



Advantages / Benefits

- ▶ Easy System integration by Easy LINK provides low cost of ownership
- ▶ Fluid-contacting parts of PVDF/ceramic with FPM (Viton)/EPDM gaskets
- ▶ 2-wire system with inline rotor and coil, no external power
- ▶ 3-wire system with inline rotor and Hall sensor for small flow rates
- ▶ “Low power” version for connection to separate versions of 8025
- ▶ Adjustable frequency output
- ▶ 4-20 mA output
- ▶ Connection to batch controller 8600

Design

The inline rotor flow sensor Type 8020 is specially designed for use in aggressive and solid-free liquids.

This sensor produces a frequency signal proportional to the flow and is easily transmitted and processed.

A specially designed fitting system ensures simple installation of the devices into all pipes.

- For aggressive and solid-free liquids
- Inline rotor sensor, 1:30 measurement dynamic (max. 32 f/s)
- 4-20 mA output signal with transmitter module (Type 8023)
- Adjustable frequency output signal with pulse divider module (Type 8021)
- Direct connection to batch controller Type 8600 mounted on valve
- Connection to separate versions of flow transmitter Type 8025:
 - Panel version
 - Wall-mount version



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Applications

Flow Measurement

Industrial waste water treatment
Water treatment and process technology
Cooling water monitoring
Swimming pool

Batch Control

Chemical dosing
Ideal system solutions for filling systems

bürkert
Easy Fluid Control Solutions

Flow Sensor

For Continuous Flow Measurement

Type 8020

Design

The flow sensor consists of a transducer and an open-cell inline rotor.

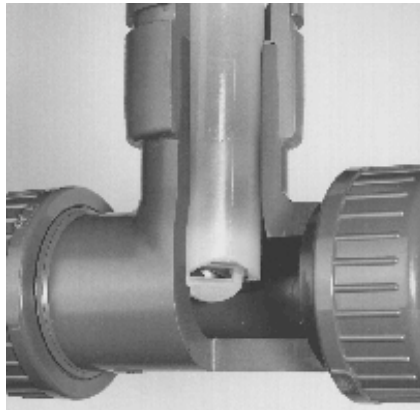
When immersed in the flow, the rotating inline rotor produces a frequency modulated measuring signal proportional to the flow.

In a 2- or 3-wire system, the signal can be displayed or processed directly. The output signal is provided via a 4-pole cable plug per DIN 43650.

In the versions with 4-20 mA/ adjustable frequency output, an additional NEMA 4 (IP65) housing is plugged on the sensor instead of the cable plug. The output signals are available on a terminal strip inside the enclosure via a PG 9 cable gland.

All parts in contact with fluid are in PVDF or ceramic, enabling use in aggressive fluids.

Principle of Operation



When liquid flows through the pipe, the inline rotor is set in rotation producing a measuring signal in the transducer (coil or Hall Sensor). The induced voltage is AC. The frequency and amplitude are proportional to the flow.

The version 8020 "low power" flow sensor can only be operated with a flow transmitter 8025 in panel or wall-mount version. It can measure flow

from 1.0 ft/s (0.3 m/s) flow velocity.

The flow sensor 8020 with coil requires no external power supply and measures flow from 1.6 ft/s (0.5 m/s) flow velocity. This flow sensor can also be operated with a flow transmitter 8025 in panel or wall-mount version.

The flow sensor 8020 with Hall Sensor requires an external power supply of 12-30 VDC and measures flow from 1.0 ft/s (0.3 m/s) flow velocity.

The flow transmitter 8020 with 4-20 mA output requires an external power supply of 12-24 VDC and measures flow from 1.0 ft/s (0.3 m/s) flow velocity.

The flow sensor 8020 with adjustable frequency output requires an external power supply of 12-30 VDC and measures flow from 1.0 ft/s (0.3 m/s) flow velocity.

Installation

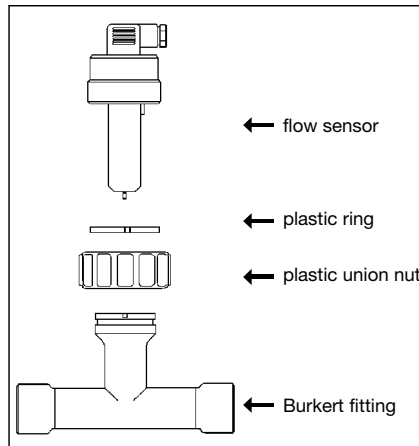
The recommended In- and Outflow straight pipe length should permit 10xD in and 3xD out.

According to pipe's design, necessary distances can be larger or use a flow conditioner to obtain the best accuracy. For more information, please refer to EN ISO 5167-1.

The flow sensor can be installed in either horizontal or vertical pipes.

