZ100ITO	NW100	19.9 (0.78)	152 (6.00)	106 (4.17)	89 (3.50)
VPZ150ITO	NW150	22.3 (0.88)	203 (8.00)	156 (6.14)	136 (5.35)

Zero length viewport with an Indium Tin Oxide conducting layer on vacuum side of window.



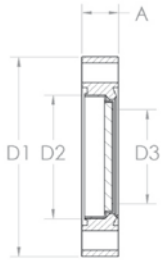
All measurements are in millimetres (inches in brackets)

CF **QUARTZ ZERO LENGTH VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	D3	PART NUMBER
VPZ16Q	NW16	12.7 (0.50)	34 (1.30)	18 (0.71)	16 (0.63)	VPZ16QLN
VPZ38Q	NW35	12.7 (0.50)	70 (2.75)	42 (1.65)	33 (1.30)	VPZ38QLN
VPZ38LAQ	NW35	12.7 (0.50)	70 (2.75)	48 (1.89)	39 (1.54)	VPZ38LAQLN
VPZ64Q	NW63	17.4 (0.69)	114 (4.50)	72 (2.83)	63 (2.48)	VPZ64QLN
VPZ100Q	NW100	19.9 (0.78)	152 (6.00)	106 (4.17)	89 (3.50)	VPZ100QLN
VPZ150Q	NW150	22.3 (0.88)	203 (8.00)	156 (6.14)	136 (5.35)	VPZ150QLN

Bakeable to 200°C at not greater than 2-3°C per minute. To be used with annealed copper gaskets.

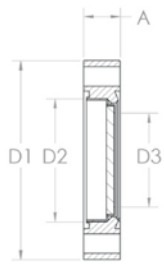
316LN flange, Kovar weld ring.

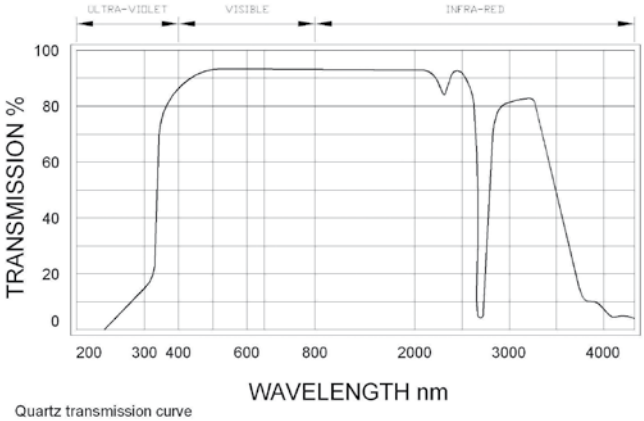


CF **QUARTZ ZERO LENGTH NON-MAGNETIC VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	D3
VPZ16QLN-NM	NW16	12.7 (0.50)	34 (1.30)	18 (0.71)	16 (0.63)
VPZ38QLN-NM	NW35	12.7 (0.50)	70 (2.75)	42 (1.65)	33 (1.30)
VPZ38LAQLN-NM	NW35	12.7 (0.50)	70 (2.75)	48 (1.89)	39 (1.54)
VPZ64QLN-NM	NW63	17.4 (0.69)	114 (4.50)	72 (2.83)	63 (2.48)
VPZ100QLN-NM	NW100	19.9 (0.78)	152 (6.00)	106 (4.17)	89 (3.50)
VPZ150QLN-NM	NW150	22.3 (0.88)	203 (8.00)	156 (6.14)	136 (5.35)

Supplied with 316LN flange, tantalum welding ring, Bakeable to 200°C at not greater than 2-3°C per minute. To be used with annealed copper gaskets.





Quartz transmission curve

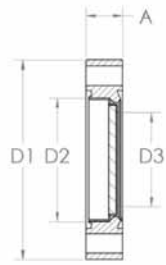
All measurements are in millimetres (inches in brackets)

CF **SAPPHIRE ZERO LENGTH VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	D3	PART NUMBER
VPZ16S	NW16	12.7 (0.50)	34 (1.30)	18 (0.71)	16 (0.63)	VPZ16SLN
VPZ38S	NW35	12.7 (0.50)	70 (2.75)	42 (1.65)	33 (1.30)	VPZ38SLN
VPZ38LAS	NW35	12.7 (0.50)	70 (2.75)	48 (1.89)	39 (1.54)	VPZ38LASLN
VPZ64S	NW63	17.4 (0.69)	114 (4.50)	72 (2.83)	63 (2.48)	VPZ64SLN
VPZ100S	NW100	19.9 (0.78)	152 (6.00)	106 (4.17)	89 (3.50)	VPZ100SLN
VPZ150S	NW150	22.3 (0.88)	203 (8.00)	156 (6.14)	136 (5.35)	VPZ150SLN

Bakeable to 450°C at not greater than 2-3°C per minute. To be used with annealed copper gaskets.

