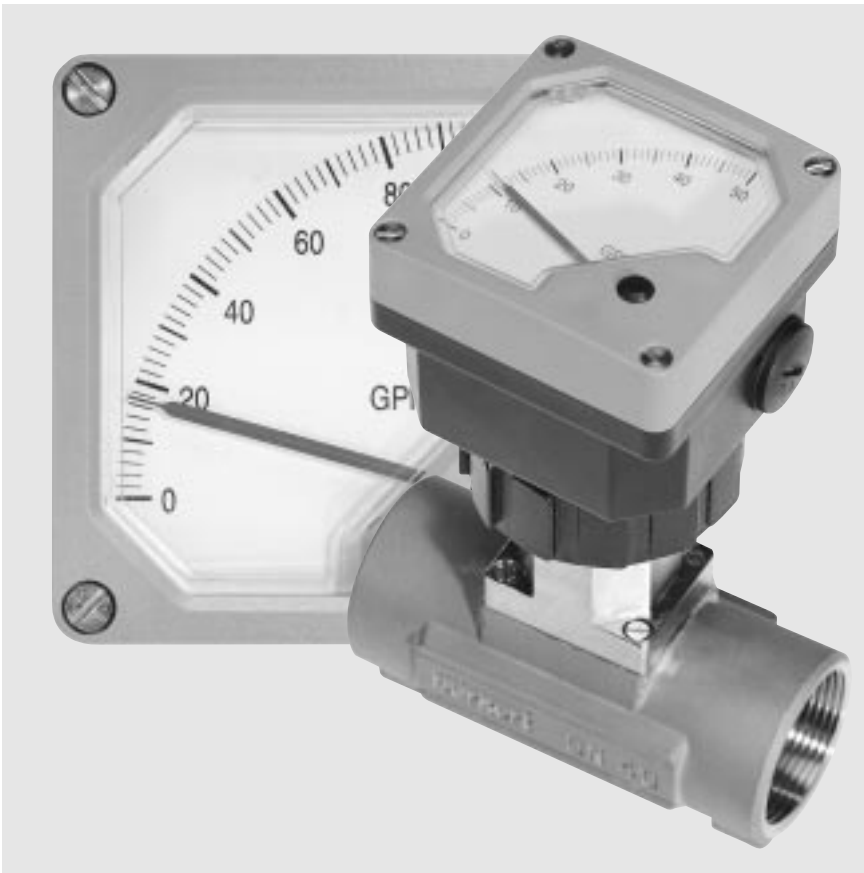


## Analogue Flow Rate Indicator, DN 15...400; PN 6



## Advantages / Benefits

- ▶ Reduced costs of ownership up to 60%
- ▶ Economic integration in pipe systems without any additional piping
- ▶ Shows flow rate with a large scaled analogue display to provide clear readability
- ▶ Adjustable flow range with standard scales for high flexibility
- ▶ Compact version for easy installation in pipe systems
- ▶ Remote indication away from the sensor for easy meter reading
- ▶ 1.5 V battery version or power supply 12-30 VDC
- ▶ Fittings available for plastic stainless steel and brass

## Design

The paddle wheel flow rate indicator 8024 for continuous flow measurement is specially designed for use in neutral and slightly aggressive, solid free liquids. The measuring principle is based on a local velocity measurement.

The indicator is supplied by two 1.5 V batteries as a stand alone solution or by an external 12-30 VDC power supply.

The external powered version has an integrated limit switch for Easy Link valve connection (on request).

The meter in compact version with the electronics and display on the top ensures simple installation of the device into all pipes from DN 15 – DN 400.

The remote version allows the electronics to be mounted with the

display on the wall or in a panel away from the insertion sensor 8020 for easy meter reading.

A large range of standardized scales compatible to the sizes of the ROTAMETERS as well as customized scales are available.

- For aggressive and solid free liquids
- Paddlewheel-sensor, 1:30 turn down ratio (max. 10 m/s)
- Compact version for insertion fitting types S020 and 1500/1501
- Remote indication with separated display box for wall or panel mounting connected with coil or hall sensor 8020 for fitting types S020 and 1500/1501.

## Application

### Flow Rate Indication of Liquids

Water treatment and process technology

Industrial waste water treatment

Liquids in food industry

Cooling water monitoring

Utilities

Replace traditional Rotameters

**bürkert**  
Easy Fluid Control Systems

## Design

The compact flow indicator combines a flow sensor and an electronic module with an analogue display in an IP 65 enclosure.

The sensor part consists of an insertion coil transducer and an open-cell paddle-wheel.

The electronics converts the measured signal and displays the actual flow rate.

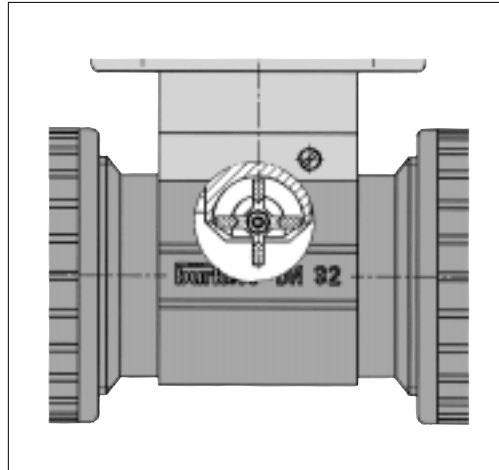
The panel version consists of an electronic module SE34 integrated in a front-cover. The associated separate flow sensor is a 8020 with coil or hall transducer. This version is supplied by an external 12-30 VDC power supply. The wall-mount version consists of an electronic module SE34 in an IP65 enclosure, that can be easily mounted on a socket with a quarterturn connection. The associated flow sensor is a 8020 with coil (only battery version) or hall transducer.

The above described remote version allows a maximum shielded cable length between display electronics and sensor as follows:

- 10 meters for battery version
- 50 meters for 12-30 VDC-version with mounted Hall sensor version

## Principle of operation

When the liquid flows through the pipe, the paddle-wheel is set in rotation producing a measuring frequency in the coil or hall transducer, which is proportional to the flow. The flow rate indicator can measure a flow rate as from 0.3 m/s (1.0 ft/s) up to max. 10 m/s (30 ft/s). The speed of flow is converted into volume per time showed at the analog display, e.g. l/h, m<sup>3</sup>/h or gallons per minute (GPM).

