



All Metal Variable Area Flow Meter

BGN

Technical Data Sheet



- Extremely robust through star guiding system instead of guiding rod
- Flow metering of liquids, gases and steam
- Available up to nominal size of DN 150 / 6"
- Linear characteristics through conical optimized float form
- Outstanding clear meter reading through 90° arranged scale
- Electrical transmitter with HART®, PROFIBUS-PA® or Fieldbus Foundation®
- Suitable for the installation in safety related applications acc. to SIL

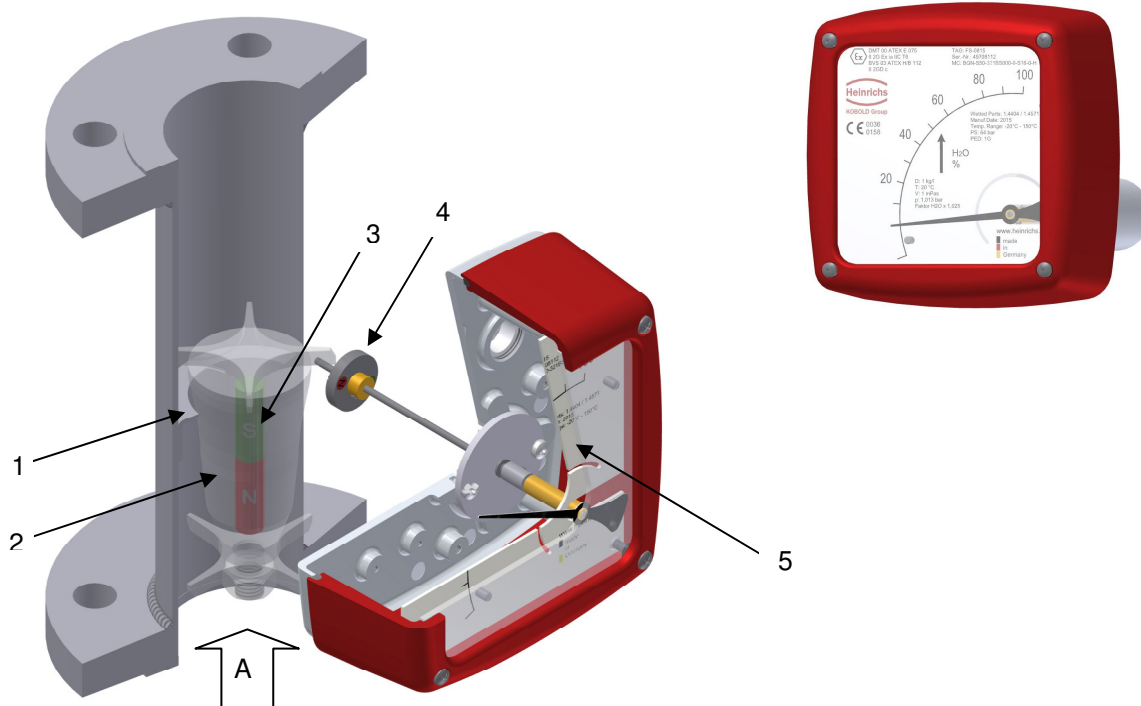
Function

The BGN variable area flow meter consists of a meter tube with connections, a measuring ring, and a conical float. The position of the float is transferred via an encapsulated magnet(3) to a counter magnet(4) which is fitted at the pointer axle and thus indicated via a pointer to the scale(5)

The fluid flows from bottom to top through the meter tube of the flow meter. The float(2) is lifted until an annular gap between the measuring ring(1) and the conical-shaped float(2) is produced which corresponds to the flow.

The forces acting on the float (weight force, flow force), are in equilibrium.

Each position of the float corresponds to a flow value measured during calibration, which is transferred to a scale.



Application

The measuring instrument BGN is suitable for flow measurement of liquid, gaseous and steam fluids in pipes. It shows the current flow rate in volume or mass per unit in time.

Applications: flow measurement, dosing, monitoring, adjusting and control of liquid and gaseous products.

The meter design makes it ideal for processes under difficult and rough operating conditions.

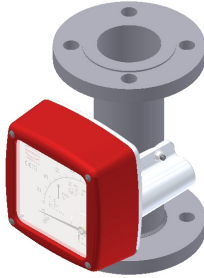
The devices are available with additional electrical equipment for process monitoring and control.