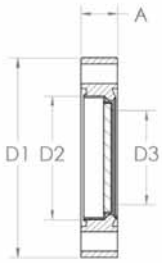
316LN flange, Kovar weld ring.

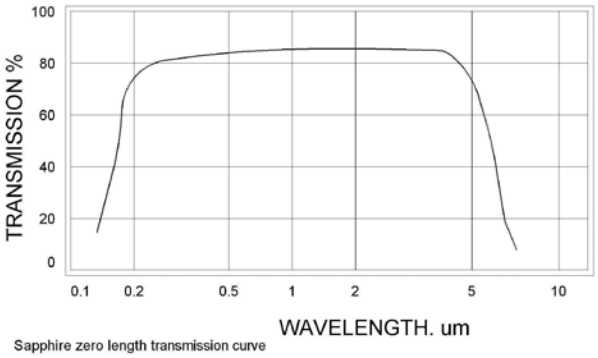


CF **SAPPHIRE ZERO LENGTH NON-MAGNETIC VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	D3
VPZ16SLN-NM	NW16	12.7 (0.50)	34 (1.30)	18 (0.71)	16 (0.63)
VPZ38SLN-NM	NW35	12.7 (0.50)	70 (2.75)	42 (1.65)	33 (1.30)
VPZ38LASLN-NM	NW35	12.7 (0.50)	70 (2.75)	48 (1.89)	39 (1.54)
VPZ64SLN-NM	NW63	17.4 (0.69)	114 (4.50)	72 (2.83)	63 (2.48)
VPZ100SLN-NM	NW100	19.9 (0.78)	152 (6.00)	106 (4.17)	89 (3.50)
VPZ150SLN-NM	NW150	22.3 (0.88)	203 (8.00)	156 (6.14)	136 (5.35)

Supplied with 316LN flange, tantalum welding ring, Bakeable to 450°C at not greater than 2-3°C per minute. To be used with annealed copper gaskets.





Sapphire zero length transmission curve

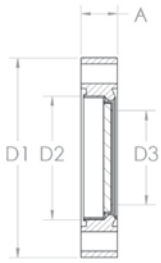
All measurements are in millimetres (inches in brackets)

CF **ZINC SELENIDE ZERO LENGTH VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	D3	PART NUMBER
VPZ16ZnSe	NW16	12.7 (0.50)	34 (1.30)	18 (0.71)	16 (0.63)	VPZ16ZnSeLN
VPZ38ZnSe	NW35	12.7 (0.50)	70 (2.75)	42 (1.65)	33 (1.30)	VPZ38ZnSeLN
VPZ38LAZnSe	NW35	12.7 (0.50)	70 (2.75)	48 (1.89)	39 (1.54)	VPZ38LAZnSeLN
VPZ64ZnSe	NW63	17.4 (0.69)	114 (4.50)	72 (2.83)	63 (2.48)	VPZ64ZnSeLN
VPZ100ZnSe	NW100	19.9 (0.78)	152 (6.00)	106 (4.17)	89 (3.50)	VPZ100ZnSeLN
VPZ150ZnSe	NW150	22.3 (0.88)	203 (8.00)	156 (6.14)	136 (5.35)	VPZ150ZnSeLN

Bakeable to 120°C at not greater than 2-3°C per minute. To be used with annealed copper gaskets.

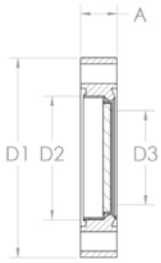
316LN flange, Kovar weld ring.