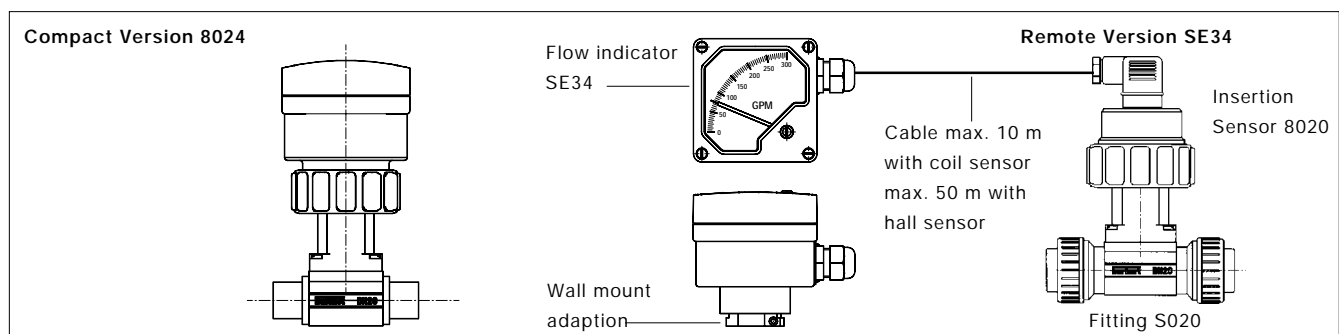


## Installation

The 8024 flow rate indicator can easily be installed into any Bürkert insertion fitting system (S020 or 1500/1501) by just fixing the main nut.

The recommended in- and outflow straight pipe length should respect 10xD in and 3xD out. According to pipe work design necessary distances can be bigger. The flow rate indicator can be installed either in horizontal or vertical pipes. The suitable pipe size is selected using the diagram on the next page. Pressure and temperature ratings must be respected according to the selected fitting material (see next page).

The flow rate indicator is not designed for gas flow measurement.



## Operation / Commissioning

The device can be calibrated by means of the K-Factor. Customized adjustments, such as measuring range, engineering units, scales are carried out on site. A large range of standard scales in l/h, m<sup>3</sup>/h or GPM are available. Special customized scales are available on request. The electronic module is factory calibrated according to the flow range and the used fitting type.

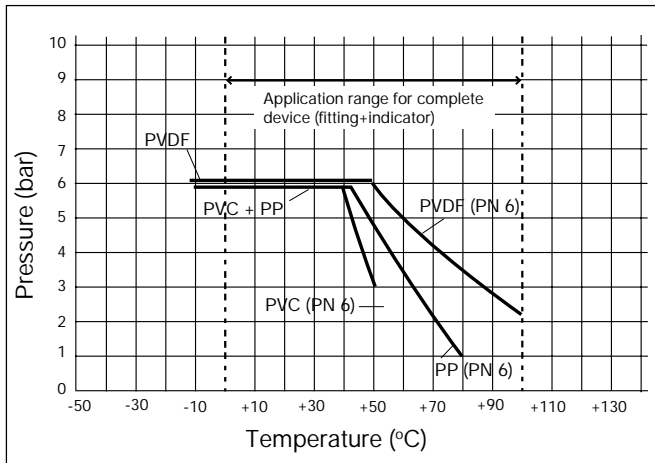
## Examples of fitting selection

The suitable pipe size is selected using the diagram below.

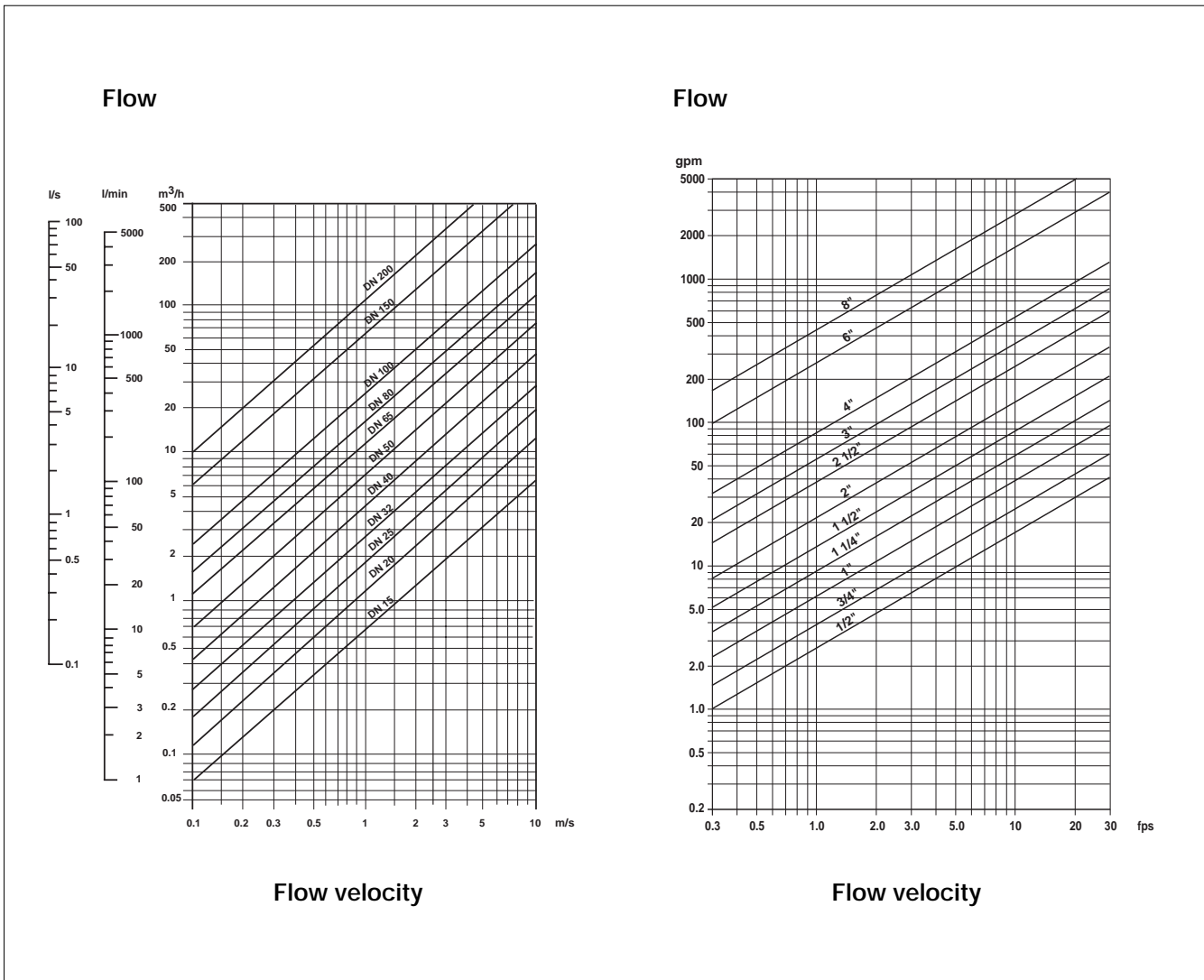
**Example 1:**  
 Specification of nominal flow: 10 m<sup>3</sup>/h  
 Ideal flow velocity: 2...3 m/s  
 For these specifications, the diagram indicates a pipe size of DN 40.