The suitable pipe size is selected using the diagram on the next page. Pressure and temperature ratings must be followed according to the selected fitting material (see next page).

The flow sensor is not designed for gas flow measurement.



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Easy **Continuous Solenoid Control**

up to **-75%**

Flow Sensor

For Continuous Flow Measurement

Type 8020

Examples of Fitting Selection

The suitable pipe size is selected using the diagram below.

Example 1:

Specification of nominal flow: 50 gpm

Ideal flow velocity: 8 fps

For these specifications, the diagram indicates a pipe size of 1-1/2".

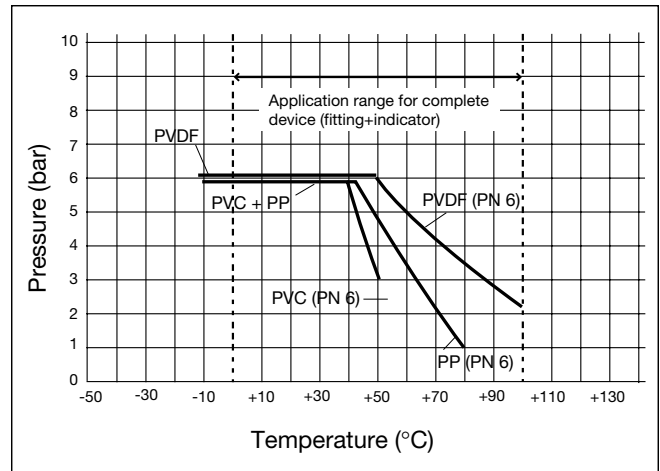
Example 2:

Specification of nominal flow: 10 m³/h

Ideal flow velocity: 2-3 m/s

For these specifications, the diagram indicates a pipe size of DN 40.

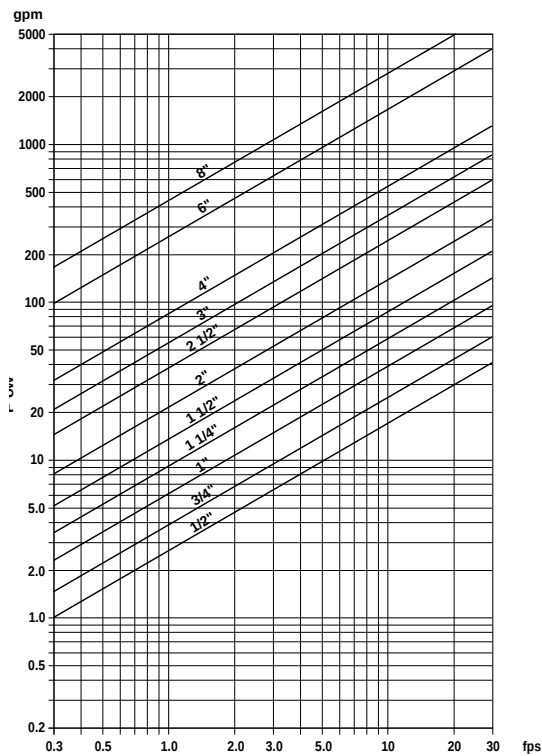
Pressure-Temperature Diagram for Plastics