- A large variety of wetted materials
- Very safe magneto-resistive signal transmission
- Gas or liquid damping (option)
- Applicable for high pressure applications and high temperature processes
- Excellent heat tracing technology (option)
- Double eddy current damping (option)
- Self draining (option)
- Backflow stop (option)
- Differential pressure flow regulator (option)



Versions / Instrument Models

Aluminum Indicator



Optimized aluminum indicator.
Large and well arranged scale with 90° angle for optimal reading.
Rounded edges and rims ensure a smooth draining of liquids after wet contact. A special anodization and paint finish makes the indicator housing also suitable for outdoor use.

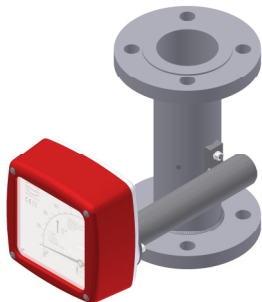
Process connections: Flange, thread, clamp, weld ends

Stainless steel indicator



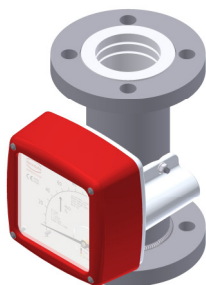
Stainless steel indicator
with IP 67 protection for extreme applications.
Large and well arranged scale with 90° angle for optimal reading.
Round design ensures a smooth draining of liquids after wet contact. Salty and rough environments e.g. off-shore applications do not show any problem.

High temperature version for up to 350 °C with displaced indicator



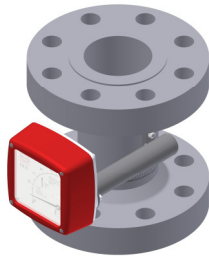
Displaced indicator for process temperatures up to 350 °C.
For very high or very low process temperatures the indicator will be displaced from the measuring pipe.
The use of limit switches or transmitters are without limitations.

Instrument lining / Special materials



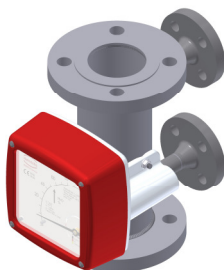
PTFE lining for highest chemical resistance..
Wetted parts made of Hastelloy or Monel.
Through the unique design of the measuring pipe with cylindrical pipe and conical float the meters can be made from various special materials. This allows the use in special areas and / or highly corrosive process applications e.g. for acid and lye

High Pressure Applications



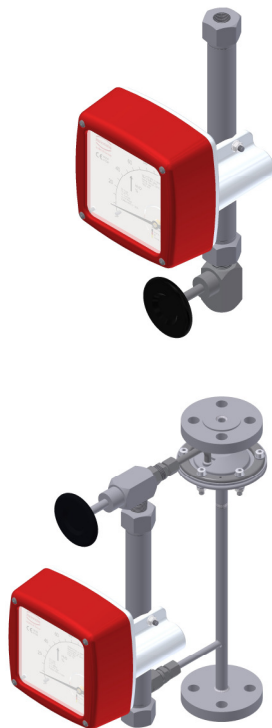
Through the unique structure of the measuring fitting with cylindrical measuring pipe and concial float, the units can be produced with thick walled pipes. This enables the use in high pressure applications for which other measuring instruments are not available e.g. sour gas, tunnel drill machine lubrication

Instruments with heating jacket



The cylindrical measuring pipe allows a double wall design with heating jacket for e.g. steam, hot water or thermal oil. This enables the meter being used for extremely difficult fluids or applications. The heating jacket connections will be produced acc. customer demand.

Component Assembly / Special solutions



In close cooperation with our customers we develop solutions for their measuring tasks and problems. We plan and manufacture application based assemblies acc. customer demands - e.g. with regulatinjg valves, flow controllers, differential pressure flow regulator including piping etc.