**Example 2:**  
 Specification of nominal flow: 50 gpm  
 Ideal flow velocity: 8 fps  
 For these specifications, the diagram indicates a pipe size of 1 1/2".

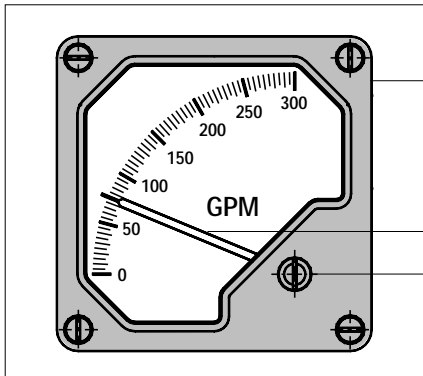
## Pressure-Temperature-Diagram for plastics



## Diagram Flow-Pipe Size-Velocity



## Operation and display



### ► Indication of flow rate

### ► Test and Setting

- Battery test
- Zero point setting
  - Span setting according to flow range and fitting

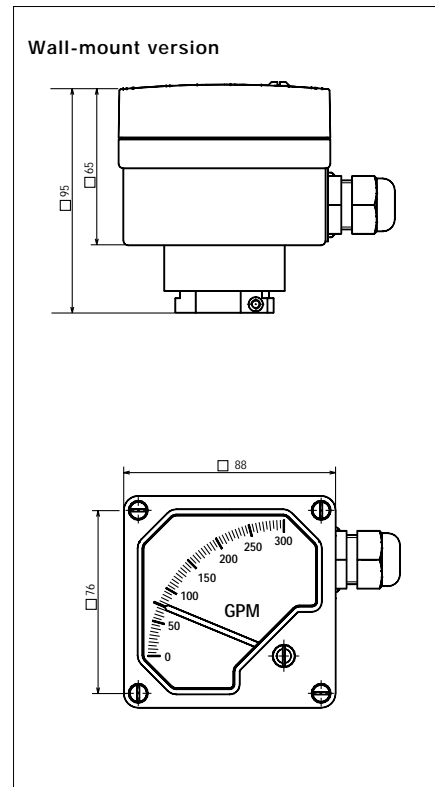
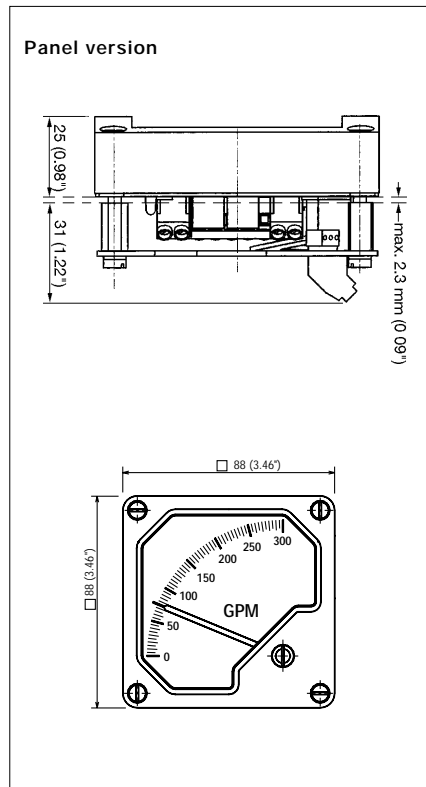
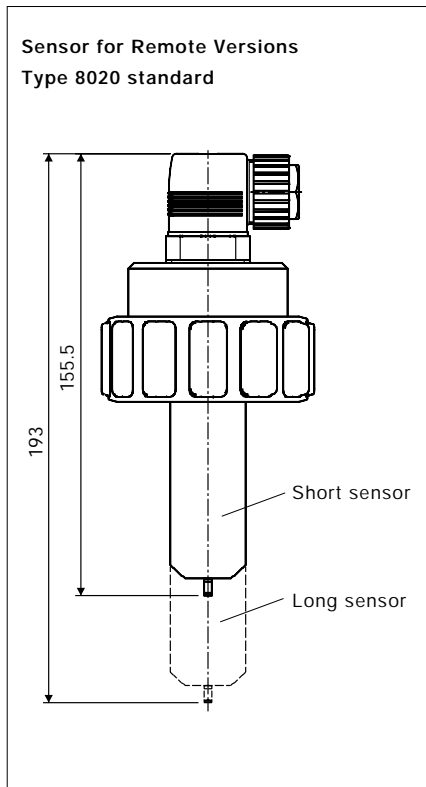
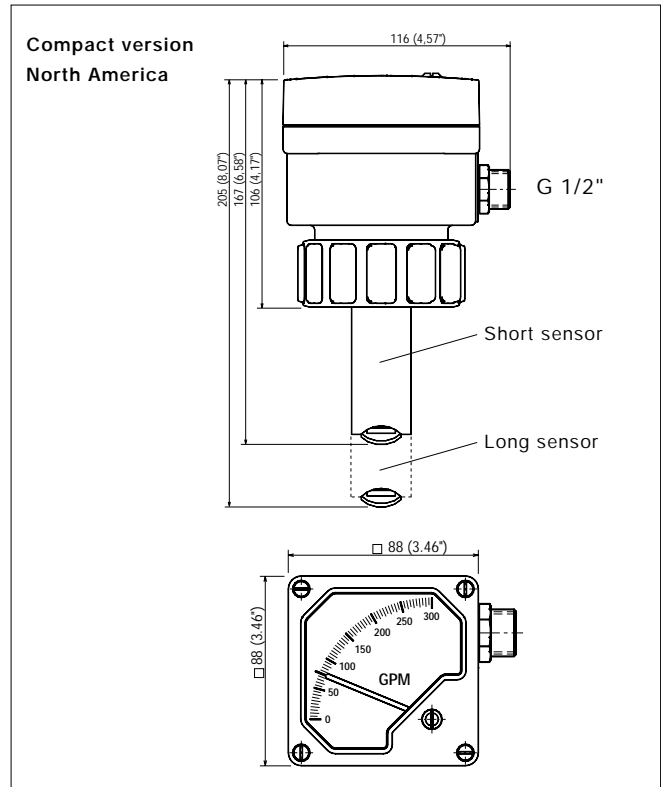
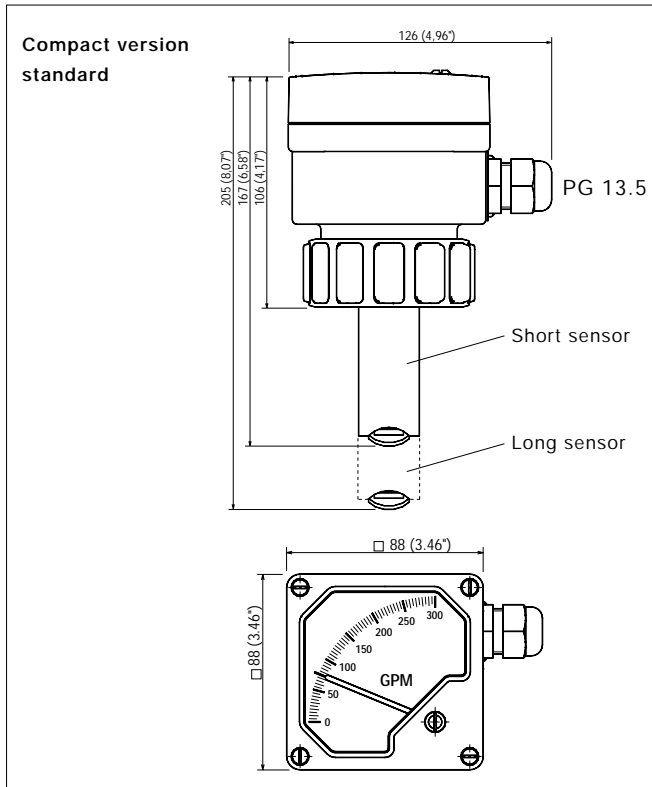
## Technical Data