CF **ZINC SELENIDE ZERO LENGTH NON-MAGNETIC VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	D3
VPZ16ZnSeLN-NM	NW16	12.7 (0.50)	34 (1.30)	18 (0.71)	16 (0.63)
VPZ38ZnSeLN-NM	NW35	12.7 (0.50)	70 (2.75)	42 (1.65)	33 (1.30)
VPZ38LAZnSeLN-NM	NW35	12.7 (0.50)	70 (2.75)	48 (1.89)	39 (1.54)
VPZ64ZnSeLN-NM	NW63	17.4 (0.69)	114 (4.50)	72 (2.83)	63 (2.48)
VPZ100ZnSeLN-NM	NW100	19.9 (0.78)	152 (6.00)	106 (4.17)	89 (3.50)
VPZ150ZnSeLN-NM	NW150	22.3 (0.88)	203 (8.00)	156 (6.14)	136 (5.35)

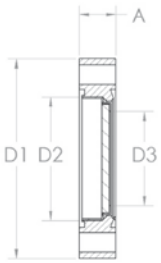
Supplied with 316LN flange, tantalum welding ring, Bakeable to 120°C at not greater than 2-3°C per minute. To be used with annealed copper gaskets.

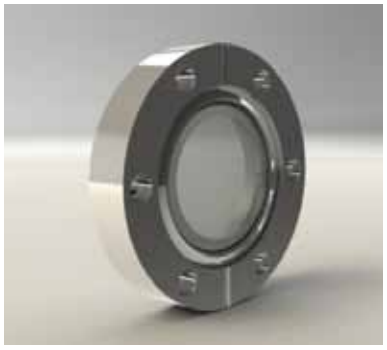


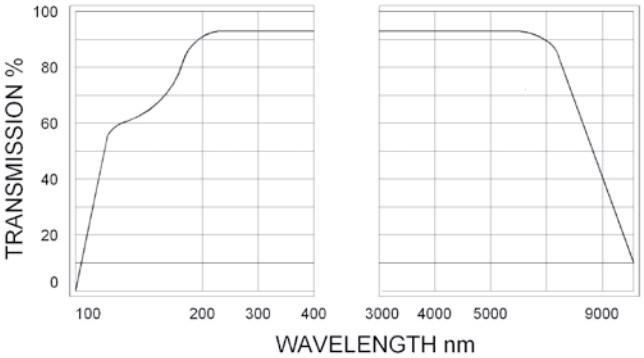
CF **MAGNESIUM FLUORIDE ZERO LENGTH VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	D3
VPZ20MF	NW35	12.7 (0.50)	70 (2.75)	38 (1.50)	20 (0.79)
VPZ38MF	NW35	12.7 (0.50)	70 (2.75)	45 (1.77)	38 (1.50)

Magnesium fluoride zero length viewports sealed by means of a frit technique are bakeable to 300°C at not greater than 2-3°C per minute. To be used with annealed copper gaskets.







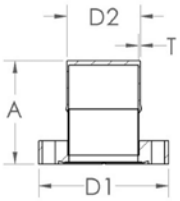
Magnesium flouride transmission curve

All measurements are in millimetres (inches in brackets)

CF **TUBULATED KODIAL VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	T
VP13	NW16	30 (1.18)	34 (1.33)	13 (0.50)	1.0 (0.04)
VP19	NW35	30 (1.18)	70 (2.75)	19 (0.75)	1.5 (0.06)
VP63	NW63	70 (2.76)	114 (4.50)	64 (2.50)	2.0 (0.08)

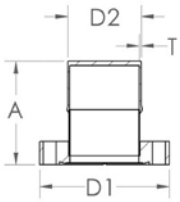
NOTE: Dimensions subject to raw material supplier tolerances.



CF **TUBULATED QUARTZ VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	T
VP13Q	NW16	30 (1.18)	34 (1.33)	13 (0.50)	1.0 (0.04)
VP19Q	NW35	30 (1.18)	70 (2.75)	19 (0.75)	1.5 (0.06)
VP63Q	NW63	70 (2.76)	114 (4.50)	64 (2.50)	2.0 (0.08)

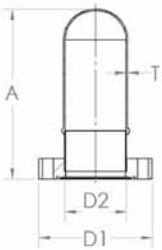
NOTE: Dimensions subject to raw material supplier tolerances.



CF **TUBULATED KODIAL VIEWPORT** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	T
T13DT	NW16	100 (3.94)	34 (1.33)	13 (0.50)	1.0 (0.04)
T38DT	NW35	100 (3.94)	70 (2.75)	38 (1.50)	1.6 (0.06)
T64DT	NW63	150 (5.91)	114 (4.50)	64 (2.50)	2.0 (0.08)

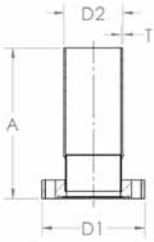
NOTE: Dimensions subject to raw material supplier tolerances.