Technical Data:

Fitting

Wetted parts:	st.st. 1.4404 (316 L) / 1.4571 (316 TI), Hastelloy C-22/C4, PTFE, Monel, Titanium and other materials on request
Process connection:	Flanges acc. EN 1092-1, ASME B16.5, JIS, NP or G pipe threads, TriClamp Special connections acc. customer demand.
Nominal pressure:	BGN-S/H: PN 40, ASME CI150 / 300 (Standard) BGN-P: PN 16, ASME CI150 (Standard) higher pressure ratings on request (max. 600 bar)
Process temperature:	BGN-S/H -40°C +350°C BGN-P -40°C +125°C
Umgebungstemperatur:	-40°C ... +80°C (without electrical equipment) -40°C ... +65°C (with electrical equipment)
Protection:	IP 65 / IP 67 (EN60529)

Indicator

Aluminum IP 65
st.st. IP 67

Limit switches

max. 2 pcs inductive limit switches
max. 2 pcs inductive limit switches in safety technology
max. 2 pcs SPDT micro switches

Electrical transmitter:

ES c/w HART-protocol
ES c/w HART-protocol and 2 NAMUR-contact
ES c/w HART-protocol and 1 NAMUR-contact / 1 pulse output
ES c/w Profibus-PA®
ES c/w HART-Protocol und totalizer module
ES c/w Foundation FIELDBUS®

Power supply:	14 - 30 VDC (reverse polarity protected)
Output signals:	passive, galvanically isolated
Analog output:	4-20 mA
Binary output 1 and 2:	$U_i=30\text{ V}$, $I_i=20\text{ mA}$, $P_i=100\text{ mW}$
Binary input:	totalizer reset (only for ES c/w totalizer module)
Ambient temperature:	-40°C +70°C
Protection:	IP 20 (EN60529)

Measuring Accuracy

(BGN-S/H)	± 1,6% of actual qG 50% acc.. VDI/VDE 3513-2
(BGN-P)	± 2% of actual qG 50% acc.. VDI/VDE 3513-2
	± 0,2% additional error for transmitter ES

Repeatability	± 0,5 %
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Measuring ranges

.Measuring range chart BGN									
DN ¹⁾⁸⁾ EN1092-1	ASME ⁸⁾ B16.5-2003	Flow Body S... st.st. P... PTFE H... Hastelloy	Range Code	Measuring range water (1000 kg/m ³ ; 1 mPas)		Measuring range air (1.013 bar abs., 20 °C) ⁷⁾		Pressure loss (mbar)	Note
15 25	1/2" 3/4" 1"	S10	A	0,5 – 5,0	l/h	0,015 - 0,15	m ³ /h	40	^{1) 2)}
		S10	B	1 - 10	l/h	0,030 - 0,30	m ³ /h	40	^{1) 2)}
		S10	C	1,6 - 16	l/h	0,045 - 0,48	m ³ /h	40	^{1) 2)}
		S10	D	2,5 - 25	l/h	0,075 - 0,75	m ³ /h	40	²⁾
		S10	E	4 - 40	l/h	0,13 - 1,3	m ³ /h	40	²⁾
15 20 25 32	1/2" 3/4" 1" 1 1/4"	S15	F	5 - 50	l/h	0,15 - 1,5	m ³ /h	40	
		S15	G	7 - 70	l/h	0,2 - 2,1	m ³ /h	40	
		S15	H	10 - 100	l/h	0,3 - 3,0	m ³ /h	60	
		S15	I	16 - 160	l/h	0,5 - 4,6	m ³ /h	60	
		S15	J	25 - 250	l/h	0,7 - 7,0	m ³ /h	60	
		S15	K	40 - 400	l/h	1,0 - 11	m ³ /h	70	
		S15	L	60 - 600	l/h	1,7 - 17	m ³ /h	80	
15 20 25 32	3/4" 1"	S25	M	100 - 1000	l/h	3 - 30	m ³ /h	60	⁵⁾
		S25	N	160 - 1600	l/h	4 - 46	m ³ /h	70	⁵⁾
		S25	P	250 - 2500	l/h	7 - 70	m ³ /h	100	⁵⁾
		S25	Q	400 - 4000	l/h	11-110	m ³ /h	100	⁵⁾
40	1 1/2"	S40	P	250 - 2500	l/h	7 - 70	m ³ /h	50	³⁾
		S40	Q	400 - 4000	l/h	11 - 110	m ³ /h	120	³⁾
		S40	R	600 - 6000	l/h	17 - 170	m ³ /h	180	³⁾
50 65	2" 2 1/2"	S50	Q	400 - 4000	l/h	11 - 110	m ³ /h	80	
		S50	R	600 - 6000	l/h	17 - 170	m ³ /h	90	
		S50	S	1000 - 10000	l/h	29 - 290	m ³ /h	110	
		S50	T	1600 - 16000	l/h	46 - 460	m ³ /h	230	
		S50	U	2500 - 25000	l/h	70 - 700	m ³ /h	500	^{3) 4)}
80	3" 3 1/2"	S80	T	1600 - 16000	l/h	46 - 460	m ³ /h	70	
		S80	U	2500 - 25000	l/h	70 - 700	m ³ /h	100	
		S80	V	4000 - 40000	l/h	110 - 1100	m ³ /h	350	
100 125	4" 5"	S1H	V	4000 - 40000	l/h	110 - 1100	m ³ /h	120	
		S1H	W	6000 - 60000	l/h	170 - 1700	m ³ /h	360	
		S1H	X	8000 - 80000	l/h	240 - 2400	m ³ /h	600	^{3) 4)}
		S1H	2	10000 - 100000	l/h	-			^{3) 4) 5)}
150	6"	SH5	2	10000 - 100000	l/h	-			^{3) 4) 5)}
		SH5	4	13000 - 130000	l/h	-			^{3) 4) 5)}

