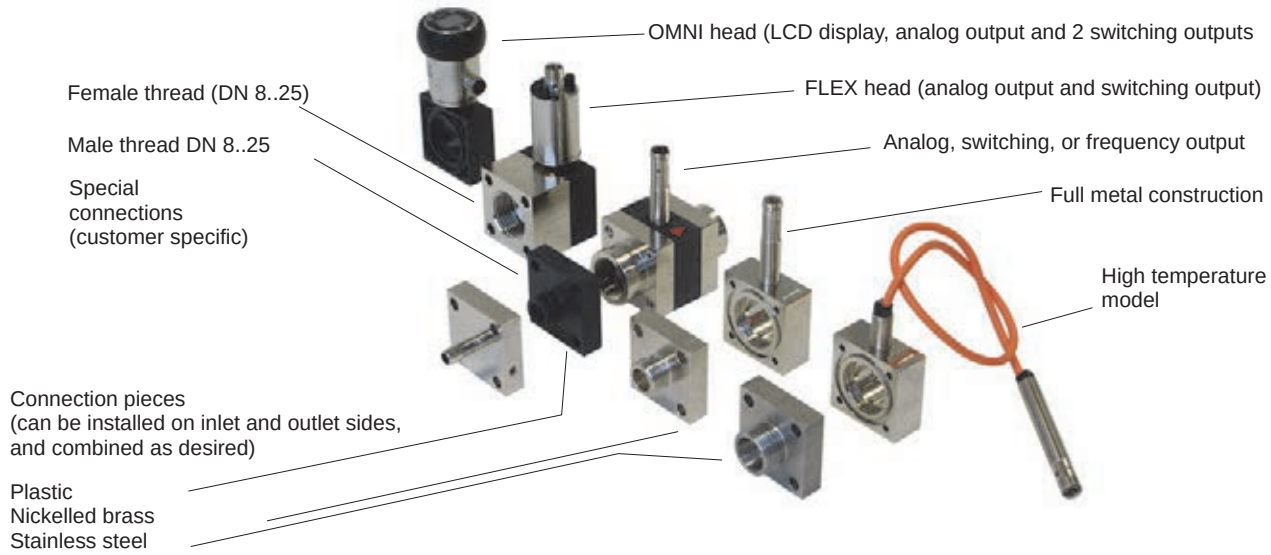
Flow - dynamic diaphragm



Characteristics

System	Flow Dynamic diaphragm
Evaluation	Display Switching Measurement
Nominal widths	DN 8..25
Range	0.4..100 l/min
Media	Water Aqueous emulsions Aggressive media
Pressure resistance	Max. 100 bar
Medium temperature	0..+150 °C

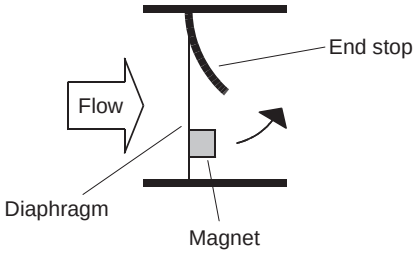
Applications

- **Industrial metering and monitoring technology**
- **Starting systems for high pressure cleaners**
- **Machine tools for emulsion control**
- **Laser coolant monitoring with very rapid reaction time**
- **Sawing emulsion monitoring for semiconductor saws**

Function And Benefits

- **Very large metering range**
- **Fast response time**
- **Robust with end stop**
- **Lowest dispersal in the series (100 % individual calibration)**
- **Modular concept**

A thin elastic diaphragm made of stainless steel, which covers the entire flow cross-section, is deflected by the flowing fluid, and thereby pushes against an arched end stop (therefore, overexpansion cannot occur!).



There is a plastic-coated magnet on the diaphragm. When there is a deflection, its magnetic field changes, and this is detected by a sensor outside the area of flow.

Flexible diaphragm made of stainless steel, with plastic-coated magnet.

Since the diaphragm only bends, and functions without a bearing, there is almost no frictional effect and extremely little wear.
The movement occurs practically free of hysteresis, and the test results have very good reproducibility. The diaphragms low bulk results in a rapid response time. The almost complete covering of the flow cross-section in the neutral position enables a very low metering range start value.

