

Technical Information

Weld-in adapter, process adapter and flanges

Level, pressure, temperature



Application area

The adapters and the flanges are used to connect level, pressure or temperature measurement instruments to a vessel or a pipe.

Advantages

- High-quality, corrosion-resistant materials for use in aggressive media
- Versions without gaps and dead space of the weld-in adapters and process adapters according to international hygiene regulations
- Weld-in adapters with a variety of seals for use in a variety of processes

Table of contents

General information	7	Weld-in adapter order numbers for Micropilot FMR43	29
Pressure equipment with permitted pressure less than 200 bar, no pressure-bearing volume	7	Accessories for Micropilot FMR43	29
Suitability for hygienic processes	7	Seals for Micropilot FMR43	30
Material conformity	7		
CRN approval	7	G 1, d=53 pipe-mounting	31
Ordering information	7	Dimensions	31
Symbols	7	Weld-in adapter order numbers	31
		Suitable devices	31
Weld-in adapter - level overview	9	Properties	32
Liquicap	10	Scope of delivery	32
Nivector	11	Accessories	32
Liquipoint	11	Seals	32
Rod probe	11		
Liquiphant	11	G 1, d=60 vessel-mounting	33
Levelflex	13	Dimensions	33
Micropilot	13	Weld-in adapter order numbers	33
		Suitable devices	33
Weld-in adapter - pressure overview	15	Properties	34
Cerabar	16	Scope of delivery	34
Ceraphant	18	Accessories	34
Deltapilot	19	Seals	34
Deltabar	19	Weld-in adapter order numbers for Micropilot FMR43	35
		Accessories for Micropilot FMR43	35
Weld-in adapter - temperature overview	21	Seals for Micropilot FMR43	35
Compact thermometer	21		
Hygienic thermometers	22	G 1 sensor adjustable	36
Thermowell	23	Dimensions	36
Temperature switch	23	Weld-in adapter order numbers	36
Flow switch	23	Suitable devices	36
		Properties	37
G ¾, d=29 pipe-mounting	24	Scope of delivery	37
Dimensions	24	Accessories	37
Weld-in adapter order numbers	24	Seals	37
Suitable devices	24		
Properties	24	RD52 sensor adjustable	38
Scope of delivery	24	Dimensions	38
Accessories	24	Weld-in adapter order numbers	38
Seals and pressure ring	25	Suitable devices	38
		Properties	38
G ¾, d=50 vessel-mounting	26	Scope of delivery	38
Dimensions	26	Accessories	38
Weld-in adapter order numbers	26	Seals	38
Suitable devices	26		
Properties	26	UNI D85	40
Scope of delivery	26	Dimensions	40
Accessories	26	Weld-in adapter order numbers	40
Seals and pressure ring	27	Suitable devices	40
		Properties	40
G ¾, d=55 vessel-mounting	28	Scope of delivery	40
Dimensions	28	Accessories	40
Weld-in adapter order numbers	28	Seals	41
Suitable devices	28		
Properties	28	UNI D65	42
Scope of delivery	29	Dimensions	42
Accessories	29	Weld-in adapter order numbers	42
Seals	29	Suitable devices	42
		Properties	42

Scope of delivery	42	G 1 flush-mounted with metallic sealing taper	54
Accessories	42	Dimensions	54
Seals	43	Weld-in adapter order numbers	54
M24 D65	44	Suitable devices	54
Dimensions	44	Properties	54
Weld-in adapter order numbers	44	Scope of delivery	54
Suitable devices	44	Accessories	54
Properties	44	G ½ flush-mounted	55
Scope of delivery	44	Dimensions	55
Accessories	44	Weld-in adapter order numbers	55
Seals	45	Suitable devices	55
Weld-in adapter order numbers for Micropilot FMR43, FMR63B	45	Properties	55
Accessories for Micropilot FMR43, FMR63B	45	Scope of delivery	55
Seals for Micropilot FMR43, FMR63B	45	Accessories	55
DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange	46	G ½ DIN3852	56
Dimensions	46	Dimensions	56
Weld-in adapter order numbers	46	Weld-in adapter order numbers	56
Suitable devices	46	Suitable devices	56
Properties	47	Properties	56
Scope of delivery	47	Scope of delivery	56
Accessories	47	Accessories	56
Seals	47	Weld-in adapter with sealing taper for G ½	57
G 1¼ with G 1 thread adapter	48	Dimensions	57
Dimensions	48	Weld-in adapter order numbers	57
Weld-in adapter order numbers	48	Suitable devices	57
Suitable devices	48	Properties	57
Properties	48	Scope of delivery	57
Scope of delivery	48	Accessories	57
Seals	48	Weld-in adapter with sealing taper for M12x1.5 . .	58
G ½, d=55 vessel-mounting	49	Dimensions	58
Dimensions	49	Weld-in adapter order numbers	58
Weld-in adapter order numbers	49	Suitable devices	58
Suitable devices	49	Properties	58
Properties	49	Scope of delivery	58
Scope of delivery	49	Accessories	58
Accessories	49	G 1¼ for Ingold process connection	59
Seals	49	Dimensions	59
G 1½, d=90 vessel-mounting	51	Weld-in adapter order numbers	59
Dimensions	51	Suitable devices	59
Weld-in adapter order numbers	51	Properties	59
Suitable devices	51	Scope of delivery	59
Properties	51	Seals	59
Scope of delivery	51	Hygienic process adapter	60
Accessories	51	Nivector	60
Seals	51	Process adapter G 1¼ Tri-Clamp 2" with threaded sleeve	61
G 1½ flush-mounted	53	Dimensions	61
Dimensions	53	Order numbers for hygienic process adapters	61
Weld-in adapter order numbers	53	Suitable devices	61
Suitable devices	53	Properties	61
Properties	53	Scope of delivery	61
Scope of delivery	53	Seals	61
Accessories	53		

Process adapter M24 - level and pressure

overview	63
Liquipoint	64
Liquiphant	65
Micropilot	65
Ceraphant	66
Cerabar	67

Varivent F DN25 (M24)	68
Dimensions	68
Process adapter order numbers	68
Suitable devices	68
Properties	68
Scope of delivery	68
Seals	69
Process adapter order numbers for Micropilot	69
Seals for Micropilot	69

Varivent N DN50/40 (M24)	70
Dimensions	70
Process adapter order numbers	70
Suitable devices	70
Properties	70
Scope of delivery	70
Seals	71
Process adapter order numbers for Micropilot	71
Seals for Micropilot	71

DIN11851 DN32 with slotted nut (M24)	72
Dimensions	72
Process adapter order numbers	72
Suitable devices	72
Properties	72
Scope of delivery	72
Seals	72

DIN11851 DN40 with slotted nut (M24)	73
Dimensions	73
Process adapter order numbers	73
Suitable devices	73
Properties	73
Scope of delivery	74
Seals	74
Process adapter order numbers for Micropilot	74
Seals for Micropilot	74

DIN11851 DN50 with slotted nut (M24)	75
Dimensions	75
Process adapter order numbers	75
Suitable devices	75
Properties	75
Scope of delivery	76
Seals	76
Process adapter order numbers for Micropilot	76
Seals for Micropilot	76

SMS 1½" with slotted nut (M24)	77
Dimensions	77
Process adapter order numbers	77
Suitable devices	77
Properties	77
Scope of delivery	77

Seals	78
Process adapter order numbers for Micropilot	78
Seals for Micropilot	78

Clamp 1½" (DIN 32676, ISO 2852) (M24)	79
Dimensions	79
Process adapter order numbers	79
Suitable devices	79
Properties	79
Scope of delivery	79
Seals	80
Process adapter order numbers for Micropilot	80
Seals for Micropilot	80

Clamp 2" (DIN 32676, ISO 2852) (M24)	81
Dimensions	81
Process adapter order numbers	81
Suitable devices	81
Properties	81
Scope of delivery	81
Seals	82
Process adapter order numbers for Micropilot	82
Seals for Micropilot	82

APV Inline (M24)	83
Dimensions	83
Process adapter order numbers	83
Suitable devices	83
Properties	83
Scope of delivery	83
Seals	83

NEUMO BioControl D25 (M24)	84
Dimensions	84
Process adapter order numbers	84
Suitable devices	84
Properties	84
Scope of delivery	84
Seals	84

NEUMO BioControl D50 (M24)	85
Dimensions	85
Process adapter order numbers	85
Suitable devices	85
Properties	85
Scope of delivery	85
Seals	85

NEUMO BioControl D80 (M24)	86
Dimensions	86
Process adapter order numbers	86
Suitable devices	86
Properties	86
Scope of delivery	86
Seals	86

UNI process adapter - pressure overview	87
Cerabar	87
Deltapilot	88
Deltabar	89

Clamp 2" (UNI)	90	Process adapter order numbers	104
Dimensions	90	Suitable devices	104
Process adapter order numbers	90	Properties	104
Suitable devices	90	Scope of delivery	104
Properties	90	Seals	104
Scope of delivery	90		
Seals	90		
Varivent N (UNI)	92	DIN11851 DN40 (G1)	105
Dimensions	92	Dimensions	105
Process adapter order numbers	92	Process adapter order numbers	105
Suitable devices	92	Suitable devices	105
Properties	92	Properties	105
Scope of delivery	92	Scope of delivery	105
Seals	92	Seals	105
DIN11851 DN40 with slotted nut (UNI)	94	DIN11851 DN50 (G1)	106
Dimensions	94	Dimensions	106
Process adapter order numbers	94	Process adapter order numbers	106
Suitable devices	94	Suitable devices	106
Properties	94	Properties	106
Scope of delivery	94	Scope of delivery	106
Seals	94	Seals	106
DIN11851 DN50 with slotted nut (UNI)	96	SMS 1½" (G1)	107
Dimensions	96	Dimensions	107
Process adapter order numbers	96	Process adapter order numbers	107
Suitable devices	96	Suitable devices	107
Properties	96	Properties	107
Scope of delivery	96	Scope of delivery	107
Seals	96	Seals	107
DRD DN50 (UNI)	98	SMS 2" (G1)	108
Dimensions	98	Dimensions	108
Process adapter order numbers	98	Process adapter order numbers	108
Suitable devices	98	Suitable devices	108
Properties	98	Properties	108
Scope of delivery	98	Scope of delivery	108
Seals	98	Seals	108
Process adapter G1 - pressure overview	100	Clamp 1½" (G1)	109
Cerabar	101	Dimensions	109
Varivent F DN25 (G1)	102	Process adapter order numbers	109
Dimensions	102	Suitable devices	109
Process adapter order numbers	102	Properties	109
Suitable devices	102	Scope of delivery	109
Properties	102	Seals	109
Scope of delivery	102		
Seals	102	Clamp 2" (G1)	110
Varivent N DN50/40 (G1)	103	Dimensions	110
Dimensions	103	Process adapter order numbers	110
Process adapter order numbers	103	Suitable devices	110
Suitable devices	103	Properties	110
Properties	103	Scope of delivery	110
Scope of delivery	103	Seals	110
Seals	103		
DIN11851 DN32 (G1)	104	NEUMO BioControl DN50 (G1)	111
Dimensions	104	Dimensions	111
		Process adapter order numbers	111
		Suitable devices	111
		Properties	111
		Scope of delivery	111
		Seals	111

NEUMO BioControl DN80 (G1)	112
Dimensions	112
Process adapter order numbers	112
Suitable devices	112
Properties	112
Scope of delivery	112
Seals	112
 Flush-mounted pipe connections M24×1.5 - level and pressure	 113
 Weldable pipe connection	 113
Dimensions	113
Properties	114
Order numbers	114
 Clamp connection pipe connection	 114
Dimensions	114
Properties	115
Order numbers	115
 Mounting and welding instructions	 116
Leakage hole or cutout	116
Information for pressure measuring instruments	116
Preparatory steps	116
Welding process	116
Prior to installation	117
Mounting	118
Compressive load capacity	119
 Flanges - overview	 120
Note	120
Versions	120
Flange standard DIN EN 1092-1	120
Height of raised face	120
 Flange dimensions and weights	 122
EN flanges (DIN EN 1092-1)	122
ASME flanges (ASME B16.5)	124
JIS flanges (B 2220)	126
 Pressure-temperature dependency	 128
EN flanges (DIN EN 1092-1)	128
ASME flanges (ASME B16.5)	128
JIS flanges (B 2220)	128
 Slip-on flange FAU80	 129
 FAX50 screw-in flange	 130
G ¾, NPT ¾	130
G 1, NPT 1	130
G 1½, NPT 1½	131
G 2, NPT 2	131

General information

NOTICE

Maximum temperature and pressure values of the sensor can reduce the specified limit values.

- ▶ Always observe the maximum temperature and pressure limits of the sensor used!

Pressure equipment with permitted pressure less than 200 bar, no pressure-bearing volume

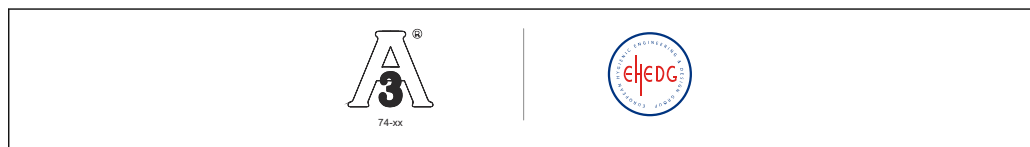
Pressure instruments with a process connection that does not have a pressurized housing do not fall within the scope of the Pressure Equipment Directive, irrespective of the maximum working pressure.

If pressure equipment does not have a pressure-bearing housing, there is no pressure accessory present within the meaning of the Directive.

 Druckgeräterichtlinie DGRL (PED) 2014/68/EU, Artikel 2, Absatz 5

Suitability for hygienic processes

3-A and EHEDG



A0062142

- Some of the connections listed in this documentation have EHEDG and 3-A approval. Suitable for hygienic applications, see also "Hygienic certificates" documentation, SD02503F.
- All seals that are FDA-compliant are permitted for 3-A applications.
- When ordering spare parts for EHEDG applications, the same seals should be chosen as when ordering the original device

Material conformity

- The information on suitability for hygienic processes is listed under the version in question.
- The weld-in adapters have been manufactured in accordance with the material specifications to the latest standard. Particular versions of weld-in adapters, e.g. an older material batch, must be requested and ordered via the TSP workflow.

 Inspection certificate in accordance with EN10204-3.1 material; AD2000: The wetted material 316L corresponds to AD2000 - W0/W2/W10.

CRN approval

Device versions with a CRN approval (Canadian Registration Number) are listed in the corresponding registration documents. CRN-approved devices are marked with a registration number.

Any restrictions regarding the maximum process pressure values are listed on the CRN certificate. CRN approvals for adapters are available in the Downloads area of the product page:

www.endress.com → Downloads.

Ordering information

Configurator

Product Configurator - the tool for individual product configuration

- Up-to-the-minute configuration data
- Depending on the device: direct input of information specific to the measuring point, such as the measuring range or operating language
- Automatic verification of exclusion criteria
- Automatic creation of the order code and its breakdown in PDF or Excel output format
- Ability to order directly in the Endress+Hauser Online Shop

The Configurator is available at www.endress.com on the relevant product page:

1. Select the product using the filters and search field.
2. Open the product page.
3. Select **Configuration**.

Symbols

Safety symbols



This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury.

⚠ WARNING

This symbol alerts you to a potentially dangerous situation. Failure to avoid this situation can result in serious or fatal injury.

⚠ CAUTION

This symbol alerts you to a potentially dangerous situation. Failure to avoid this situation can result in minor or medium injury.

NOTICE

This symbol alerts you to a potentially harmful situation. Failure to avoid this situation can result in damage to the product or something in its vicinity.

Symbols for certain types of information

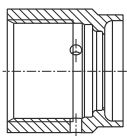
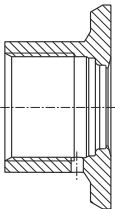
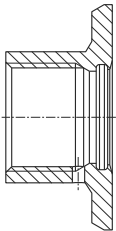
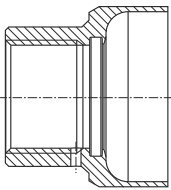
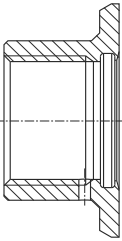
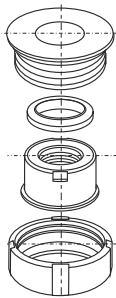
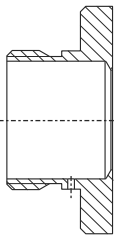
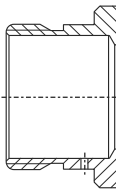


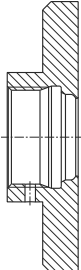
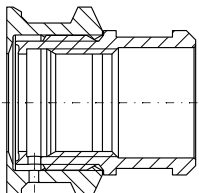
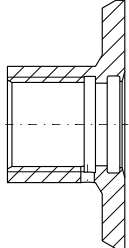
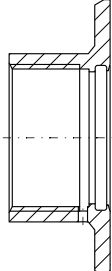
Tip

Indicates additional information

1., 2., 3. Series of steps

Weld-in adapter - level overview

 A0008246 G 3/4, d=29 pipe-mounting → 24	 A0008251 G 3/4, d=50 vessel-mounting → 26	 A0008256 G 3/4, d=55 vessel-mounting → 28
 A0011924 G 1, d=53 pipe-mounting → 31	 A0008248 G 1, d=60 vessel-mounting → 33	 A0008253 G 1 sensor adjustable → 36
 A0008252 RD52 sensor adjustable → 38	 A0008245 UNI D85 → 40	 A0017639 UNI D65 → 42

 M24 D65 → 44 A0008552	 DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46 A0008254	 G 1 1/4 with G 1 thread adapter → 48 A0045641
 G 1/2, d=55 vessel-mounting → 49 A0056490	 G 1 1/2, d=90 vessel-mounting → 51 A0056492	

- The following tables provide an overview of the weld-in adapters that suit the various process connections of a device.
- The **"Process connection version"** column indicates the order option in the Product Configurator under the "Process connection" feature.
- The **"Accessory enclosed version"** column indicates the order option in the Product Configurator using the "Accessory enclosed" feature, which can be used to select the weld-in adapter.
- If no version is specified in the **"Accessory enclosed version"** column, the weld-in adapter must be ordered separately.
- Details and order numbers of the weld-in adapters are listed in the following chapters.

Liquicap

FMI51, FTI51

Process connection version	Suitable adapters	Accessory enclosed version
GQJ	G 3/4, d=50 vessel-mounting → 26	Not available
GWJ	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
UPJ	UNI D85 → 40	Not available
	UNI D65 → 42	Not available

FMI52, FTI52

Process connection version	Suitable adapters	Accessory enclosed version
GWJ	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
UPJ	UNI D85 → 40	Not available
	UNI D65 → 42	Not available

Nivector

FTI26

Process connection version	Suitable adapters	Accessory enclosed version
WDJ	G 1¼ with G 1 thread adapter → 48	PK

Liquipoint

FTW23, FTW33

Process connection version	Suitable adapters	Accessory enclosed version
W5J	G ¾, d=29 pipe-mounting → 24	PC/PD
	G ¾, d=50 vessel-mounting → 26	PA/PB
WSJ	G 1, d=53 pipe-mounting → 31	PG/PH
	G 1, d=60 vessel-mounting → 33	PE/PF
X2J	M24 D65 → 44	PM/PN

Rod probe

11371

Process connection version	Suitable adapters	Accessory enclosed version
4	G ¾, d=29 pipe-mounting → 24	Not available
	G ¾, d=50 vessel-mounting → 26	Not available
	G ¾, d=55 vessel-mounting → 28	Not available

Liquiphant

FTL31

Process connection version	Suitable adapters	Accessory enclosed version
W5J	G ¾, d=29 pipe-mounting → 24	PC/PD
	G ¾, d=50 vessel-mounting → 26	PA/PB
WSJ	G 1, d=53 pipe-mounting → 31	PG/PH
	G 1, d=60 vessel-mounting → 33	PE/PF
	G 1 sensor adjustable → 36	Not available

FTL33

Process connection version	Suitable adapters	Accessory enclosed version
W5J	G ¾, d=29 pipe-mounting → 24	PC/PD
	G ¾, d=50 vessel-mounting → 26	PA/PB
WSJ	G 1, d=53 pipe-mounting → 31	PG/PH
	G 1, d=60 vessel-mounting → 33	PE/PF
	G 1 sensor adjustable → 36	Not available
5ZJ	RD52 sensor adjustable → 38	PO/PQ
X2J	M24 D65 → 44	PM/PN

FTL43

Process connection version	Suitable adapters	Accessory enclosed version
W5J ¹⁾	G ¾, d=55 vessel-mounting → 28	PO/PP
WSJ	G 1, d=53 pipe-mounting → 31	PG/PH
	G 1, d=60 vessel-mounting → 33	PE/PF

Process connection version	Suitable adapters	Accessory enclosed version
	G 1 sensor adjustable → 36	PI/PJ
5ZJ	RD52 sensor adjustable → 38	PR/PS

1) The process connection is only available for the compact probe version.

FTL50

Process connection version	Suitable adapters	Accessory enclosed version
GQ2	G ¾, d=55 vessel-mounting → 28	Not available
GW2	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
	G 1 sensor adjustable → 36	Not available

FTL50H

Process connection version	Suitable adapters	Accessory enclosed version
GQ2	G ¾, d=55 vessel-mounting → 28	Not available
GW2	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
	G 1 sensor adjustable → 36	Not available
EE2	RD52 sensor adjustable → 38	Not available
PE2	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46	Not available

FTL51

Process connection version	Suitable adapters	Accessory enclosed version
GW2	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
	G 1 sensor adjustable → 36	Not available

FTL51H

Process connection version	Suitable adapters	Accessory enclosed version
GW2	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
	G 1 sensor adjustable → 36	Not available
EE2	RD52 sensor adjustable → 38	Not available
PE2	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46	Not available

FTL41, FTL51B

Process connection version	Suitable adapters	Accessory enclosed version
W5J ¹⁾	G ¾, d=55 vessel-mounting → 28	PO/PP
WSJ	G 1, d=53 pipe-mounting → 31	PG/PH
	G 1, d=60 vessel-mounting → 33	PE/PF
	G 1 sensor adjustable → 36	PI/PJ

1) The process connection is only available for the compact probe version.

FTL63

Process connection version	Suitable adapters	Accessory enclosed version
W5J ¹⁾	G ¾, d=55 vessel-mounting → 28	PO/PP
WSJ	G 1, d=53 pipe-mounting → 31	PG/PH
	G 1, d=60 vessel-mounting → 33	PE/PF
	G 1 sensor adjustable → 36	PI/PJ
5ZJ	RD52 sensor adjustable → 38	PR/PS

1) The process connection is only available for the compact probe version.

FTL80

Process connection version	Suitable adapters	Accessory enclosed version
WCJ	G ¾, d=55 vessel-mounting → 28	Not available
WSJ	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
	G 1 sensor adjustable → 36	Not available

FTL81

Process connection version	Suitable adapters	Accessory enclosed version
WSJ	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
	G 1 sensor adjustable → 36	Not available

Levellflex**FMP53**

Process connection version	Suitable adapters	Accessory enclosed version
U1J	M24 D65 → 44	Not available

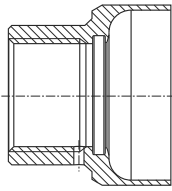
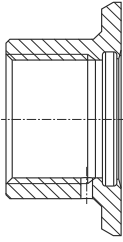
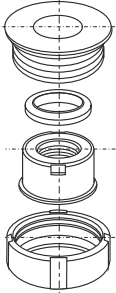
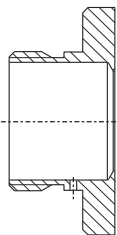
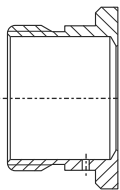
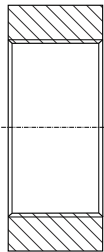
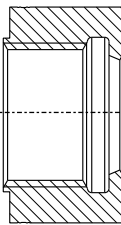
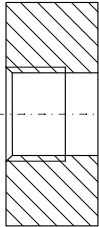
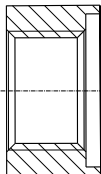
Micropilot**FMR43**

Process connection version	Suitable adapters	Accessory enclosed version
WJJ	G ½, d=55 vessel-mounting → 49	QA
WKJ	G ¾, d=55 vessel-mounting → 28	QC
WLJ	G 1, d=60 vessel-mounting → 33	QE
WNJ	G 1½, d=90 vessel-mounting → 51	QG
X2J	M24 D65 → 44	QI

FMR63B

Process connection version	Suitable adapters	Accessory enclosed version
X2J	M24 D65 →  44	QI/QH

Weld-in adapter - pressure overview

 G 1, d=53 pipe-mounting → 31 A0011924	 G 1, d=60 vessel-mounting → 33 A0008248	 G 1 sensor adjustable → 36 A0008253
 UNI D85 → 40 A0008245	 UNI D65 → 42 A0017639	 M24 D65 → 44 A0008552
 DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46 A0008254	 G 1½ flush-mounted → 53 A0008247	 G 1 flush-mounted with metallic sealing taper → 54 A0008249
 G ½ flush-mounted → 55 A0008250	 G ½ DIN3852 → 56 A0037352	

- The following tables provide an overview of the weld-in adapters that suit the various process connections of a device.
- The **"Process connection version"** column indicates the order option in the Product Configurator under the "Process connection" feature.
- The **"Accessory enclosed version"** column indicates the order option in the Product Configurator using the "Accessory enclosed" feature, which can be used to select the weld-in adapter.
- If no version is specified in the **"Accessory enclosed version"** column, the weld-in adapter must be ordered separately.
- Details and order numbers of the weld-in adapters are listed in the following chapters.

Cerabar

PMP11

Process connection version	Suitable adapters	Accessory enclosed version
WJJ	G ½ DIN3852 → 56	Not available

PMP21

Process connection version	Suitable adapters	Accessory enclosed version
WUJ	G ½ flush-mounted → 55	QA/QB
WJJ	G ½ DIN3852 → 56	QM/QN

PMP23

Process connection version	Suitable adapters	Accessory enclosed version
52J	UNI D85 → 40	QP/QR
	UNI D65 → 42	QL/QM
X2J/X3J	M24 D65 → 44	PM/PN
WSJ	G 1, d=53 pipe-mounting → 31	QH/QI
	G 1, d=60 vessel-mounting → 33	QJ/QK
WQJ	G 1 flush-mounted with metallic sealing taper → 54	QE/QF

PMP43

Process connection version	Suitable adapters	Accessory enclosed version
50J/52J	UNI D85 → 40	QQ
	UNI D65 → 42	QP
	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46	Not available
WSJ	G 1 sensor adjustable → 36	PJ
	G 1, d=53 pipe-mounting → 31	PH
	G 1, d=60 vessel-mounting → 33	PF
WNJ	G 1½ flush-mounted → 53 With this combination, it is not possible to flush-mount the device.	QG
WQJ	G 1 flush-mounted with metallic sealing taper → 54	QE
WUJ	G ½ flush-mounted → 55	QA
WJJ	G ½ DIN3852 → 56	QB

PMP51B, PMP71B

Process connection version	Suitable adapters	Accessory enclosed version
WNJ	G 1½ flush-mounted → 53 For devices with a diaphragm seal, it is not possible to flush-mount the device with this combination.	QJ
WJJ	G ½ DIN3852 → 56	Not available

PMC51B, PMC71B

Process connection version	Suitable adapters	Accessory enclosed version
WNJ	G 1½ flush-mounted → 53	QJ

PMC51

Process connection version	Suitable adapters	Accessory enclosed version
UNJ/UPJ	UNI D85 → 40	Q2/Q3
	UNI D65 → 42	QT/QU
TIJ	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46	QP/QR
GVJ	G 1½ flush-mounted → 53	QJ/QK

PMP51

Process connection version	Suitable adapters	Accessory enclosed version
TIJ	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46	QP/QR
GZJ	G 1, d=60 vessel-mounting → 33	Not available
	G 1, d=53 pipe-mounting → 31	Not available
GVJ	G 1½ flush-mounted → 53	QJ/QK
GXJ	G 1 flush-mounted with metallic sealing taper → 54	QE/QF
G0J	G ½ flush-mounted → 55	QA/QB
GRJ/GRC	G ½ DIN3852 → 56	QM/QN

PMP55

Process connection version	Suitable adapters	Accessory enclosed version
UPJ	UNI D85 → 40	Not available
	UNI D65 → 42	Not available
TIJ	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46	QP/QR
GVJ	G 1½ flush-mounted → 53 With this combination, it is not possible to flush-mount the device.	QJ/QK

PMP63B

Process connection version	Suitable adapters	Accessory enclosed version
50J/52J/54J	UNI D85 → 40	QQ
50J/52J/54J	UNI D65 → 42	QP
50J/52J	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46	Not available
WNJ	G 1½ flush-mounted → 53 For devices with a diaphragm seal, it is not possible to flush-mount the device with this combination.	Not available

PMC71

Process connection version	Suitable adapters	Accessory enclosed version
1G/1H/1J	G 1½ flush-mounted → 53	Not available

PMP71

Process connection version	Suitable adapters	Accessory enclosed version
1G/1H	G 1½ flush-mounted → 53	Not available
1A/1B	G ½ DIN3852 → 56	Not available

PMP75

Process connection version	Suitable adapters	Accessory enclosed version
1G/1H	G 1½ flush-mounted → 53 With this combination, it is not possible to flush-mount the device.	Not available

Ceraphant**PTP31B**

Process connection version	Suitable adapters	Accessory enclosed version
WUJ	G ½ flush-mounted → 55	QA/QB
WJJ	G ½ DIN3852 → 56	Not available

PTP33B

Process connection version	Suitable adapters	Accessory enclosed version
X2J/X3J	M24 D65 → 44	PM/PN
WSJ	G 1, d=53 pipe-mounting → 31	QH/QI
	G 1, d=60 vessel-mounting → 33	QJ/QK
WQJ	G 1 flush-mounted with metallic sealing taper → 54	QE/QF

Deltapilot

FMB50

Process connection version	Suitable adapters	Accessory enclosed version
UNJ/UPJ	UNI D85 → 40	Q2/Q3
	UNI D65 → 42	QT/QU
TIJ	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46	QP/QR
GGJ/GGC	G 1½ flush-mounted → 53	QJ/QK

FMB51, FMB52

Process connection version	Suitable adapters	Accessory enclosed version
GGJ/GGC	G 1½ flush-mounted → 53	QJ/QK

FMB70

Process connection version	Suitable adapters	Accessory enclosed version
00/01	UNI D85 → 40	Not available
	UNI D65 → 42	Not available
TK	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46	Not available
1G/1H	G 1½ flush-mounted → 53	Not available

Deltabar

FMD71

Process connection version	Suitable adapters	Accessory enclosed version
UNJ/UPJ	UNI D85 → 40	Not available
	UNI D65 → 42	Not available
TIJ	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46	Not available
GVJ	G 1½ flush-mounted → 53	Not available

FMD72

Process connection version	Suitable adapters	Accessory enclosed version
TIJ	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange → 46	Not available
GVJ	G 1½ flush-mounted → 53	Not available

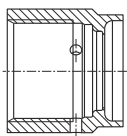
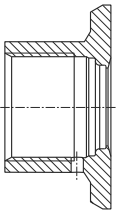
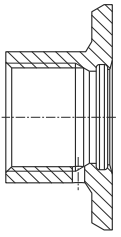
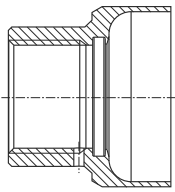
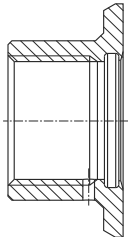
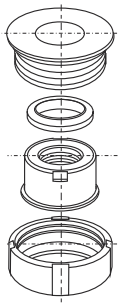
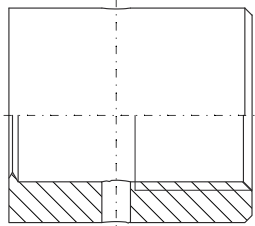
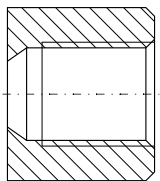
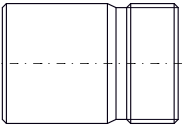
FMD78

Process connection version	Suitable adapters	Accessory enclosed version
00	UNI D85 →  40	Not available
	UNI D65 →  42	Not available
TK	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange →  46	Not available

PMD63B

Process connection version	Suitable adapters	Accessory enclosed version
52J/54J	UNI D85 →  40	Not available
52J/54J	UNI D65 →  42	Not available
4AJ	DRD DN50 65 mm (2.56 in) for flush-mounted installation of devices with a DRD flange →  46	Not available

Weld-in adapter - temperature overview

 G 3/4, d=29 pipe-mounting → 24 A0008246	 G 3/4, d=50 vessel-mounting → 26 A0008251	 G 3/4, d=55 vessel-mounting → 28 A0008256
 G 1, d=53 pipe-mounting → 31 A0011924	 G 1, d=60 vessel-mounting → 33 A0008248	 G 1 sensor adjustable → 36 A0008253
 Weld-in adapter with sealing taper for G 1/2 → 57 A0045815	 Weld-in adapter with sealing taper for M12x1.5 → 58 A0045834	 G 1 1/4 for Ingold process connection → 59 A0045836

- The following tables provide an overview of the weld-in adapters that suit the various process connections of a device.
- The "**Process connection version**" column indicates the order option in the Product Configurator under the "Process connection" feature.
- The "**Accessory enclosed version**" column indicates the order option in the Product Configurator using the "Accessory enclosed" feature, which can be used to select the weld-in adapter.
- If no version is specified in the "**Accessory enclosed version**" column, the weld-in adapter must be ordered separately.
- Details and order numbers of the weld-in adapters are listed in the following chapters.