Note: 1 bar = 14.5 PSI

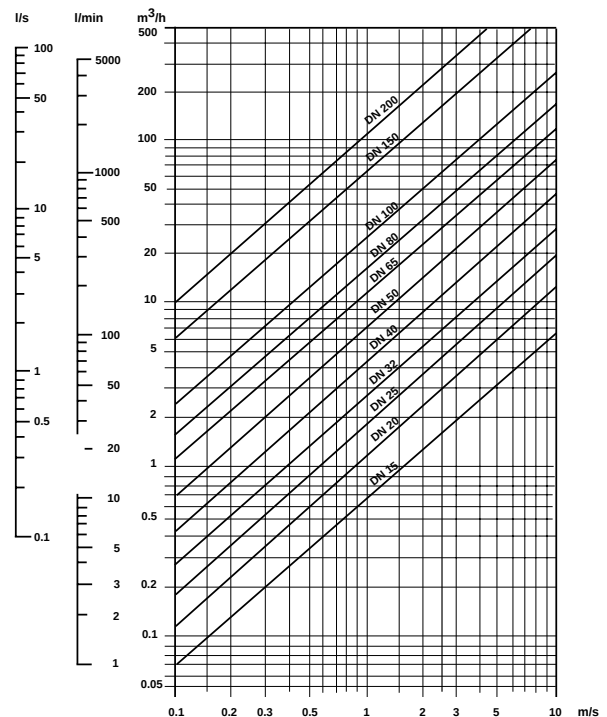
Pipe Size – Flow Velocity Diagram

Flow



Flow Velocity

Flow

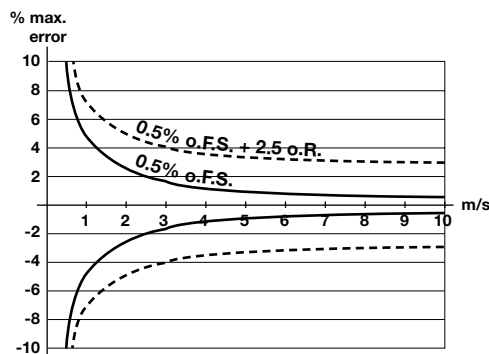


Flow Velocity

Technical Data

General Data

Pipe diameter	From 1/2" (for more detailed information, please see chapter fittings)
Measuring range	1.0 fps to 32.8 fps (0.3 m/s to 10 m/s) From 0.9 gpm (1/2" pipe, 1.0 fps flow velocity) From 3 l/min (DN 15 pipe 0.3 m/s flow velocity)
Measuring error	1. With individual works calibration (on request): ≤ ±0.5% o.F.S. (at 33 fps)* 2. With standard mean K-factor: ≤ ± (0.5% o.F.S. + 2.5% o.R.)*
Linearity	≤ ±0.5% o.F.S. (at 33 fps)*
Repeatability	0.4% o.R.*
Pressure class plastic and metal fitting	84 PSI, PN 6
Ambient temperature	32°F to 140°F (0°C to 60°C)
Storage temperature	32°F to 140°F (0°C to 60°C)
Enclosure	NEMA 4. (Relative humidity max. 80%)
Pulses/rotation	2
Sensor housing	PVDF
Inline rotor	PVDF
Axis and bearing	Ceramic
Housing	PE
Union nut	PC
O-rings	FPM (Viton)/EPDM



Specific Data for 8020 with Coil

Fluid temperature max.	PVC: 122°F (50°C); PP: 176°F (80°C); PVDF: 212°F (100°C); Stainless steel and brass: 212°F (100°C)
Measuring range	1.6 to 32.8 ft/s (0.5 to 10 m/s)
Supply voltage	none
Output signal	AC: approx. 0-10 V, frequency: 0-200 Hz
Cable length	33 ft. (use shielded cable of max. 1/16 in ² wire cross section)

Specific Data for 8020 with Hall Effect

Fluid temperature max.	PVC: 122°F (50°C); PP: 176°F (80°C); PVDF: 176°F (80°C); Stainless steel and brass: 176°F (80°C)
Measuring range	1.0 to 32.8 ft/s (0.3 to 10 m/s)
Supply voltage	12-30 VDC
Output signal	Transistor PNP, NPN open collector max. 100 mA; frequency: 0-200 Hz
Cable length	165 ft. (use shielded cable of max. 1/16 in ² wire cross section)

Specific Data for 8020 with Hall Effect "Low Power"

Fluid temperature max.	PVC: 122°F (50°C); PP: 176°F (80°C); PVDF: 176°F (80°C); Stainless steel and brass: 176°F (80°C)
Measuring range	1.0 to 32.8 ft/s (0.3 to 10 m/s)
Cable length	165 ft. (use shielded cable of max. 1/16 in ² wire cross section)

(Can only be connected to separate versions of flow transmitter/indicator Type 8025, 8023, 8021, SE34)

Specific Data for 8020 with 4-20 mA Output (8023)

Associated flow sensor	Coil and Hall low power version
Supply voltage	12-24 VDC
Output signal	4-20 mA
Load	Max. 500Ω at 12 V Max. 1000Ω at 24 V
Accuracy	≤ 2%
Material of additional housing	PA

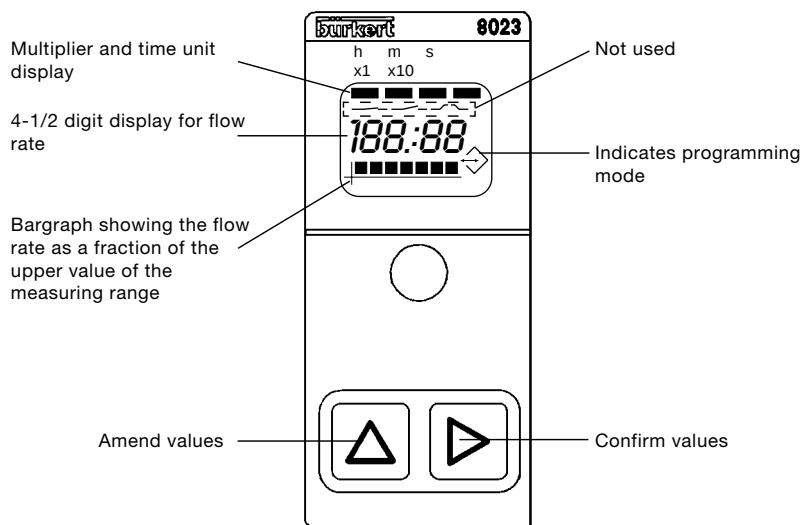
Specific Data for 8020 with Calibrated Frequency Output (8021)