Reference conditions: acc. IEC 770
Water 20 °C; air 1,013 bar abs.

- for BGN-P version (PTFE), float with tantalum collar, measuring cone made of borosilicate glass
measuring range: A 0.7–7.0 l/h, B 1.2–12 l/h, C 2.0–20 l/h
- gas throttle in S version for gas measurement included in price (pressure loss 200 mbar)
- not available in P version
- sizing for higher viscosities not possible
- only in S and H version, only with reduced sealing face
- gas measurement not possible
- with only atmospheric pressure a measurement is not possible. Indicated values are for orientation. For gas measurements a factor of 2-3 of the inlet pressure should be considered as minimum operating pressure
- Restrictions for units with PTFE lining

Materials

Type	Measuring tube	Lining of measuring tube	Flanges	Flange lining	Float
BGN – S	Stainless steel	none	Stainless steel	none	Stainless steel
BGN – P (Qmax. 5/10/16 l/h H ₂ O)	Stainless steel	PTFE	Stainless steel	PTFE	PTFE / Tantalum
BGN – P	Stainless steel	PTFE	Stainless steel	PTFE	PTFE
BGN – H DN15/25 3/4"/1"	Hastelloy HC4	none	Hastelloy HC4	none	Hastelloy HC4
BGN – H > DN40 / 1 1/2"	Hastelloy HC4	none	Stainless steel	Hastelloy HC4	Hastelloy HC4



Certification and Approvals

Hazardous area approvals:

DMT 00 ATEX E 075 / PTB 99 ATEX 2219 / ZELM 03 ATEX 0128

Protection class: w/o electrical equipment
c/w limit switches
c/w electrical transmitter ES

⊕ II 2GD
⊕ II 2G Ex ia IIC T6 / II 1D Ex iaD 20 T108
⊕ II 2G Ex ia IIC T6

Explosion Directive

94/9/EG, Explosion Protection Directive 94/9/EC

EN 13463-1 Non-electrical equipment for potentially explosive atmospheres
EN 60079-0 General requirements
EN 60079-11 Intrinsic safety „i“
EN 60079-27 Fieldbus intrinsically safe concept FISCO

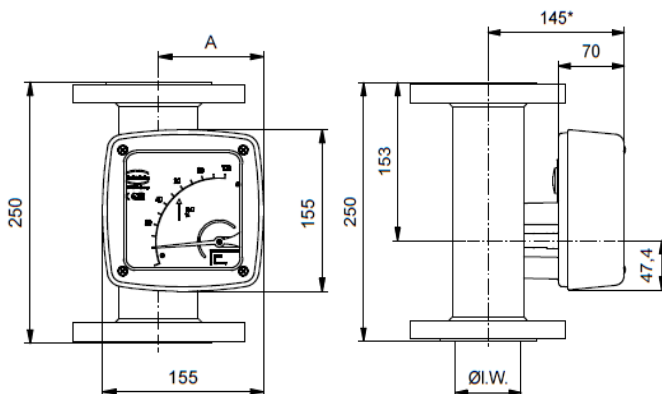
Electro magnetic compatibility:

EMC Directive 2004/108/EC

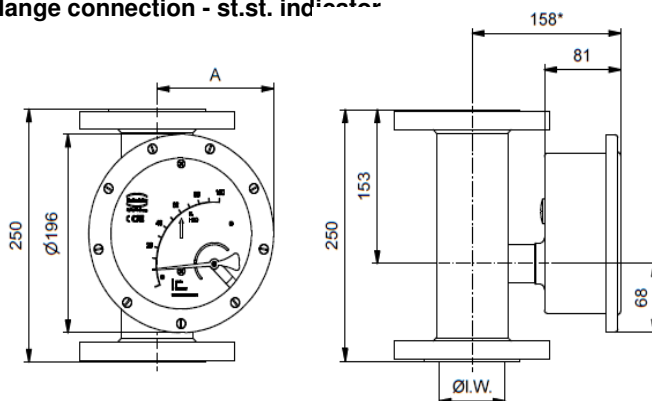
EN 61000-6-2:2011 immunity industrial environment
EN 61000-6-3:2011 emission residential, commercial
EN 55011:2011 Group 1 Class B , ISM ratio-frequency equipment
EN61326-1:2013 EMC requirements

Dimensions

Flange connection - aluminum indicator



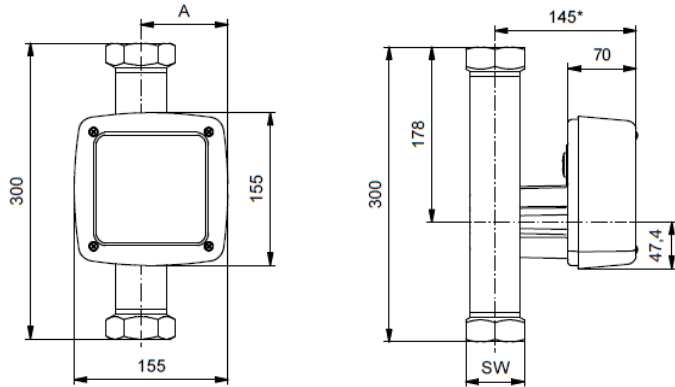
Flange connection - st.st. indicator



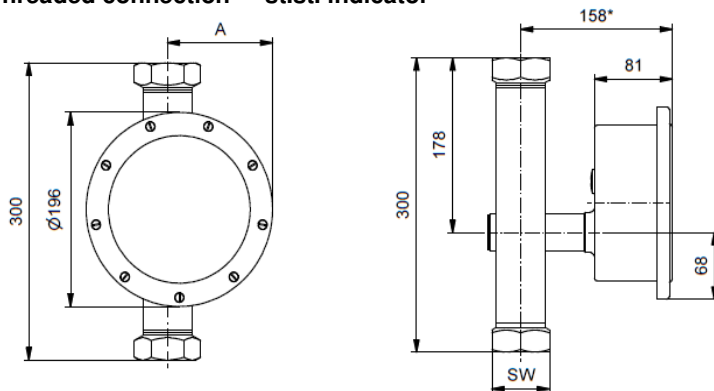
Fitting	DN / ASME	PN / CL bar / lbs	Ø I. W. (mm)	St.st. indicator A (mm)	Aluminum indicator A (mm)
S15	15 / 1/2"	40 / (150/300)	26	99,5	77,0
S25	25 / 1"	40 / (150/300)	32	102,6	80,1
S40	40 / 1 1/2"	40 / (150/300)	46	110,4	87,9
S50	50 / 2"	40 / (150/300)	70	123,4	100,9
S80	80 / 3"	40 / (150/300)	102	139,7	117,4
S1H	100 / 4"	16 / (150)	125	152,4	130,1
SH5	150 / 6"	16 / (150)	158	170,2	149,6

* =+100 mm for displaced indicator

Threaded connection - aluminum indicator



Threaded connection - st.st. indicator



Fitting	NPT(f) / G(f) (in)	PN (bar)	SW	st.st. indicator A (mm)	Aluminum indicator A (mm)
S15	1/4-3/8-1/2-3/4	40	36	99,5	77,0
S25	1/4-3/8-1/2-3/4	40	36	102,6	80,1
S40	3/4-1-1 1/4	40	60	110,4	87,9
S50	1 1/4-1 1/2-2	40	80	123,4	100,9

* =+100 mm for displaced indicator

Further informations on BGN flow meters can be found in the device description or installation manual.