Compact thermometer

TMR35

Process connection version	Suitable adapters	Accessory enclosed version
AC	G 3/4, d=29 pipe-mounting → 24	Not available
	G 3/4, d=50 vessel-mounting → 26	Not available
AB	G 3/4, d=55 vessel-mounting → 28	Not available
AD	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available

Process connection version	Suitable adapters	Accessory enclosed version
	G 1 sensor adjustable → 36	Not available
MB	Weld-in adapter with sealing taper for G ½ → 57	Not available

TM311

Process connection version	Suitable adapters	Accessory enclosed version
J1	G ¾, d=29 pipe-mounting → 24	Not available
	G ¾, d=50 vessel-mounting → 26	Not available
J2	G ¾, d=55 vessel-mounting → 28	Not available
J3	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
	G 1 sensor adjustable → 36	Not available
H2	Weld-in adapter with sealing taper for G ½ → 57	Not available
H1	Weld-in adapter with sealing taper for M12x1.5 → 58	Not available

Hygienic thermometers**TM371, TM411**

Process connection version	Suitable adapters	Accessory enclosed version
J1	G ¾, d=29 pipe-mounting → 24	Not available
	G ¾, d=50 vessel-mounting → 26	Not available
J2	G ¾, d=55 vessel-mounting → 28	Not available
J3	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
	G 1 sensor adjustable → 36	Not available
H2	Weld-in adapter with sealing taper for G ½ → 57	Not available
H1	Weld-in adapter with sealing taper for M12x1.5 → 58	Not available
M1/M3	G 1¼ for Ingold process connection → 59	Not available

TM372

Process connection version	Suitable adapters	Accessory enclosed version
J1	G ¾, d=29 pipe-mounting → 24	Not available
	G ¾, d=50 vessel-mounting → 26	Not available
J2	G ¾, d=55 vessel-mounting → 28	Not available
J3	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
	G 1 sensor adjustable → 36	Not available

TM401

Process connection version	Suitable adapters	Accessory enclosed version
H2	Weld-in adapter with sealing taper for G ½ → 57	Not available
H1	Weld-in adapter with sealing taper for M12x1.5 → 58	Not available

Thermowell**TT411**

Process connection version	Suitable adapters	Accessory enclosed version
J1	G ¾, d=29 pipe-mounting → 24	Not available
	G ¾, d=50 vessel-mounting → 26	Not available
J2	G ¾, d=55 vessel-mounting → 28	Not available
J3	G 1, d=53 pipe-mounting → 31	Not available
	G 1, d=60 vessel-mounting → 33	Not available
	G 1 sensor adjustable → 36	Not available
H2	Weld-in adapter with sealing taper for G ½ → 57	Not available
H1	Weld-in adapter with sealing taper for M12x1.5 → 58	Not available
M1/M3	G 1¼ for Ingold process connection → 59	Not available

Temperature switch**TTR35**

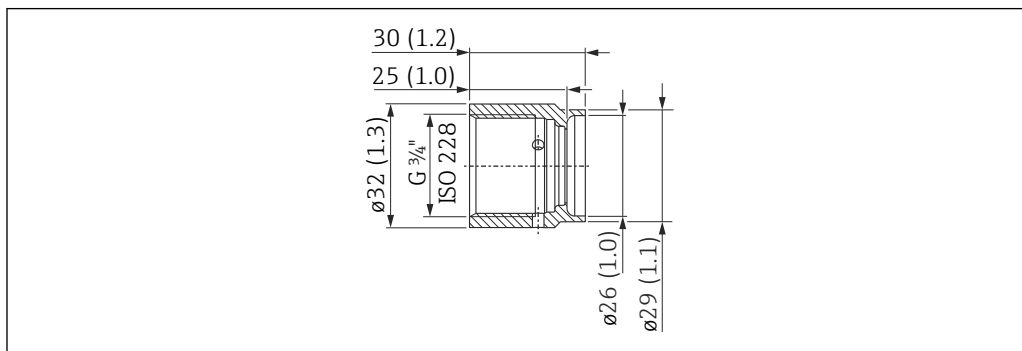
Process connection version	Suitable adapters	Accessory enclosed version
MB	Weld-in adapter with sealing taper for G ½ → 57	Not available

Flow switch**DTT35**

Process connection version	Suitable adapters	Accessory enclosed version
MB	Weld-in adapter with sealing taper for G ½ → 57	Not available

G 3/4, d=29 pipe-mounting

Dimensions



A0008265

1 Dimensions of weld-in adapter G 3/4, d=29 pipe-mounting. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	71258357
Weld-in adapter with inspection certificate EN10204-3.1 material	52028295

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquipoint	FTW23, FTW33	W5J	PC/PD
Rod probe	11371	4	Not available
Liquiphant	FTL33, FTL31	W5J	PC/PD

Temperature

Device		Process connection version	Accessory enclosed version
Compact thermometer	TMR35	AC	Not available
	TM311	J1	Not available
Hygienic thermometers	TM371, TM372, TM411	J1	Not available
Thermowell	TT411	J1	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): Ra ≤ 1.5 µm (59.1 µin)
- Certified according to CRN

Scope of delivery

- Weld-in adapter
- 1x standard seal O-ring VMQ 70
- 1x standard seal O-ring EPDM 70



Only use one seal.

Accessories

Welding aid for welding the weld-in adapter	71675415
Material: Brass	

Dummy plug for sealing the weld-in adapter including VMQ 70 O-ring	71675412
Material: AISI 316L (1.4435)	
Roughness (process side): Ra ≤ 3.2 µm (126 µin)	

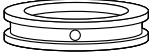
Seals and pressure ring

O-ring, VMQ 70 (standard seal)	52021717 (5 pieces)
Ø 14.9 mm × 2.7 mm (0.59 in × 0.11 in)	
Complies with FDA, EC1935, GB4806	
With this version, the seal can be easily replaced.	

O-ring, EPDM (standard seal)	71529759 (5 pieces)
Ø 15.08 mm × 2.62 mm (0.59 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

O-ring, FKM	71675404 (5 pieces)
Ø 15.08 mm × 2.62 mm (0.59 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

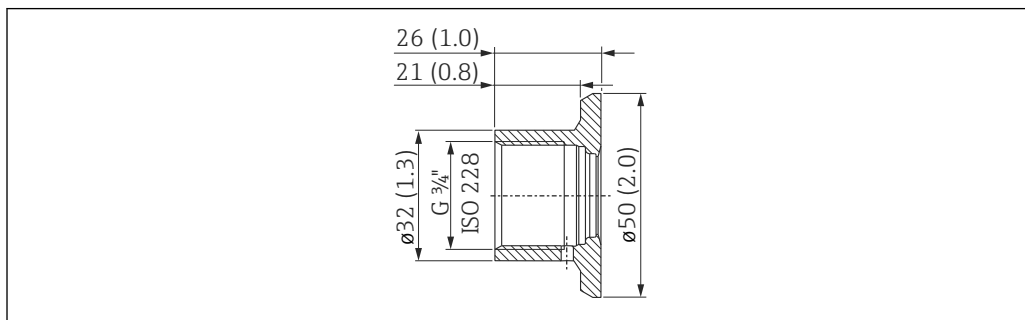
O-ring, VMQ 80	71086117 (3 pieces)
Ø 14.9 mm × 2.7 mm (0.59 in × 0.11 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

Pressure ring	52027421
Material: 316L (1.4435)	
The seal with pressure ring enables defective seals to be easily replaced.	
	
 2 <i>Figure: Pressure ring</i>	

A0021902

G 3/4, d=50 vessel-mounting

Dimensions



A0008810

 3 Dimensions of weld-in adapter G 3/4, d=50 vessel-mounting. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	71258355
Weld-in adapter with inspection certificate EN10204-3.1 material	52018765

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquicap	FMI51, FTI51	GQJ	Not available
Liquipoint	FTW23, FTW33	W5J	PA/PB
Rod probe	11371	4	Not available
Liquiphant	FTL33, FTL31	W5J	PA/PB

Temperature

Device		Process connection version	Accessory enclosed version
Compact thermometer	TMR35	AC	Not available
	TM311	J1	Not available
Hygienic thermometers	TM371, TM372, TM411	J1	Not available
Thermowell	TT411	J1	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)
- Certified according to CRN

Scope of delivery

- Weld-in adapter
- 1x standard seal O-ring VMQ 70
- 1x standard seal O-ring EPDM 70

 Only use one seal.

Accessories

Welding aid for welding the weld-in adapter	71675415
Material: Brass	

Dummy plug for sealing the weld-in adapter including VMQ 70 O-ring	71675412
Material: AISI 316L (1.4435)	
Roughness (process side): Ra ≤ 3.2 µm (126 µin)	

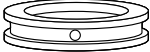
Seals and pressure ring

O-ring, VMQ 70 (standard seal)	52021717 (5 pieces)
Ø 14.9 mm × 2.7 mm (0.59 in × 0.11 in)	
Complies with FDA, EC1935, GB4806	
With this version, the seal can be easily replaced.	

O-ring, EPDM (standard seal)	71529759 (5 pieces)
Ø 15.08 mm × 2.62 mm (0.59 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

O-ring, FKM	71675404 (5 pieces)
Ø 15.08 mm × 2.62 mm (0.59 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

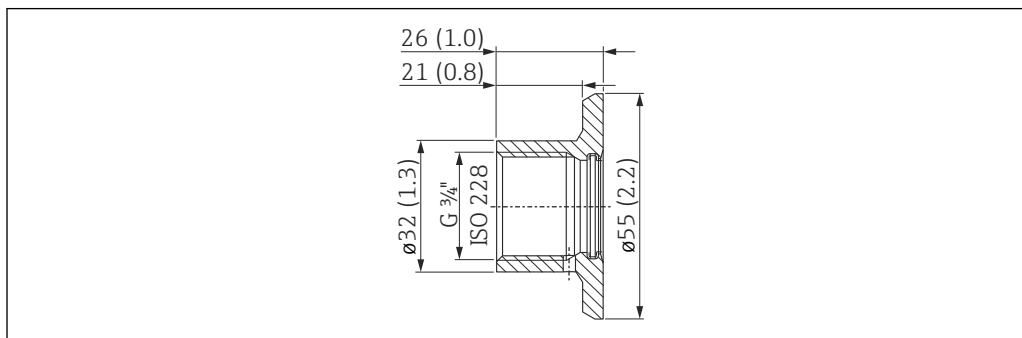
O-ring, VMQ 80	71086117 (3 pieces)
Ø 14.9 mm × 2.7 mm (0.59 in × 0.11 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

Pressure ring	52027421
Material: 316L (1.4435)	
The seal with pressure ring enables defective seals to be easily replaced.	
	
 4 <i>Figure: Pressure ring</i>	

A0021902

G 3/4, d=55 vessel-mounting

Dimensions



A0008274

5 Dimensions of weld-in adapter G 3/4, d=55 vessel-mounting. Unit of measurement mm (in)

Weld-in adapter order numbers



These order numbers do not apply to Micropilot. The order numbers for Micropilot are specified separately below.

Weld-in adapter without inspection certificate	52001052
Weld-in adapter with inspection certificate EN10204-3.1 material	52011897

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Rod probe	11371	4	Not available
Liquiphant	FTL50, FTL50H	GQ2	Not available
	FTL41, FTL43, FTL51B, FTL63	W5J	PO/PP
	FTL80	WCJ	Not available
Micropilot	FMR43	WKJ	QC

Temperature

Device		Process connection version	Accessory enclosed version
Compact thermometer	TMR35	AB	Not available
	TM311	J2	Not available
Hygienic thermometers	TM371, TM372, TM411	J2	Not available
Thermowell	TT411	J2	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)
- Certified according to CRN

Scope of delivery

- Weld-in adapter
- 1x standard seal O-ring VMQ 70
- 1x standard seal O-ring EPDM 70



Only use one seal.



A seal is not included in the delivery for the Micropilot FMR43.

Accessories

Welding aid for welding the weld-in adapter	71168889
Material: Brass	
Modification number. Can only be ordered via FTSP, PTSP or NTSP	

Dummy plug for sealing the weld-in adapter without inspection certificate	71177193
Dummy plug for sealing the weld-in adapter with inspection certificate EN10204-3.1 material	71190074
Material: AISI 316L (1.4435)	
Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	
Modification number. Can only be ordered via FTSP, PTSP or NTSP	

Seals

O-ring, VMQ 70 (standard seal)	52014473 (5 pieces)
Ø 21.89 mm × 2.62 mm (0.86 in × 0.10 in)	
Complies with FDA, EC1935, GB4806	
O-ring, EPDM (standard seal)	71140670 (3 pieces)
Ø 21.89 mm × 2.62 mm (0.86 in × 0.10 in)	
Complies with FDA, EC1935, USP Class VI	
O-ring, FKM	71172153 (5 pieces)
Ø 21.89 mm × 2.62 mm (0.86 in × 0.10 in)	
TSP modification number. Can only be ordered via FTSP, PTSP or NTSP	
O-ring, FKM-FEP coated	71167747
Ø 21.89 mm × 2.62 mm (0.86 in × 0.10 in)	
Compliance on request	
TSP modification number. Can only be ordered via FTSP, PTSP or NTSP	
O-ring, VMQ 3-80	71086100 (3 pieces)
Ø 21.89 mm × 2.62 mm (0.86 in × 0.10 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

Weld-in adapter order numbers for Micropilot FMR43

Weld-in adapter without inspection certificate	71653580
Weld-in adapter with inspection certificate EN10204-3.1 material	71653581

Accessories for Micropilot FMR43

Welding aid for welding the weld-in adapter	
Material: Brass	71675415

Dummy plug for sealing the weld-in adapter without inspection certificate	71177193
Dummy plug for sealing the weld-in adapter with inspection certificate EN10204-3.1 material	71190074
Material: AISI 316L (1.4435)	
Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)	
Modification number. Can only be ordered via FTSP, PTSP or NTSP	

Seals for Micropilot FMR43

The seal is not included in the delivery.

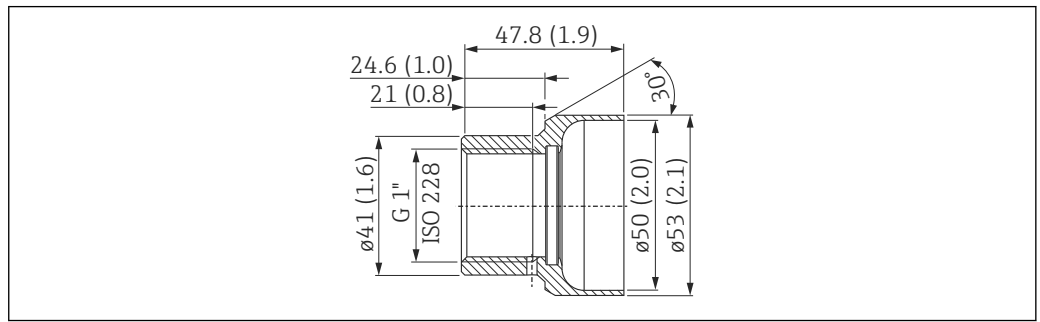
O-ring, EPDM-70 (standard seal)	71655741 (5 pieces)
$\varnothing 21.89 \text{ mm} \times 2.62 \text{ mm}$ (0.86 in $\times$ 0.10 in)	
Complies with FDA, EC1935, GB4806, USP Class VI, UBA KTW-BWGL, NSF61	

O-ring, FKM	71655742
$\varnothing 21.89 \text{ mm} \times 2.62 \text{ mm}$ (0.86 in $\times$ 0.10 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring, EPDM-70	71696902 (5 pieces)
$\varnothing 21.89 \text{ mm} \times 2.62 \text{ mm}$ (0.86 in $\times$ 0.10 in)	
Complies with FDA, EC1935, GB4806, UBA KTW-BWGL, NSF61	

G 1, d=53 pipe-mounting

Dimensions



6 Dimensions of weld-in adapter G 1, d=53 pipe-mounting. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	71258358
Weld-in adapter with inspection certificate EN10204-3.1 material	71093129

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquicap	FMI51, FMI52, FTI51, FTI52	GWJ	Not available
Liquipoint	FTW23, FTW33	WSJ	PG/PH
Liquiphant	FTL33, FTL31, FTL41, FTL43, FTL51B, FTL63, FTL80, FTL81	WSJ	PG/PH
	FTL50, FTL50H, FTL51, FTL51H	GW2	Not available

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	WSJ	QH/QI
Cerabar	PMP23	WSJ	QH/QI
	PMP43	WSJ	PH
	PMP51	GZJ	Not available

Temperature

Device		Process connection version	Accessory enclosed version
Compact thermometer	TMR35	AD	Not available
	TM311	J3	Not available
Hygienic thermometers	TM371, TM372, TM411	J3	Not available
Thermowell	TT411	J3	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Certified according to CRN

Scope of delivery

- Weld-in adapter
- 1x standard seal O-ring VMQ 70
- 1x standard seal O-ring EPDM 70



Only use one seal.

Accessories

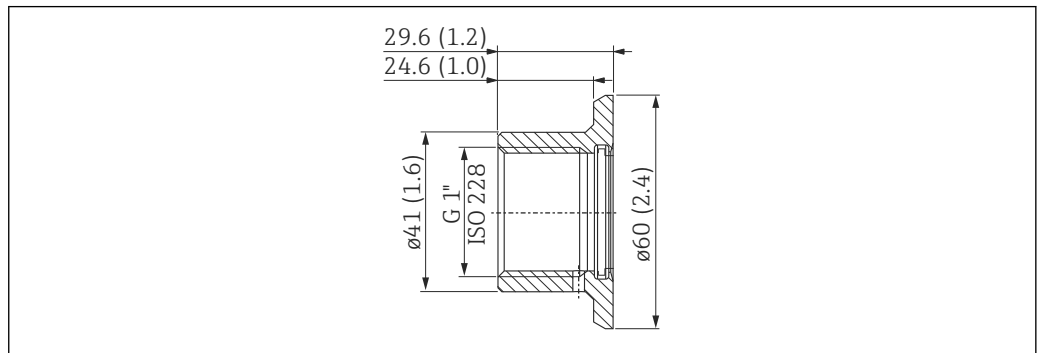
Welding aid for welding the weld-in adapter	71675410
Material: Brass	
Dummy plug for sealing the weld-in adapter including VMQ 70 O-ring with inspection certificate EN10204-3.1 material	71675413
Material: AISI 316L (1.4435)	
Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)	

Seals

O-ring, VMQ 70 (standard seal)	52014472 (5 pieces)
$\varnothing 28.17 \text{ mm} \times 3.53 \text{ mm}$ (1.11 in $\times$ 0.14 in)	
Complies with FDA, EC1935, GB4806	
O-ring, EPDM-70	71140668 (3 pieces)
$\varnothing 28.17 \text{ mm} \times 3.53 \text{ mm}$ (1.11 in $\times$ 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	
O-ring, FKM 75	71675402 (5 pieces)
$\varnothing 28.17 \text{ mm} \times 3.53 \text{ mm}$ (1.11 in $\times$ 0.14 in)	
Complies with FDA, EC1935, USP Class VI	
O-ring, FFKM Kalrez 4079	71166292
$\varnothing 28.17 \text{ mm} \times 3.53 \text{ mm}$ (1.11 in $\times$ 0.14 in)	
Compliances on request	
TSP modification number. Can only be ordered via FTSP, PTSP or NTSP	
O-ring, VMQ 3-80	71086102 (3 pieces)
$\varnothing 28.17 \text{ mm} \times 3.53 \text{ mm}$ (1.11 in $\times$ 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

G 1, d=60 vessel-mounting

Dimensions



A0008267

 7 Dimensions of weld-in adapter G 1, d=60 vessel-mounting. Unit of measurement mm (in)

Weld-in adapter order numbers



These order numbers do not apply to Micropilot. The order numbers for Micropilot are specified separately below.

Weld-in adapter without inspection certificate	52001051
Weld-in adapter with inspection certificate EN10204-3.1 material	52011896

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquicap	FMI51, FMI52, FTI51, FTI52	GWJ	Not available
Liquipoint	FTW23, FTW33	WSJ	PE/PF
Liquiphant	FTL33, FTL31, FTL41, FTL43, FTL51B, FTL63	WSJ	PE/PF
	FTL50, FTL50H, FTL51, FTL51H	GW2	Not available
	FTL80, FTL81	WSJ	Not available
Micropilot	FMR43	WLJ	QE

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	WSJ	QJ/QK
Cerabar	PMP23	WSJ	QJ/QK
	PMP51	GZJ	Not available
	PMP43	WSJ	PF

Temperature

Device		Process connection version	Accessory enclosed version
Compact thermometer	TMR35	AD	Not available
	TM311	J3	Not available

Device		Process connection version	Accessory enclosed version
Hygienic thermometers	TM371, TM372, TM411	J3	Not available
Thermowell	TT411	J3	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Certified according to CRN

Scope of delivery

- Weld-in adapter
- 1x standard seal O-ring VMQ 70
- 1x standard seal O-ring EPDM 70
-  Only use one seal.
-  A seal is not included in the delivery for the Micropilot FMR43.

Accessories

Welding aid for welding the weld-in adapter	71675410
Material: Brass	
Dummy plug for sealing the weld-in adapter including VMQ 70 O-ring with inspection certificate EN10204-3.1 material	71675413
Material: AISI 316L (1.4435)	
Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)	

Seals

O-ring, VMQ 70 (standard seal)	52014472 (5 pieces)
$\varnothing 28.17 \text{ mm} \times 3.53 \text{ mm}$ (1.11 in $\times$ 0.14 in)	
Complies with FDA, EC1935, GB4806	
O-ring, EPDM-70	71140668 (3 pieces)
$\varnothing 28.17 \text{ mm} \times 3.53 \text{ mm}$ (1.11 in $\times$ 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	
O-ring, FKM 75	71675402 (5 pieces)
$\varnothing 28.17 \text{ mm} \times 3.53 \text{ mm}$ (1.11 in $\times$ 0.14 in)	
Complies with FDA, EC1935, USP Class VI	
O-ring, FFKM Kalrez 4079	71166292
$\varnothing 28.17 \text{ mm} \times 3.53 \text{ mm}$ (1.11 in $\times$ 0.14 in)	
Compliances on request	
TSP modification number. Can only be ordered via FTSP, PTSP or NTSP	

O-ring, VMQ 3-80	71086102 (3 pieces)
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

Weld-in adapter order numbers for Micropilot FMR43

Weld-in adapter without inspection certificate	71653587
Weld-in adapter with inspection certificate EN10204-3.1 material	71653588

Accessories for Micropilot FMR43

Welding aid for welding the weld-in adapter	71675410
Material: Brass	

Dummy plug for sealing the weld-in adapter	On request
Material: AISI 316L (1.4435)	
Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	

Seals for Micropilot FMR43



The seal is not included in the delivery.

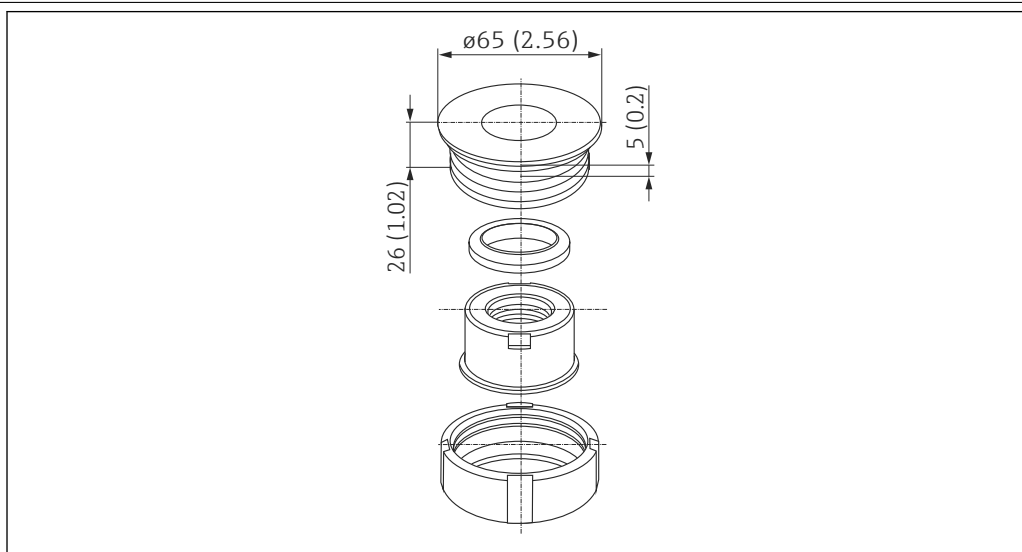
O-ring, EPDM-70	71655743 (5 pieces)
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	

O-ring, FKM	71655744
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring, EPDM-70	71696903 (5 pieces)
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, EC1935, GB4806, UBA KTW-BWGL, NSF61	

G 1 sensor adjustable

Dimensions



A0008272

8 Dimensions of weld-in adapter G 1 sensor adjustable. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	52001221
Weld-in adapter with inspection certificate EN10204-3.1 material	52011898

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquiphant	FTL33, FTL31, FTL80, FTL81	WSJ	Not available
	FTL50, FTL50H, FTL51, FTL51H	GW2	Not available
	FTL41, FTL43, FTL51B, FTL63, FTL80, FTL81	WSJ	PI/PJ

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP43	WSJ	PJ

Temperature

Device		Process connection version	Accessory enclosed version
Compact thermometer	TMR35	AD	Not available
	TM311	J3	Not available
Hygienic thermometers	TM371, TM372, TM411	J3	Not available
Thermowell	TT411	J3	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.8 \mu\text{m}$ (31.5 μin)
- Certified according to CRN

Scope of delivery

- Weld-in adapter
- 1x standard seal profile seal VMQ 60

Accessories

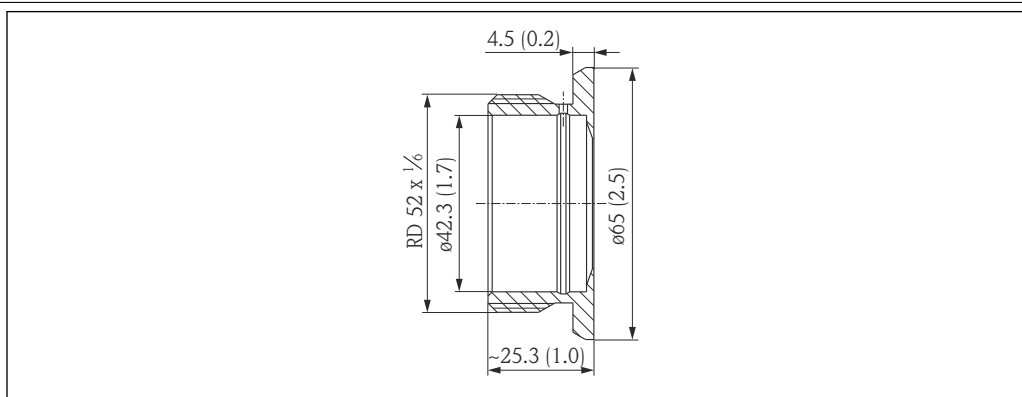
Welding aid for welding the weld-in adapter	71675411
Material: Brass	
Dummy plug for sealing the weld-in adapter including VMQ 70 O-ring with inspection certificate EN10204-3.1 material	71675414
Material: AISI 316L (1.4435)	
Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)	

Seals

Profile seal, VMQ 60 (standard seal)	52014424 (5 pieces)
Ø 29 mm x 36 mm x 3.7 mm (1.14 in x 1.42 in x 0.15 in)	
Complies with FDA, EC1935	
With this version, the seal can be easily replaced.	
Profile seal, EPDM 70	71168375 (5 pieces)
Ø 29 mm x 36 mm x 3.7 mm (1.14 in x 1.42 in x 0.15 in)	
Compliance on request	
TSP modification number. Can only be ordered via FTSP, PTSP or NTSP	
Profile seal, VMQ 60	71075662 (5 pieces)
Ø 29 mm x 36 mm x 3.7 mm (1.14 in x 1.42 in x 0.15 in)	
Complies with FDA, EC1935, USP Class VI	
Profile seal, FKM	71675408 (5 pieces)
Ø 29 mm x 36 mm x 3.7 mm (1.14 in x 1.42 in x 0.15 in)	
Complies with FDA	

RD52 sensor adjustable

Dimensions



A0008271

9 Dimensions of weld-in adapter RD52 sensor adjustable. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	52001047
Weld-in adapter with inspection certificate EN10204-3.1 material	52006909

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquiphant	FTL33	5ZJ	PO/PQ
	FTL50H, FTL51H	EE2	Not available
	FTL43, FTL63	5ZJ	PR/PS

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)

Scope of delivery

- Weld-in adapter
- 1x standard seal profile seal VMQ 60

Accessories

Welding aid for welding the weld-in adapter	71675411
Material: Brass	
Dummy plug for sealing the weld-in adapter including VMQ 70 O-ring with inspection certificate EN10204-3.1 material	71675414
Material: AISI 316L (1.4435)	
Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	
Slotted nut	52021715

Seals

Profile seal, VMQ 60 (standard seal)	52014424 (5 pieces)
Ø 29 mm x 36 mm x 3.7 mm (1.14 in x 1.42 in x 0.15 in)	
Complies with FDA, EC1935	
With this version, the seal can be easily replaced.	