Associated flow sensor	Hall sensor versions
Supply voltage	12-30 VDC
Output signal	Transistor PNP, NPN open collector max. 100 mA
Accuracy	0.1%
Material of additional housing	PA

* Under reference conditions, i.e. measuring fluid = water, ambient and water temperature = 68°F, applying the minimum inlet and outlet pipe straights, matched inside pipe dimensions
o.R. = of reading
o.F.S. = of full scale (33 fps)

Operation and Display

Type 8023, 4-20 mA Output Module



The operation is specified according to two levels:

- **Indication in operating mode**
 - Flow (digits and bargraph)
- **Parameter definition**
 - K-factor
 - Time unit
 - 4-20 mA measuring range

The device works without the control unit. The control unit enables performance by parameter definition.

Type 8021 Adjustable Frequency Output Module



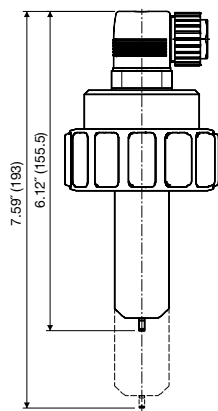
- 1, 2, 3** rotary switches for factor K programming.
- 5, 6, 7** jumpers for decimal position of factor K.
- 4** rotary switch for multiplier D programming.
- 8** reset jumper.

The operation is specified according to the following level:

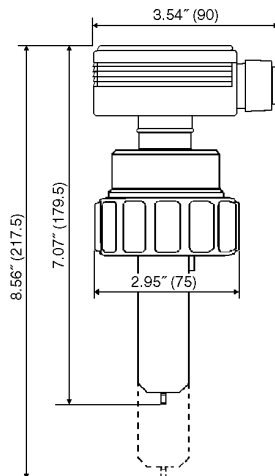
- **Parameter definition**
 - K-factor
 - Multiplier D

Dimensions

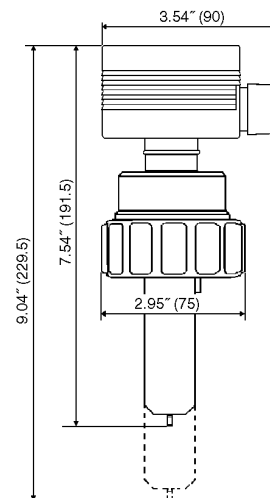
Type 8020 standard



Type 8020 with 4-20 mA or adjustable frequency output (8021)



Type 8020 with 4-20 mA output including control unit (8023)



Type 8020 flow sensor with adjustable frequency output:
- from coil
- open collector NPN or PNP

Type 8020 flow sensor with 4-20 mA current output

Type 8025 flow transmitter in panel version (see separate datasheet for more details)

Type 8600 batch controller mounted on valve (see separate datasheet for more details)

Type 8025 flow transmitter in wall-mount version (see separate datasheet for more details)

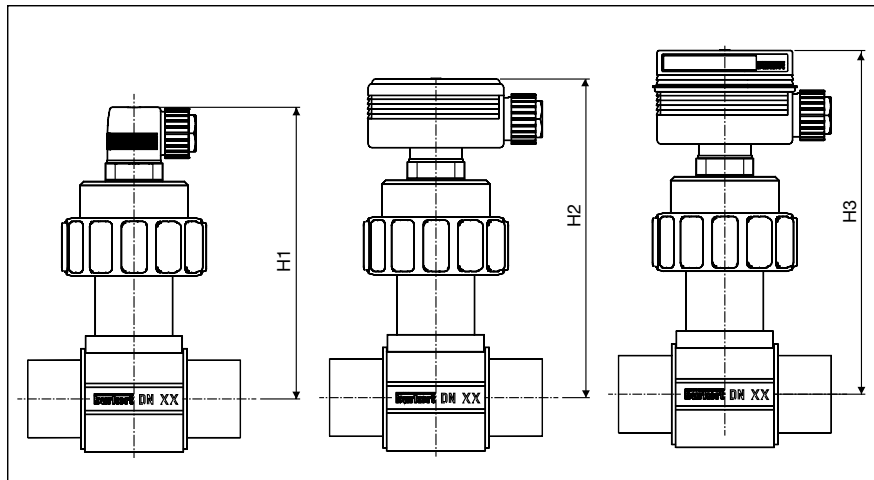
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Flow Sensor

For Continuous Flow Measurement

Type 8020

Dimensions [inch] - Fittings S020, 1/2" - 2"