CF **KODIAL TUBULATION** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	T
T6	NW16	100 (3.94)	34 (1.33)	6 (0.25)	1.0 (0.04)
T13	NW16	100 (3.94)	34 (1.33)	13 (0.50)	1.0 (0.04)
T19	NW35	100 (3.94)	70 (2.75)	19 (0.75)	1.5 (0.06)
T25	NW35	100 (3.94)	70 (2.75)	25 (1.00)	1.5 (0.06)
T38	NW35	100 (3.94)	70 (2.75)	38 (1.50)	1.6 (0.06)
T64	NW63	100 (3.94)	114 (4.50)	64 (2.50)	2.0 (0.08)

NOTE: Dimensions subject to raw material supplier tolerances.

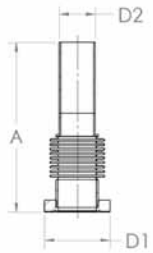


All measurements are in millimetres (inches in brackets)

CF **KODIAL TUBULATION WITH HYDROFORMED BELLOWS** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2
TB6	NW16	170 (6.69)	34 (1.33)	6 (0.25)
TB13	NW16	170 (6.69)	34 (1.33)	13 (0.50)
TB19	NW35	190 (7.48)	70 (2.75)	19 (0.75)
TB25	NW35	200 (7.87)	70 (2.75)	25 (1.00)
TB38	NW35	200 (7.87)	70 (2.75)	38 (1.50)
TB64	NW63	260 (10.24)	114 (4.50)	64 (2.50)

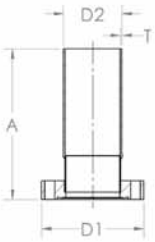
NOTE: Dimensions subject to raw material supplier tolerances.



CF **PYREX TUBULATION** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	T
T6P	NW16	100 (3.94)	34 (1.33)	6 (0.25)	1.0 (0.04)
T13P	NW16	100 (3.94)	34 (1.33)	13 (0.50)	1.0 (0.04)
T19P	NW35	100 (3.94)	70 (2.75)	19 (0.75)	1.5 (0.06)
T25P	NW35	100 (3.94)	70 (2.75)	25 (1.00)	1.5 (0.06)
T38P	NW35	100 (3.94)	70 (2.75)	38 (1.50)	1.6 (0.06)
T63P	NW63	100 (3.94)	114 (4.50)	64 (2.50)	2.0 (0.08)

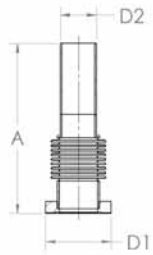
NOTE: Dimensions subject to raw material supplier tolerances.



CF **PYREX TUBULATION WITH HYDROFORMED BELLOWS** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2
T6PB	NW16	170 (6.69)	34 (1.33)	6 (0.25)
T13PB	NW16	170 (6.69)	34 (1.33)	13 (0.50)
T19PB	NW35	190 (7.48)	70 (2.75)	19 (0.75)
T25PB	NW35	200 (7.87)	70 (2.75)	25 (1.00)
T38PB	NW35	200 (7.87)	70 (2.75)	38 (1.50)
T63PB	NW63	260 (10.24)	114 (4.50)	64 (2.50)

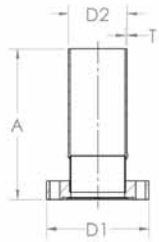
NOTE: Dimensions subject to raw material supplier tolerances.



CF **QUARTZ TUBULATION** - STAINLESS STEEL

PART NUMBER	PNEUROP	A	D1	D2	T
T6Q	NW16	100 (3.94)	34 (1.33)	6 (0.24)	1.0 (0.04)
T13Q	NW16	100 (3.94)	34 (1.33)	13 (0.51)	1.0 (0.04)
T19Q	NW35	100 (3.94)	70 (2.75)	19 (0.75)	1.5 (0.06)
T25Q	NW35	100 (3.94)	70 (2.75)	25 (0.98)	1.5 (0.06)
T38Q	NW35	100 (3.94)	70 (2.75)	38 (1.50)	1.6 (0.06)
T63Q	NW63	100 (3.94)	114 (4.50)	64 (2.52)	2.0 (0.08)

NOTE: Dimensions subject to raw material supplier tolerances.