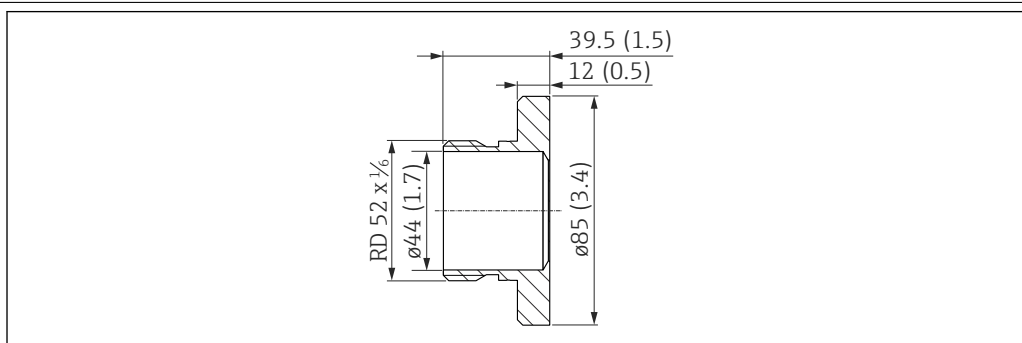
Profile seal, EPDM 70	71168375 (5 pieces)
Ø 29 mm x 36 mm x 3.7 mm (1.14 in x 1.42 in x 0.15 in)	
Compliance on request	
TSP modification number. Can only be ordered via FTSP, PTSP or NTSP	

Profile seal, VMQ 60	71075662 (5 pieces)
Ø 29 mm x 36 mm x 3.7 mm (1.14 in x 1.42 in x 0.15 in)	
Complies with FDA, EC1935, USP Class VI	

Profile seal, FKM	71675408 (5 pieces)
Ø 29 mm x 36 mm x 3.7 mm (1.14 in x 1.42 in x 0.15 in)	
Complies with FDA	

UNI D85

Dimensions



A0009985

10 Dimensions of weld-in adapter UNI D85. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	52006262
Weld-in adapter with inspection certificate EN10204-3.1 material	52010173

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquicap	FMI51, FMI52, FTI51, FTI52	UPJ	Not available

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP23	52J	QP/QR
	PMP43	50J/52J	QQ
	PMC51	UNJ/UPJ	Q2/Q3
	PMP55	UPJ	Not available
	PMP63B	50J/52J/54J	QQ
Deltapilot	FMB50	UNJ/UPJ	Q2/Q3
	FMB70	00/01	Not available
Deltabar	FMD78	00	Not available
	FMD71	UNJ/UPJ	Not available
	PMD63B	52J/54J	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 16 bar (232 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Certified according to CRN

Scope of delivery

- Weld-in adapter
- 1x standard seal, profile seal SI-60

Accessories

Welding aid for welding the Weld-in adapter	71114210
Material: Brass	

Dummy plug for sealing the weld-in adapter	71580894
Material: AISI 316L (1.4435)	
Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	

Slotted nut	52021715
--------------------	----------

Seals

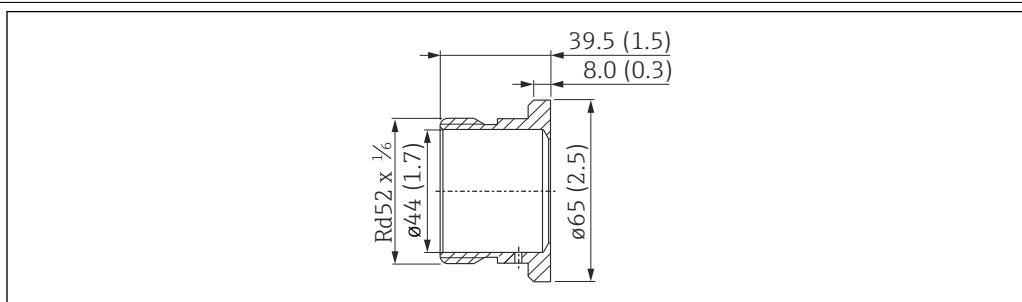
Silicone profile seal, SI 60 (standard seal)	52023572 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

Profile seal, EPDM-70	71100719 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring with backup ring with inspection certificate EN10204-3.1 material	71431380
O-ring	
Ø 36 mm x 2.5 mm (1.42 in x 0.1 in)	
Material: EPDM 70	
Complies with FDA, USP Class VI, EC1935, GB4806	
Backup ring	
Ø 38.2 mm x 43.6 mm x 5.6 mm (1.5 in x 1.72 in x 0.22 in)	
Material: AISI 316L (1.4404)	
 11 Figure: Backup ring A0042001	

UNI D65

Dimensions



A0008264

12 Dimensions of weld-in adapter UNI D65. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	214880-0002
Weld-in adapter with inspection certificate EN10204-3.1 material	52010174

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquicap	FMI51, FMI52, FTI51, FTI52	UPJ	Not available

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP23	52J	QL/QM
	PMP43	50J/52J	QP
	PMC51	UNJ/UPJ	QT/QU
	PMP55	UPJ	Not available
	PMP63B	50J/52J/54J	QP
Deltapilot	FMB50	UNJ/UPJ	QT/QU
	FMB70	00/01	Not available
Deltabar	FMD78	00	Not available
	FMD71	UNJ/UPJ	Not available
	PMD63B	52J/54J	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 16 bar (232 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Certified according to CRN

Scope of delivery

- Weld-in adapter
- 1x standard seal, profile seal SI-60

Accessories

Welding aid for welding the Weld-in adapter	71114210
Material: Brass	

Dummy plug for sealing the weld-in adapter	71580894
Material: AISI 316L (1.4435)	
Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	

Slotted nut	52021715
--------------------	----------

Seals

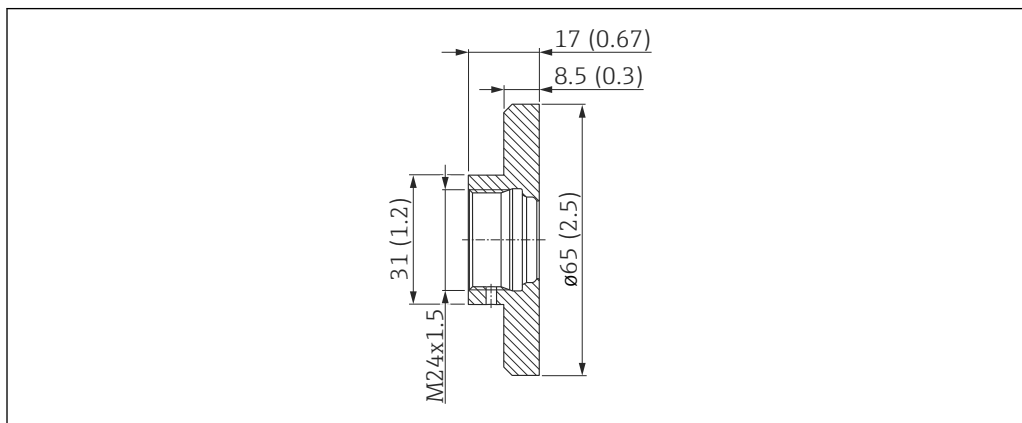
Silicone profile seal, SI 60 (standard seal)	52023572 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

Profile seal, EPDM-70	71100719 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring with backup ring with inspection certificate EN10204-3.1 material	71431380
O-ring	
Ø 36 mm x 2.5 mm (1.42 in x 0.1 in)	
Material: EPDM 70	
Complies with FDA, USP Class VI, EC1935, GB4806	
Backup ring	
Ø 38.2 mm x 43.6 mm x 5.6 mm (1.5 in x 1.72 in x 0.22 in)	
Material: AISI 316L (1.4404)	
 13 Figure: Backup ring A0042001	

M24 D65

Dimensions



A0008551

14 Dimensions of weld-in adapter M24 D65. Unit of measurement mm (in)

Weld-in adapter order numbers



These order numbers do not apply to Micropilot. The order numbers for Micropilot are specified separately below.

Weld-in adapter without inspection certificate	71041381
Weld-in adapter with inspection certificate EN10204-3.1 material	71041383

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquipoint	FTW23, FTW33	X2J	PM/PN
Liquiphant	FTL33	X2J	PM/PN
Levelflex	FMP53	U1J	Not available
Micropilot	FMR43	X2J	QI
	FMR63B	X2J	QI/QH

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	X2J/X3J	PM/PN
Cerabar	PMP23	X2J/X3J	PM/PN

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 25 bar (362 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Certified according to CRN

Scope of delivery

- Weld-in adapter
- 1x standard seal O-ring EPDM 70



A seal is not included in the delivery for Micropilot FMR43 and Micropilot FMR63B.

Accessories

Blind plug for sealing the weld-in adapter	71171418
Material: AISI 316L (1.4435)	

Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	
TSP modification number. Can only be ordered via FTSP, PTSP or NTSP	

Seals	O-ring, EPDM-70	52024267 (5 pieces)
	Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
	Complies with FDA, USP Class VI, EC1935	

Weld-in adapter order numbers for Micropilot FMR43, FMR63B	Weld-in adapter without inspection certificate	71653537
	Weld-in adapter with inspection certificate EN10204-3.1 material	71653541

Accessories for Micropilot FMR43, FMR63B	Dummy plug for sealing the weld-in adapter	On request
	Material: AISI 316L (1.4435)	
	Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	

Seals for Micropilot FMR43, FMR63B



The seal is not included in the delivery.

O-ring, EPDM-70	71653949 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	

O-ring, FKM	71337274 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring, EPDM-70	71696899 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, EC1935, GB4806, UBA KTW-BWGL, NSF61	

O-ring, FFKM (only available for FMR63B)	71567760
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	52002041
Weld-in adapter with inspection certificate EN10204-3.1 material	52011899
Material: AISI 316L (1.4435)	
Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	
Weld-in adapter without inspection certificate	916743-0000
Material: AISI 304 (1.4301)	
Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	

Level

Device		Process connection version	Accessory enclosed version
Liquiphant	FTL50H, FTL51H	PE2	Not available

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMC51, PMP51, PMP55	TJ	QP/QR
	PMP43	50J/52J	Not available
	PMP63B	50J/52J	Not available
Deltapilot	FMB50	TJ	QP/QR
	FMB70	TK	Not available

Device		Process connection version	Accessory enclosed version
Deltabar	PMD63B	4AJ	Not available
	FMD78	TK	Not available
	FMD71, FMD72	TJJ	Not available

Properties

Permitted pressure and permitted temperature of the adapter:

- Max. 25 bar (362 psi) / max. 150 °C (302 °F)
- Max. 40 bar (580 psi) / max. 100 °C (212 °F)



For materials and roughness, see weld-in adapter order numbers

Scope of delivery

- Weld-in adapter
- 1x standard flat seal, PTFE

Accessories

Dummy plug for sealing the weld-in adapter	
Material: AISI 316L (1.4435)	71181450
Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	
TSP modification number. Can only be ordered via FTSP, PTSP or NTSP	

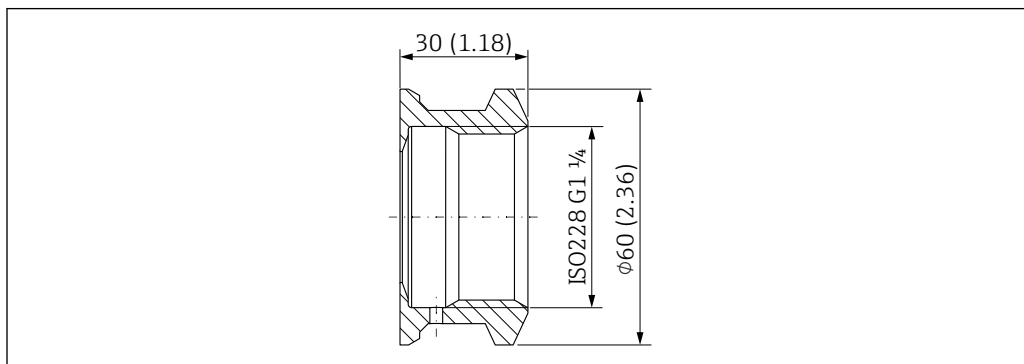
Welding aid for welding the weld-in adapter	
Material: Brass	71114209

Seals

Flat seal, PTFE	
Ø 50 mm × 65 mm × 1 mm (1.97 in × 2.56 in × 0.04 in)	52024228 (5 pieces)
Complies with FDA, EC1935	

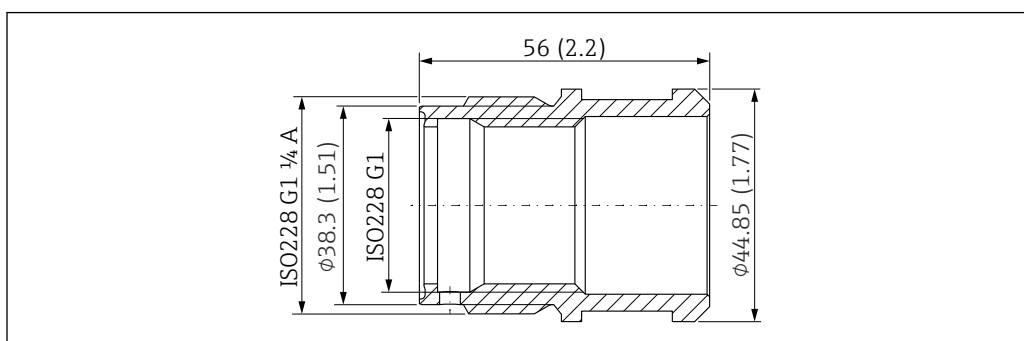
G 1¼ with G 1 thread adapter

Dimensions



A0045643

16 Dimensions of weld-in adapter G 1¼. Unit of measurement mm (in)



A0045644

17 Dimensions of threaded sleeve. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter with inspection certificate EN10204-3.1 material	71444432
--	----------

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Nivector	FTI26	WDJ	PK

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 6 bar (87 psi) / -20 to 80 °C (-4 to 176 °F)
- Material: AISI 316L (1.4404)
- Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)

Scope of delivery

- Weld-in adapter
- 1x standard seal profile seal VMQ 60

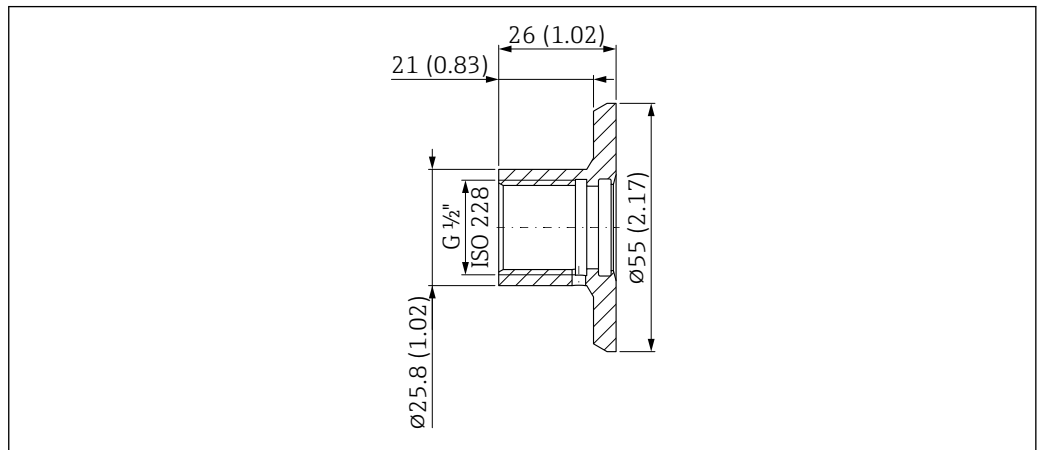
Seals

Profile seal, VMQ 60 (standard seal)		71075662 (5 pieces)
Ø 29 mm × 36 mm x 3.7 mm (1.14 in × 1.42 in × 0.15 in)		
Complies with FDA, EC1935		

Profile seal, VMQ 60		52014424 (5 pieces)
Ø 29 mm x 36 mm x 3.7 mm (1.14 in x 1.42 in x 0.15 in)		
Complies with FDA, EC1935		

G ½, d=55 vessel-mounting

Dimensions



A0056491

18 Dimensions of weld-in adapter G ½, d=55 vessel-mounting. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	71653545
Weld-in adapter with inspection certificate EN10204-3.1 material	71653547

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Micropilot	FMR43	WJJ	QA

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)

Scope of delivery

Weld-in adapter



The seal is not included in the delivery.

Accessories

Welding aid for welding the weld-in adapter	71712768
Material: Brass	
Dummy plug for sealing the weld-in adapter	On request
Material: AISI 316L (1.4435)	
Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	

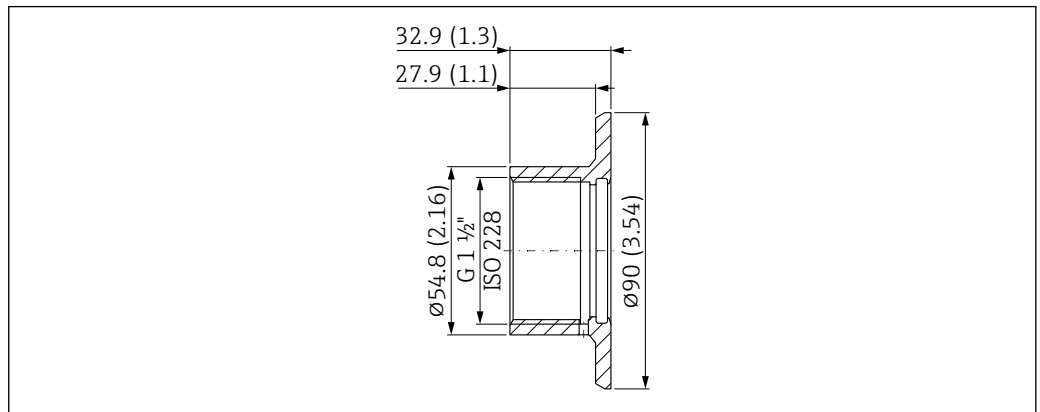
Seals

O-ring, EPDM	71655736 (5 pieces)
Ø 17.2 mm × 2.62 mm (0.68 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	
O-ring, FKM	71655740
Ø 17.2 mm × 2.62 mm (0.68 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring, EPDM	71696901 (5 pieces)
Ø 17.2 mm × 2.62 mm (0.68 in × 0.1 in)	
Complies with FDA, EC1935, GB4806, UBA KTW-BWGL, NSF61	

G 1½, d=90 vessel-mounting

Dimensions



19 Dimensions of weld-in adapter G 1½, d=90 vessel-mounting. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	71653592
Weld-in adapter with inspection certificate EN10204-3.1 material	71653594

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Micropilot	FMR43	WNJ	QG

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)

Scope of delivery

Weld-in adapter



The seal is not included in the delivery.

Accessories

Welding aid for welding the weld-in adapter	71712768
Material: Brass	

Dummy plug for sealing the weld-in adapter	On request
Material: AISI 316L (1.4435)	
Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)	

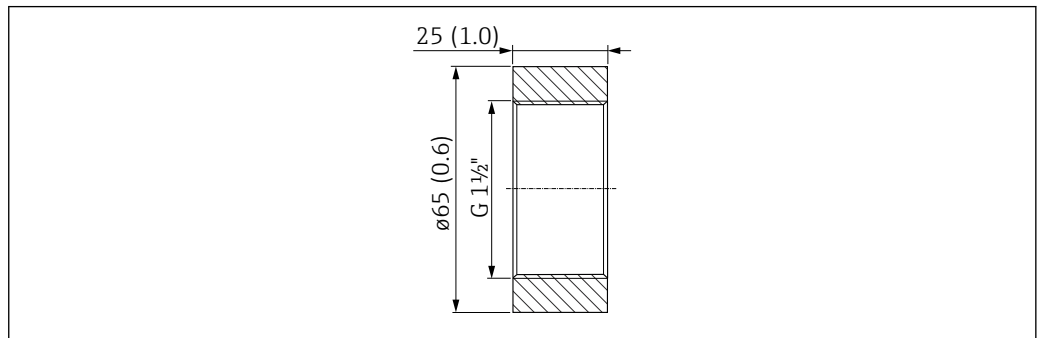
Seals

O-ring, EPDM	71655745 (5 pieces)
Ø 40.87 mm × 3.53 mm (1.61 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	
O-ring, FKM	71655746
Ø 40.87 mm × 3.53 mm (1.61 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring, EPDM	71696892 (5 pieces)
Ø 40.87 mm × 3.53 mm (1.61 in × 0.14 in)	
Complies with FDA, EC1935, GB4806, UBA KTW-BWGL, NSF61	

G 1½ flush-mounted

Dimensions



A0008266

20 Dimensions of weld-in adapter G 1½ flush-mounted. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	52024469
Weld-in adapter with inspection certificate EN10204-3.1 material	52024470

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP43 ¹⁾	WNJ	QG
	PMP51B ²⁾ , PMP71B ²⁾ , PMC51B, PMC71B	WNJ	QJ
	PMP63B ²⁾	WNJ	Not available
Cerabar M	PMP55 ¹⁾ , PMC51, PMP51	GVJ	QJ/QK
Cerabar S	PMC71	1G/1H/1J	Not available
	PMP71, PMP75 ¹⁾	1G/1H	Not available
Deltapilot M	FMB50, FMB51, FMB52	GGJ/GGC	QJ/QK
Deltapilot S	FMB70	1G/1H	Not available
Deltabar	FMD71, FMD72	GVJ	Not available

1) With this combination, it is not possible to flush-mount the device

2) For devices with a diaphragm seal, it is not possible to flush-mount the device with this combination.

Properties

- Permissible pressure of the adapter:
Max. 100 bar (1 500 psi)
- Material: AISI 316L (1.4435)
- Roughness (process side): Ra ≤ 0.8 µm (31.5 µin)

Scope of delivery

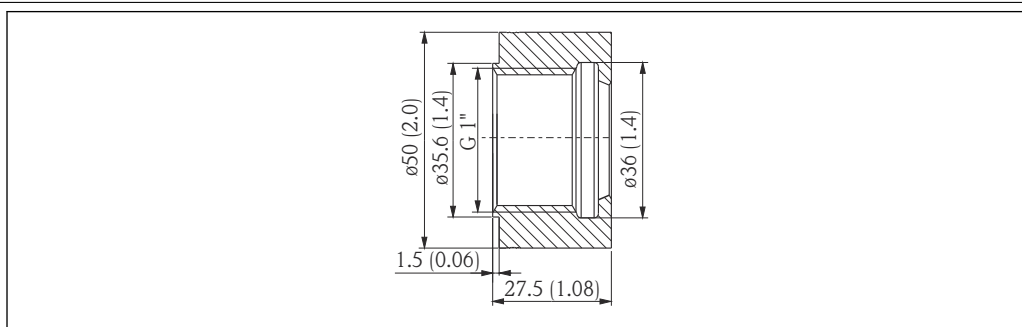
Weld-in adapter

Accessories

Welding aid for welding the weld-in adapter	52024471
Material: Brass	

G 1 flush-mounted with metallic sealing taper

Dimensions



A0008268

21 Dimensions of weld-in adapter G 1 flush-mounted with metallic sealing taper. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	52005087
Weld-in adapter with inspection certificate EN10204-3.1 material	52010171

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	WQJ	QE/QF
Cerabar	PMP23	WQJ	QE/QF
	PMP51	GXJ	QE/QF
	PMP43	WQJ	QE

Properties

- Permissible pressure of the adapter:
Max. 100 bar (1 500 psi)
- Material: AISI 316L (1.4404)
- Roughness (process side): $R_a \leq 0.8 \mu\text{m}$ (31.5 μin)
- Certified according to CRN

NOTICE

Repeated screwing in of the process connection can cause damage to the weld-in adapter.
The connection will leak.

- Only use flush-mounted G 1 sealing taper for screwing in once.

Scope of delivery

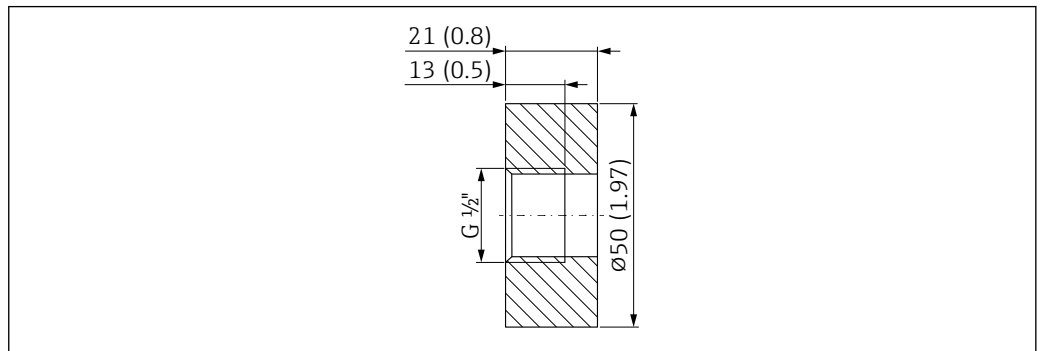
Weld-in adapter

Accessories

Welding aid for welding the weld-in adapter	52005272
Material: Brass	
Blind plug for sealing the weld-in adapter	71171731
Material: AISI 316L (1.4435)	
Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)	
Modification number. Can only be ordered via FTSP, PTSP or NTSP	
Dummy plug replacement seal	71286354

G ½ flush-mounted

Dimensions



A0008269

22 Dimensions of weld-in adapter G ½ flush-mounted. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	52002643
Weld-in adapter with inspection certificate EN10204-3.1 material	52010172

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP31B	WUJ	QA/QB
Cerabar	PMP21	WUJ	QA/QB
	PMP51	G0J	QA/QB
	PMP43	WUJ	QA

Properties

- Permissible pressure of the adapter:
Max. 100 bar (1 500 psi)
- Material: AISI 316L (1.4435)
- Roughness (process side): Ra ≤ 0.8 µm (31.5 µin)

Scope of delivery

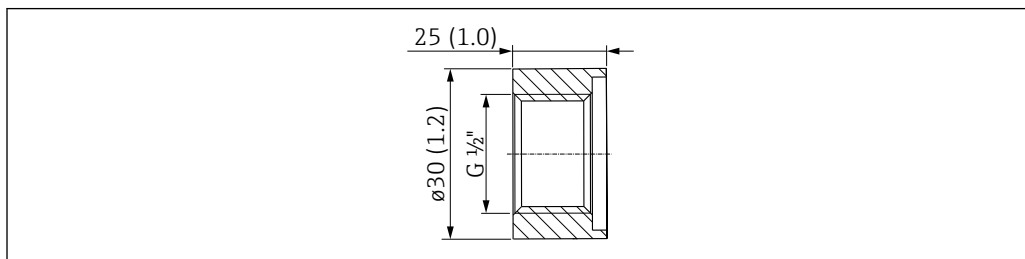
Weld-in adapter

Accessories

Welding aid for welding the weld-in adapter	52005082
Material: Brass	

G ½ DIN3852

Dimensions



A0037351

23 Dimensions of weld-in adapter G ½ DIN3852. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	71389241
Weld-in adapter with inspection certificate EN10204-3.1 material	71389243

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP31B	WJJ	Not available
Cerabar	PMP11, PMP51B, PMP71B	WJJ	Not available
	PMP51	GRJ/GRC	QM/QN
	PMP71	1A/1B	Not available
	PMP21	WJJ	QM/QN
	PMP43	WJJ	QB

Properties

- Permissible pressure of the adapter:
Max. 100 bar (1 500 psi)
- Material: AISI 316L (1.4404)
- Roughness (process side): Ra ≤ 0.8 µm (31.5 µin)

Scope of delivery

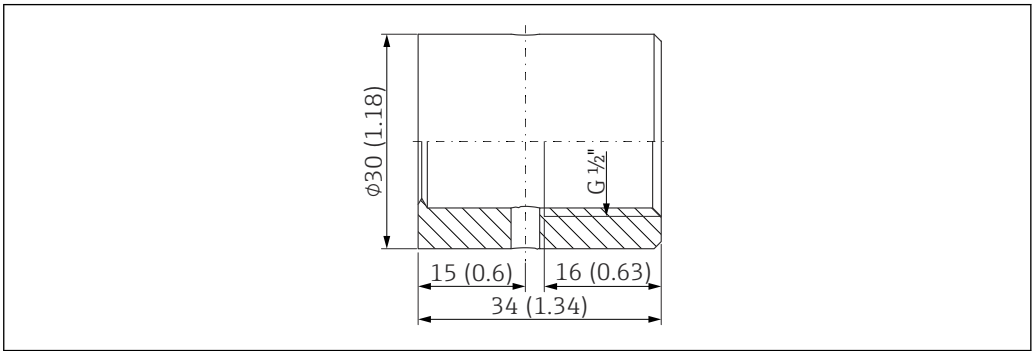
Weld-in adapter

Accessories

Welding aid for welding the weld-in adapter	52005082
Material: Brass	

Weld-in adapter with sealing taper for G 1/2

Dimensions



24 Dimensions of weld-in adapter with sealing taper for G 1/2 thread . Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	71424800
--	----------

Suitable devices

Temperature

Device		Process connection version	Accessory enclosed version
Compact thermometer	TMR35	MB	Not available
	TM311	H2	Not available
Hygienic thermometer	TM371, TM401, TM411	H2	Not available
Thermowell	TT411	H2	Not available
Temperature switch	TTR35	MB	Not available
Flow switch	DTT35	MB	Not available

Properties

- Permissible pressure of the adapter:
Max. 16 bar (232 psi)
- Material: AISI 316L (1.4435)
- Metal-sealing; conical

Scope of delivery

Weld-in adapter

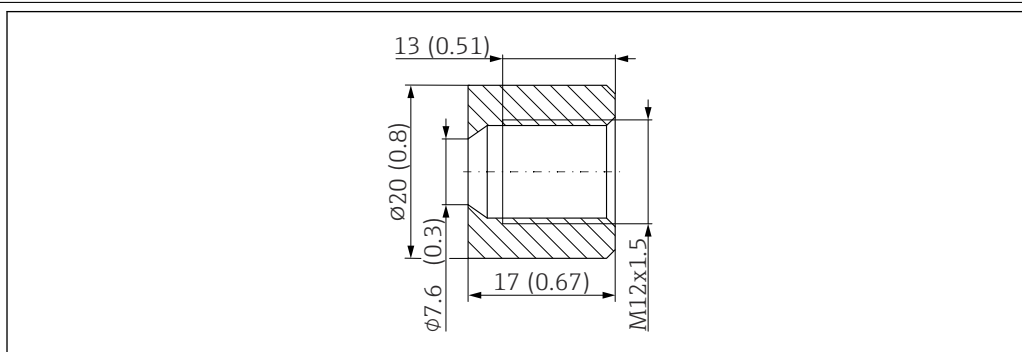
Accessories

Dummy plug for sealing the weld-in adapter	
For conical metal-sealing weld-in adapter	
Material: AISI 316L (1.4435)	
8 (0.31) 37 (1.46) G 1/2 M12x1.5 Ø18 (0.71)	
60022519	

25 Figure: Dummy plug

Weld-in adapter with sealing taper for M12x1.5

Dimensions



26 Dimensions of weld-in adapter with sealing taper for M12x1.5 thread. Unit of measurement mm (in)

Weld-in adapter order numbers

Weld-in adapter without inspection certificate	71405560
--	----------

Suitable devices

Temperature

Device		Process connection version	Accessory enclosed version
Compact thermometer	TM311	H1	Not available
Hygienic thermometer	TM371, TM401, TM411	H1	Not available
Thermowell	TT411	H1	Not available

Properties

- Permissible pressure of the adapter:
Max. 16 bar (232 psi)
- Material: AISI 316L (1.4435)
- Metal-sealing; conical

Scope of delivery

Weld-in adapter

Accessories

Dummy plug for sealing the weld-in adapter	60021194
For conical metal-sealing weld-in adapter	
Material: AISI 316L (1.4435)	

27 Figure: Dummy plug

Hygienic process adapter



- The following tables provide an overview of the hygienic process adapter that suits the various process connections of a device.
- The "**Process connection version**" column indicates the order option in the Product Configurator under the "Process connection" feature.
- The "**Accessory enclosed version**" column indicates the order option in the Product Configurator using the "Accessory enclosed" feature, which can be used to select the hygienic process adapter.
- If a version is not specified in the "Accessory enclosed version" column, the hygienic process adapter must be ordered separately.
- Details and order numbers of the hygienic process adapter are listed in the following chapters.