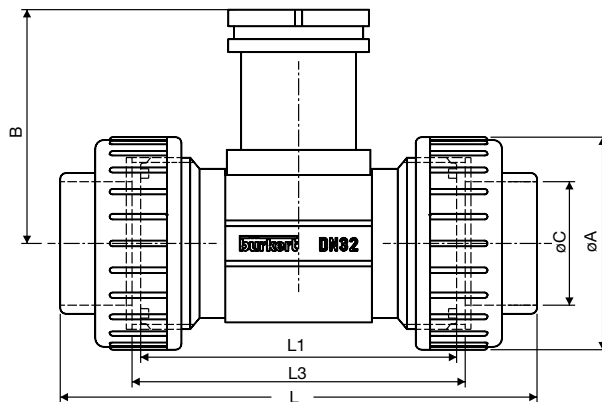


Variable Dimensions [inch]

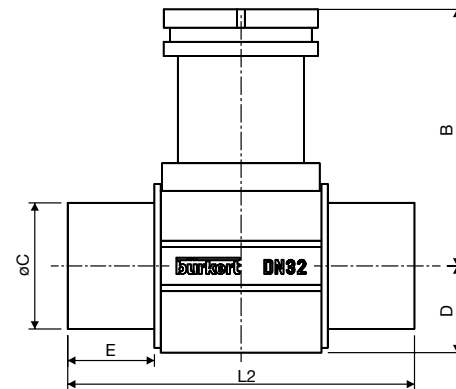
Orifice	H 1	H 2	H 3
1/2	6.25	6.81	7.32
3/4	6.18	6.73	7.24
1	6.18	6.73	7.24
1-1/4	6.41	6.96	7.48
1-1/2	6.45	7.00	7.51
2	6.69	7.24	7.75

Applicable for all fitting materials
1/2" - 2" sizes and process
connections.

True Union - PVC, PP, PVDF



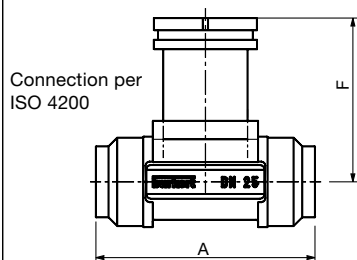
Solvent Spigot - PVC, PP, PVDF



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
3.16	1.69	5.03	5.11	5.07	3/4"	0.83	0.72	3.54	3.77	1/2"	0.68	3.54	3.34	0.65	0.55
3.06	2.08	5.67	5.73	5.70	1"	1.05	1.04	3.93	4.17	3/4"	0.68	3.93	3.62	0.78	0.63
3.07	2.36	6.30	6.35	6.33	1-1/4"	1.31	1.28	4.33	4.56	1"	0.84	4.33	3.74	0.90	0.70
3.20	2.91	6.61	6.69	6.65	1-1/2"	1.66	1.52	4.33	4.56	1-1/4"	1.08	4.33	3.93	1.08	0.78
3.35	3.26	7.40	7.48	7.48	2"	1.90	1.91	4.72	5.00	1-1/2"	1.24	4.72	4.17	1.18	0.90
3.60	4.05	8.34	8.40	8.38	2-1/2"	2.37	2.39	5.11	5.35	2"	1.55	5.11	4.33	1.45	1.06