### General Data

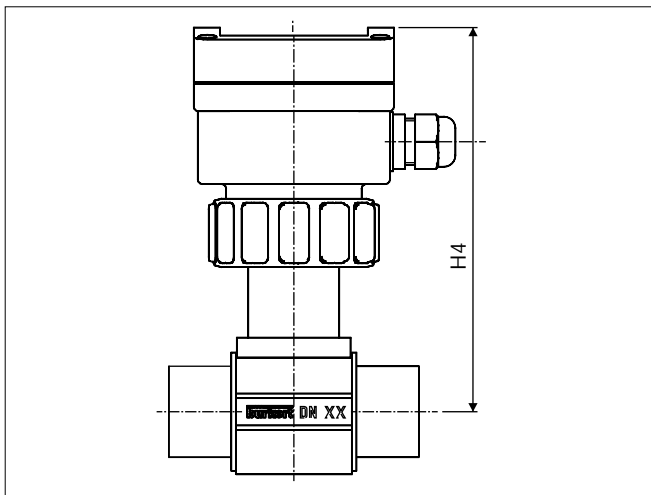
Pipe diameter	Stainless Steel: DN 15 to DN 50 (1/2" to 2"); DN 65 to 200 weld-in Brass: DN 15 to DN 50  PVC, PP, PVDF: DN 15 to DN 400
Measuring range	0.3 m/s to 10 m/s (1.0 fps to 33 fps) as from 3 l/min (DN 15 pipe 0.3 m/s flow velocity) as from 0.9 gpm (1/2" pipe, 1.0 fps flow velocity)
Measuring error	± 4% o.R. (2...10 m/s) * ± 10% o.R. (0.8...2 m/s) *
Repeatability	1% of measured value o.R. *
Display	white background, black graduations, red pointer
Sensor	Coil (to 100°C) or hall sensor (to 80°C, only 12-30 VDC version)
Pressure class plastic and metal fitting	PN 6
Fluid temperature max.	PVC: 50°C (122°F); PP: 80°C (176°F); PVDF: 100°C (212°F) Stainless steel and brass: 100°C (212°F)
Ambient temperature	0 to 60°C (32°F to 140°F)
Storage temperature	-10°C to 80°C (14°F to 176°F)
Enclosure	IP 65 (NEMA 4). Relative humidity max. 80%
Sensor fitting	PVDF
Paddle-wheel	PVDF
Axis and bearing	ceramic
O-Rings	FPM / EPDM
Electronic housing	PC
Voltage supply	Two batteries 1.5 VDC (type LR 14) for compact and wall mounted versions. Battery life of 2 years at 20°C  12-30 VDC external power supply for compact, panel and wall mounted version
Relay output for flow alarm	Only 12-30 VDC versions (on request)
Cable length to remote version	Coil sensor: 10 m (use shielded cable of max. 1.5 mm <sup>2</sup> wire cross section) Hall sensor: 50 m (use shielded cable of max. 1.5 mm <sup>2</sup> wire cross section)

\* Under reference conditions, i.e. measuring fluid = water, ambient and water temperature = 20 °C, applying the minimum inlet and outlet pipe straights, matched inside pipe dimensions  
o.R. = of reading

## Dimensions [mm (inch)]



## Dimensions [mm] - Fittings S020, DN 15 - 50

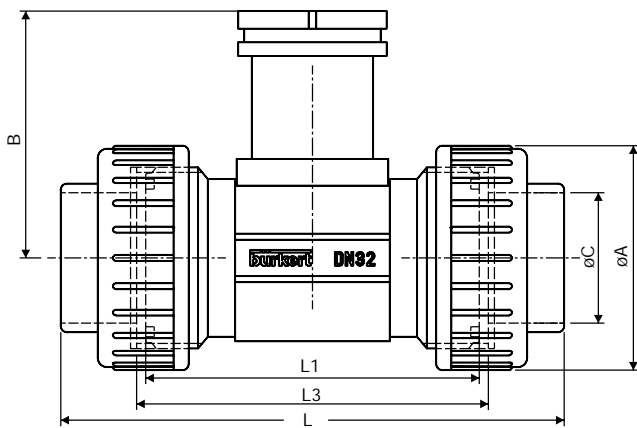


### Variable Dimensions [mm]

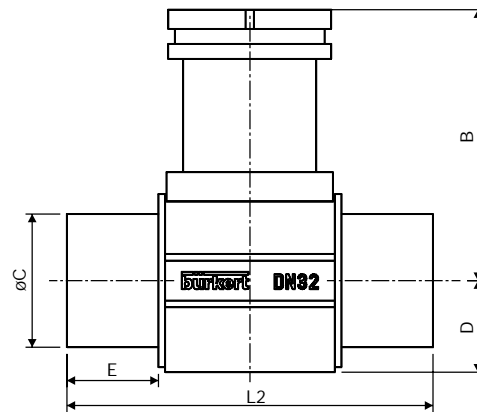
DN	H 4
15	173
20	171
25	171
32	177
40	178
50	184

Applicable for all fitting materials  
DN 15 ...50 sizes and process  
connections.