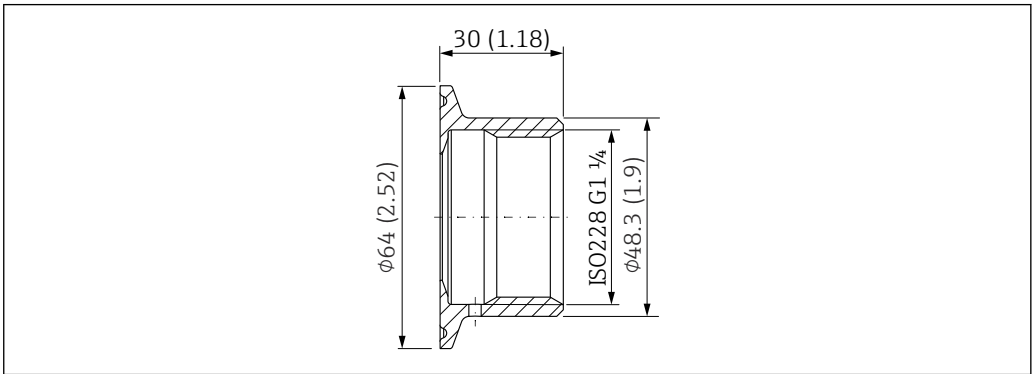
Nivector

FTI26

Process connection version	Suitable adapters	Accessory enclosed version
WDJ	Process adapter G 1 1/4 Tri-Clamp 2" with threaded sleeve → 61	RK

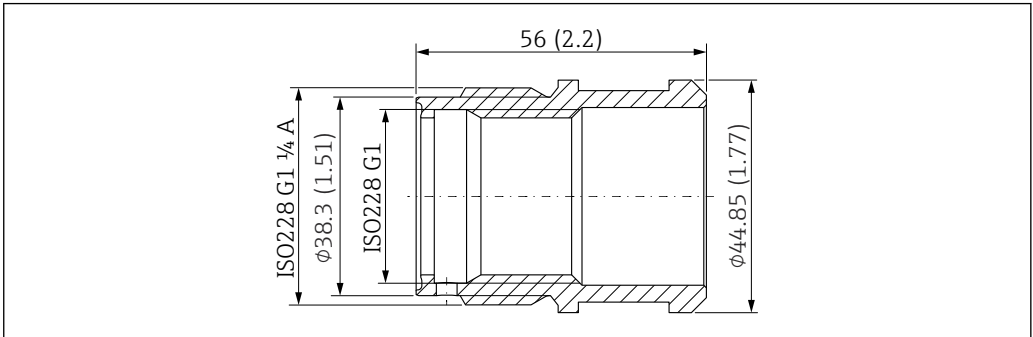
Process adapter G 1¼ Tri-Clamp 2" with threaded sleeve

Dimensions



A0045642

29 Dimensions of process adapter G 1¼. Unit of measurement mm (in)



A0045644

30 Dimensions of threaded sleeve. Unit of measurement mm (in)

Order numbers for hygienic process adapters

Hygienic process adapter with inspection certificate EN10204-3.1 material	71444431
---	----------

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Nivector	FTI26	WDJ	RK

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 6 bar (87 psi) / -20 to 80 ° (80 to 176 °F)
 - Material: AISI 316L (1.4404)
 - Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)
- i** Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

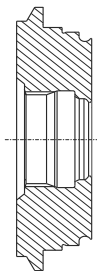
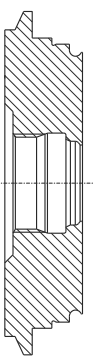
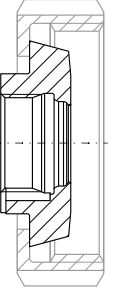
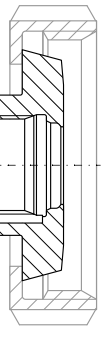
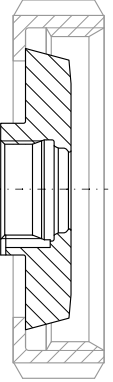
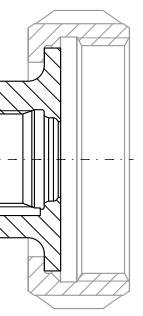
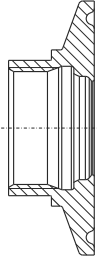
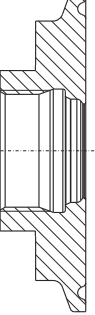
- Weld-in adapter
- 1x standard seal profile seal VMQ 60

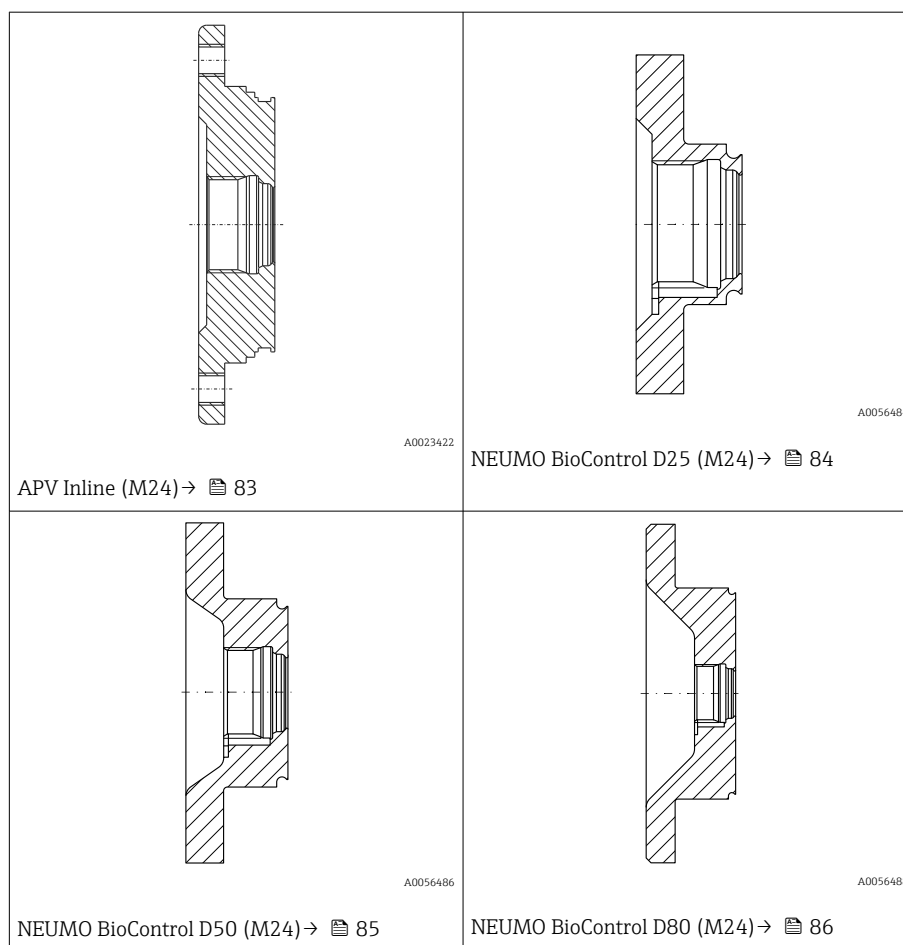
Seals

Profile seal, VMQ 60 (standard seal)	71075662 (5 pieces)
Ø 29 mm × 36 mm x 3.7 mm (1.14 in × 1.42 in × 0.15 in)	
Complies with FDA, EC1935	

Profile seal, VMQ 60	52014424 (5 pieces)
Ø 29 mm x 36 mm x 3.7 mm (1.14 in x 1.42 in x 0.15 in)	
Complies with FDA, EC1935	

Process adapter M24 - level and pressure overview

 A0023286 Varivent F DN25 (M24) → 68	 A0023419 Varivent N DN50/40 (M24) → 70
 A0056482 DIN11851 DN32 with slotted nut (M24) → 72	 A0023547 DIN11851 DN40 with slotted nut (M24) → 73
 A0023418 DIN11851 DN50 with slotted nut (M24) → 75	 A0023420 SMS 1½" with slotted nut (M24) → 77
 A0023423 Clamp 1½" (M24) → 79	 A0023426 Clamp 2" (M24) → 81



- The following tables provide an overview of the M24 process adapters that suit the various process connections of a device.
- The **"Process connection version"** column indicates the order option in the Product Configurator under the "Process connection" feature.
- The **"Accessory enclosed version"** column indicates the order option in the Product Configurator using the "Accessory enclosed" feature, which can be used to select the M24 process adapter.
- If a version is not specified in the "Accessory enclosed version" column, the M24 process adapter must be ordered separately.
- Details and order numbers of the M24 process adapters are listed in the following chapters.

Liquipoint

FTW23

Process connection version	Suitable adapters	Accessory enclosed version
X2J	Varivent F DN25 (M24) → 68	RC/RD
	Varivent N DN50/40 (M24) → 70	RA/RB
	DIN11851 DN40 with slotted nut (M24) → 73	Not available
	DIN11851 DN50 with slotted nut (M24) → 75	RE/RF
	SMS 1½" with slotted nut (M24) → 77	RG/RH
	Clamp 1½" (M24) → 79	RI/RJ
	Clamp 2" (M24) → 81	RK/RL
	APV Inline (M24) → 83	Not available

FTW33

Process connection version	Suitable adapters	Accessory enclosed version
X2J	Varivent F DN25 (M24) →  68	RC/RD
	Varivent N DN50/40 (M24) →  70	RA/RB
	DIN11851 DN40 with slotted nut (M24) →  73	Not available
	DIN11851 DN50 with slotted nut (M24) →  75	RE/RF
	SMS 1½" with slotted nut (M24) →  77	RG/RH
	Clamp 1½" (M24) →  79	Not available
	Clamp 2" (M24) →  81	Not available
	APV Inline (M24) →  83	Not available

Liquiphant**FTL33**

Process connection version	Suitable adapters	Accessory enclosed version
X2J	Varivent F DN25 (M24) →  68	RC/RD
	Varivent N DN50/40 (M24) →  70	RA/RB
	DIN11851 DN40 with slotted nut (M24) →  73	Not available
	DIN11851 DN50 with slotted nut (M24) →  75	RE/RF
	SMS 1½" with slotted nut (M24) →  77	RG/RH
	Clamp 1½" (M24) →  79	Not available
	Clamp 2" (M24) →  81	Not available
	APV Inline (M24) →  83	Not available

Micropilot**FMR43**

Process connection	Suitable adapters	Accessory enclosed version
X2J	Varivent F DN25 (M24) →  68	RA
	Varivent N DN50/40 (M24) →  70	RB
	DIN11851 DN32 with slotted nut (M24) →  72	RD
	DIN11851 DN40 with slotted nut (M24) →  73	RE
	DIN11851 DN50 with slotted nut (M24) →  75	RF
	SMS 1½" with slotted nut (M24) →  77	RI
	Clamp 1½" (M24) →  79	RL
	Clamp 2" (M24) →  81	RM

Process connection	Suitable adapters	Accessory enclosed version
	NEUMO BioControl D25 (M24) → 84	RR
	NEUMO BioControl D50 (M24) → 85	RS
	NEUMO BioControl D80 (M24) → 86	RT

FMR62

Process connection	Suitable adapters	Accessory enclosed version
U2J	Varivent F DN25 (M24) → 68	RC/RD
	Varivent N DN50/40 (M24) → 70	RA/RB
	DIN11851 DN40 with slotted nut (M24) → 73	RE/RF
	DIN11851 DN50 with slotted nut (M24) → 75	RG/RH
	SMS 1½" with slotted nut (M24) → 77	RI/RJ
	Clamp 1½" (M24) → 79	RK/RL

FMR63B

Process connection	Suitable adapters	Accessory enclosed version
X2J	Varivent F DN25 (M24) → 68	RC/RD
	Varivent N DN50/40 (M24) → 70	RA/RB
	DIN11851 DN40 with slotted nut (M24) → 73	RE/RF
	DIN11851 DN50 with slotted nut (M24) → 75	RG/RH
	SMS 1½" with slotted nut (M24) → 77	RI/RJ
	Clamp 1½" (M24) → 79	RK/RL

Ceraphant**PTP33B**

Process connection version	Suitable adapters	Accessory enclosed version
X2J/X3J	Varivent F DN25 (M24) → 68	Not available
	Varivent N DN50/40 (M24) → 70	Not available
	DIN11851 DN40 with slotted nut (M24) → 73	Not available
	DIN11851 DN50 with slotted nut (M24) → 75	Not available
	SMS 1½" with slotted nut (M24) → 77	Not available
	Clamp 1½" (M24) → 79	Not available

Process connection version	Suitable adapters	Accessory enclosed version
	Clamp 2" (M24) →  81	Not available
	APV Inline (M24) →  83	Not available

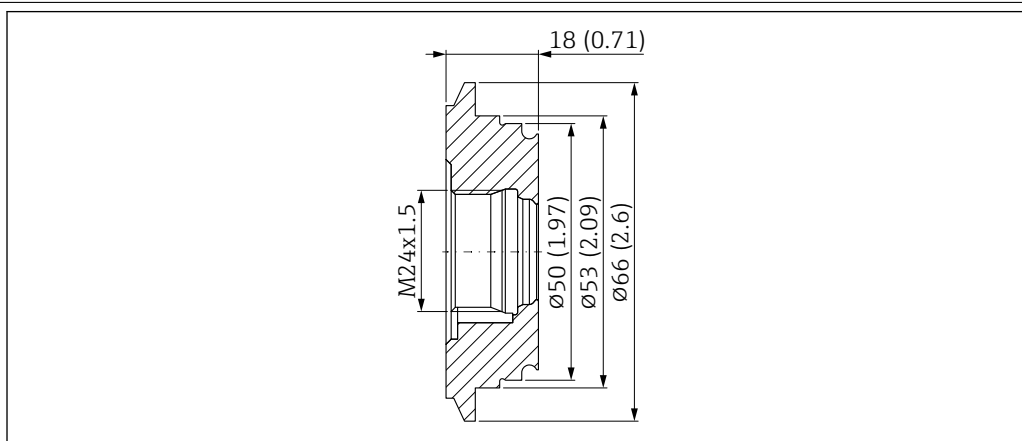
Cerabar

PMP23

Process connection version	Suitable adapters	Accessory enclosed version
X2J/X3J	Varivent F DN25 (M24) →  68	Not available
	Varivent N DN50/40 (M24) →  70	Not available
	DIN11851 DN40 with slotted nut (M24) →  73	Not available
	DIN11851 DN50 with slotted nut (M24) →  75	Not available
	SMS 1½" with slotted nut (M24) →  77	Not available
	Clamp 1½" (M24) →  79	Not available
	Clamp 2" (M24) →  81	Not available
	APV Inline (M24) →  83	Not available

Varivent F DN25 (M24)

Dimensions



A0056481

31 Dimensions of process adapter Varivent F DN25 (M24). Unit of measurement mm (in)

Process adapter order numbers



These order numbers do not apply to Micropilot. The order numbers for Micropilot are specified separately below.

Process adapter without inspection certificate	52023996
Process adapter with inspection certificate EN10204-3.1 material	52024003

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquipoint	FTW23, FTW33	X2J	RC/RD
Liquiphant	FTL33	X2J	RC/RD
Micropilot	FMR43	X2J	RB
	FMR63B	X2J	RC/RD
	FMR62	U2J	RC/RD

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	X2J/X3J	Not available
Cerabar	PMP23	X2J/X3J	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Certified according to CRN



Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

- Process adapter
- 1x standard seal O-ring EPDM 70



A seal is not included in the delivery for the Micropilot.

Seals	O-ring, EPDM-70 (standard seal)	52024267 (5 pieces)
	Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
	Complies with FDA, USP Class VI, EC1935	

Process adapter order numbers for Micropilot	Process adapter without inspection certificate	71653517
	Process adapter with inspection certificate EN10204-3.1 material	71653532

Seals for Micropilot



The seal is not included in the delivery.

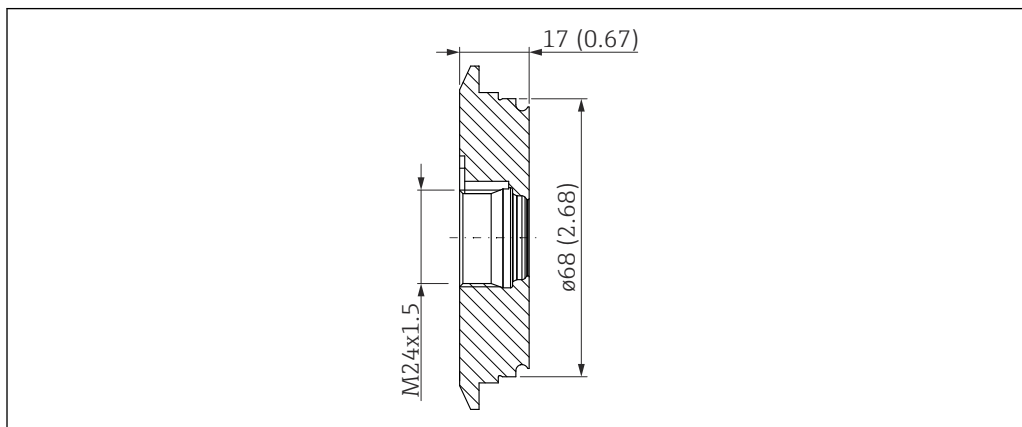
O-ring, EPDM-70	71653949 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	

O-ring, FKM	71337274 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring, FFKM (only available for FMR63B)	71567760
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

Varivent N DN50/40 (M24)

Dimensions



A0023276

32 Dimensions of process adapter Varivent N DN50/40 (M24). Unit of measurement mm (in)

Process adapter order numbers



These order numbers do not apply to Micropilot. The order numbers for Micropilot are specified separately below.

Process adapter without inspection certificate	52023997
Process adapter with inspection certificate EN10204-3.1 material	52024004

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquipoint	FTW23, FTW33	X2J	RA/RB
Liquiphant	FTL33	X2J	RA/RB
Micropilot	FMR43	X2J	RB
	FMR63B	X2J	RA/RB
	FMR62	U2J	RA/RB

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	X2J/X3J	Not available
Cerabar	PMP23	X2J/X3J	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Certified according to CRN



Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

- Process adapter
- 1x standard seal O-ring EPDM 70



A seal is not included in the delivery for the Micropilot.

Seals	O-ring, EPDM-70 (standard seal)	52024267 (5 pieces)
	Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
	Complies with FDA, USP Class VI, EC1935	

Process adapter order numbers for Micropilot	Process adapter without inspection certificate	71653534
	Process adapter with inspection certificate EN10204-3.1 material	71653536

Seals for Micropilot



The seal is not included in the delivery.

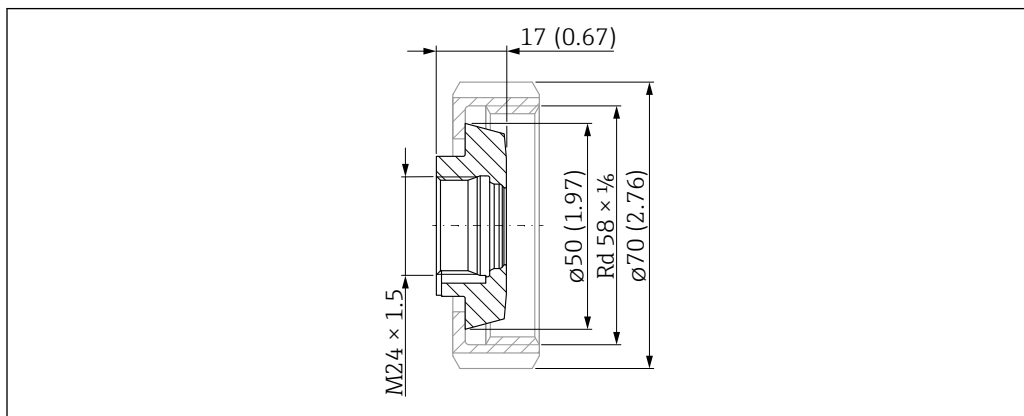
O-ring, EPDM-70	71653949 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	

O-ring, FKM	71337274 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring, FFKM (only available for FMR63B)	71567760
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

DIN11851 DN32 with slotted nut (M24)

Dimensions



33 Dimensions of process adapter DIN11851 DN32 with slotted nut (M24). Unit of measurement mm (in)

Process adapter order numbers

Process adapter without inspection certificate	71653550
Process adapter with inspection certificate EN10204-3.1 material	71653552

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Micropilot	FMR43	X2J	RD

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 25 bar (362 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Slotted nut material: Stainless steel AISI 304 (1.4301) or AISI 304L (1.4307)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Certified according to CRN



Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

- Process adapter
- Slotted nut



The seal is not included in the delivery.

Seals

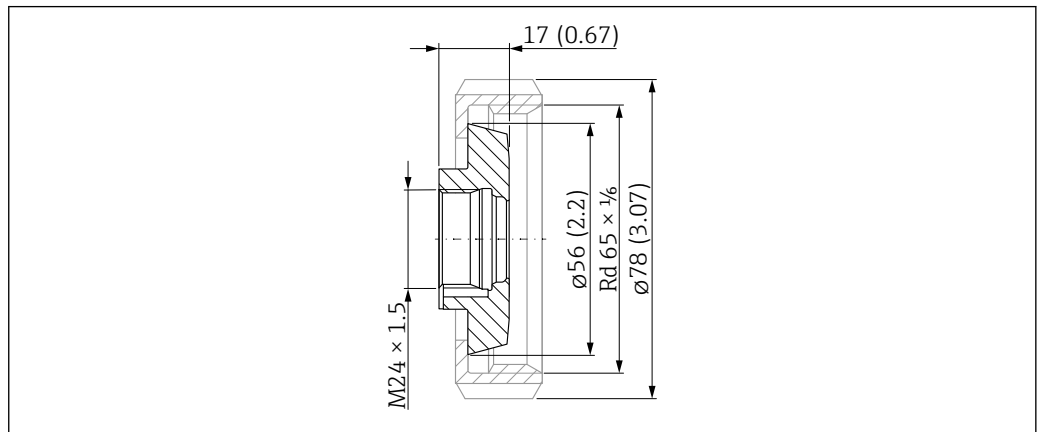


The seal is not included in the delivery.

O-ring, EPDM-70	71653949 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	
O-ring, FKM	71337274 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

DIN11851 DN40 with slotted nut (M24)

Dimensions



34 Dimensions of process adapter DIN11851 DN40 with slotted nut (M24). Unit of measurement mm (in)

Process adapter order numbers

i These order numbers do not apply to Micropilot. The order numbers for Micropilot are specified separately below.

Process adapter without inspection certificate	52023999
Process adapter with inspection certificate EN10204-3.1 material	52024006

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquipoint	FTW23, FTW33	X2J	Not available
Liquiphant	FTL33	X2J	Not available
Micropilot	FMR43	X2J	RE
	FMR63B	X2J	RE/RF
	FMR62	U2J	RE/RF

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	X2J/X3J	Not available
Cerabar	PMP23	X2J/X3J	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 25 bar (362 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Slotted nut material: Stainless steel AISI 304 (1.4301) or AISI 304L (1.4307)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Certified according to CRN

i Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

- Process adapter
- 1x standard seal O-ring EPDM 70
- Slotted nut

 A seal is not included in the delivery for the Micropilot.

Seals

O-ring, EPDM-70 (standard seal)	52024267 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

Process adapter order numbers for Micropilot

Process adapter without inspection certificate	71653556
Process adapter with inspection certificate EN10204-3.1 material	71653557

Seals for Micropilot

 The seal is not included in the delivery.

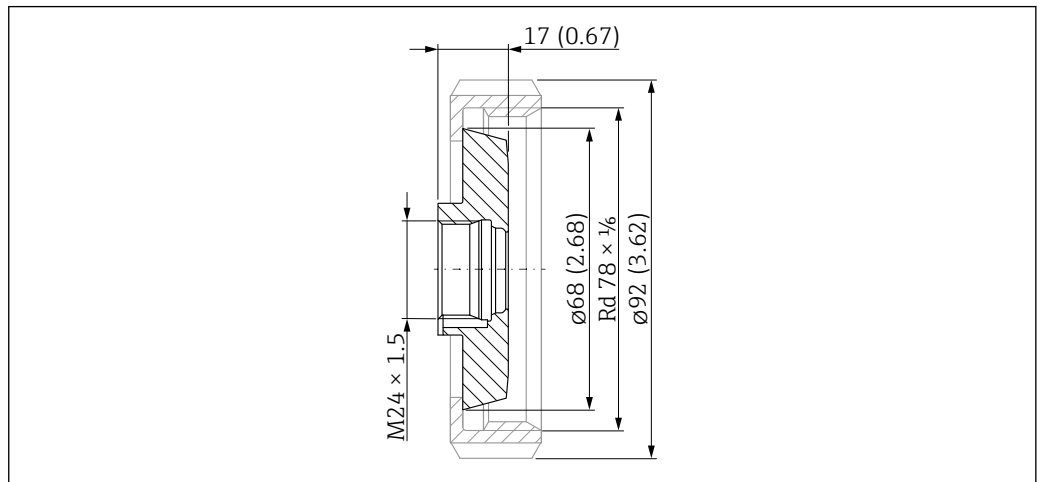
O-ring, EPDM-70	71653949 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	

O-ring, FKM	71337274 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring, FFKM (only available for FMR63B)	71567760
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

DIN11851 DN50 with slotted nut (M24)

Dimensions



35 Dimensions of process adapter DIN11851 DN50 with slotted nut (M24). Unit of measurement mm (in)

Process adapter order numbers



These order numbers do not apply to Micropilot. The order numbers for Micropilot are specified separately below.

Process adapter without inspection certificate	52023998
Process adapter with inspection certificate EN10204-3.1 material	52024005

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquipoint	FTW23, FTW33	X2J	RE/RF
Liquiphant	FTL33	X2J	RE/RF
Micropilot	FMR43	X2J	RF
	FMR63B	X2J	RG/RH
	FMR62	U2J	RG/RH

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	X2J/X3J	Not available
Cerabar	PMP23	X2J/X3J	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 25 bar (362 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Slotted nut material: Stainless steel AISI 304 (1.4301) or AISI 304L (1.4307)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Certified according to CRN



Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

- Process adapter
- 1x standard seal O-ring EPDM 70
- Slotted nut



A seal is not included in the delivery for the Micropilot.

Seals

O-ring, EPDM-70 (standard seal)	52024267 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

Process adapter order numbers for Micropilot

Process adapter without inspection certificate	71653559
Process adapter with inspection certificate EN10204-3.1 material	71653560

Seals for Micropilot



The seal is not included in the delivery.

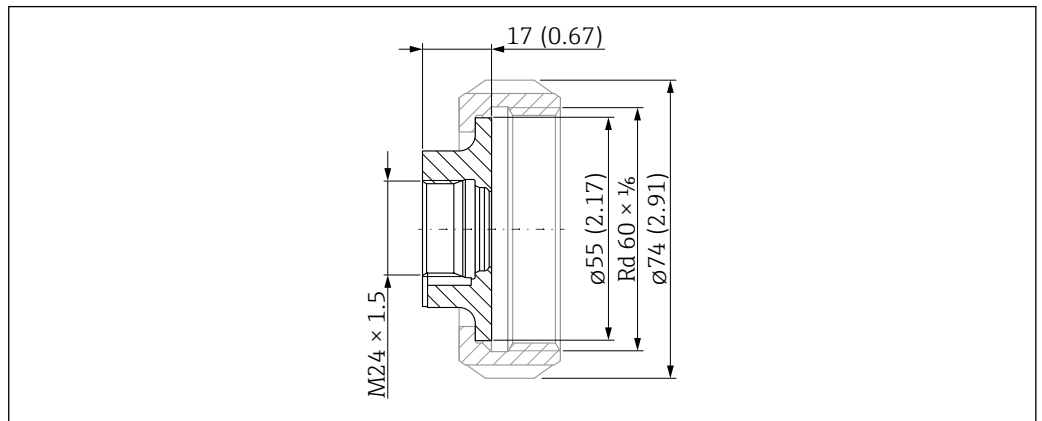
O-ring, EPDM-70	71653949 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	

O-ring, FKM	71337274 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring, FFKM (only available for FMR63B)	71567760
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

SMS 1½" with slotted nut (M24)

Dimensions



36 Dimensions of process adapter SMS 1½" with slotted nut (M24). Unit of measurement mm (in)

Process adapter order numbers

i These order numbers do not apply to Micropilot. The order numbers for Micropilot are specified separately below.