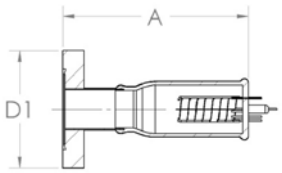


All measurements are in millimetres (inches in brackets)

CF **IONISATION GAUGE HEAD** - GLASS ENCAPSULATED

PART NUMBER	PRESSURE GAUGE mbar	SENSITIVITY mbar[1]	X-RAY LIGHT mbar	FILAMENT TYPE AND No.	BASE TYPE	FILAMENT VOLTAGE	COLLECTOR VOLTAGE	GRID VOLTAGE	CONNECTOR / LEAD
VIG30	10^{-3} to 10^{-10}	13	3 x 10^{-10}	Twin tungsten	Glass	0 to 5V	-20 to -80V	112 to 180V	Barrel or crimp
VIG39	10^{-2} to 10^{-7}	7	7 x 10^{-8}	Single Tungsten*	Glass	2 to 5V	-20 to -60V	120 to 250V	Barrel or crimp
IGH9	10^{-3} to 10^{-10}	9	3 x 10^{-10}	Twin thoriated iridium	Glass	3 to 6V	-20 to -65V	150 to 250V	IGP9/IGL9B

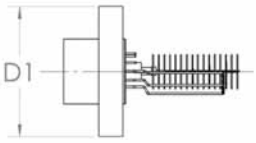
* Iridium version available on request



CF **IONISATION GAUGE HEAD** - NUDE

PART NUMBER	PRESSURE GAUGE mbar	SENSITIVITY mbar[1]	X-RAY LIGHT mbar	FILAMENT TYPE AND No.	BASE TYPE	FILAMENT VOLTAGE	COLLECTOR VOLTAGE	GRID VOLTAGE	CONNECTOR / LEAD
VIG32NTIR	10^{-3} to 10^{-10}	13	3 x 10^{-10}	Twin thoriated iridium	Glass	0 to 5V	-20 to 80V	112 to 180V	Barrel or crimp
IGH8/IR	10^{-3} to 10^{-9}	8	5 x 10^{-10}	Replaceable single thoriated iridium	Metal / Glass bead	8V	-50V	150V	IGP8/B, IGL8/B
IGH8T/W	10^{-3} to 10^{-9}	8	5 x 10^{-10}	Replaceable twin tungsten	Metal / Glass bead	16V	-50V	150V	IGP8B, IGL8B
IGH11/W	10^{-3} to 10^{-11}	17	4 x 10^{-11}	Replaceable twin tungsten	Ceramic	6 to 20V	-50V	180V	IGPBK, IGLBK

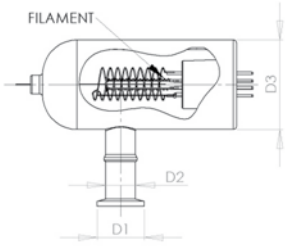
Replacement filament kits available on request.



All measurements are in millimetres (inches in brackets)

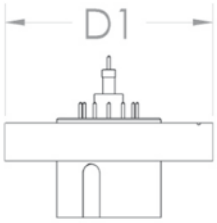
IONISATION GAUGE HEAD - GLASS ENCAPSULATED

PART NUMBER	OPERATING PRESSURE mbar	FILAMENT TYPE	SIDE PORT (D1)	D2	D3
BA-0.75-F35	10^{-3} to 10^{-10}	Thoriated iridium	DN40CF Flg.	19.05 (0.75)	57 (2.24)
BA-0.75-KOV	10^{-3} to 10^{-10}	Thoriated iridium	Kovar	19.05 (0.75)	57 (2.24)
BA-0.75-GLASS	10^{-3} to 10^{-10}	Thoriated iridium	Glass	19.05 (0.75)	57 (2.24)
BA-0.75-T-KOV	10^{-3} to 10^{-10}	Twin tungsten	Kovar	19.05 (0.75)	57 (2.24)
BA-0.75-T-GLASS	10^{-3} to 10^{-10}	Twin tungsten	Glass	19.05 (0.75)	57 (2.24)
BA-1.00-F35	10^{-3} to 10^{-10}	Thoriated iridium	DN40CF Flg.	25.40 (1.00)	57 (2.24)
BA-1.00-KF25	10^{-3} to 10^{-10}	Thoriated iridium	DN25KF Flg.	25.40 (1.00)	57 (2.24)
BA-1.00-KF40	10^{-3} to 10^{-10}	Thoriated iridium	DN40KF Flg.	25.40 (1.00)	57 (2.24)
BA-1.00-KOV	10^{-3} to 10^{-10}	Thoriated iridium	Kovar	25.40 (1.00)	57 (2.24)
BA-1.00-GLASS	10^{-3} to 10^{-10}	Thoriated iridium	Glass	25.40 (1.00)	57 (2.24)
BA-1.00-T-KOV	10^{-3} to 10^{-10}	Twin tungsten	Kovar	25.40 (1.00)	57 (2.24)
BA-1.00-T-GLASS	10^{-3} to 10^{-10}	Twin tungsten	Glass	25.40 (1.00)	57 (2.24)