The evaluation of the entire flow cross-section means that there are no problems when routing pipes. Run-in and run-out sections are not necessary. The shaped end stop and the elastic properties of the diaphragm mean that even severe water hammer causes no damage. The low number of parts coming into contact with the medium as well as the bend of the diaphragm guarantee a low tendency towards soiling and material adhesion. The flange construction simplifies installation and service.

Through a range of options, the XF system is flexibly adaptable to very varied requirements.

- The widest range of materials and connection possibilities.
- High-temperature model
- Resistance to backflows
- Minimum value measurement

Programmability of parameters

All XF sensors from HONSBERG are a part of the family of intelligent sensors. They have a microcontroller which enables a multitude of parameter changes.
By standard, all three main electronics have the capability of making local changes. In addition, a device configurator can be used to change all saved parameters of a device at any time, if desired or necessary.

LABO-XF
- / U / F / C / S

Pulse programming on pin 2:
Apply the supply voltage level for 1 second and save the current value as the full scale value (for analog outputs) or as a switching value (for limit switches).

FLEX-XF

Programming with magnet clip:
Hold the magnet to the marking for 1 second and save the present value as the full scale value (for analog outputs) or as a switching value (for limit switches).

OMNI-XF

Programming with magnet ring:
With the aid of the display and of the movable ring, numerous parameters can be conveniently set on the spot.

ECI-1

If required, all parameters can be set at any time on all intelligent sensors, using the ECI-1 device configurator.

Universal switching outputs

The push-pull transistor outputs enable the simplest installation.
You install the output like an NPN switch and it is an NPN switch; you install the output like a PNP switch and it is a PNP switch – without programming or wire breaks.
You are assured a resistance to short circuits and pole reversal and an overload or short circuit is also shown in the display with OMNI electronics.

Device overview

Device		Range l/min	Pressure resistance in bar	Medium temperature	Supply voltage	Displays	Output signal		Page
							Switching	Measuring	
LABO-XF-S		0.6..80 (0.4..100)	PN 16..100	0..+70 °C (150 °C)	10..30 V DC	Signal LED	1 x Push-Pull	-	**4**
LABO-XF-I		0.6..80 (0.4..100)	PN 16..100	0..+70 °C (150 °C)	10..30 V DC	Signal LED	-	4..20 mA	**9**
LABO-XF-U		0.6..80 (0.4..100)	PN 16..100	0..+70 °C (150 °C)	15..30 V DC	Signal LED	-	0..10 V	**9**
LABO-XF-F		0.6..80 (0.4..100)	PN 16..100	0..+70 °C (150 °C)	10..30 V DC	Signal LED	-	Frequency 0..2 kHz (push-pull)	**9**
LABO-XF-C		0.6..80 (0.4..100)	PN 16..100	0..+70 °C (150 °C)	10..30 V DC	Signal LED	-	X pulses / litre (push-pull)	**9**
FLEX-XF		0.6..80 (0.4..100)	PN 16..100	0..+70 °C (150 °C)	18..30 V DC	Signal LED	1 x Push-Pull	0/4..20 mA 0..10 V or 0..2 kHz	**14**
OMNI-XF		0.6..80 (0.4..100)	PN 16..100	0..+70 °C (150 °C)	18..30 V DC	Graphic LCD illuminated transflective and signal LED	2 x Push-Pull	0/4..20 mA or 0..10 V	**19**
Counter-OPTION-C		Preset Counter with external reset facility, anti-complementary switching outputs and actual value display.							**25**
Counter-OPTION-C1		Instantaneous value display with analog output, pulse output and volume totalizer.							**28**

ECI-1	All LABO, FLEX, and OMNI parameters can be set or modified using the ECI-1 configurator.	**31**
Options	● LABO transmitter – Temperature up to 150 ° ● OMNI – Tropical model	**32**
Accessories	● Type ZV / ZE (Filter) ● KB.... (Round plug connector 4/5-pin) ● OMNI-TA (Panel meter) ● OMNI-remote	**33**

Errors and technical modifications reserved.