Process adapter without inspection certificate	52026997
Process adapter with inspection certificate EN10204-3.1 material	52026999

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquipoint	FTW23, FTW33	X2J	RG/RH
Liquiphant	FTL33	X2J	RG/RH
Micropilot	FMR43	X2J	RI
	FMR63B	X2J	RI/RJ
	FMR62	U2J	RI/RJ

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	X2J/X3J	Not available
Cerabar	PMP23	X2J/X3J	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 25 bar (362 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Slotted nut material: Stainless steel AISI 304 (1.4301) or AISI 304L (1.4307)
- Certified according to CRN

i Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

- Process adapter
- 1x standard seal O-ring EPDM 70
- Slotted nut

i A seal is not included in the delivery for the Micropilot.

Seals	O-ring, EPDM-70 (standard seal)	52024267 (5 pieces)
	Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
	Complies with FDA, USP Class VI, EC1935	

Process adapter order numbers for Micropilot	Process adapter without inspection certificate	71653562
	Process adapter with inspection certificate EN10204-3.1 material	71653564

Seals for Micropilot



The seal is not included in the delivery.

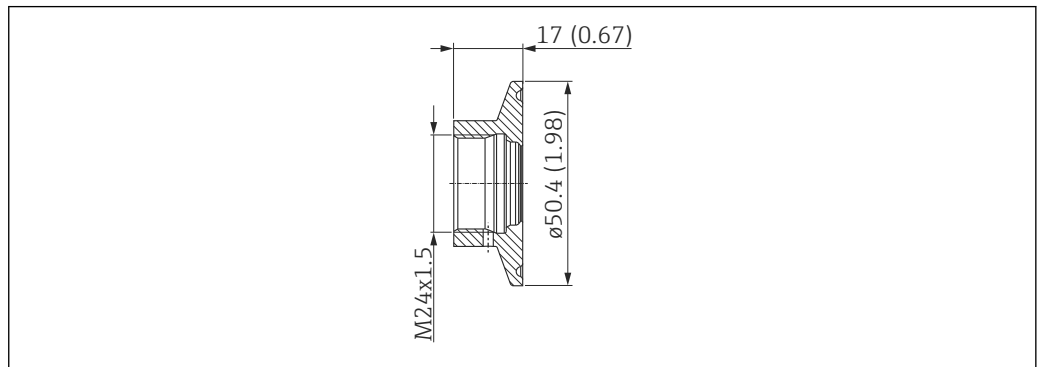
O-ring, EPDM-70	71653949 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	

O-ring, FKM	71337274 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring, FFKM (only available for FMR63B)	71567760
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

Clamp 1½" (DIN 32676, ISO 2852) (M24)

Dimensions



37 Dimensions of process adapter clamp 1½" (DIN 32676, ISO 2852) (M24). Unit of measurement mm (in)

Process adapter order numbers

i These order numbers do not apply to Micropilot. The order numbers for Micropilot are specified separately below.

Process adapter without inspection certificate	52023994
Process adapter with inspection certificate EN10204-3.1 material	52024001

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquipoint	FTW23, FTW33	X2J	Not available
Liquiphant	FTL33	X2J	Not available
Micropilot	FMR43	X2J	RL
	FMR63B	X2J	RK/RL
	FMR62	U2J	RK/RL

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	X2J/X3J	Not available
Cerabar	PMP23	X2J/X3J	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Roughness (process side) electropolished: $R_a \leq 0.38 \mu\text{m}$ (15.0 μin)
- Certified according to CRN

i Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

- Process adapter
- 1x standard seal O-ring EPDM 70

i A seal is not included in the delivery for the Micropilot.

Seals	O-ring, EPDM-70 (standard seal)	52024267 (5 pieces)
	Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
	Complies with FDA, USP Class VI, EC1935	

Process adapter order numbers for Micropilot	Process adapter without inspection certificate	71653565
	Process adapter with inspection certificate EN10204-3.1 material	71653568
	Process adapter, electropolished, without inspection certificate	71653570
	Process adapter, electropolished, with inspection certificate EN10204-3.1 material	71653571

Seals for Micropilot



The seal is not included in the delivery.

O-ring, EPDM-70	71653949 (5 pieces)

Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61

O-ring, FKM	71337274 (5 pieces)

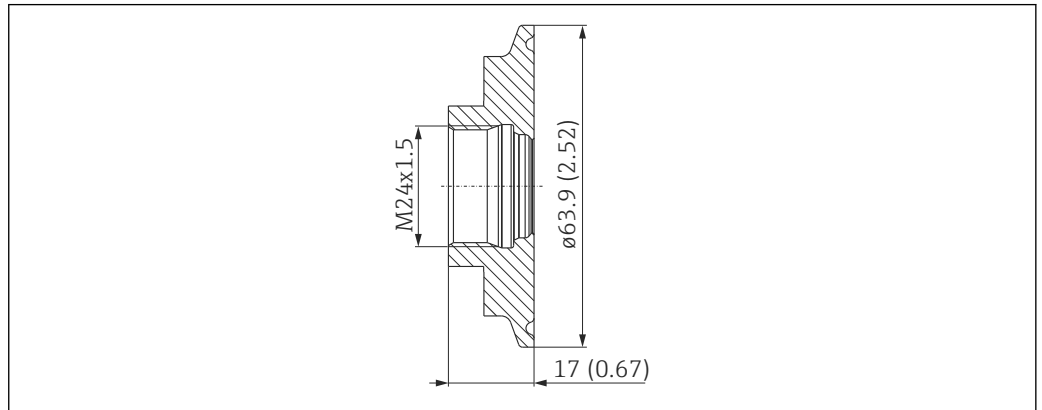
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)
Complies with FDA, USP Class VI, EC1935, GB4806

O-ring, FFKM (only available for FMR63B)	71567760

Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)
Complies with FDA, USP Class VI, EC1935

Clamp 2" (DIN 32676, ISO 2852) (M24)

Dimensions



38 Dimensions of process adapter clamp 2" (DIN 32676, ISO 2852) (M24). Unit of measurement mm (in)

Process adapter order numbers

i These order numbers do not apply to Micropilot. The order numbers for Micropilot are specified separately below.

Process adapter without inspection certificate	52023995
Process adapter with inspection certificate EN10204-3.1 material	52024002

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquipoint	FTW23, FTW33	X2J	Not available
Liquiphant	FTL33	X2J	Not available
Micropilot	FMR43	X2J	RM

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	X2J/X3J	Not available
Cerabar	PMP23	X2J/X3J	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Roughness (process side) electropolished: $R_a \leq 0.38 \mu\text{m}$ (15.0 μin)
- Certified according to CRN

i Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

- Process adapter
- 1x standard seal O-ring EPDM 70

i A seal is not included in the delivery for the Micropilot.

Seals	O-ring, EPDM-70 (standard seal)	52024267 (5 pieces)
	Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
	Complies with FDA, USP Class VI, EC1935	

Process adapter order numbers for Micropilot	Process adapter without inspection certificate	71653573
	Process adapter with inspection certificate EN10204-3.1 material	71653575
	Process adapter, electropolished, without inspection certificate	71653577
	Process adapter, electropolished, with inspection certificate EN10204-3.1 material	71653578

Seals for Micropilot



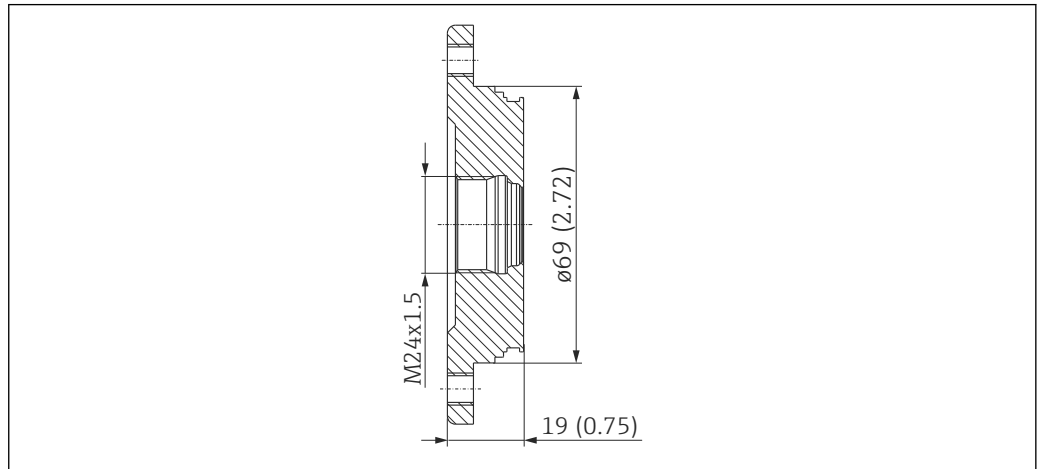
The seal is not included in the delivery.

O-ring, EPDM-70	71653949 (5 pieces)

O-ring, FKM	71337274 (5 pieces)

APV Inline (M24)

Dimensions



39 Dimensions of APV Inline (M24) process adapter. Unit of measurement mm (in)

Process adapter order numbers

Process adapter without inspection certificate	52024000
Process adapter with inspection certificate EN10204-3.1 material	52024007

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Liquipoint	FTW23, FTW33	X2J	Not available
Liquiphant	FTL33	X2J	Not available

Pressure

Device		Process connection version	Accessory enclosed version
Ceraphant	PTP33B	X2J/X3J	Not available
Cerabar	PMP23	X2J/X3J	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
 - Max. 25 bar (362 psi) / max. 150 °C (302 °F)
 - Max. 40 bar (580 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Roughness (process side) electropolished: $R_a \leq 0.38 \mu\text{m}$ (15.0 μin)
- Certified according to CRN



Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

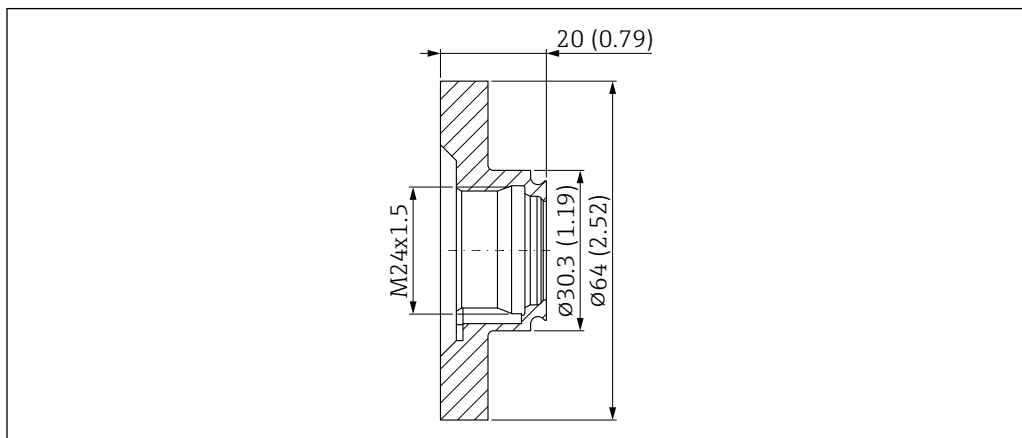
- Process adapter
 - 1x standard seal O-ring EPDM 70
-  A seal is not included in the delivery for the Micropilot.

Seals

O-ring, EPDM-70 (standard seal)	52024267 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935	

NEUMO BioControl D25 (M24)

Dimensions



40 Dimensions of NEUMO BioControl D25 (M24) process adapter. Unit of measurement mm (in)

Process adapter order numbers

Process adapter, electropolished, with inspection certificate EN10204-3.1 material

71653585

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Micropilot	FMR43	X2J	RR

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 25 bar (362 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): electropolished: $R_a \leq 0.38 \mu\text{m}$ (15 μin)
- Certified according to CRN

Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

Process adapter

The seal is not included in the delivery.

Seals

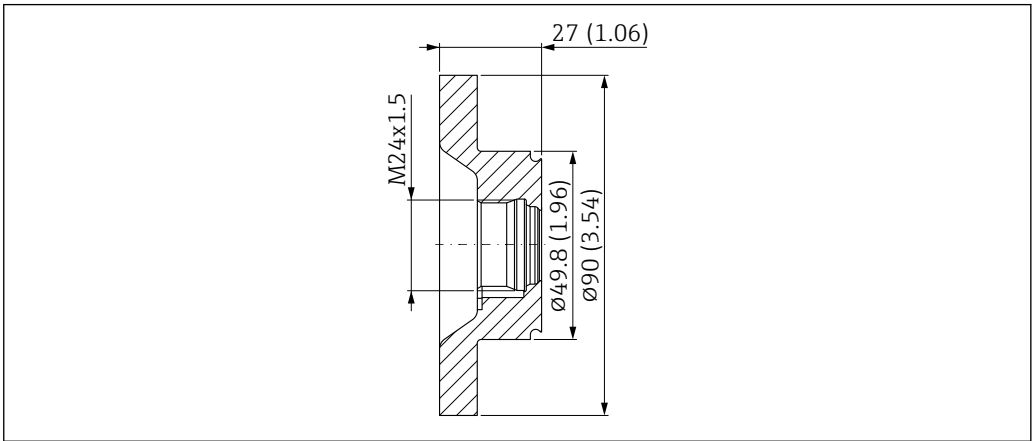
The seal is not included in the delivery.

O-ring, EPDM-70	71653949 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	

O-ring, FKM	71337274 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

NEUMO BioControl D50 (M24)

Dimensions



41 Dimensions of NEUMO BioControl D50 (M24) process adapter. Unit of measurement mm (in)

Process adapter order numbers

Process adapter, electropolished, with inspection certificate EN10204-3.1 material	71653591
--	----------

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Micropilot	FMR43	X2J	RS

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 25 bar (362 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): electropolished: $R_a \leq 0.38 \mu\text{m}$ (15 μin)
- Certified according to CRN



Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

Process adapter



The seal is not included in the delivery.

Seals



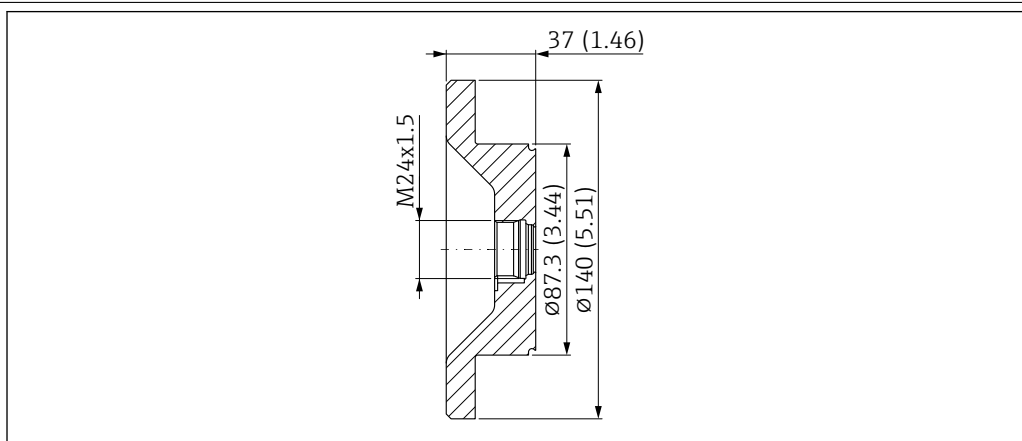
The seal is not included in the delivery.

O-ring, EPDM-70		71653949 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)		
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61		

O-ring, FKM		71337274 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)		
Complies with FDA, USP Class VI, EC1935, GB4806		

NEUMO BioControl D80 (M24)

Dimensions



42 Dimensions of NEUMO BioControl D80 (M24) process adapter. Unit of measurement mm (in)

Process adapter order numbers

Process adapter, electropolished, with inspection certificate EN10204-3.1 material

71653596

Suitable devices

Level

Device		Process connection version	Accessory enclosed version
Micropilot	FMR43	X2J	RD

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 25 bar (362 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): electropolished: $R_a \leq 0.38 \mu\text{m}$ (15 μin)
- Certified according to CRN



Pay attention to the temperature and pressure specifications for the seals and clips used at the customer site.

Scope of delivery

Process adapter



The seal is not included in the delivery.

Seals

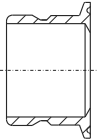
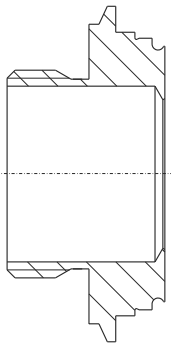
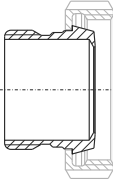
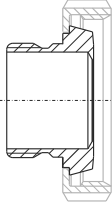
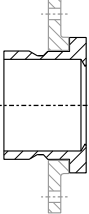


The seal is not included in the delivery.

O-ring, EPDM-70	71653949 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806, UBA KTW-BWGL, NSF61	

O-ring, FKM	71337274 (5 pieces)
Ø 15.54 mm × 2.62 mm (0.61 in × 0.1 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

UNI process adapter - pressure overview

 Clamp 2" (UNI) → 90 A0023532	 Varivent N (UNI) → 92 A0023530
 DIN11851 DN40 with slotted nut (UNI) → 94 A0023413	 DIN11851 DN50 with slotted nut (UNI) → 96 A0023417
 DRD DN50 (UNI) → 98 A0021898	

- The following tables provide an overview of the UNI process adapters that suit the various process connections of a device.
- The "**Process connection version**" column indicates the order option in the Product Configurator under the "Process connection" feature.
- The "**Accessory enclosed version**" column indicates the order option in the Product Configurator using the "Accessory enclosed" feature, which can be used to select the UNI process adapter.
- If a version is not specified in the "Accessory enclosed version" column, the UNI process adapter must be ordered separately.
- Details and order numbers of the UNI process adapter are listed in the following chapters.

The following adapters can be used to create a connection between the customer's process connection and the Endress+Hauser measuring instrument with a universal adapter

Cerabar

PMP23

Process connection version	Suitable adapters	Accessory enclosed version
52J	Clamp 2" (UNI) → 90	Not available
	Varivent N (UNI) → 92	Not available
	DIN11851 DN40 with slotted nut (UNI) → 94	Not available

Process connection version	Suitable adapters	Accessory enclosed version
	DIN11851 DN50 with slotted nut (UNI) → 96	Not available
	DRD DN50 (UNI) → 98	Not available

PMC51

Process connection version	Suitable adapters	Accessory enclosed version
UNJ/UPJ	Clamp 2" (UNI) → 90	RD/R4
	Varivent N (UNI) → 92	RF/R6
	DIN11851 DN40 with slotted nut (UNI) → 94	RA/R1
	DIN11851 DN50 with slotted nut (UNI) → 96	RB/R2
	DRD DN50 (UNI) → 98	RC/R3

PMP55

Process connection version	Suitable adapters	Accessory enclosed version
UPJ	Clamp 2" (UNI) → 90	Not available
	Varivent N (UNI) → 92	Not available
	DIN11851 DN40 with slotted nut (UNI) → 94	Not available
	DIN11851 DN50 with slotted nut (UNI) → 96	Not available
	DRD DN50 (UNI) → 98	Not available

PMP63B

Process connection version	Suitable adapters	Accessory enclosed version
50J/52J	DRD DN50 (UNI) → 98	Not available

Deltapilot**FMB50**

Process connection version	Suitable adapters	Accessory enclosed version
UNJ/UPJ/URJ	Clamp 2" (UNI) → 90	RD/R4
	Varivent N (UNI) → 92	RF/R6
	DIN11851 DN40 with slotted nut (UNI) → 94	RA/R1
	DIN11851 DN50 with slotted nut (UNI) → 96	RB/R2
	DRD DN50 (UNI) → 98	RC/R3

FMB70

Process connection version	Suitable adapters	Accessory enclosed version
00/01/02	Clamp 2" (UNI) → 90	Not available
	Varivent N (UNI) → 92	Not available

Process connection version	Suitable adapters	Accessory enclosed version
	DIN11851 DN40 with slotted nut (UNI) → 94	Not available
	DIN11851 DN50 with slotted nut (UNI) → 96	Not available
	DRD DN50 (UNI) → 98	Not available

Deltabar

FMD71

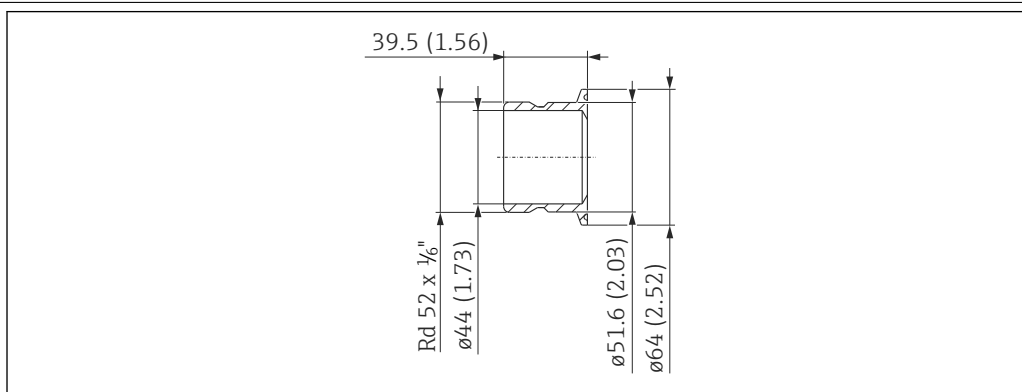
Process connection version	Suitable adapters	Accessory enclosed version
UNJ/UPJ	Clamp 2" (UNI) → 90	Not available
	Varivent N (UNI) → 92	Not available
	DIN11851 DN40 with slotted nut (UNI) → 94	Not available
	DIN11851 DN50 with slotted nut (UNI) → 96	Not available
	DRD DN50 (UNI) → 98	Not available

FMD78

Process connection version	Suitable adapters	Accessory enclosed version
00	Clamp 2" (UNI) → 90	Not available
	Varivent N (UNI) → 92	Not available
	DIN11851 DN40 with slotted nut (UNI) → 94	Not available
	DIN11851 DN50 with slotted nut (UNI) → 96	Not available
	DRD DN50 (UNI) → 98	Not available

Clamp 2" (UNI)

Dimensions



A0023531

43 Dimensions of process adapter clamp 2 (UNI). Unit of measurement mm (in)

Process adapter order numbers

Process adapter without inspection certificate	71114176
Process adapter with inspection certificate EN10204-3.1 material	71114207

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP23	52J	Not available
	PMC51	UNJ/UPJ	RD/R4
	PMP55	UPJ	Not available
Deltapilot	FMB50	UNJ/UPJ/URJ	RD/R4
	FMB70	00/01/02	Not available
Deltabar	FMD71	UNJ/UPJ	Not available
	FMD78	00	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 10 bar (150 psi) / max. 100 °C (212 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)

Scope of delivery

- Process adapter
- 1x standard seal silicone profile seal SI-60

Seals

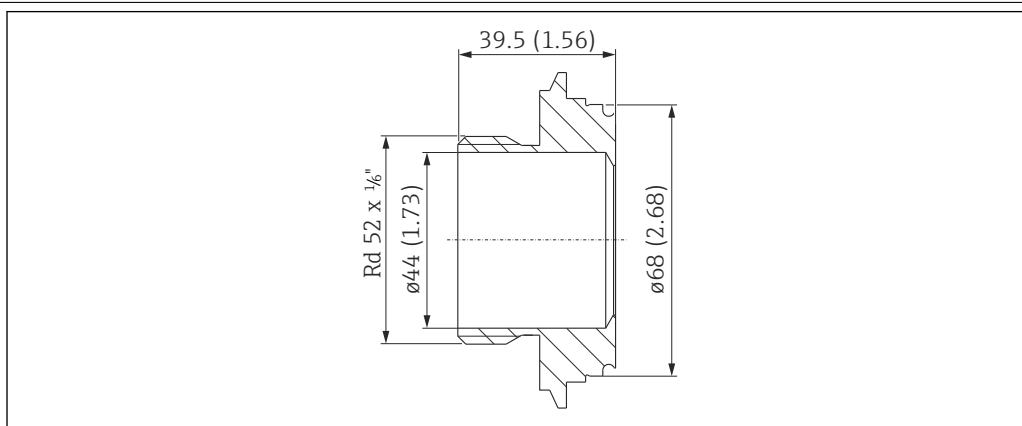
Silicone profile seal, SI 60 (standard seal)		52023572 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)		
Complies with FDA, USP Class VI, EC1935, GB4806		
Profile seal, EPDM-70		71100719 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)		
Complies with FDA, USP Class VI, EC1935, GB4806		
O-ring with backup ring with inspection certificate EN10204-3.1 material		71431380
O-ring		

Ø 36 mm x 2.5 mm (1.42 in x 0.1 in)	
Material: EPDM 70	
Complies with FDA, USP Class VI, EC1935, GB4806	
Backup ring	
Ø 38.2 mm x 43.6 mm x 5.6 mm (1.5 in x 1.72 in x 0.22 in)	
Material: AISI 316L (1.4404)	
  44 <i>Figure: Backup ring</i>	

A0042001

Varivent N (UNI)

Dimensions



A0023526

45 Dimensions of process adapter Varivent N (UNI). Unit of measurement mm (in)

Process adapter order numbers

Process adapter without inspection certificate	71114177
Process adapter with inspection certificate EN10204-3.1 material	71114208

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP23	52J	Not available
	PMC51	UNJ/UPJ	RF/R6
	PMP55	UPJ	Not available
Deltapilot	FMB50	UNJ/UPJ/URJ	RF/R6
	FMB70	00/01/02	Not available
Deltabar	FMD71	UNJ/UPJ	Not available
	FMD78	00	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 10 bar (150 psi) / max. 100 °C (212 °F)
or max. 135 °C (275 °F) for 30 minutes
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)

Scope of delivery

- Process adapter
- 1x standard seal silicone profile seal SI-60

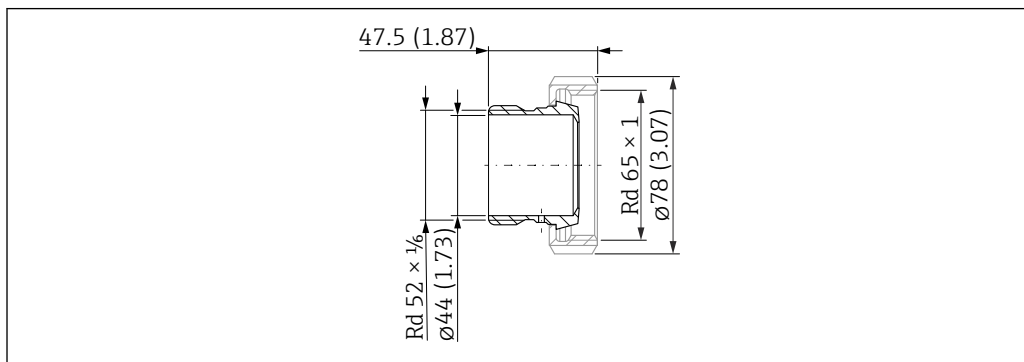
Seals

Silicone profile seal, SI 60 (standard seal)		52023572 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)		
Complies with FDA, USP Class VI, EC1935, GB4806		
Profile seal, EPDM-70		71100719 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)		
Complies with FDA, USP Class VI, EC1935, GB4806		

O-ring with backup ring with inspection certificate EN10204-3.1 material		71431380
O-ring		
Ø 36 mm x 2.5 mm (1.42 in x 0.1 in)		
Material: EPDM 70		
Complies with FDA, USP Class VI, EC1935, GB4806		
Backup ring		
Ø 38.2 mm x 43.6 mm x 5.6 mm (1.5 in x 1.72 in x 0.22 in)		
Material: AISI 316L (1.4404)		
		
 46 <i>Figure: Backup ring</i>		A0042001

DIN11851 DN40 with slotted nut (UNI)

Dimensions



47 Dimensions of process adapter DIN11851 DN40 with slotted nut (UNI). Unit of measurement mm (in)

Process adapter order numbers

Process adapter without inspection certificate	71114172
Process adapter with inspection certificate EN10204-3.1 material	71114178

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP23	52J	Not available
	PMC51	UNJ/UPJ	RA/R1
	PMP55	UPJ	Not available
Deltapilot	FMB50	UNJ/UPJ/URJ	RA/R1
	FMB70	00/01/02	Not available
Deltabar	FMD71	UNJ/UPJ	Not available
	FMD78	00	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 10 bar (150 psi) / max. 100 °C (212 °F)
or max. 135 °C (275 °F) for 30 minutes
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Slotted nut material: Stainless steel AISI 304 (1.4301) or AISI 304L (1.4307)

Scope of delivery

- Process adapter
- 1x standard seal silicone profile seal SI-60
- Slotted nut

Seals

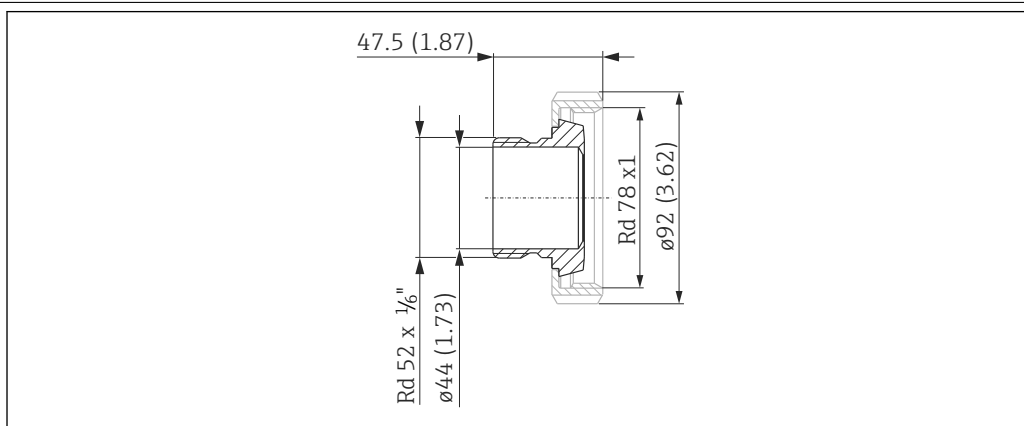
Silicone profile seal, SI 60 (standard seal)		52023572 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)		
Complies with FDA, USP Class VI, EC1935, GB4806		

Profile seal, EPDM-70		71100719 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)		
Complies with FDA, USP Class VI, EC1935, GB4806		

O-ring with backup ring with inspection certificate EN10204-3.1 material		71431380
O-ring		
Ø 36 mm x 2.5 mm (1.42 in x 0.1 in)		
Material: EPDM 70		
Complies with FDA, USP Class VI, EC1935, GB4806		
Backup ring		
Ø 38.2 mm x 43.6 mm x 5.6 mm (1.5 in x 1.72 in x 0.22 in)		
Material: AISI 316L (1.4404)		
		A0042001
48 Figure: Backup ring		

DIN11851 DN50 with slotted nut (UNI)

Dimensions



A0023416

49 Dimensions of process adapter DIN11851 DN50 with slotted nut (UNI). Unit of measurement mm (in)

Process adapter order numbers

Process adapter without inspection certificate	71114173
Process adapter with inspection certificate EN10204-3.1 material	71114205