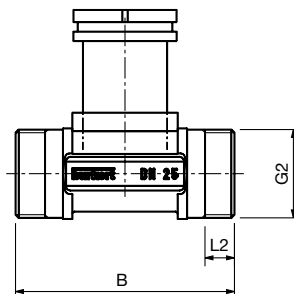
* only for PVC with true union

Weld Ends - Stainless Steel



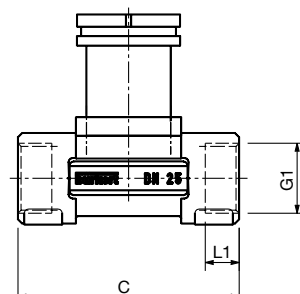
Material Stainless steel:
BS 316L

**Male Threaded Port
Stainless Steel / Brass**



Material Stainless steel:
BS 316L

**Female Threaded Port
Stainless Steel / Brass**



Material Stainless steel:
BS 316L

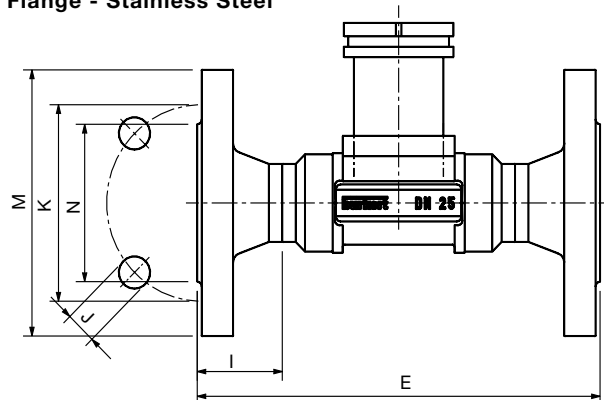
Flow Sensor

For Continuous Flow Measurement

Type 8020

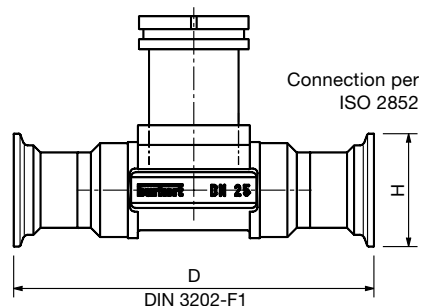
Dimensions [inch] - Fittings S020, 1/2" - 2"

Flange - Stainless Steel



Material:
DIN 1.4404; B.S. 316 L

Tri-Clamp®



Material:
B.S. 316 L

Variable Dimensions [inch] for Weld Ends, Male Threaded Port, Female Threaded Port, Flange, Tri-Clamp

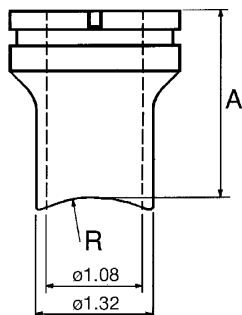
Orifice	Weld Ends		Length Dimensions							Thread				Tri-Clamp	Flange Dimensions					
	ø Outside	Wall Thickness	A	B	C	D	E (DIN) (ANSI)	E (JIS)	F	G1	L1	G2	L2		H	Norm*	I	J	K	M
1/2"	0.83	0.06	3.30	3.30	3.34	5.11	5.11	5.51	3.16	G 1/2	0.63	G 3/4	0.45	1.33	DIN	0.92	4 x 0.55	2.56	3.74	1.77
										NPT 1/2	0.67				ANSI	0.92	4 x 0.62	2.37	3.50	1.37
										Rc 1/2	0.59				JIS	0.92	4 x 0.59	2.75	3.74	2.00
3/4"	1.06	0.06	3.70	3.70	3.74	5.90	5.90	5.98	3.06	G 3/4	0.67	G 1	0.53	1.98	DIN	1.12	4 x 0.55	2.95	4.13	2.28
										NPT 3/4	0.72				ANSI	1.12	4 x 0.62	2.74	3.89	1.68
										Rc 3/4	0.64				JIS	1.12	4 x 0.59	2.95	3.93	2.20
1"	1.32	0.07	4.09	4.09	4.13	6.30	6.30	6.49	3.07	G 1	0.92	G 1-1/4	0.55	1.98	DIN	1.12	4 x 0.55	3.34	4.52	2.67
										NPT 1	0.70				ANSI	1.12	4 x 0.62	3.12	4.25	2.00
										Rc 1	0.70				JIS	1.12	4 x 0.74	3.54	4.92	2.63
1-1/4"	1.67	0.07	4.68	4.68	4.72	7.08	7.08	7.00	3.21	G 1-1/4	0.92	G 1/2	0.70	1.98	DIN	1.22	4 x 0.70	3.93	5.51	3.07
										NPT 1-1/4	0.82				ANSI	1.22	4 x 0.62	3.50	4.60	2.50
										Rc 1-1/4	0.82				JIS	1.22	4 x 0.74	3.93	5.31	2.99
1-1/2"	1.90	0.07	5.07	5.07	5.11	7.87	7.87	7.48	3.36	G 1-1/2	0.92	M55x2	0.74	2.52	DIN	1.41	4 x 0.70	4.33	5.90	3.46
										NPT 1-1/2	0.78				ANSI	1.41	4 x 0.62	3.87	5.00	2.87
										Rc 1-1/2	0.74				JIS	1.41	4 x 0.74	4.13	5.51	3.18
2"	2.37	0.10	5.86	5.86	5.90	9.05	9.05	8.50	3.60	G 2	1.08	M64x2	0.78	3.05	DIN	1.61	4 x 0.70	4.92	6.49	4.01
										NPT 2	0.94				ANSI	1.61	4 x 0.74	4.74	5.98	3.62
										Rc 2	0.94				JIS	1.61	4 x 0.74	4.72	6.10	3.79

* Flange: DIN 2501/2633, length per DIN 3201-F1;
ANSI B16-5-1988, length per DIN 3201-F1
JIS 10K, length per ANSI B16-10

Dimensions [inch] - Fittings 2-1/2" - 14"

Weld-o-Let Fittings with Radius - Stainless Steel

Material: 316L (B.S.)