### True union - PVC, PP, PVDF



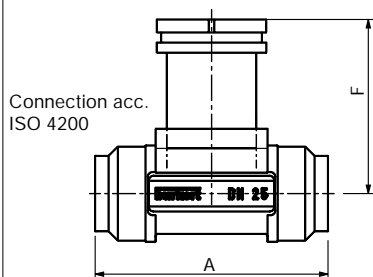
### Solvent spigot - PVC, PP, PVDF



True union										Solvent spigot					
B	øA	L			øC			L1	L3	DN	D	L2		E	
		DIN	ANSI	JIS	(DIN)	(ANSI)*	(JIS)*					PVC	PP/PVDF	PVC	PP/PVDF
80.4	43	128	130.0	129	20	21.3	18.40	90	96	15	17.5	90	85	16.5	14
77.8	53	144	145.6	145	25	26.7	26.45	100	106	20	17.5	100	92	20.0	16
78.0	60	160	161.4	161	32	33.4	32.55	110	116	25	21.5	110	95	23.0	18
81.4	74	168	170.0	169	40	42.2	38.60	110	116	32	27.5	110	100	27.5	20
85.2	83	188	190.2	190	50	48.3	48.70	120	127	40	31.5	120	106	30.0	23
91.5	103	212	213.6	213	63	60.3	60.80	130	136	50	39.5	130	110	37.0	27

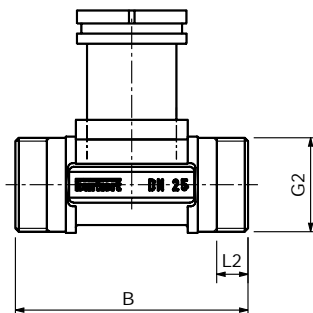
\* only for PVC with true union

### Weld ends - Stainless steel



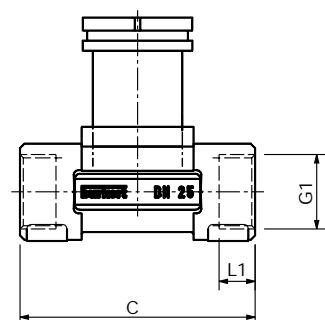
Material Stainless steel:  
DIN 1.4404; BS 316L

### Male threaded port - Stainless steel / Brass



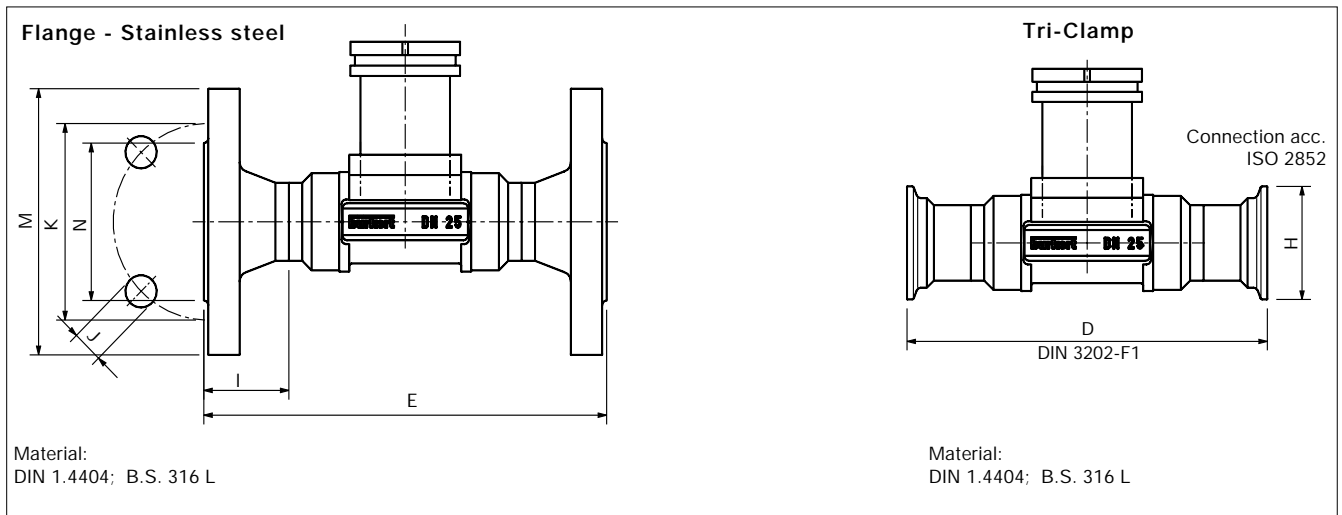
Material Stainless steel:  
DIN 1.4404; BS 316L

### Female threaded port - Stainless steel / Brass -



Material Stainless steel:  
DIN 1.4404; BS 316L

## Dimensions [mm] - Fittings S020, DN 15 - 50



### Variable dimensions [mm] for Weld ends, Male threaded port, Female threaded port, Flange, Tri-Clamp

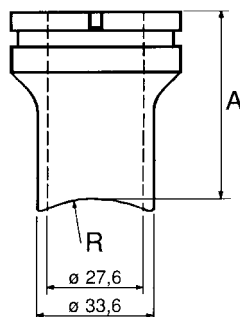
DN	Weld ends		Length dimensions						Thread				Tri-Clamp	Flange dimensions						
	ø out-side	Wall-thickness	A	B	C	D	E (DIN) (ANSI)	E (JIS)	F	G1	L1	G2		L2	H	Norm*	I	J	K	M
15	21.3	1.6	84	84	85	130	130	140	80.3	G 1/2 NPT 1/2 Rc 1/2	16.0 17.0 15.0	G3/4	11.5	34.0	DIN ANSI JIS	23.5 23.5 23.5	4x14.0 4x15.8 4x15.0	65.0 60.3 70.0	95 89 95	45.0 34.9 51.0
20	26.9	1.6	94	94	95	150	150	152	77.8	G 3/4 NPT 3/4 Rc 3/4	17.0 18.3 16.3	G 1	13.5	50.5	DIN ANSI JIS	28.5 28.5 28.5	4x14.0 4x15.8 4x15.0	75.0 69.8 75.0	105 99 100	58.0 42.9 56.0
25	33.7	2.0	104	104	105	160	160	165	78.0	G 1 NPT 1 Rc 1	23.5 18.0 18.0	G 1/4	14.0	50.5	DIN ANSI JIS	28.5 28.5 28.5	4x14.0 4x15.8 4x19.0	85.0 79.4 90.0	115 108 125	68.0 50.8 67.0
32	42.4	2.0	119	119	120	180	180	178	81.6	G 1 1/4 NPT 1 1/4 Rc	23.5 21.0 21.0	G 1/2	18.0	50.5	DIN ANSI JIS	31.0 31.0 31.0	4x18.0 4x15.8 4x19.0	100.0 88.9 100.0	140 117 135	78.0 63.5 76.0
40	48.3	2.0	129	129	130	200	200	190	85.4	G 1 1/2 NPT 1 1/2 Rc 1 1/2	23.5 20.0 19.0	M55x2	19.0	64.0	DIN ANSI JIS	36.0 36.0 36.0	4x18.0 4x15.8 4x19.0	110.0 98.4 105.0	150 127 140	88.0 73.0 81.0
50	60.3	2.6	149	149	150	230	230	216	91.5	G 2 NPT 2 Rc 2	27.5 24.0 24.0	M64x2	20.0	77.5	DIN ANSI JIS	41.0 41.0 41.0	4x18.0 4x19.0 4x19.0	125.0 120.6 120.0	165 152 155	102.0 92.1 96.0