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP23	52J	Not available
	PMC51	UNJ/UPJ	RB/R2
	PMP55	UPJ	Not available
Deltapilot	FMB50	UNJ/UPJ/URJ	RB/R2
	FMB70	00/01/02	Not available
Deltabar	FMD71	UNJ/UPJ	Not available
	FMD78	00	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 10 bar (150 psi) / max. 100 °C (212 °F)
or max. 135 °C (275 °F) for 30 minutes
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Slotted nut material: Stainless steel AISI 304 (1.4301) or AISI 304L (1.4307)

Scope of delivery

- Process adapter
- 1x standard seal silicone profile seal SI-60
- Slotted nut

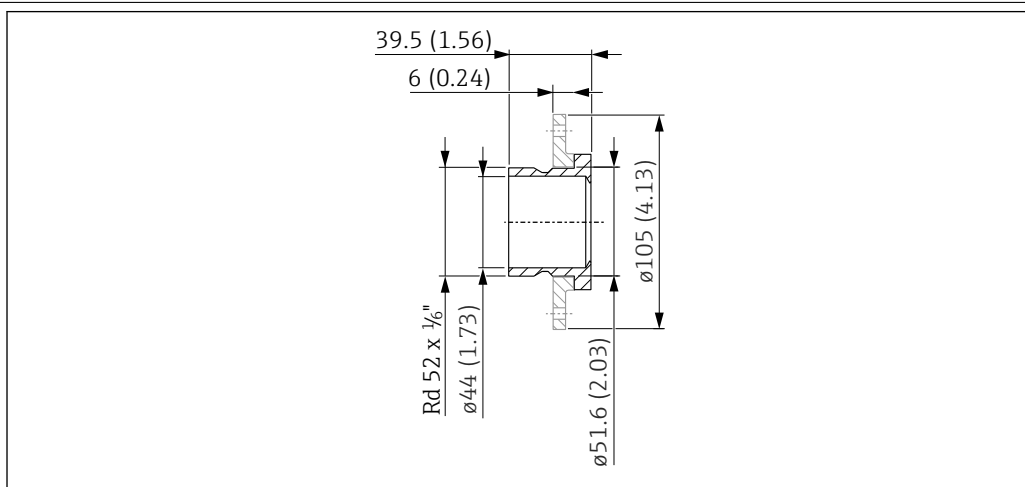
Seals

Silicone profile seal, SI 60 (standard seal)	52023572 (5 pieces)
$\varnothing 34 \text{ mm} \times 41.5 \text{ mm} \times 6.4 \text{ mm}$ (1.34 in $\times$ 1.63 in $\times$ 0.25 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	
Profile seal, EPDM-70	71100719 (5 pieces)
$\varnothing 34 \text{ mm} \times 41.5 \text{ mm} \times 6.4 \text{ mm}$ (1.34 in $\times$ 1.63 in $\times$ 0.25 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring with backup ring with inspection certificate EN10204-3.1 material		71431380
O-ring		
Ø 36 mm x 2.5 mm (1.42 in x 0.1 in)		
Material: EPDM 70		
Complies with FDA, USP Class VI, EC1935, GB4806		
Backup ring		
Ø 38.2 mm x 43.6 mm x 5.6 mm (1.5 in x 1.72 in x 0.22 in)		
Material: AISI 316L (1.4404)		
		
50 Figure: Backup ring		A0042001

DRD DN50 (UNI)

Dimensions



A0021388

51 Dimensions of process adapter DRD DN50 (UNI). Unit of measurement mm (in)

Process adapter order numbers

Process adapter without inspection certificate	71114174
Process adapter with inspection certificate EN10204-3.1 material	71114206

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP23	52J	Not available
	PMC51	UNJ/UPJ	RC/R3
Deltapilot	FMB50	UNJ/UPJ	RC/R3
	FMB70	00/01	Not available
Deltabar	FMD71	UNJ/UPJ	Not available
	FMD78	00	Not available

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 10 bar (150 psi) / max. 100 °C (212 °F)
or max. 135 °C (275 °F) for 30 minutes
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)
- Material of DRD flange: AISI 304 (1.4301)

Scope of delivery

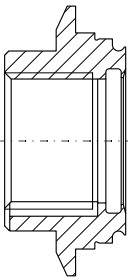
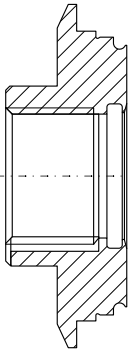
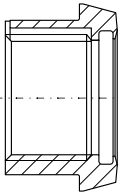
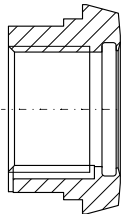
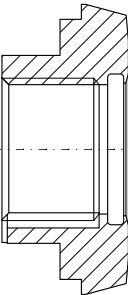
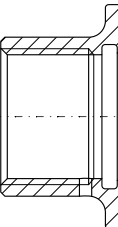
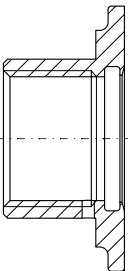
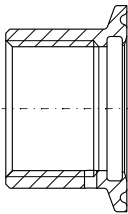
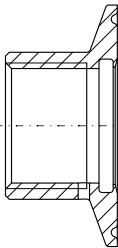
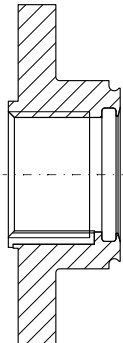
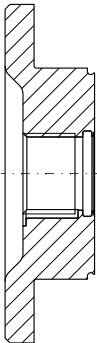
- Process adapter
- 1x standard seal silicone profile seal SI-60
- 1x DRD flange

Seals

Silicone profile seal, SI 60 (standard seal)	52023572 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	
Profile seal, EPDM-70	71100719 (5 pieces)
Ø 34 mm × 41.5 mm × 6.4 mm (1.34 in × 1.63 in × 0.25 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

O-ring with backup ring with inspection certificate EN10204-3.1 material		71431380
O-ring		
Ø 36 mm x 2.5 mm (1.42 in x 0.1 in)		
Material: EPDM 70		
Complies with FDA, USP Class VI, EC1935, GB4806		
Backup ring		
Ø 38.2 mm x 43.6 mm x 5.6 mm (1.5 in x 1.72 in x 0.22 in)		
Material: AISI 316L (1.4404)		
		A0042001
52 Figure: Backup ring		

Process adapter G1 - pressure overview

 Varivent F DN25 (G1) → 102 A0061862	 Varivent N DN50/40 (G1) → 103 A0061860	 DIN11851 DN32 (G1) → 104 A0061856
 DIN11851 DN40 (G1) → 105 A0061818	 DIN11851 DN50 (G1) → 106 A0061876	 SMS 1½" (G1) → 107 A0061874
 SMS 2" (G1) → 108 A0061871	 Clamp 1½" (G1) → 109 A0061864	 Clamp 2" (G1) → 110 A0061806
 NEUMO BioControl DN50 (G1) → 111 A0061784	 NEUMO BioControl DN80 (G1) → 112 A0061781	



- The following tables provide an overview of the G1 process adapters that suit the various process connections of a device.
- The "**Process connection version**" column indicates the order option in the Product Configurator under the "Process connection" feature.

- The "**Accessory enclosed version**" column indicates the order option in the Product Configurator using the "Accessory enclosed" feature, which can be used to select the G1 process adapter.
- If a version is not specified in the "Accessory enclosed version" column, the G1 process adapter must be ordered separately.
- Details and order numbers of the G1 process adapter are listed in the following chapters.

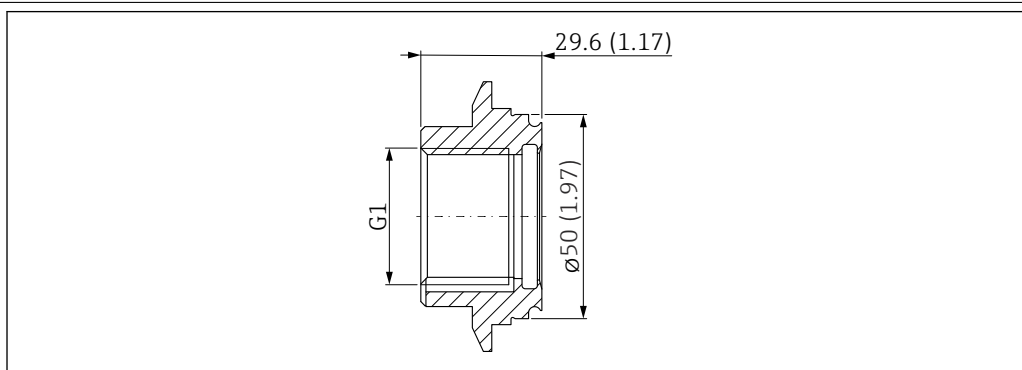
Cerabar

PMP43

Process connection version	Suitable adapters	Accessory enclosed version
WSJ	Varivent F DN25 (G1) →  102	SA
	Varivent N DN50/40 (G1) →  103	SC
	DIN11851 DN32 (G1) →  104	SE
	DIN11851 DN40 (G1) →  105	SF
	DIN11851 DN50 (G1) →  106	SG
	SMS 1½" (G1) →  107	SI
	SMS 2" (G1) →  108	SJ
	Clamp 1½" (G1) →  109	SL
	Clamp 2" (G1) →  110	SM
	NEUMO BioControl DN50 (G1) →  111	SQ
	NEUMO BioControl DN80 (G1) →  112	SR

Varivent F DN25 (G1)

Dimensions



A0061861

53 Dimensions of process adapter Varivent F DN25 (G1). Unit of measurement mm (in)

Process adapter order numbers

Process adapter with inspection certificate EN10204-3.1 material	71722786
--	----------

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP43	WSJ	SA

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 40 bar (580 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)

Scope of delivery

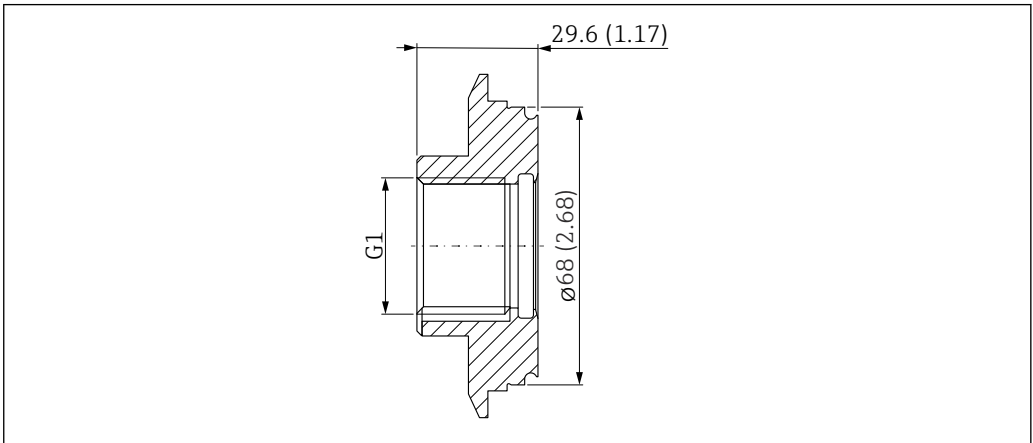
- Process adapter
- 1x standard seal O-ring EPDM 70

Seals

O-ring, EPDM-70 (standard seal)	71700537
$\varnothing 28.17 \text{ mm} \times 3.53 \text{ mm}$ (1.11 in $\times$ 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

Varivent N DN50/40 (G1)

Dimensions



A0061859

54 Dimensions of process adapter Varivent N DN40/50 (G1). Unit of measurement mm (in)

Process adapter order numbers

Process adapter with inspection certificate EN10204-3.1 material	71722787
--	----------

Suitable devices

Pressure			
Device		Process connection version	Accessory enclosed version
Cerabar	PMP43	WSJ	SC

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 40 bar (580 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)

Scope of delivery

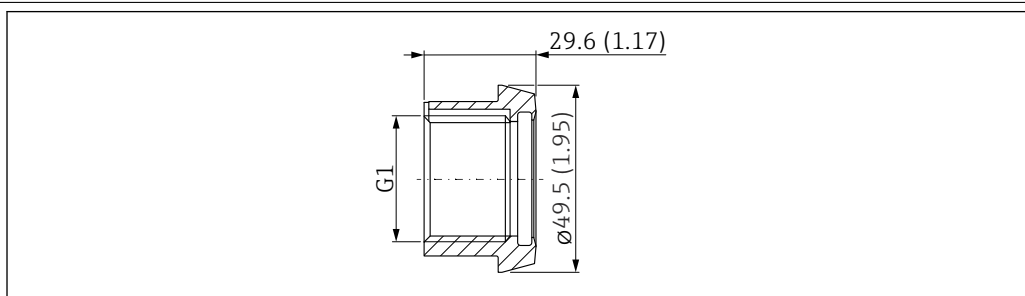
- Process adapter
- 1x standard seal O-ring EPDM 70

Seals

O-ring, EPDM-70 (standard seal)	71700537
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

DIN11851 DN32 (G1)

Dimensions



55 Dimensions of process adapter DIN11851 DN32 (G1). Unit of measurement mm (in)

Process adapter order numbers

Process adapter with inspection certificate EN10204-3.1 material	71722788
--	----------

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP43	WSJ	SE

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 40 bar (580 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)

Scope of delivery

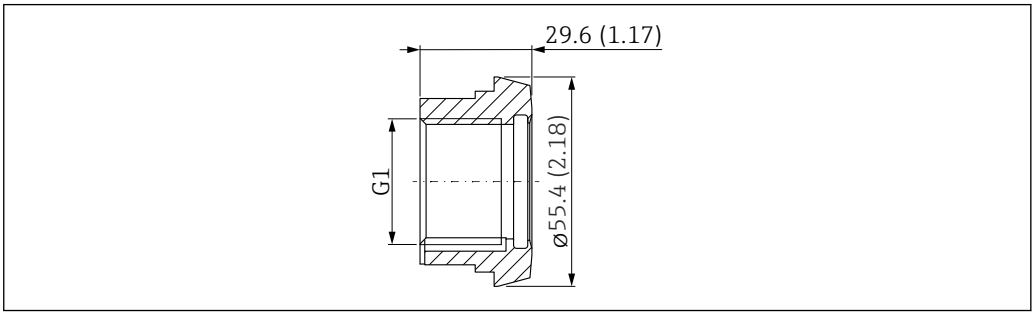
- Process adapter
- 1x standard seal O-ring EPDM 70

Seals

O-ring, EPDM-70 (standard seal)	71700537
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

DIN11851 DN40 (G1)

Dimensions



56 Dimensions of process adapter DIN11851 DN40 (G1). Unit of measurement mm (in)

Process adapter order numbers

Process adapter with inspection certificate EN10204-3.1 material	71722789
--	----------

Suitable devices

Pressure			
Device		Process connection version	Accessory enclosed version
Cerabar	PMP43	WSJ	SF

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 40 bar (580 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)

Scope of delivery

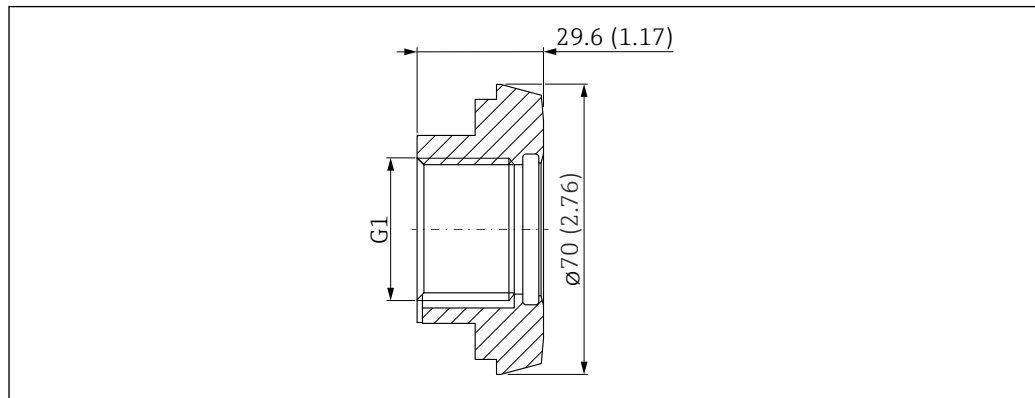
- Process adapter
- 1x standard seal O-ring EPDM 70

Seals

O-ring, EPDM-70 (standard seal)	71700537
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

DIN11851 DN50 (G1)

Dimensions



57 Dimensions of process adapter DIN11851 DN50 (G1). Unit of measurement mm (in)

Process adapter order numbers

Process adapter with inspection certificate EN10204-3.1 material	71722782
--	----------

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP43	WSJ	SG

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 25 bar (362.5 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)

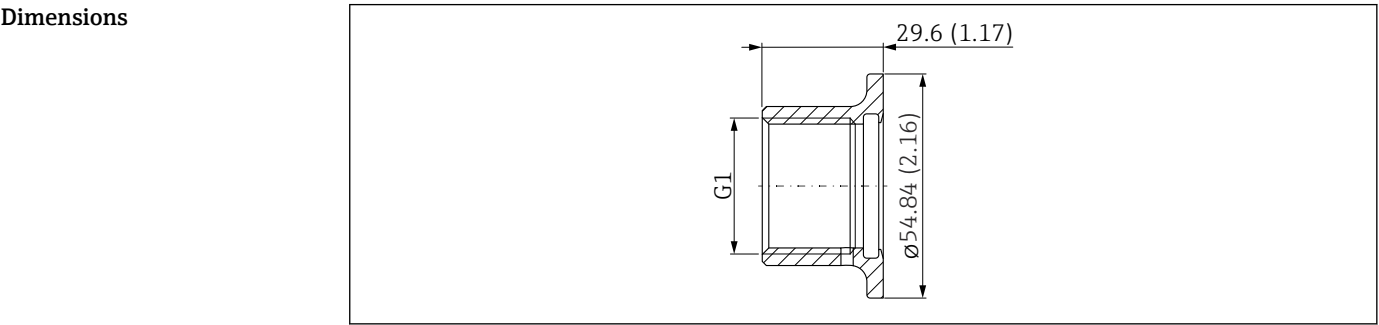
Scope of delivery

- Process adapter
- 1x standard seal O-ring EPDM 70

Seals

O-ring, EPDM-70 (standard seal)	71700537
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

SMS 1½" (G1)



58 Dimensions of process adapter SMS 1½" (G1). Unit of measurement mm (in)

Process adapter order numbers	Process adapter with inspection certificate EN10204-3.1 material	71722783
-------------------------------	--	----------

Suitable devices	Pressure		
	Device	Process connection version	Accessory enclosed version
	Cerabar	PMP43	WSJ

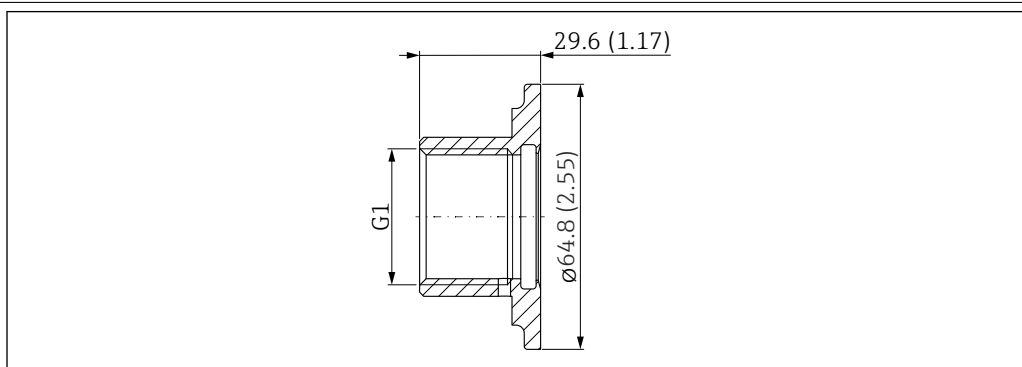
Properties	- Permitted pressure and permitted temperature of the adapter: Max. 40 bar (580 psi) / max. 150 °C (302 °F) - Material: AISI 316L (1.4435) - Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)
------------	--

Scope of delivery	- Process adapter 1x standard seal O-ring EPDM 70
-------------------	---

Seals	O-ring, EPDM-70 (standard seal)	71700537
	Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
	Complies with FDA, USP Class VI, EC1935, GB4806	

SMS 2" (G1)

Dimensions



A0061870

59 Dimensions of process adapter SMS 2" (G1). Unit of measurement mm (in)

Process adapter order numbers

Process adapter with inspection certificate EN10204-3.1 material	71722784
--	----------

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP43	WSJ	SJ

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 40 bar (580 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)

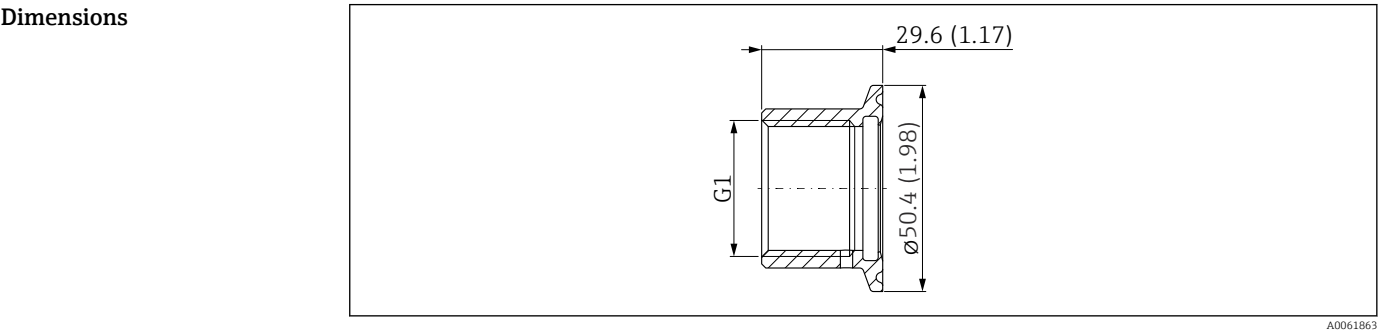
Scope of delivery

- Process adapter
- 1x standard seal O-ring EPDM 70

Seals

O-ring, EPDM-70 (standard seal)	71700537
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

Clamp 1½" (G1)



60 Dimensions of process adapter clamp 1½" (G1). Unit of measurement mm (in)

Process adapter order numbers	Process adapter with inspection certificate EN10204-3.1 material	71722785
-------------------------------	--	----------

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP43	WSJ	SL

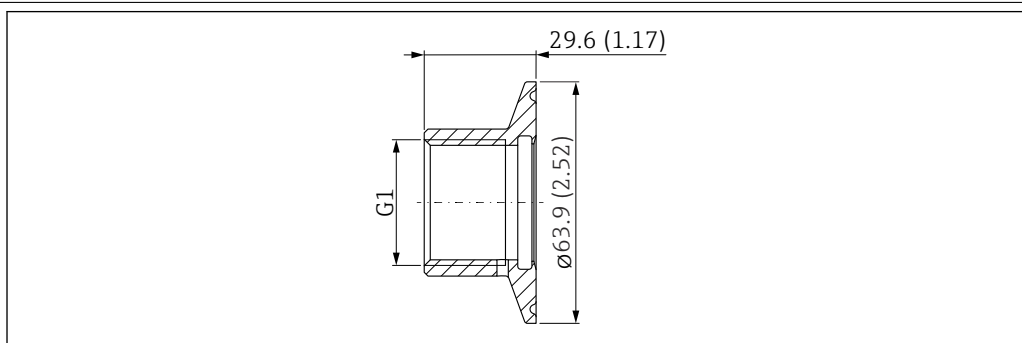
Properties	- Permitted pressure and permitted temperature of the adapter: Max. 40 bar (580 psi) / 150 °C (302 °F) - Material: AISI 316L (1.4435) - Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)
------------	---

Scope of delivery	- Process adapter 1x standard seal O-ring EPDM 70
-------------------	---

Seals	O-ring, EPDM-70 (standard seal)	71700537
	Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
	Complies with FDA, USP Class VI, EC1935, GB4806	

Clamp 2" (G1)

Dimensions



61 Dimensions of process adapter clamp 2" (G1). Unit of measurement mm (in)

Process adapter order numbers

Process adapter with inspection certificate EN10204-3.1 material	71722790
--	----------

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP43	WSJ	SM

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 40 bar (580 psi) / 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)

Scope of delivery

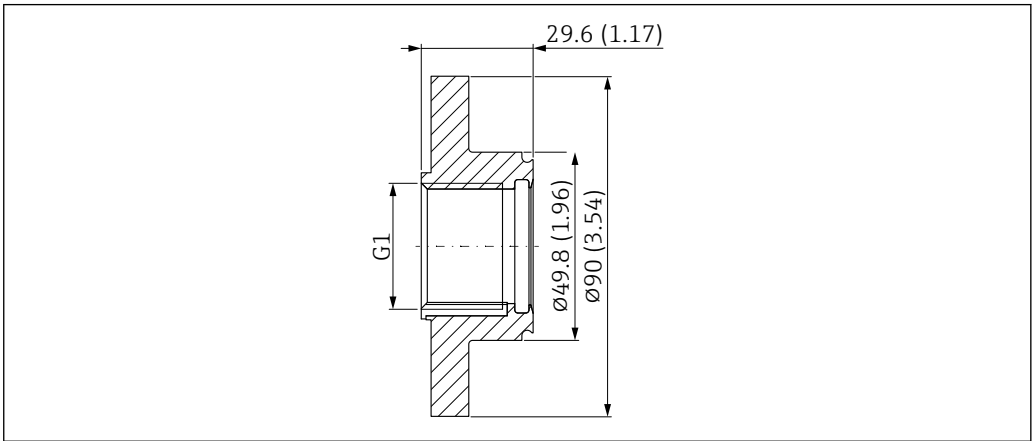
- Process adapter
- 1x standard seal O-ring EPDM 70

Seals

O-ring, EPDM-70 (standard seal)	71700537
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

NEUMO BioControl DN50 (G1)

Dimensions



A0061783

62 Dimensions of process adapter NEUMO BioControl DN50 (G1). Unit of measurement mm (in)

Process adapter order numbers

Process adapter with inspection certificate EN10204-3.1 material	71722791
--	----------

Suitable devices

Pressure			
Device		Process connection version	Accessory enclosed version
Cerabar	PMP43	WSJ	SQ

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 16 bar (232 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): Ra ≤ 0.76 µm (29.9 µin)

Scope of delivery

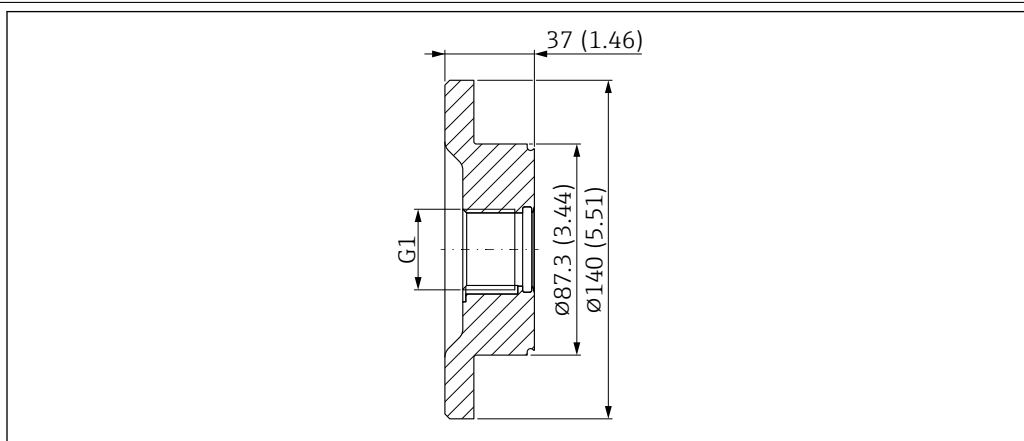
- Process adapter
- 1x standard seal O-ring EPDM 70

Seals

O-ring, EPDM-70 (standard seal)	71700537
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

NEUMO BioControl DN80 (G1)

Dimensions



A0061780

63 Dimensions of process adapter NEUMO BioControl DN80 (G1). Unit of measurement mm (in)

Process adapter order numbers

Process adapter with inspection certificate EN10204-3.1 material	71722792
--	----------

Suitable devices

Pressure

Device		Process connection version	Accessory enclosed version
Cerabar	PMP43	WSJ	SR

Properties

- Permitted pressure and permitted temperature of the adapter:
Max. 16 bar (232 psi) / max. 150 °C (302 °F)
- Material: AISI 316L (1.4435)
- Roughness (process side): $R_a \leq 0.76 \mu\text{m}$ (29.9 μin)

Scope of delivery

- Process adapter
- 1x standard seal O-ring EPDM 70

Seals

O-ring, EPDM-70 (standard seal)	71700537
Ø 28.17 mm × 3.53 mm (1.11 in × 0.14 in)	
Complies with FDA, USP Class VI, EC1935, GB4806	

Flush-mounted pipe connections M24×1.5 - level and pressure

Weldable pipe connection

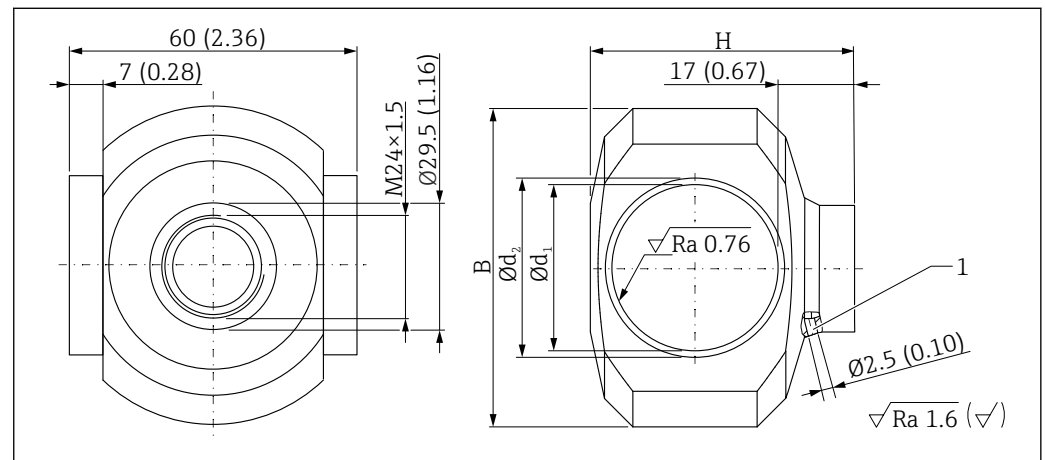
- Suitable devices:
 - Liquipoint FTW23, FTW33
 - Ceraphant PTP33B
 - Cerabar PMP23
- Order option in the Product Configurator under the "Accessory enclosed" feature:
 - DN25: QS
 - DN32: QU
 - DN40: QW
 - DN50: QY

Clamp connection pipe connection

- Suitable devices:
 - Liquipoint FTW23, FTW33
 - Ceraphant PTP33B
 - Cerabar PMP23
- Order option in the Product Configurator under the "Accessory enclosed" feature:
 - DN25: QT
 - DN32: QV
 - DN40: QX
 - DN50: QZ

Weldable pipe connection

Dimensions



64 Dimensions of weldable pipe connection. Unit of measurement mm (in)

1 Leakage hole

Nominal size	DN25	DN32	DN40	DN50
B	67 mm (2.64 in)	70 mm (2.56 in)	73 mm (2.87 in)	81 mm (3.19 in)
H	48 mm (1.89 in)	54 mm (2.13 in)	60 mm (2.36 in)	72 mm (2.83 in)
Ø d ₁	26 mm (1.02 in)	32 mm (1.26 in)	38 mm (1.50 in)	50 mm (2.00 in)
Ø d ₂	29 mm (1.14 in)	35 mm (1.34 in)	41 mm (1.61 in)	53 mm (2.09 in)

Properties

- Process temperature range:
-40 to 130 °C (-40 to 266 °F)
or 130 to 150 °C (266 to 302 °F) for max. 30 min (e.g. SIP cleaning)
- Material: AISI 316L (1.4404)
- Roughness:
 - Wetted parts (interior): Ra 0.76 µm (29.9 µin)
 - Exterior: Ra 1.6 µm (62.99 µin)

Maximum working pressure

Nominal size	DN25	DN32	DN40	DN50
Gases in fluid group 2	26 bar (377 psi)	26 bar (377 psi)	20 bar (290 psi)	20 bar (290 psi)
Gases in fluid group 1	26 bar (377 psi)	26 bar (377 psi)	26 bar (377 psi)	26 bar (377 psi)



The maximum working pressure depends on the temperature.