Note:
Short sensor version for:
2-1/2" - 8"
Long sensor version for:
10" - 14"

Variable Dimensions [inch]

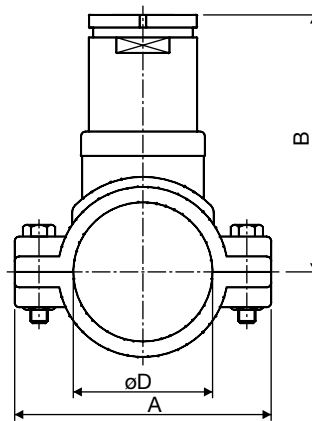
Orifice	A	R
2-1/2"	2.14	1.44
3"	2.08	1.75
4"	1.99	2.25
5"	1.90	2.78
6"	1.80	3.31
8"	1.61	4.31
10"	2.90	5.37
14"	2.51	7.00

Dimensions [inch] - Fittings 2-1/2" - 16"

Saddle - PP

Body material: PP/PVC
Seal material: EPDM

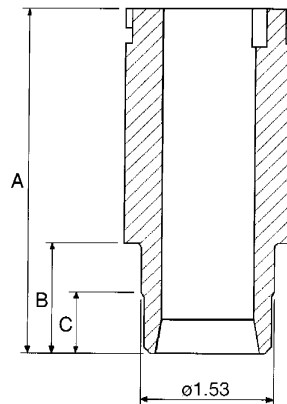
Note: These saddle fittings require the long sensor version of the flow sensor 8020 for all size orifices.



Variable Dimensions [inch]

Orifice	A	B	øD
2	4.56	4.37	2.48
2-1/2	5.07	4.33	2.95
3	5.66	4.48	3.54
4	6.53	4.67	4.33
4-1/2	7.12	4.54	4.92
5	7.71	4.78	5.51
6	8.50	5.17	6.29
8	11.41	6.85	8.85

Weld-o-Let Fittings - PE, PP, PVDF



Variable Dimensions [inch]

Orifice	A	PE		PP		PVDF	
		B	C	B	C	B	C
2-1/2	2.85	0.51	—	0.51	—	0.40	—
3	2.85	0.61	—	0.61	—	0.49	—
4	2.85	0.74	0.19	0.74	0.19	0.59	0.23
6	4.01	1.09	0.39	1.09	0.39	—	—
8	4.01	1.53	0.63	1.53	0.63	—	—
10	4.01	1.90	0.82	1.90	0.82	—	—
12	4.01	2.41	1.10	2.41	1.10	—	—
14	4.01	2.41	1.10	2.41	1.10	—	—
16	4.01	2.72	1.24	—	—	—	—

Note:

Short sensor version for: 2-1/2" - 4"
Long sensor version for: 6" - 16"



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Ordering Data for Flow Sensor Type 8020