\* Flange: DIN 2501/2633, length according to DIN 3202-F1;  
ANSI B16-5-1988, length according to DIN 3202-F1  
JIS 10K, length according to ANSI B16-10

## Dimensions [mm] - Fittings DN 65 - 350

### Weld-o-let fittings with radius - Stainless steel

Material: 1.4404 (DIN),  
316L (B.S.)



### Variable Dimensions [mm]

DN	A	R
65	54.52	36.65
80	53.07	44.45
100	50.71	57.15
125	48.24	70.65
150	45.73	84.15
200	41.01	109.55
250	73.64	136.55
350	63.94	177.80

### Note:

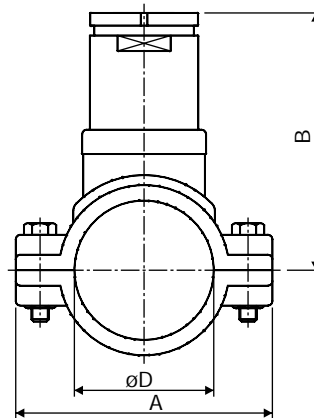
Short sensor version for: DN 65 - DN 200  
Long sensor version for: DN 250 - DN 350

## Dimensions [mm] - Fittings DN 65 - 400

### Saddle - PP

Body material: PP/PVC  
Seal material: EPDM

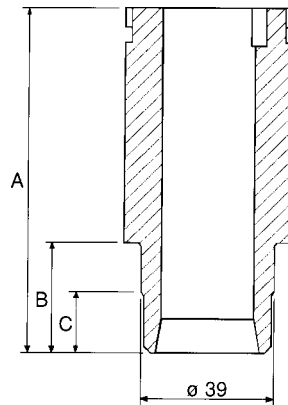
**Note:** These saddle fittings require the long sensor version of the flow indicator 8024 for all DN.



Variable Dimensions [mm]

DN	A	B	øD
50	116	111.1	63
65	129	110.0	75
80	144	113.9	90
100	166	118.7	110
110	181	115.5	125
125	196	121.5	140
150	216	131.5	160
200	290	174.0	225

### Weld-o-let fittings - PE, PP, PVDF



Variable Dimensions [mm]

DN	A	PE		PP		PVDF	
		B	C	B	C	B	C
65	72.5	13	---	13	---	10.4	---
80	72.5	15.6	---	15.6	---	12.5	---
100	72.5	19	5	19	5	15.2	6
150	102	27.7	10	27.7	10	---	---
200	102	38.9	16	38.9	16	---	---
250	102	48.4	21	48.4	21	---	---
300	102	61.3	28	61.3	28	---	---
350	102	61.3	28	61.3	28	---	---
400	102	69.1	31,5	---	---	---	---

**Note:**

Short sensor version for: DN 65 - DN 100

Long sensor version for: DN 150 - DN 400



## Ordering Data for Flow Indicator 8024

A compact Flow Indicator Type 8024 consists of three basic modules as follows:

- 1 Insertion Flow Indicator 8024
- 2 Standard scale according to the required max. flow rate.
- 3 Fitting type S020 (DN 15 to DN 50) or 1500/1501 (DN 65 to DN 400)

A remote Flow Indicator Type 8024 consists of four basic modules as follows:

- 1 Remote Electronic SE34 as a wall- or panel-mount version
- 2 Standard scale according to the required max. flow rate.
- 3 Insertion Flow Sensor 8020 with coil or Hall transducer
- 4 Fitting type S020 (DN 15 to DN 50) or 1500/1501 (DN 65 to DN 400)

**Note:** Flow sensor with Hall can only be connected to external powered (12...30 VDC) Flow Indicators

TYPE DESCRIPTION	Scale	Power Supply	Sealing	Sensor	Cable connector	Item-No.
<b>STANDARD TYPES WORLDWIDE</b>						
<b>Compact Flow Indicator 8024</b>						
8024 compact flow indicator	no	2 x 1.5V battery	FPM	coil, short	none	429 343 F
8024 compact flow indicator	no	2 x 1.5V battery	FPM	coil, long	none	429 344 G
8024 compact flow indicator	no	12 – 30 VDC	FPM	hall, short	1 x PG 13.5	429 345 H
8024 compact flow indicator	no	12 – 30 VDC	FPM	hall, long	1 x PG 13.5	429 346 A
8024 compact flow indicator	no	12 – 30 VDC	FPM	coil, short	1 x PG 13.5	429 347 B
8024 compact flow indicator	no	12 – 30 VDC	FPM	coil, long	1 x PG 13.5	429 348 L

TYPE DESCRIPTION	Scale	Power Supply	Sealing	Sensor	Cable connector	Item-No.
<b>STANDARD TYPES WORLDWIDE</b>						
<b>Panel Version SE34</b>						
SE34 panel mount indicator	no	12 – 30 VDC	no	no	clamps	429 349 M

TYPE DESCRIPTION	Scale	Power Supply	Sealing	Sensor	Cable connector	Item-No.
<b>STANDARD TYPES WORLDWIDE</b>						
<b>Wall-mount Version SE34</b>						
SE34 wall mount indicator	no	1.5 VDC batteries	no	no	1 x PG 13.5	429 350 J
SE34 wall mount indicator	no	12 – 30 VDC	no	no	1 x PG 13.5	429 351 F

