- Closed pipe system, i.e. sensor is integrated
- Wide range of materials and process connections
- Metal up to 16 bar
- Plastic up to 10 bar

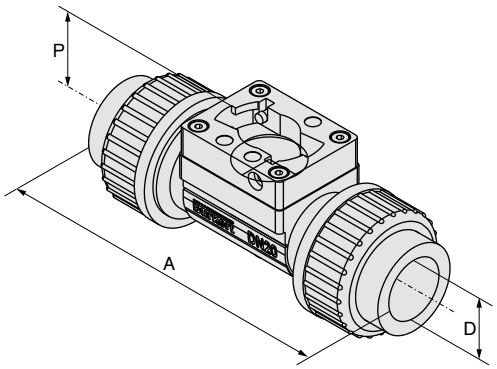
Example
SO30 PVC

The S030 sensor-fitting has a built-in paddle wheel to measure the flow rate. When liquid flows through the pipe, the paddle wheel is set in rotation producing pulses which frequency is proportional to the flow rate. The Bürkert special construction, called "INLINE Quarter-turn" technology, ensures leakage free operation. The paddle wheel rotation (permanent magnets included in the wheels) is detected contactless through the sensor-fitting wall. The transmitter can be snapped-on or removed without opening the pipe or interrupting the process.

Technical Data

General data	
Pipe diameter	DN06 to DN65
Measurement range	from 0.5 to 1200 l/min
Flow velocity	0.3 to 10 m/s (see flow diagram)
Measurement error	
Teach-In	±01% of Reading[1] (at the teach flow rate value)
(via a remote transmitter)	±2.5% of Reading[1]
Standard K-factor	
Linearity[1]	±0.5% of F.S.*
Repeatability[1]	±0.4% of Reading
Process connections	
Metal	Internal or external thread, weld ends, Clamp or flange
Plastic	True union, spigot or external thread
Materials	
Seal	FKM or EPDM (depending on version, see ordering chart)
Body	Stainless steel (316L -1.4404), brass ($CuZn_{39}Pb_2$), PVC, PP, PVDF
Screws	Stainless steel (316L -1.4404)
Paddle wheel	PVDF (PP on request or st. st., see datasheet 8030HT)
Shaft and bearings	Ceramics (Al_2O_3)
Medium data	
Medium temperature	0 to 50°C for sensor-fitting in PVC 0 to 80°C for sensor-fitting in PP -15 to 100°C for sensor-fitting in st. st., brass or PVDF
Medium pressure (max.)	see pressure/temperature chart
Metal	PN16 *(232.16 PSI)* (PN40 *(580.4 PSI)* on request)
Plastic	PN10 *(145.1 PSI)*
Fluid properties	clean, neutral or slightly aggressive, solid-free liquids
Pollution	max. 1%, size of particles 0.5 mm max.
Viscosity	300 cSt. max.
Environment	
Ambient temperature (operating and storage)	-15 to 60°C for sensor-fitting in PVC -15 to 80°C for sensor-fitting in PP -15 to 100°C for sensor-fitting in stainless steel, brass or PVDF depending on associated transmitter

Pressure/temperature diagram



True union connection
DIN 8063 in PVC

DN [mm]	P [mm]	A [mm]	D [mm]
15	34.5	128.0	20.00
20	32.0	144.0	25.00
25	32.2	160.0	32.00
32	35.8	168.0	40.00
40	39.6	188.0	50.00
50	45.7	212.0	63.00

Standards, directives and approvals	
Directive - Pressure	Complying with article 3 of §3 from 97/23/CE directive.*
Approval/Certificate on request	3.1 certificate; 2.2 certificate; surface finish certificate; calibration certificate; FDA (with EPDM seal) - stainless steel sensor-fitting only

* F.S. = Full scale (10 m/s)
[1] 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.

* For the 97/23/CE pressure directive, the device can only be used under following conditions (dependent on max. pressure, pipe diameter and fluid).

Type of fluid	Conditions
Fluid group 1, §1.3.a	DN ≤ 25 only
Fluid group 2, §1.3.a	DN ≤ 32 or DN > 32 and PN*DN ≤ 1000
Fluid group 1, §1.3.b	PN*DN ≤ 2000
Fluid group 2, §1.3.b	DN ≤ 200

Diagram Flow/Velocity/DN

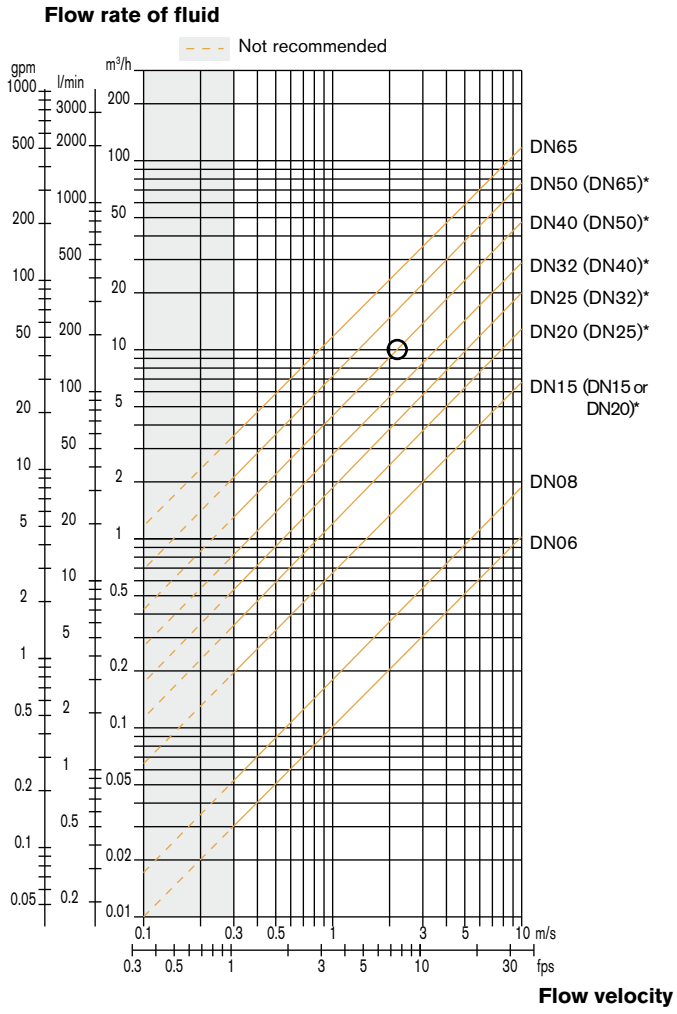
Selection Help – Flow Velocity Considerations

Depending on the sensor type, the right flow rate has to be chosen to get the best accuracy. The higher the flow velocity, the lower the measurement error, but the higher the pressure loss. The following chart will help you find the correct fitting diameter for your application depending on flow velocity and sensor technology. Pipes for fluids similar to water are generally designed for an average flow velocity of approx. 2 to 3 m/s or 6-10 ft/s.

Example:

- Flow: 10 m^3/h
- Ideal flow velocity: 2... 3 m/s

For these specifications, the diagram indicates a pipe size of DN40 [or DN50 for (*) mentioned sensor-fittings]



* for following fitings with:
- external threads acc. to SMS 1145
- weld ends acc. to SMS 3008, BS 4825/ASME BPE or DIN 11850 Series 2
- Clamp acc. to SMS 3017/ISO 2852, BS 4825/ASME BPE or DIN 32676