Flow Sensor	Power Supply	Gasket	Sensor	Cable Entry	Item No.
FLOW SENSOR 8020 STANDARD TYPES					
8020 with coil	none	FPM	Coil short	DIN 43650 PG9	419 583 P
8020 with coil	none	EPDM	Coil short	DIN 43650 PG9	419 584 Q
8020 with coil	none	FPM	Coil long	DIN 43650 PG9	419 585 R
8020 with coil	none	EPDM	Coil long	DIN 43650 PG9	419 586 J
8020 with Hall sensor	12-30 VDC	FPM	Hall short	DIN 43650 PG9	419 587 K
8020 with Hall sensor	12-30 VDC	EPDM	Hall short	DIN 43650 PG9	419 588 U
8020 with Hall sensor	12-30 VDC	FPM	Hall long	DIN 43650 PG9	419 589 V
8020 with Hall sensor	12-30 VDC	EPDM	Hall long	DIN 43650 PG9	419 590 S
8020 with Hall sensor, only connectable to 8025/8021/8023/SE34		FPM	Hall short	DIN 43650 PG9	419 591 P
8020 with Hall sensor, only connectable to 8025/8021/8023/SE34		EPDM	Hall short	DIN 43650 PG9	419 592 Q
8020 with Hall sensor, only connectable to 8025/8021/8023/SE34		FPM	Hall long	DIN 43650 PG9	419 593 R
8020 with Hall sensor, only connectable to 8025/8021/8023/SE34		EPDM	Hall long	DIN 43650 PG9	419 594 J
FLOW SENSOR 8020 WITH PULSE DIVIDER TYPE 8021					
8020 with Hall sensor and adjustable pulse output NPN & PNP	12-30 VDC	FPM	Hall short	DIN 43650 PG9	419 595 K
8020 with Hall sensor and adjustable pulse output NPN & PNP	12-30 VDC	EPDM	Hall short	DIN 43650 PG9	419 596 L
8020 with Hall sensor and adjustable pulse output NPN & PNP	12-30 VDC	FPM	Hall long	DIN 43650 PG9	419 597 M
8020 with Hall sensor and configurable pulse output NPN & PNP	12-30 VDC	EPDM	Hall long	DIN 43650 PG9	419 598 W
FLOW SENSOR 8020 WITH FLOW TRANSMITTER TYPE 8023					
8020 with coil and adjustable 4-20 mA output	12-24 VDC	FPM	Coil short	DIN 43650 PG9	419 603 B
8020 with coil and adjustable 4-20 mA output	12-24 VDC	EPDM	Coil short	DIN 43650 PG9	419 604 C
8020 with coil and adjustable 4-20 mA output	12-24 VDC	FPM	Coil long	DIN 43650 PG9	419 605 D
8020 with coil and adjustable 4-20 mA output	12-24 VDC	EPDM	Coil long	DIN 43650 PG9	419 606 E
8020 Hall sensor and adjustable 4-20 mA output	12-24 VDC	FPM	Hall short	DIN 43650 PG9	419 738 H
8020 Hall sensor and adjustable 4-20 mA output	12-24 VDC	EPDM	Hall short	DIN 43650 PG9	419 739 A
8020 Hall sensor and adjustable 4-20 mA output	12-24 VDC	FPM	Hall long	DIN 43650 PG9	419 740 P
8020 Hall sensor and adjustable 4-20 mA output	12-24 VDC	EPDM	Hall long	DIN 43650 PG9	419 741 C
FLOW TRANSMITTER TYPE 8023 FOR FLOW SENSOR TYPE 8020					
8023 with adjustable 4-20 mA output	12-24 VDC	none	none	1 X PG9	130 428 V
1077-3 control unit for flow transmitter Type 8023	12-24 VDC	none	none	none	130 446 X
PULSE DIVIDER TYPE 8021 FOR FLOW SENSOR TYPE 8020					
8021 with adjustable pulse output	12-30 VDC	none	none	1 X PG9	418 895 P



Ordering Data of Stainless Steel Fittings Type S020

Diameters	Materials	Item No.
SS - Female G-Threaded Ports		
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
SS - Female NPT-Threaded Ports		
1/2"	SS, FPM	428 742 E
3/4"	SS, FPM	428 743 F
1"	SS, FPM	428 744 G
1-1/4"	SS, FPM	428 745 H
1-1/2"	SS, FPM	428 746 A
2"	SS, FPM	428 747 B
SS - Female ISO7 (JIS) Threaded Ports		
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
SS- Male G Threaded Ports		
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
SS - Weld Ends		
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
SS - Tri-Clamp (ISO 2852)		
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
SS - DIN Flanges (DIN 2501)		
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
SS - Flanges (JIS 10K)		
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.
SS - ANSI Flanges (ANSI B16-5-1988)		
1/2"	SS, FPM	428 778 J
3/4"	SS, FPM	428 779 K
1"	SS, FPM	428 780 H
1-1/4"	SS, FPM	428 781 W
1-1/2"	SS, FPM	428 782 X
2"	SS, FPM	428 783 Y
SS - Weld-o-Let		
2-1/2"	SS	418 112 M
3"	SS	418 113 N
4"	SS	418 114 P
5"	SS	418 115 Q
6"	SS	418 116 R
8"	SS	418 117 J
10"	SS	418 756 A
12"	SS	420 070 G
14"	SS	416 637 R

Ordering Data of Brass Fittings Type S020

Diameters	Materials	Item No.
Brass - Female G-Threaded Ports		
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
Brass - Female NPT-Threaded Ports		
1/2"	Brass, FPM	428 718 E
3/4"	Brass, FPM	428 719 F
1"	Brass, FPM	428 720 C
1-1/4"	Brass, FPM	428 721 Z
1-1/2"	Brass, FPM	428 722 S
2"	Brass, FPM	428 723 T
Brass - Female ISO7 (JIS) Threaded Ports		
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
Brass - Male G/metric Threaded Ports		
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.
PVC - True Union ISO		
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
PVC - True Union ASTM		
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
1-1/2"	PVC, FPM	428 686 X
2"	PVC, FPM	428 687 Y
PVC - True Union JIS		
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
PVC - Solvent Spigot		
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
PE - Weld-o-Let		
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



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Diameters	Materials	Item No.
PP - True Union with Threaded Port		
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
PP - Weld Ends		
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
PP - Weld-o-Let		
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
PP - Saddle (Metric Pipe)		
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
PVDF - True Union with Threaded Port		
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
PVDF - Weld Ends		
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
PVDF - Weld-o-Let		
DN 65	PVDF	418 658 Q
DN 80	PVDF	418 659 R
DN 100	PVDF	418 660 N