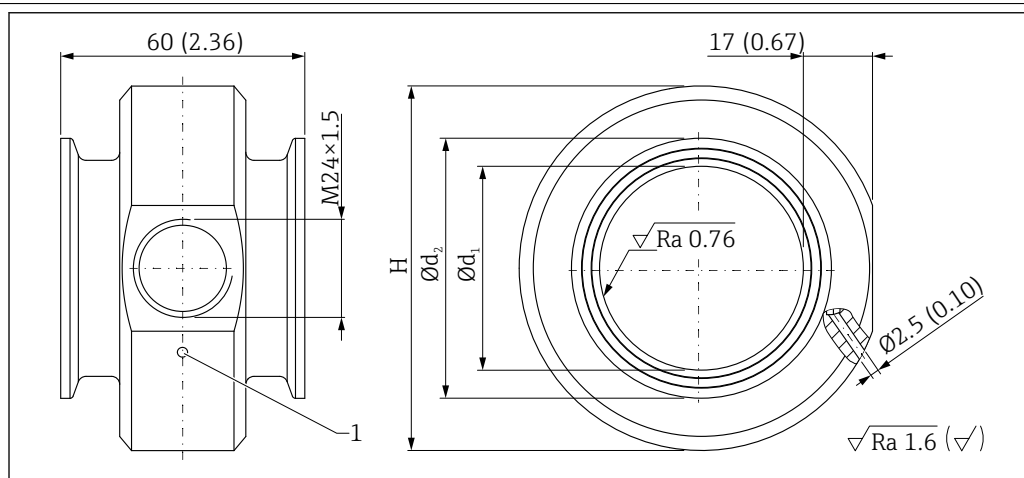
Specifications according to PED, pipe adapter, classified according to PED (EU) 2014/68, Article 4, paragraph 3

Order numbers

Nominal size	DN25	DN32	DN40	DN50
Order code	71477801	71477803	71477807	71477808

Clamp connection pipe connection

Dimensions



A0042361

65 Dimensions of clamp connection pipe connection. Unit of measurement mm (in)

1 Leakage hole

Nominal size	DN25	DN32	DN40	DN50
H	68 mm (2.68 in)	73 mm (2.87 in)	78.5 mm (3.09 in)	90 mm (3.54 in)
Ø d1	26 mm (1.02 in)	32 mm (1.26 in)	38 mm (1.50 in)	50 mm (2.00 in)
Ø d2	50 mm (2.00 in)	50 mm (2.00 in)	50 mm (2.00 in)	64 mm (2.50 in)

Properties

- Process temperature range:
–40 to 130 °C (–40 to 266 °F)
or 130 to 150 °C (266 to 302 °F) for max. 30 min (e.g. SIP cleaning)
- Material: AISI 316L (1.4404)
- Roughness:
 - Wetted parts (interior): Ra 0.76 µm (29.9 µin)
 - Exterior: Ra 1.6 µm (62.99 µin)

Maximum working pressure

Nominal size	DN25	DN32	DN40	DN50
Gases in fluid group 2	26 bar (377 psi)	26 bar (377 psi)	20 bar (290 psi)	20 bar (290 psi)
Gases in fluid group 1	26 bar (377 psi)	26 bar (377 psi)	26 bar (377 psi)	26 bar (377 psi)



The maximum working pressure depends on the temperature.

Specifications according to PED, pipe adapter, classified according to PED (EU) 2014/68, Article 4, paragraph 3

Order numbers

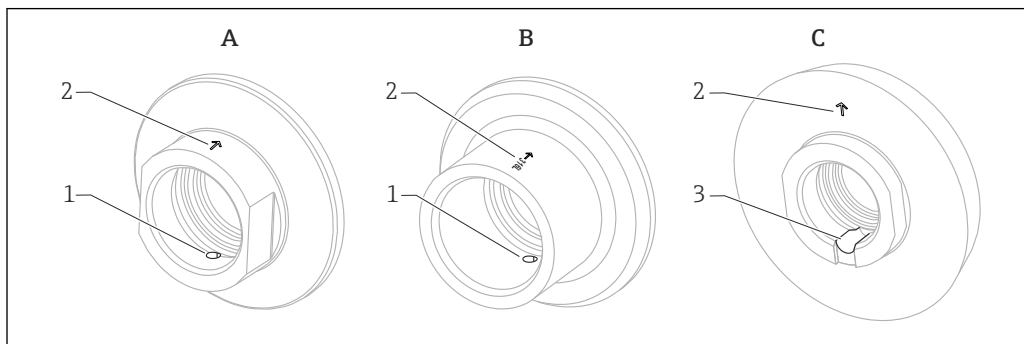
Nominal size	DN25	DN32	DN40	DN50
Order code	71477812	71477813	71477816	71477817

Mounting and welding instructions

- i** Welding stainless steel requires utmost care. The workpieces and tools used must be free of rust. Similarly, standard steel must not be processed in the immediate vicinity.
- i** When welding, the adapters should be protected against warping with a welding aid if possible, or with cooling used according to common welding practice (e.g. water cooling). The welding aid can also be used with the relevant seal for flush sealing of the process when commissioning the system. Ensure material compatibility of the welding aid.

Leakage hole or cutout

If installed horizontally and process adapters or weld-in adapters with a leakage hole or with a cutout are used, ensure that the leakage hole or cutout is pointing down. Leaks caused by escaping medium are therefore detected immediately.



A0021912

- A Process adapter with leakage hole
 B Weld-in adapter with leakage hole
 C Process adapter with cutout
 1 Leakage hole
 2 Marking, e.g. arrow, and/or material specification, offset by 180° in relation to the hole or cutout
 3 Cutout

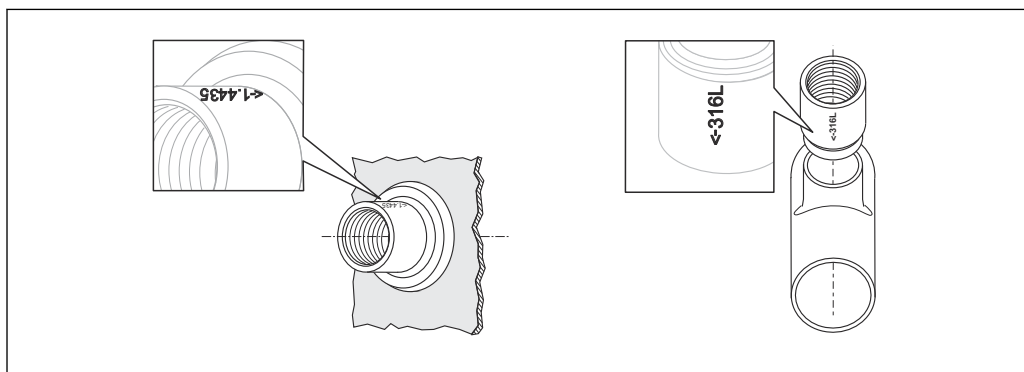
Information for pressure measuring instruments

Note the following before installing a weld-in adapter for pressure measuring instruments:

- The maximum pressure resistance of a sensor is limited. Therefore, utmost care must be taken during welding when using a weld-in adapter to screw in a pressure measuring cell.
- To prevent the weld-in adapter from warping during the welding process, it is essential to use the correct welding aid to dissipate the heat. Otherwise, the tightness and pressure resistance cannot be guaranteed when the pressure measuring cell is screwed in. The welding aid prevents warping of the weld-in adapter and any resulting leakage after the sensor has been fitted.

Preparatory steps

- Drill a hole in the vessel wall or pipe
 Hole size: Outer diameter of the weld-in adapter max. tolerance: +0.2 mm (0.01 in)
- Use the welding aid to slide the weld-in adapter into the hole and align it so that the sensor is positioned correctly at a later stage. Compare the "Mounting" chapter from → 118

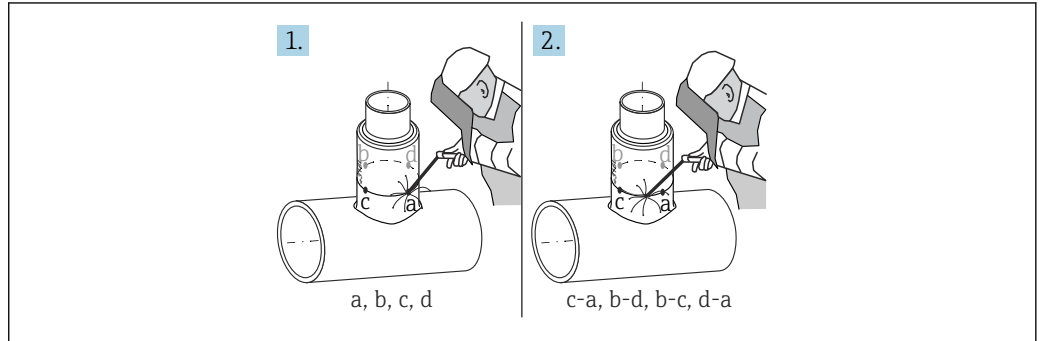


A0008868

Welding process

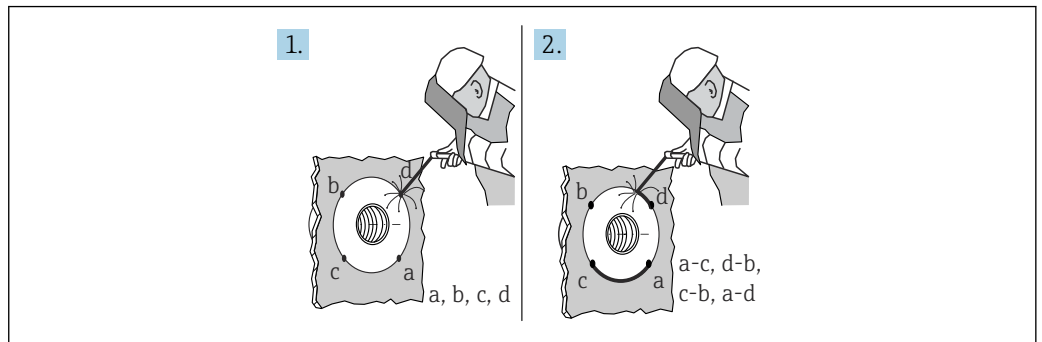
It is recommended to subdivide the weld seam into several segments in accordance with common welding practice.

1. Attach the weld-in adapter with four or six welding points (see figures)
2. Weld the segments between the points in order to avoid deformation and problems in sealing. After welding one segment, always weld the opposite segment
3. After welding two segments, stop the welding process until the welding point has cooled down
4. Let the weld-in adapter cool down after welding and remove the welding aid



A0009303

66 Welding pipes



A0008870

67 Welding vessels

i To obtain the required surface roughness, the area of the welding seam must be polished.

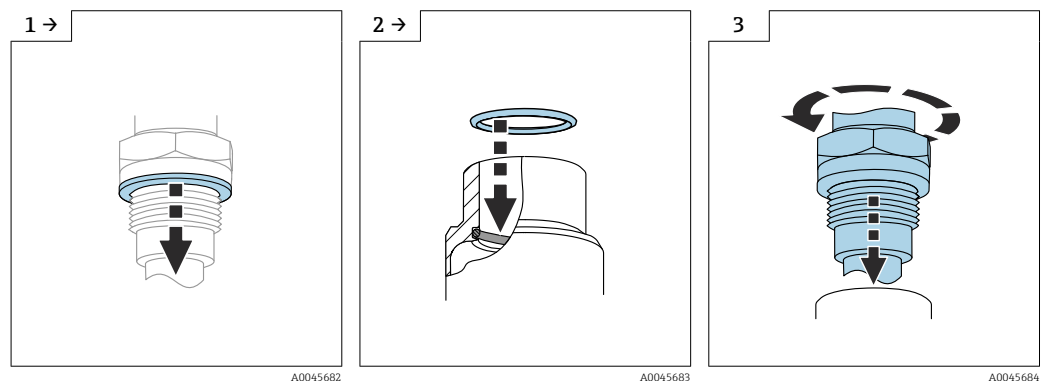
Prior to installation

Note for Liquiphant

Some devices are supplied with a flat seal at the adapter.

- Remove the flat seal
- Use the O-ring supplied or the pressure ring with an O-ring

Scope of delivery: O-ring for G $\frac{3}{4}$ d=55, G1 d=53, G 1 d=60

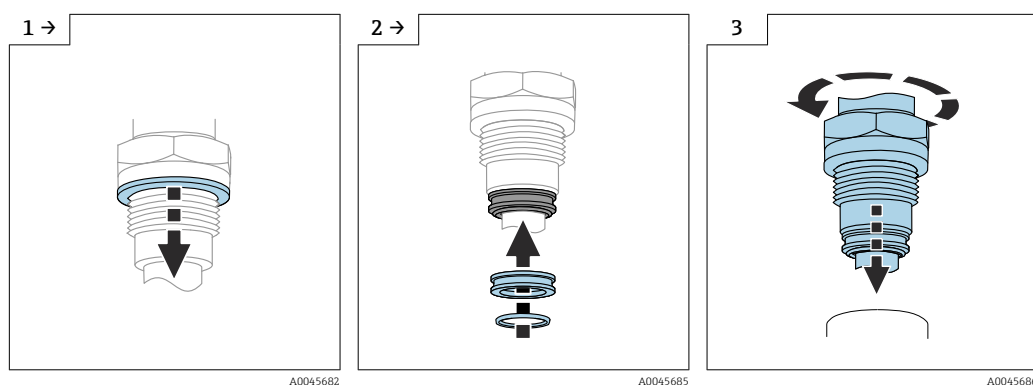


A0045682

A0045683

A0045684

Scope of delivery: Pressure ring with an O-ring for G $\frac{3}{4}$ d=50, G $\frac{3}{4}$ d=29



Mounting

Information for level transmitters (Liquiphant as an example)

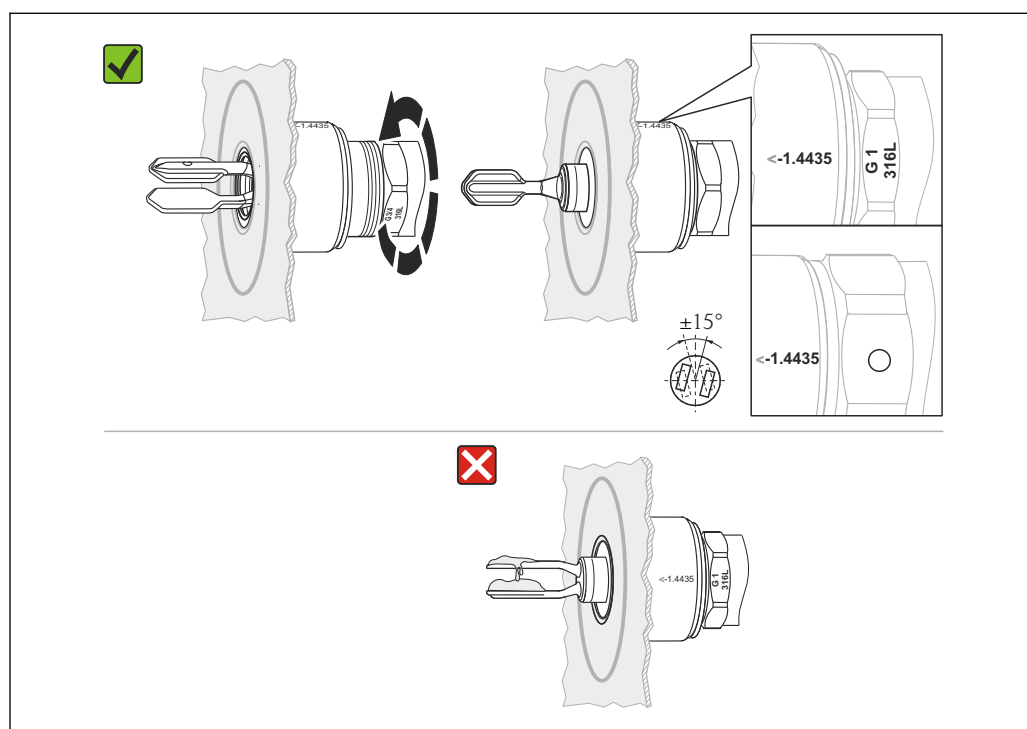
Align the vibrating fork using the marking: The vibrating fork can be aligned using the marking such that the medium drains off easily and buildup is avoided.

Markings on process connection:

- Material specification
- Thread designation
- Circle
- Dash or double dash

Horizontal orientation in vessels:

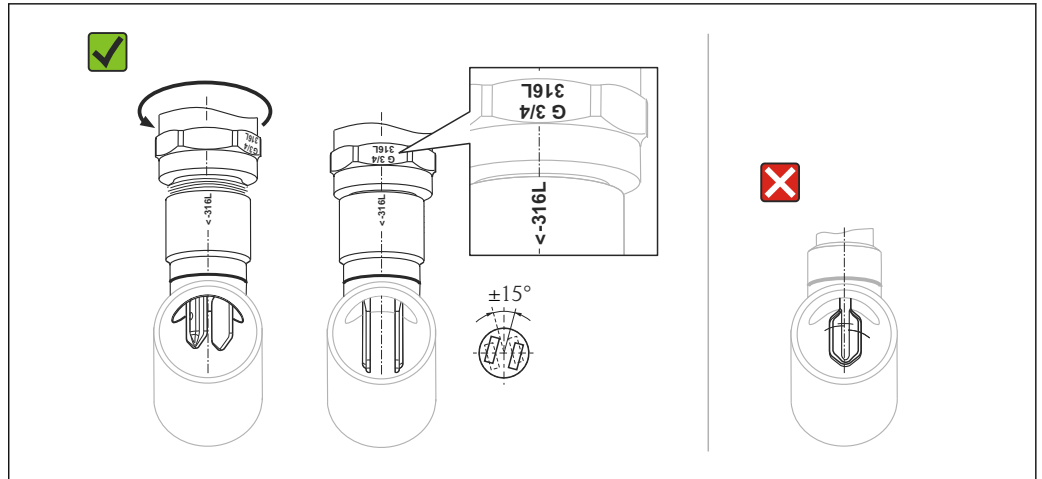
- Align the marking upward
- Ensure that the leakage hole is pointing down. This allows leaks to be detected as quickly as possible, refer to "Leakage hole/cutout" chapter → 116



68 Installation position in vessels

A0008871

When installed in pipes, the vibrating fork must be aligned in the direction of flow according to the marking to minimize the contact surface of the medium on the sensor.



A0008872

69 Orientation in pipes

Information for pressure measuring cells

- Before installation, all sealing surfaces at the weld-in adapter must be cleaned.
- Remove the protective cap from the pressure sensor.
 - i** Do not touch or damage the process membrane!
- Screw the pressure sensor onto the hexagon. The threaded connection must be tightened by hand. It is recommended that the threaded connection be secured with a torque of 60 Nm (± 20 Nm) to protect against vibrations and other effects.

Compressive load capacity

The material of the weld-in adapter and quality of the weld are critical for the compressive load capacity. The length of the thread must be fully pressure-bearing.

Flanges - overview

Note

The flanges are supplied in stainless steel AISI 316L with material number 1.4404 or 1.4435. Materials 1.4404 and 1.4435 are classified according to their stability-temperature property in DIN EN 1092-1, Table 18 under 13E0, and in JIS B2220, Table 5 under 023b. The ASME flanges are dual-rated flanges (316/316L) and are grouped together under Tab. 2-2.2 in ASME B16.5.



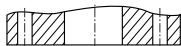
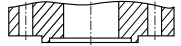
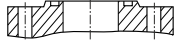
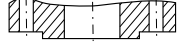
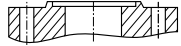
Values in inches are converted to values in millimeters using the factor 2.54. In the ASME standard, the metric values are rounded to 0 or 5.

Versions

EN flanges	ASME flanges	JIS flanges
European standard	American Society of Mechanical Engineers	Japanese Industrial Standard
DIN EN 1092-1	ASME B16.5	JIS B 2220

Flange standard DIN EN 1092-1

Endress+Hauser usually supplies flanges with a flat sealing surface. This type of flange has not changed much. Therefore, the comparison should be limited to the sealing surfaces only. As the sealing surface marking (form) has changed, there is a risk of confusion. For the roughness (Rz) between the raised face form C and the new B1, there is an overlap in the range of 40–50 µm. If the value is within this roughness window, both standards are met. For this reason, Endress+Hauser flanges are labeled with both flange standards. This double marking of the flanges makes it clear that both standards are met.

Flange	Sealing surface	DIN EN 1092-1		
		Form	Rz (µm)	Ra (µm)
without raised face	 A0029177	A	12.5-50	3.2-12.5
with raised face	 A0029178	B1 ¹⁾	12.5-50	3.2-12.5
		B2 ²⁾	3.2-12.5	0.8-3.2
Spring	 A0029179	C	3.2-12.5	0.8-3.2
Groove	 A0029180	D		
Projection	 A0029181	E	12.5-50	3.2-12.5
Recess	 A0029182	F		
Projection	 A0029183	H	3.2-12.5	3.2-12.5
Recess	 A0029184	G		

1) Typically PN2.5 to PN40

2) Typically from PN63

Height of raised face

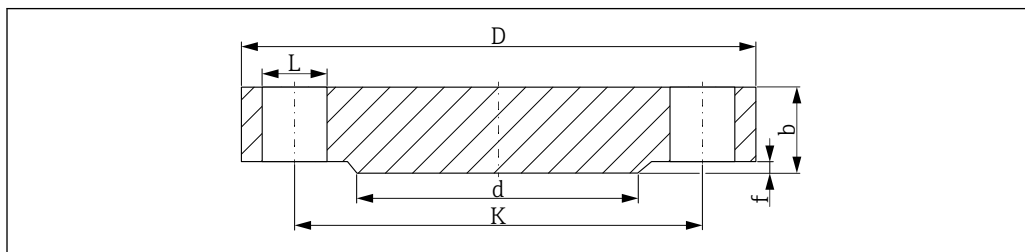
Dimensions in mm (in)

Standard	Flange	Height of raised face f	Tolerance
DIN EN 1092-1	≤ DN 32	2 (0.08)	0 -1 (-0.04)
	> DN 32 to DN 250	3 (0.12)	0 -2 (-0.08)

	> DN 250 to DN 500	4 (0.16)	$\begin{matrix} 0 \\ -3 \end{matrix}$ (-0.12)
	> DN 500	5 (0.19)	$\begin{matrix} 0 \\ -4 \end{matrix}$ (-0.16)
ASME B16.5	≤ Class 300	1.6 (0.06)	±0.75 (0.03)
	≥ Class 600	6.4 (0.25)	±0.5 (0.02)
JIS B 2220	< 20 A	$\begin{matrix} 1.5 (0.06) \\ 0 \end{matrix}$	-
	>20 A to 50 A	$\begin{matrix} 2 (0.08) \\ 0 \end{matrix}$	
	> 50 A	$\begin{matrix} 3 (0.) \\ 0 \end{matrix}$	

Flange dimensions and weights

EN flanges (DIN EN 1092-1)



A0029176

70 Raised face B1

- L* Bore diameter
d Diameter of raised face
K Diameter of pitch circle
D Flange diameter
b Total flange thickness
f Height of raised face (generally 2 mm (0.08 in))

PN16

The dimensions in the following tables are in mm (in), unless otherwise specified.

DN	D	b	K	d	L	Approx. kg (lbs)
25	115 (4.53)	18 (0.71)	85 (3.35)	68 (2.68)	4xØ14 (0.55)	1.50 (3.31)
32	140 (5.51)	18 (0.71)	100 (3.94)	78 (3.07)	4xØ18 (0.71)	2.00 (4.41)
40	150 (5.91)	18 (0.71)	110 (4.33)	88 (3.46)	4xØ18 (0.71)	2.50 (5.51)
50	165 (6.50)	18 (0.71)	125 (4.92)	102 (4.02)	4xØ18 (0.71)	2.90 (6.39)
65	185 (7.28)	18 (0.71)	145 (5.71)	122 (4.80)	8xØ18 (0.71)	3.50 (7.72)
80	200 (7.87)	20 (0.79)	160 (6.30)	138 (5.43)	8xØ18 (0.71)	4.50 (9.92)
100	220 (8.66)	20 (0.79)	180 (7.09)	158 (6.22)	8xØ18 (0.71)	5.50 (12.13)
125	250 (9.84)	22 (0.87)	210 (8.27)	188 (7.40)	8xØ18 (0.71)	8.00 (17.64)
150	285 (11.2)	22 (0.87)	240 (9.45)	212 (8.35)	8xØ22 (0.87)	10.5 (23.15)
200	340 (13.4)	24 (0.94)	295 (11.6)	268 (10.6)	12xØ22 (0.87)	16.5 (36.38)
250	405 (15.9)	26 (1.02)	355 (14.0)	320 (12.6)	12xØ26 (1.02)	25.0 (55.13)
300	460 (18.1)	28 (1.10)	410 (16.1)	378 (14.9)	12xØ26 (1.02)	35.0 (77.18)

PN25

DN	D	b	K	d	L	Approx. kg (lbs)
25	115 (4.53)	18 (0.71)	85 (3.35)	68 (2.68)	4xØ14 (0.55)	1.50 (3.31)
32	140 (5.51)	18 (0.71)	100 (3.94)	78 (3.07)	4xØ18 (0.71)	2.00 (4.41)
40	150 (5.91)	18 (0.71)	110 (4.33)	88 (3.46)	4xØ18 (0.71)	2.50 (5.51)
50	165 (6.50)	20 (0.79)	125 (4.92)	102 (4.02)	4xØ18 (0.71)	3.00 (6.62)
65	185 (7.28)	22 (0.87)	145 (5.71)	122 (4.80)	8xØ18 (0.71)	4.50 (9.92)
80	200 (7.87)	24 (0.94)	160 (6.30)	138 (5.43)	8xØ18 (0.71)	5.50 (12.13)
100	235 (9.25)	24 (0.94)	190 (7.48)	162 (6.38)	8xØ22 (0.87)	7.50 (16.54)
125	270 (10.6)	26 (1.02)	220 (8.66)	188 (7.40)	8xØ26 (1.02)	11.0 (24.26)
150	300 (11.8)	28 (1.10)	250 (9.84)	218 (8.58)	8xØ26 (1.02)	14.5 (31.97)
200	360 (14.2)	30 (1.18)	310 (12.2)	278 (10.9)	12xØ26 (1.02)	22.5 (49.61)

250	425 (16.7)	32 (1.26)	370 (14.6)	335 (13.2)	12xØ30 (1.18)	33.5 (73.9)
300	485 (19.1)	34 (1.34)	430 (16.9)	395 (15.6)	16xØ30 (1.18)	46.5 (102.5)

PN40

DN	D	b	K	d	L	Approx. kg (lbs)
25	115 (4.53)	18 (0.71)	85 (3.35)	68 (2.68)	4xØ14 (0.55)	1.50 (3.31)
32	140 (5.51)	18 (0.71)	100 (3.94)	78 (3.07)	4xØ18 (0.71)	2.00 (4.41)
40	150 (5.91)	18 (0.71)	110 (4.33)	88 (3.46)	4xØ18 (0.71)	2.50 (5.51)
50	165 (6.50)	20 (0.79)	125 (4.92)	102 (4.02)	4xØ18 (0.71)	3.00 (6.62)
65	185 (7.28)	22 (0.87)	145 (5.71)	122 (4.80)	8xØ18 (0.71)	4.50 (9.92)
80	200 (7.87)	24 (0.94)	160 (6.30)	138 (5.43)	8xØ18 (0.71)	5.50 (12.13)
100	235 (9.25)	24 (0.94)	190 (7.48)	162 (6.38)	8xØ22 (0.87)	7.50 (16.54)
125	270 (10.6)	26 (1.02)	220 (8.66)	188 (7.40)	8xØ26 (1.02)	11.0 (24.26)
150	300 (11.8)	28 (1.10)	250 (9.84)	218 (8.58)	8xØ26 (1.02)	14.5 (31.97)
200	375 (14.8)	36 (1.42)	320 (12.6)	285 (11.2)	12xØ30 (1.18)	29.0 (63.95)
250	450 (17.7)	38 (1.50)	385 (15.2)	345 (13.6)	12xØ33 (1.30)	44.5 (98.12)
300	515 (20.3)	42 (1.65)	450 (17.7)	410 (16.1)	16xØ33 (1.30)	64.0 (141.1)

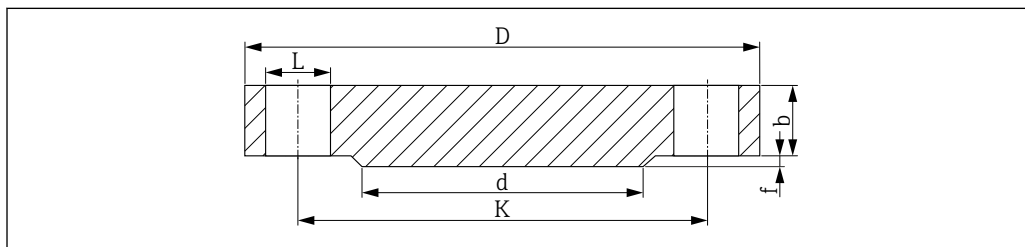
PN63

DN	D	b	K	d	L	Approx. kg (lbs)
25	140 (5.51)	24 (0.94)	100 (3.94)	68 (2.68)	4xØ18 (0.71)	2.50 (5.51)
32	155 (6.10)	24 (0.94)	110 (4.33)	78 (3.07)	4xØ22 (0.87)	3.50 (7.72)
40	170 (6.69)	26 (1.02)	125 (4.92)	88 (3.46)	4xØ22 (0.87)	4.50 (9.92)
50	180 (7.09)	26 (1.02)	135 (5.31)	102 (4.02)	4xØ22 (0.87)	5.00 (11.03)
65	205 (8.07)	26 (1.02)	160 (6.30)	122 (4.80)	8xØ22 (0.87)	6.00 (13.23)
80	215 (8.46)	28 (1.10)	170 (6.69)	138 (5.43)	8xØ22 (0.87)	7.50 (16.54)
100	250 (9.84)	30 (1.18)	200 (7.87)	162 (6.38)	8xØ26 (1.02)	10.5 (23.15)
125	295 (11.6)	34 (1.34)	240 (9.45)	188 (7.40)	8xØ30 (1.18)	16.5 (36.38)
150	345 (13.6)	36 (1.42)	280 (11.0)	218 (8.58)	8xØ33 (1.30)	24.5 (54.02)
200	415 (16.3)	42 (1.65)	345 (13.6)	285 (11.2)	12xØ36 (1.42)	40.5 (89.30)
250	470 (18.5)	46 (1.81)	400 (15.7)	345 (13.6)	12xØ36 (1.42)	58.0 (127.9)
300	530 (20.9)	52 (2.05)	460 (18.1)	410 (16.1)	16xØ36 (1.42)	83.5 (184.1)

PN100

DN	D	b	K	d	L	Approx. kg (lbs)
25	140 (5.51)	24 (0.94)	100 (3.94)	68 (2.68)	4xØ18 (0.71)	2.50 (5.51)
32	155 (6.10)	24 (0.94)	110 (4.33)	78 (3.07)	4xØ22 (0.87)	3.50 (7.72)
40	170 (6.69)	26 (1.02)	125 (4.92)	88 (3.46)	4xØ22 (0.87)	4.50 (9.92)
50	195 (7.68)	28 (1.10)	145 (5.71)	102 (4.02)	4xØ26 (1.02)	6.00 (13.23)
65	220 (8.66)	30 (1.18)	170 (6.69)	122 (4.80)	8xØ26 (1.02)	8.00 (17.64)
80	230 (9.06)	32 (1.26)	180 (7.09)	138 (5.43)	8xØ26 (1.02)	9.50 (20.95)
100	265 (10.4)	36 (1.42)	210 (8.27)	162 (6.38)	8xØ30 (1.18)	14.0 (30.87)

125	315 (12.4)	40 (1.57)	250 (9.84)	188 (7.40)	8xØ33 (1.30)	22.5 (49.61)
150	355 (14.0)	44 (1.73)	290 (11.4)	218 (8.58)	12xØ33 (1.30)	30.5 (67.25)
200	430 (16.9)	52 (2.05)	360 (14.2)	285 (11.2)	12xØ36 (1.42)	54.5 (120.2)
250	505 (19.9)	60 (2.36)	430 (16.9)	345 (13.6)	12xØ39 (1.54)	87.5 (192.9)
300	585 (23.0)	68 (2.68)	500 (19.7)	410 (16.1)	16xØ42 (1.65)	131.5 (289.9)

ASME flanges (ASME B16.5)

A0029175

71 Raised face RF*L* Bore diameter*d* Diameter of raised face*K* Diameter of pitch circle*D* Flange diameter*b* Total flange thickness*f* Height of raised face, Class 150/300: 1.6 mm (0.06 in) or from Class 600: 6.4 mm (0.25 in)Surface quality of the raised face $R_a \leq 3,2 - 6,3 \mu\text{m}$ ($R_a \leq 126 - 248 \mu\text{in}$).**Class 150**

The dimensions in the following tables are in mm (in), unless otherwise specified.