CF **MULTIPIN CERAMIC FEEDTHROUGH** - STAINLESS STEEL

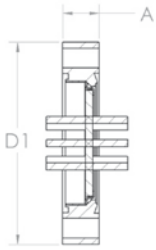
PART NUMBER	PNEUROP	D1
SFT12C	CF35	70 (2.75)



CF **MULTIPIN CERAMIC FEEDTHROUGH** - STAINLESS STEEL

PART NUMBER	PNEUROP	D1	A	No. & TYPE OF CONDUCTORS	CURRENT AMPS	VOLTAGE Kv
OBFG	CF35	70 (2.75)	12.7 (0.5)	9 x Kovar	10	5
OBFM	CF35	70 (2.75)	12.7 (0.5)	9 x Kovar	10	1

Please note that the OBFG has Kovar pins sealed into an all glass base. OBFM has Kovar pins sealed into a metal base with glass beads. Internal and external connectors are available for both (see socket connectors below).

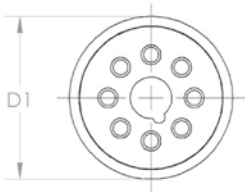


All measurements are in millimetres (inches in brackets)

SOCKET CONNECTOR

PART NUMBER	D1	CRIMP SOCKET	CURRENT	VOLTAGE	INTERNAL / EXTERNAL	TO FIT
VC12E	32 (1.26	10 x 1.0	5	3	EXTERNAL	SFT12C
VC12I	32 (1.26	11 x 1.0	5	3	INTERNAL	SFT12C
VC8E	32 (1.26)	8 x 2.3	3	1	EXTERNAL	OBFG, OBGM
VC8I	32 (1.26)	8 x 2.3	3	1	INTERNAL	OBFG, OBGM

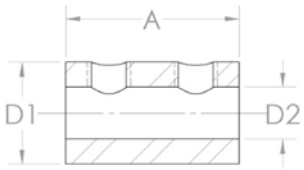
All connectors have a unique fitting orientation to obviate incorrect wiring connections. All external connectors are bakeable to 250˚C and all internal connectors are bakeable to 150˚C maximum.



BARREL CONNECTOR - STAINLESS STEEL

PART NUMBER	D2	D1	A	SCREWS
BC10	1.1 (0.04)	4.7 (0.19)	8 (0.39)	2 x GRUB
BC23	2.4 (0.09)	4.7 (0.19)	8 (0.39)	2 x GRUB
BC15	1.5 (0.06)	4.7 (0.19)	13 (0.51)	2 x PAN
BC18	1.8 (0.07)	4.7 (0.19)	13 (0.51)	2 x PAN
BC30	3.0 (0.12)	6.4 (0.25)	14 (0.55)	2 x PAN

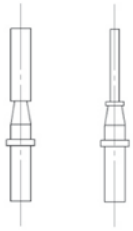
Pack size: 10pcs



FEEDTHROUGH CRIMP SET

PART NUMBER	BORE	TYPE	VACUUM COMPATABLE	PACK QTY
CC10F	1.0 (0.04)	FEMALE	YES	20
CC10M	1.0 (0.04)	MALE	NO	20
CC23F2	2.3 (0.09)	FEMALE	YES	20
CC23M2	2.3 (0.09)	MALE	NO	20

Please note, the non-vacuum compatible crimps should only be used on the atmosphere side of the flange.



All measurements are in millimetres (inches in brackets)