TYPE DESCRIPTION	Scale	Power Supply	Sealing	Sensor	Cable connector	Item-No.
<b>STANDARD TYPES WORLDWIDE</b>						
<b>Flow Sensor Type 8020 for remote versions (Panel- and Wall-mount flow indicator)</b>						
8020 with coil		no	FPM	coil, short	PG 9	419 583 P
8020 with coil		no	EPDM	coil, short	PG 9	419 584 Q
8020 with coil		no	FPM	coil, long	PG 9	419 565 R
8020 with coil		no	EPDM	coil, long	PG 9	419 586 J
8020 with hall sensor		from SE34	FPM	hall, short	PG 9	419 591 P
8020 with hall sensor		from SE34	EPDM	hall, short	PG 9	419 592 Q
8020 with hall sensor		from SE34	FPM	hall, long	PG 9	419 593 R
8020 with hall sensor		from SE34	EPDM	hall, long	PG 9	419 594 J



## Ordering Data for Flow Indicator 8024

TYPE DESCRIPTION	Measuring Range	Item-No.
<b>STANDARD TYPES</b>		
<b>Scale for Analog Indicator Modul SE 34 / 8024</b>	<b>Metric range</b>	
Scale for SE 34 / 8024	0 ... 100 %	427 215 M
Scale for SE 34 / 8024	0 ... 600 l/h	427 136 E
Scale for SE 34 / 8024	0 ... 1000 l/h	427 013 E
Scale for SE 34 / 8024	0 ... 1600 l/h	427 079 Y
Scale for SE 34 / 8024	0 ... 2500 l/h	427 080 N
Scale for SE 34 / 8024	0 ... 4000 l/h	427 081 B
Scale for SE 34 / 8024	0 ... 6000 l/h	427 082 C
Scale for SE 34 / 8024	0 ... 8000 l/h	427 083 D
Scale for SE 34 / 8024	0 ... 10000 l/h	427 084 E
Scale for SE 34 / 8024	0 ... 16 m <sup>3</sup> /h	427 087 H
Scale for SE 34 / 8024	0 ... 25 m <sup>3</sup> /h	427 146 Q
Scale for SE 34 / 8024	0 ... 40 m <sup>3</sup> /h	427 147 R
Scale for SE 34 / 8024	0 ... 60 m <sup>3</sup> /h	427 148 S
Scale for SE 34 / 8024	0 ... 100 m <sup>3</sup> /h	427 149 T
Scale for SE 34 / 8024	0 ... 160 m <sup>3</sup> /h	427 212 J
Scale for SE 34 / 8024	0 ... 250 m <sup>3</sup> /h	427 213 J
Scale for SE 34 / 8024	0 ... 400 m <sup>3</sup> /h	427 214 L

TYPE DESCRIPTION	Measuring Range	Item-No.
<b>STANDARD TYPES</b>		
<b>Scale for Analog Indicator Modul SE 34 / 8024</b>	<b>US-Range</b>	
Scale for SE 34 / 8024	0 ... 3 gpm	427 218 Y
Scale for SE 34 / 8024	0 ... 5 gpm	427 219 Z
Scale for SE 34 / 8024	0 ... 10 gpm	427 220 W
Scale for SE 34 / 8024	0 ... 15 gpm	427 221 K
Scale for SE 34 / 8024	0 ... 20 gpm	427 222 L
Scale for SE 34 / 8024	0 ... 25 gpm	427 223 M
Scale for SE 34 / 8024	0 ... 30 gpm	427 224 N
Scale for SE 34 / 8024	0 ... 50 gpm	427 076 M
Scale for SE 34 / 8024	0 ... 100 gpm	427 077 N
Scale for SE 34 / 8024	0 ... 150 gpm	427 225 P
Scale for SE 34 / 8024	0 ... 200 gpm	427 078 X
Scale for SE 34 / 8024	0 ... 300 gpm	427 226 Q
Scale for SE 34 / 8024	0 ... 400 gpm	427 227 R
Scale for SE 34 / 8024	0 ... 800 gpm	427 228 S
Scale for SE 34 / 8024	0 ... 1000 gpm	427 229 T
Scale for SE 34 / 8024	0 ... 1500 gpm	427 230 Y
Scale for SE 34 / 8024	0 ... 2000 gpm	427 231 M

## Ordering Data of Stainless Steel Fittings Type S020

Diameters	Materials	Item-No.
<b>SS - Female G-Threaded Ports</b>		
DN 15	SS, FPM	428 736 Y
DN 20	SS, FPM	428 737 Z
DN 25	SS, FPM	428 738 A
DN 32	SS, FPM	428 739 B
DN 40	SS, FPM	428 740 Q
DN 50	SS, FPM	428 741 D
<b>SS - Female NPT-Threaded Ports</b>		
DN 15	SS, FPM	428 742 E
DN 20	SS, FPM	428 743 F
DN 25	SS, FPM	428 744 G
DN 32	SS, FPM	428 745 H
DN 40	SS, FPM	428 746 A
DN 50	SS, FPM	428 747 B
<b>SS - Female ISO7 (JIS) Threaded Ports</b>		
DN 15	SS, FPM	428 748 L
DN 20	SS, FPM	428 749 M
DN 25	SS, FPM	428 750 J
DN 32	SS, FPM	428 751 F
DN 40	SS, FPM	428 752 G
DN 50	SS, FPM	428 753 H
<b>SS- Male G Threaded Ports</b>		
DN 15	SS, FPM	428 754 A
DN 20	SS, FPM	428 755 B
DN 25	SS, FPM	428 756 C
DN 32	SS, FPM	428 757 D
DN 40	SS, FPM	428 758 N
DN 50	SS, FPM	428 759 P
<b>SS - Weld Ends</b>		
DN 15	SS, FPM	428 760 L
DN 20	SS, FPM	428 761 H
DN 25	SS, FPM	428 762 A
DN 32	SS, FPM	428 763 B
DN 40	SS, FPM	428 764 C
DN 50	SS, FPM	428 765 D
<b>SS - Tri-Clamp (ISO 2852)</b>		
DN 15	SS, FPM	428 766 E
DN 20	SS, FPM	428 767 F
DN 25	SS, FPM	428 768 Q
DN 32	SS, FPM	428 769 R
DN 40	SS, FPM	428 770 N
DN 50	SS, FPM	428 771 B
<b>SS - DIN Flanges (DIN 2501)</b>		
DN 15	SS, FPM	428 772 C
DN 20	SS, FPM	428 773 D
DN 25	SS, FPM	428 774 E
DN 32	SS, FPM	428 775 F
DN 40	SS, FPM	428 776 G
DN 50	SS, FPM	428 777 H
<b>SS - Flanges (JIS 10K)</b>		
DN 15	SS, FPM	431 053 J
DN 20	SS, FPM	431 054 K
DN 25	SS, FPM	431 055 L
DN 32	SS, FPM	431 056 M
DN 40	SS, FPM	431 057 N
DN 50	SS, FPM	431 058 X