	D	b	K	d	L	Approx. kg (lbs)
1"	108 (4.25)	14.2 (0.56)	79.2 (3.12)	50.8 (2.00)	4xØ15.7 (0.62)	0.86 (1.9)
1¼"	117.3 (4.62)	15.7 (0.62)	88.9 (3.50)	63.5 (2.50)	4xØ15.7 (0.62)	1.17 (2.58)
1½"	127.0 (5.00)	17.5 (0.69)	98.6 (3.88)	73.2 (2.88)	4xØ15.7 (0.62)	1.53 (3.37)
2"	152.4 (6.00)	19.1 (0.75)	120.7 (4.75)	91.9 (3.62)	4xØ19.1 (0.75)	2.42 (5.34)
2½"	177.8 (7.00)	22.4 (0.88)	139.7 (5.50)	104.6 (4.12)	4xØ19.1 (0.75)	3.94 (8.69)
3"	190.5 (7.50)	23.9 (0.94)	152.4 (6.00)	127.0 (5.00)	4xØ19.1 (0.75)	4.93 (10.87)
3½"	215.9 (8.50)	23.9 (0.94)	177.8 (7.00)	139.7 (5.50)	8xØ19.1 (0.75)	6.17 (13.60)
4"	228.6 (9.00)	23.9 (0.94)	190.5 (7.50)	157.2 (6.19)	8xØ19.1 (0.75)	7.00 (15.44)
5"	254.0 (10.0)	23.9 (0.94)	215.9 (8.50)	185.7 (7.31)	8xØ22.4 (0.88)	8.63 (19.03)
6"	279.4 (11.0)	25.4 (1.00)	241.3 (9.50)	215.9 (8.50)	8xØ22.4 (0.88)	11.3 (24.92)
8"	342.9 (13.5)	28.4 (1.12)	298.5 (11.8)	269.7 (10.6)	8xØ22.4 (0.88)	19.6 (43.22)
10"	406.4 (16.0)	30.2 (1.19)	362.0 (14.3)	323.8 (12.7)	12xØ25.4 (1.00)	28.8 (63.50)

Class 300

	D	b	K	d	L	Approx. kg (lbs)
1"	124.0 (4.88)	17.5 (0.69)	88.9 (3.50)	50.8 (2.00)	4xØ19.1 (0.75)	1.39 (3.06)
1¼"	133.4 (5.25)	19.1 (0.75)	98.6 (3.88)	63.5 (2.50)	4xØ19.1 (0.75)	1.79 (3.95)
1½"	155.4 (6.12)	20.6 (0.81)	114.3 (4.5)	73.2 (2.88)	4xØ22.4 (0.88)	2.66 (5.87)
2"	165.1 (6.50)	22.4 (0.88)	127.0 (5.00)	91.9 (3.62)	8xØ19.1 (0.75)	3.18 (7.01)

2½"	190.5 (7.50)	25.4 (1.00)	149.4 (5.88)	104.6 (4.12)	8xØ22.4 (0.88)	4.85 (10.69)
3"	209.5 (8.25)	28.4 (1.12)	168.1 (6.62)	127.0 (5.00)	8xØ22.4 (0.88)	6.81 (15.02)
3½"	228.6 (9.00)	30.2 (1.19)	184.2 (7.25)	139.7 (5.50)	8xØ22.4 (0.88)	8.71 (19.21)
4"	254.0 (10.0)	31.8 (1.25)	200.2 (7.88)	157.2 (6.19)	8xØ22.4 (0.88)	11.5 (25.36)
5"	279.4 (11.0)	35.1 (1.38)	235.0 (9.25)	185.7 (7.31)	8xØ22.4 (0.88)	15.6 (34.4)
6"	317.5 (12.5)	36.6 (1.44)	269.7 (10.6)	215.9 (8.50)	12xØ22.4 (0.88)	20.9 (46.08)
8"	381.0 (15.0)	41.1 (1.62)	330.2 (13.0)	269.7 (10.6)	12xØ25.4 (1.00)	34.3 (75.63)
10"	444.5 (17.5)	47.8 (1.88)	387.4 (15.3)	323.8 (12.7)	16xØ28.4 (1.12)	53.3 (117.5)

Class 600

	D	b	K	d	L	Approx. kg (lbs)
1"	124.0 (4.88)	17.5 (0.69)	88.9 (3.50)	50.8 (2.00)	4xØ19.1 (0.75)	1.60 (3.53)
1¼"	133.4 (5.25)	20.6 (0.81)	98.6 (3.88)	63.5 (2.50)	4xØ19.1 (0.75)	2.23 (4.92)
1½"	155.4 (6.12)	22.4 (0.88)	114.3 (4.5)	73.2 (2.88)	4xØ22.4 (0.88)	3.25 (7.17)
2"	165.1 (6.50)	25.4 (1.00)	127.0 (5.00)	91.9 (3.62)	8xØ19.1 (0.75)	4.15 (9.15)
2½"	190.5 (7.50)	28.4 (1.12)	149.4 (5.88)	104.6 (4.12)	8xØ22.4 (0.88)	6.13 (13.52)
3"	209.5 (8.25)	31.8 (1.25)	168.1 (6.62)	127.0 (5.00)	8xØ22.4 (0.88)	8.44 (18.61)
3½"	228.6 (9.00)	35.1 (1.38)	184.2 (7.25)	139.7 (5.50)	8xØ25.4 (1.00)	11.0 (24.26)
4"	273.1 (10.8)	38.1 (1.50)	215.9 (8.50)	157.2 (6.19)	8xØ25.4 (1.00)	17.3 (38.15)
5"	330.2 (13.0)	44.5 (1.75)	266.7 (10.5)	185.7 (7.31)	8xØ28.4 (1.12)	29.4 (64.83)
6"	355.6 (14.0)	47.8 (1.88)	292.1 (11.5)	215.9 (8.50)	12xØ28.4 (1.12)	36.1 (79.6)
8"	419.1 (16.50)	55.6 (2.19)	349.3 (13.8)	269.7 (10.6)	12xØ31.8 (1.25)	58.9 (129.9)
10"	508.0 (20.00)	63.5 (2.50)	431.8 (17.0)	323.8 (12.7)	16xØ35.1 (1.38)	97.5 (214.9)

Class 900

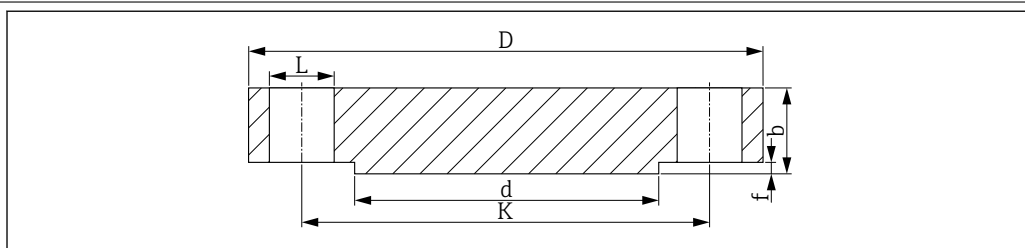
	D	b	K	d	L	Approx. kg (lbs)
1"	149.4 (5.88)	28.4 (1.12)	101.6 (4.00)	50.8 (2.00)	4xØ25.4 (1.00)	3.57 (7.87)
1¼"	158.8 (6.25)	28.4 (1.12)	111.3 (4.38)	63.5 (2.50)	4xØ25.4 (1.00)	4.14 (9.13)
1½"	177.8 (7.00)	31.8 (1.25)	124.0 (4.88)	73.2 (2.88)	4xØ28.4 (1.12)	5.75 (12.68)
2"	215.9 (8.50)	38.1 (1.50)	165.1 (6.50)	91.9 (3.62)	8xØ25.4 (1.00)	10.1 (22.27)
2½"	244.4 (9.62)	41.1 (1.62)	190.5 (7.50)	104.6 (4.12)	8xØ28.4 (1.12)	14.0 (30.87)
3"	241.3 (9.50)	38.1 (1.50)	190.5 (7.50)	127.0 (5.00)	8xØ25.4 (1.00)	13.1 (28.89)
4"	292.1 (11.50)	44.5 (1.75)	235.0 (9.25)	157.2 (6.19)	8xØ31.8 (1.25)	26.9 (59.31)
5"	349.3 (13.8)	50.8 (2.00)	279.4 (11.0)	185.7 (7.31)	8xØ35.1 (1.38)	36.5 (80.48)
6"	381.0 (15.00)	55.6 (2.19)	317.5 (12.5)	215.9 (8.50)	12xØ31.8 (1.25)	47.4 (104.5)
8"	469.9 (18.50)	63.5 (2.50)	393.7 (15.5)	269.7 (10.6)	12xØ38.1 (1.50)	82.5 (181.9)
10"	546.1 (21.50)	69.9 (2.75)	469.9 (18.5)	323.8 (12.7)	16xØ38.1 (1.50)	122 (269.0)

Class 1500

	D	b	K	d	L	Approx. kg (lbs)
1"	149.4 (5.88)	28.4 (1.12)	101.6 (4.00)	50.8 (2.00)	4xØ25.4 (1.00)	3.57 (7.87)
1¼"	158.8 (6.25)	28.4 (1.12)	111.3 (4.38)	63.5 (2.50)	4xØ25.4 (1.00)	4.14 (9.13)

1½"	177.8 (7.00)	31.8 (1.25)	124.0 (4.88)	73.2 (2.88)	4xØ28.4 (1.12)	5.75 (12.68)
2"	215.9 (8.50)	38.1 (1.50)	165.1 (6.50)	91.9 (3.62)	8xØ25.4 (1.00)	10.1 (22.27)
2½"	244.4 (9.62)	41.1 (1.62)	190.5 (7.50)	104.6 (4.12)	8xØ28.4 (1.12)	14.0 (30.87)
3"	266.7 (10.50)	47.8 (1.88)	203.2 (8.00)	127.0 (5.00)	8xØ31.8 (1.25)	19.1 (42.12)
4"	311.2 (12.3)	53.8 (2.12)	241.3 (9.50)	157.2 (6.19)	8xØ35.1 (1.38)	29.9 (65.93)
5"	374.7 (14.8)	73.2 (2.88)	292.1 (11.5)	185.7 (7.31)	8xØ41.1 (1.62)	58.4 (128.8)
6"	393.7 (15.50)	82.6 (3.25)	317.5 (12.5)	215.9 (8.50)	12xØ38.1 (1.50)	71.8 (158.3)
8"	482.6 (19.00)	91.9 (3.62)	393.7 (15.5)	269.7 (10.6)	12xØ44.5 (1.75)	122 (269.0)
10"	584.2 (23.00)	108.0 (4.25)	482.6 (19.0)	323.8 (12.7)	12xØ50.8 (2.00)	210 (463.0)

JIS flanges (B 2220)



A0029174

72 Raised face RF

- L* Bore diameter
d Diameter of raised face
K Diameter of pitch circle
D Flange diameter
b Total flange thickness
f Height of raised face (generally 2 mm (0.08 in))

i Surface quality of sealing surface $R_a \leq 3.2\text{--}6.3\text{ }\mu\text{m}$ ($R_a \leq 126\text{--}248\text{ }\mu\text{in}$).

10K

The dimensions in the following tables are in mm (in), unless otherwise specified.

A	D	b	K	d	L
25	125 (4.92)	14 (0.55)	90 (3.54)	67 (2.64)	4xØ19 (0.75)
32	135 (5.31)	16 (0.63)	100 (3.94)	76 (2.99)	4xØ19 (0.75)
40	140 (5.51)	16 (0.63)	105 (4.13)	81 (3.19)	4xØ19 (0.75)
50	155 (6.10)	16 (0.63)	120 (4.72)	96 (3.78)	4xØ19 (0.75)
65	175 (6.89)	18 (0.71)	140 (5.51)	116 (4.57)	4xØ19 (0.75)
80	185 (7.28)	18 (0.71)	150 (5.91)	126 (4.96)	8xØ19 (0.75)
100	210 (8.27)	18 (0.71)	175 (6.89)	151 (5.94)	8xØ19 (0.75)
125	250 (9.84)	20 (0.79)	210 (8.27)	182 (7.17)	8xØ23 (0.91)
150	280 (11.0)	22 (0.87)	240 (9.45)	212 (8.35)	8xØ23 (0.91)
200	330 (13.0)	22 (0.87)	290 (11.4)	262 (10.3)	12xØ23 (0.91)
250	400 (15.7)	24 (0.94)	355 (14.0)	324 (12.8)	12xØ25 (0.98)
300	445 (17.5)	24 (0.94)	400 (15.7)	368 (14.5)	16xØ25 (0.98)

20K

A	D	b	K	d	L
25	125 (4.92)	16 (0.63)	90 (3.54)	67 (2.64)	4xØ19 (0.75)
32	135 (5.31)	18 (0.71)	100 (3.94)	76 (2.99)	4xØ19 (0.75)
40	140 (5.51)	18 (0.71)	105 (4.13)	81 (3.19)	4xØ19 (0.75)
50	155 (6.10)	18 (0.71)	120 (4.72)	96 (3.78)	8xØ19 (0.75)
65	175 (6.89)	20 (0.79)	140 (5.51)	116 (4.57)	8xØ19 (0.75)
80	200 (7.87)	22 (0.87)	160 (6.30)	132 (5.20)	8xØ23 (0.91)
100	225 (8.86)	24 (0.94)	185 (7.28)	160 (6.30)	8xØ23 (0.91)
125	270 (10.6)	26 (1.02)	225 (8.86)	195 (7.68)	8xØ25 (0.98)
150	305 (12.0)	28 (1.10)	260 (10.2)	230 (9.06)	12xØ25 (0.98)
200	350 (13.8)	30 (1.18)	305 (12.0)	275 (10.8)	12xØ25 (0.98)
250	430 (16.9)	34 (1.34)	380 (15.0)	345 (13.6)	12xØ27 (1.06)
300	480 (18.9)	36 (1.42)	430 (16.9)	395 (15.6)	16xØ27 (1.06)

63K

A	D	b	K	d	L
25	140 (5.51)	27 (1.06)	100 (3.94)	70 (2.76)	4xØ23 (0.91)
32	150 (5.91)	30 (1.18)	110 (4.33)	80 (3.15)	4xØ23 (0.91)
40	175 (6.89)	32 (1.26)	130 (5.12)	90 (3.54)	4xØ25 (0.98)
50	185 (7.28)	34 (1.34)	145 (5.71)	105 (4.13)	8xØ23 (0.91)
65	220 (8.66)	38 (1.50)	175 (6.89)	130 (5.12)	8xØ25 (0.98)
80	230 (9.06)	40 (1.57)	185 (7.28)	140 (5.51)	8xØ25 (0.98)
100	270 (10.6)	44 (1.73)	220 (8.66)	165 (6.50)	8xØ27 (1.06)
125	325 (12.8)	50 (1.97)	265 (10.4)	200 (7.87)	8xØ33 (1.30)
150	365 (14.4)	54 (2.13)	305 (12.0)	240 (9.45)	12xØ33 (1.30)
200	425 (16.7)	60 (2.36)	360 (14.2)	290 (11.4)	12xØ33 (1.30)
250	500 (19.7)	68 (2.68)	430 (16.9)	355 (14.0)	12xØ39 (1.54)
300	560 (22.0)	77 (3.03)	485 (19.1)	410 (16.1)	16xØ39 (1.54)

Pressure-temperature dependency

EN flanges (DIN EN 1092-1)



In terms of their stability-temperature property, the materials 1.4404 and 1.4435 are grouped in DIN EN 1092-1 table 18 under 13E0.

Temperature range	Nominal pressure bar (psi)				
	PN16	PN25	PN40	PN63	PN100
-10 to 50 °C (14 to 122 °F)	16.0 (232)	25.0 (362)	40.0 (580)	63.0 (913)	100.0 (1450)
50 °C (122 °F)	15.5 (225)	24.3 (352)	38.9 (564)	61.3 (889)	97.3 (1411)
100 °C (212 °F)	15.1 (219)	23.6 (342)	37.9 (550)	59.7 (866)	94.7 (1373)
150 °C (302 °F)	13.7 (199)	21.5 (312)	34.4 (499)	54.3 (787)	86.1 (1248)
200 °C (392 °F)	12.7 (184)	19.8 (287)	31.8 (461)	50.1 (726)	79.5 (1153)
250 °C (482 °F)	11.9 (173)	18.6 (270)	29.9 (434)	47.1 (683)	74.7 (1083)
300 °C (572 °F)	11.0 (159)	17.2 (249)	27.6 (400)	43.5 (631)	69.0 (1000)
350 °C (662 °F)	10.5 (152)	16.5 (239)	26.4 (383)	41.7 (605)	66.1 (958)
400 °C (752 °F)	10.2 (148)	16.0 (232)	25.7 (373)	40.1 (580)	64.2 (931)

ASME flanges (ASME B16.5)



The ASME flanges are dual-rated flanges (316/316L) and are grouped together under Tab. 2-2.2 in ASME B16.5.

Temperature range	Nominal pressure bar (psi)				
	Class 150	Class 300	Class 600	Class 900	Class 1500
-29 to 38 °C (-20 to 100 °F)	19.0 (275)	49.6 (719)	99.3 (1440)	148.9 (2159)	248.2 (3599)
50 °C (122 °F)	18.4 (267)	48.1 (697)	96.2 (1395)	144.3 (2092)	240.6 (3489)
100 °C (212 °F)	16.2 (235)	42.2 (612)	84.4 (1224)	126.6 (1836)	211.0 (3059)
150 °C (302 °F)	14.8 (215)	38.5 (558)	77.0 (1116)	115.5 (1675)	192.5 (2791)
200 °C (392 °F)	13.7 (199)	35.7 (518)	71.3 (1034)	107.0 (1551)	178.3 (2588)
250 °C (482 °F)	12.1 (175)	33.4 (484)	66.8 (969)	100.1 (1451)	166.9 (2420)
300 °C (572 °F)	10.2 (148)	31.6 (458)	63.2 (916)	94.9 (1376)	158.1 (2292)
325 °C (617 °F)	9.3 (135)	30.9 (448)	61.8 (896)	92.7 (1344)	154.4 (2239)
350 °C (662 °F)	8.4 (122)	30.3 (439)	60.7 (880)	91.0 (1319)	151.6 (2189)
375 °C (707 °F)	7.4 (107)	29.9 (434)	59.8 (867)	89.6 (1299)	149.4 (2166)
400 °C (752 °F)	6.5 (94)	29.4 (426)	58.9 (854)	88.3 (1280)	147.2 (2134)

JIS flanges (B 2220)



In terms of their stability-temperature property, the materials 1.4404 and 1.4435 are grouped in JIS B 2220 table 5 under 023b.

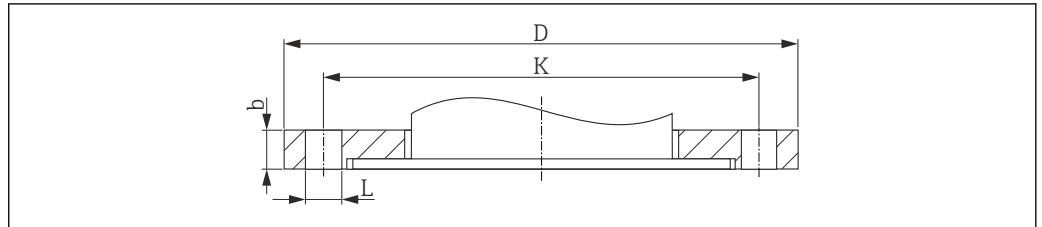
Temperature range	Nominal pressure bar (psi)			
	10K	20K		
	for all flanges	Up to 125 A	150 A to 250 A	300 A
Up to 120 °C (248 °F)	14 (203.0)	34 (493.0)	20 (290.0)	20 (290.0)
220 °C (428 °F)	12 (174.0)	31 (449.5)	20 (290.0)	-
300 °C (572 °F)	10 (145.0)	29 (420.5)	19 (275.5)	-
350 °C (662 °F)	-	26 (377.0)	17 (246.5)	-
400 °C (752 °F)	-	23 (333.5)	17 (246.5)	-
425 °C (797 °F)	-	20 (290.0)	17 (246.5)	-

Slip-on flange FAU80

A slip-on flange can be flush-mounted on a sensor (Prosonic FDU91F, FDU80F). Polypropylene flanges (PP) may only be used up to a max. 1.5 bar (22 psi); flanges made of 316L can also be used above this.



The order options can be selected via the Product Configurator.



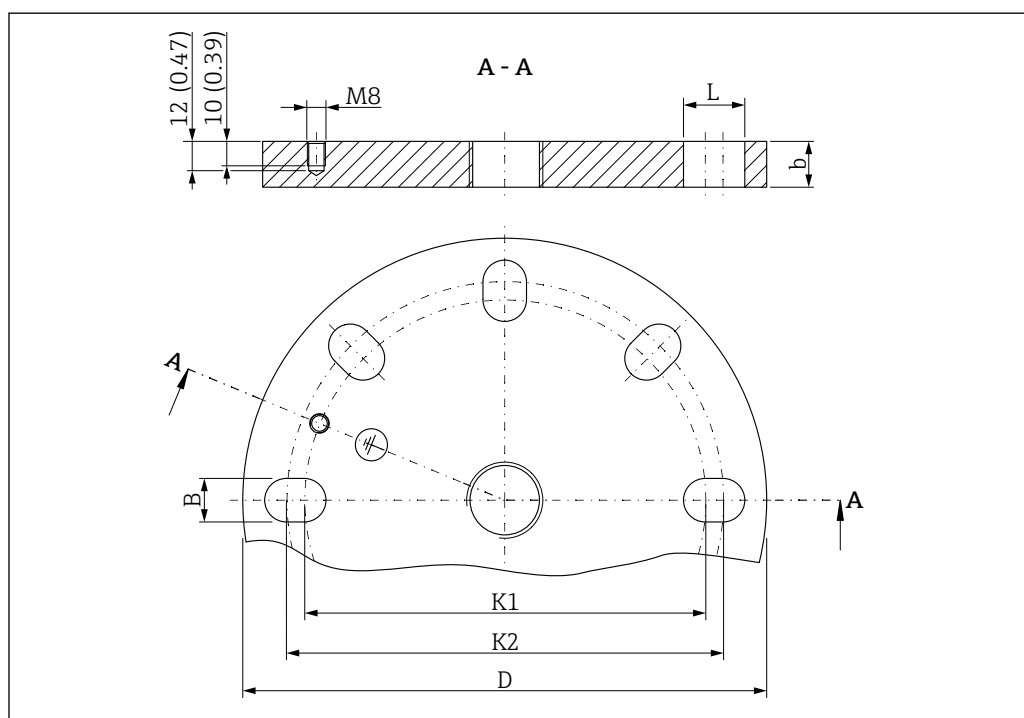
A0029186

73 Slip-on flange

- D* Flange diameter
- K* Diameter of pitch circle
- b* Total flange thickness
- L* Bore diameter

FAX50 screw-in flange

The FAX50 screw-in flange is a universal flange that can be used for all three standards (DIN EN 1092-1, ASME B16.5, JIS B 2220) due to its min./max. dimensions.



A0045621

74 Dimensions in mm (inches)

- D* Flange diameter
K1 Diameter of pitch circle
K2 Diameter of pitch circle
b Total flange thickness
L Bore diameter
B Slotted hole (width)



Thread M8, 10 mm + 2 mm deep, centered between 2 boreholes.

Is manufactured from steel or 316L for all FAX50 flanges and UNI flanges.

G 3/4, NPT 3/4

The dimensions in the following tables are in mm (in), unless otherwise specified.

DN	D	b	L	K1	K2	Approx. kg (lbs)		
						PP	PVDF	316L
50	165 (6.50)	20 (0.79)	4Ø19 (0.75)	120 (4.72)	125 (4.92)	-	-	3.11 (6.86)
80	200 (7.87)		8Ø19 (0.75)	150 (5.91)	160 (6.30)	-	-	4.37 (9.64)
100	228.6 (9.0)		8Ø 19 (0.75)	175 (6.89)	190.5 (7.5)	-	-	5.79 (12.77)

G 1, NPT 1

DN	D	b	L	K1	K2	Approx. kg (lbs)		
						PP	PVDF	316L
80	200 (7.87)	20 (0.79)	8xØ19 (0.75)	150 (5.91)	160 (6.30)	0.50 (1.10)	0.97 (2.14)	4.34 (9.57)
100	228.6 (9.0)		8xØ 19 (0.75)	175 (6.89)	190.5 (7.5)	0.66 (1.46)	1.29 (2.84)	5.75 (12.68)
150	285 (11.2)		8xØ 23 (0.91)	240 (9.45)	241.3 (9.5)	1.09 (2.40)	2.12 (4.67)	9.44 (20.82)

200 ¹⁾	340 (13.4)		12xØ 23 (0.91)	290 (11.4)	295 (11.6)	1.53 (3.37)	-	-
250	406.4 (16.0)		12xØ 26 (1.02)	355 (14.0)	362 (14.3)	2.20 (4.85)	-	-

1) Only for DIN EN 1092-1 and JIS B 2220

Exception G1

NPS (nominal pipe size)	D	b	L	K1	K2	Approx. kg (lbs)		
ASME						PP	PVDF	316L
8"	342.9 (13.5)	20 (0.79)	8xØ22.5 (0.89)	298.5 (11.8)	298.5 (11.8)	1.61 (3.55)	-	-

G 1½, NPT 1½

DN	D	b	L	K1	K2	Approx. kg (lbs)		
						PP	PVDF	316L
50	165 (6.50)	20 (0.79)	4Ø19 (0.75)	120 (4.72)	125 (4.92)	0.34 (0.75)	0.67 (1.48)	2.97 (6.55)
80	200 (7.87)		8Ø19 (0.75)	150 (5.91)	160 (6.30)	0.49 (1.08)	0.95 (2.09)	4.24 (9.35)
100	228.6 (9.0)		8Ø19 (0.75)	175 (6.89)	190.5 (7.5)	0.65 (1.43)	1.27 (2.80)	5.65 (12.46)
150	285 (11.2)		8Ø23 (0.91)	240 (9.45)	241.3 (9.5)	1.08 (2.38)	2.09 (4.61)	9.34 (20.59)

G 2, NPT 2

DN	D	b	L	K1	K2	Approx. kg (lbs)		
						PP	PVDF	316L
50	165 (6.50)	20 (0.79)	4Ø19 (0.75)	120 (4.72)	125 (4.92)	0.33 (0.73)	0.63 (1.39)	2.83 (6.24)
80	200 (7.87)		8Ø19 (0.75)	150 (5.91)	160 (6.30)	0.47 (1.04)	0.92 (2.03)	4.10 (9.04)
100	228.6 (9.0)		8Ø19 (0.75)	175 (6.89)	190.5 (7.5)	0.64 (1.41)	1.24 (2.73)	5.51 (12.15)
150	285 (11.2)		8Ø23 (0.91)	240 (9.45)	241.3 (9.5)	1.06 (2.34)	2.06 (4.54)	9.20 (20.29)



www.addresses.endress.com

For more Endress+Hauser product please visit: www.ainstru.com
Mail: Sales@ainstru.com