Diameters	Materials	Item-No.
<b>SS - ANSI Flanges (ANSI B16-5-1988)</b>		
DN 15	SS, FPM	428 778 J
DN 20	SS, FPM	428 779 K
DN 25	SS, FPM	428 780 H
DN 32	SS, FPM	428 781 W
DN 40	SS, FPM	428 782 X
DN 50	SS, FPM	428 783 Y
<b>SS - Weld-o-let</b>		
DN 65	SS	418 112 M
DN 80	SS	418 113 N
DN 100	SS	418 114 P
DN 125	SS	418 115 Q
DN 150	SS	418 116 R
DN 200	SS	418 117 J
DN 250	SS	418 756 A
DN 300	SS	420 070 G
DN 350	SS	416 637 R

## Ordering Data of Brass Fittings Type S020

Diameters	Materials	Item-No.
<b>Brass - Female G-Threaded Ports</b>		
DN 15	Brass, FPM	428 712 Y
DN 20	Brass, FPM	428 713 Z
DN 25	Brass, FPM	428 714 S
DN 32	Brass, FPM	428 715 T
DN 40	Brass, FPM	428 716 U
DN 50	Brass, FPM	428 717 V
<b>Brass - Female NPT-Threaded Ports</b>		
DN 15	Brass, FPM	428 718 E
DN 20	Brass, FPM	428 719 F
DN 25	Brass, FPM	428 720 C
DN 32	Brass, FPM	428 721 Z
DN 40	Brass, FPM	428 722 S
DN 50	Brass, FPM	428 723 T
<b>Brass - Female ISO7 (JIS) Threaded Ports</b>		
DN 15	Brass, FPM	428 724 U
DN 20	Brass, FPM	428 725 V
DN 25	Brass, FPM	428 726 W
DN 32	Brass, FPM	428 727 X
DN 40	Brass, FPM	428 728 G
DN 50	Brass, FPM	428 729 H
<b>Brass - Male G/metric Threaded Ports</b>		
DN 15	Brass, FPM	428 730 E
DN 20	Brass, FPM	428 731 T
DN 25	Brass, FPM	428 732 U
DN 32	Brass, FPM	428 733 V
DN 40	Brass, FPM	428 734 W
DN 50	Brass, FPM	428 735 X

## Ordering Data of Plastic Fittings Type S020

Diameters	Materials	Item-No.
<b>PVC - True union ISO</b>		
DN 15	PVC, FPM	428 670 J
DN 20	PVC, FPM	428 671 F
DN 25	PVC, FPM	428 672 G
DN 32	PVC, FPM	428 673 H
DN 40	PVC, FPM	428 674 A
DN 50	PVC, FPM	428 675 B
<b>PVC - True union ASTM</b>		
1/2"	PVC, FPM	428 682 T
3/4"	PVC, FPM	428 683 U
1"	PVC, FPM	428 684 V
1" 1/4"	PVC, FPM	428 685 W
1" 3/4"	PVC, FPM	428 686 X
2"	PVC, FPM	428 687 Y
<b>PVC - True union JIS</b>		
DN 15	PVC, FPM	429 078 H
DN 20	PVC, FPM	429 079 A
DN 25	PVC, FPM	429 080 Y
DN 32	PVC, FPM	429 081 M
DN 40	PVC, FPM	429 082 N
DN 50	PVC, FPM	429 083 P
<b>PVC - Solvent Spigot</b>		
DN 15	PVC, FPM	428 676 C
DN 20	PVC, FPM	428 677 D
DN 25	PVC, FPM	428 678 N
DN 32	PVC, FPM	428 679 P
DN 40	PVC, FPM	428 680 D
DN 50	PVC, FPM	428 681 S
<b>PE - Weld-o-let</b>		
DN 65	PE	418 642 G
DN 80	PE	418 643 H
DN 100	PE	418 644 A
DN 150	PE	418 645 B
DN 200	PE	418 646 C
DN 250	PE	418 647 D
DN 300	PE	418 648 N
DN 350	PE	418 649 P
DN 400	PE	418 598 V

Diameters	Materials	Item-No.
<b>PP - True Union with Threaded Port</b>		
DN 15	PP, FPM	428 688 H
DN 20	PP, FPM	428 689 A
DN 25	PP, FPM	428 690 F
DN 32	PP, FPM	428 691 U
DN 40	PP, FPM	428 692 V
DN 50	PP, FPM	428 693 W
<b>PP - Weld Ends</b>		
DN 15	PP, FPM	428 694 X
DN 20	PP, FPM	428 695 Y
DN 25	PP, FPM	428 696 Z
DN 32	PP, FPM	428 697 S
DN 40	PP, FPM	428 698 B
DN 50	PP, FPM	428 699 C
<b>PP - Weld-o-let</b>		
DN 65	PP	418 650 L
DN 80	PP	418 651 H
DN 100	PP	418 652 A
DN 150	PP	418 653 B
DN 200	PP	418 654 C
DN 250	PP	418 655 D
DN 300	PP	418 656 E
DN 350	PP	418 657 F
<b>PP - Saddle</b>		
DN 50	PP, PVC, FPM	425 138 N
DN 65	PP, PVC, FPM	425 139 P
DN 80	PP, PVC, FPM	425 140 U
DN 100	PP, PVC, FPM	425 141 R
DN 110	PP, PVC, FPM	425 142 J
DN 125	PP, PVC, FPM	425 143 K
DN 150	PP, PVC, FPM	425 144 L
DN 200	PP, PVC, FPM	425 416 D
<b>PVDF - True Union with Threaded Port</b>		
DN 15	PVDF, FPM	428 700 R
DN 20	PVDF, FPM	428 701 E
DN 25	PVDF, FPM	428 702 F
DN 32	PVDF, FPM	428 703 G
DN 40	PVDF, FPM	428 704 H
DN 50	PVDF, FPM	428 705 A
<b>PVDF - Weld Ends</b>		
DN 15	PVDF, FPM	428 706 B
DN 20	PVDF, FPM	428 707 C
DN 25	PVDF, FPM	428 708 M
DN 32	PVDF, FPM	428 709 N
DN 40	PVDF, FPM	428 710 A
DN 50	PVDF, FPM	428 711 X
<b>PVDF - Weld-o-let</b>		
DN 65	PVDF	418 658 Q
DN 80	PVDF	418 659 R
DN 100	PVDF	418 660 N