Model Code

BGN -				
	Material			
S	Stainless Steel, process temperature ≤ 350°C			
P	Stainless Steel, Wetted Parts PTFE, process temperature ≤ 125°C, process pressure max. 16 bar (not for size "H5" available)			
H	Hastelloy C22, process temperature ≤ 350°C (not for size "10" available)			
	Nominal Device-Size		Measuring Range-Code	
10	1/4"	Measuring ranges see table	A-F	
15	1/2"	Measuring ranges see table	F-L	
25	1"	Measuring ranges see table	M-Q	
40	1 1/2"	Measuring ranges see table	P-R	
50	2"	Measuring ranges see table	Q-U	
80	3"	Measuring ranges see table	T-V	
1H	4"	Measuring ranges see table	V-2	
H5	6"	Measuring ranges see table	2-4	
	Flange connections			
(10)	305B	DN15 PN40 Form B1 DIN EN 1092-1	202R	¾" Class 150 RF ASME B16.5-2003
	305D	DN15 PN40 Form D DIN EN 1092-1	222R	¾" Class 300 RF ASME B16.5-2003
	309B	DN25 PN40 Form B1 DIN EN 1092-1	203R	1" Class 150 RF ASME B16.5-2003
	309D	DN25 PN40 Form D DIN EN 1092-1	223R	1" Class 300 RF ASME B16.5-2003
	201R	½" Class 150 RF ASME B16.5-2003 (reduced raised face diameter)	203J	1" Class 150 RTJ ASME B16.5-2003
	221R	½" Class 300 RF ASME B16.5-2003 (reduced raised face diameter)	223J	1" Class 300 RTJ ASME B16.5-2003



	Flange connections		
	305B	DN15 PN40 Form B1 DIN EN 1092-1	203R 1" Class 150 RF ASME B16.5-2003
	3A5B	DN20 PN40 Form B1 DIN EN 1092-1	223R 1" Class 300 RF ASME B16.5-2003
	309B	DN25 PN40 Form B1 DIN EN 1092-1	204R 1½" Class 150 RF ASME B16.5-2003
	309D	DN25 PN40 Form D DIN EN 1092-1	224R 1½" Class 300 RF ASME B16.5-2003
	313B	DN32 PN40 Form B1 DIN EN 1092-1	406R 15A 10K RF JIS B2220
	313D	DN32 PN40 Form D DIN EN 1092-1	407R 15A 16K RF JIS B2220
	201R	½" Class 150 RF ASME B16.5-2003 (reduced raised face diameter)	406F 15A 10K FF JIS B2220
	221R	½" Class 300 RF ASME B16.5-2003 (reduced raised face diameter)	407F 15A 16K FF JIS B2220
	202R	¾" Class 150 RF ASME B16.5-2003	
	222R	¾" Class 300 RF ASME B16.5-2003	
	Thread connections (installation length: 300mm, float not removable)		
	4000	G1/4" female thread	6030 1/2" NPT(f)
	4010	G3/8" female thread	6040 3/4" NPT(f)
	4020	G1/2" female thread	6832 DN25 TriClamp ISO 2852
	4030	G3/4" female thread	6830 DN25 TriClamp DIN 32676
	6010	1/4" NPT(f)	6630 RD52x1/6" DIN11851
	6020	3/8" NPT(f)	
(15)	Flange connections		
	305B	DN15 PN40 Form B1 DIN EN 1092-1 (reduced raised face diameter)	204R 1¼" Class 150 RF ASME B16.5-2003
	3A5B	DN20 PN40 Form B1 DIN EN 1092-1 (reduced raised face diameter)	224R 1¼" Class 300 RF ASME B16.5-2003
	309B	DN25 PN40 Form B1 DIN EN 1092-1	205R 1½" Class 150 RF ASME B16.5-2003
	309D	DN25 PN40 Form D DIN EN 1092-1	225R 1½" Class 300 RF ASME B16.5-2003
	313B	DN32 PN40 Form B1 DIN EN 1092-1	416R 25A 10K RF JIS B2220
	313D	DN32 PN40 Form D DIN EN 1092-1	417R 25A 16K RF JIS B2220
	202R	¾" Class 150 RF ASME B16.5-2003 (reduced raised face diameter)	416F 25A 10K FF JIS B2220
	222R	¾" Class 300 RF ASME B16.5-2003 (reduced raised face diameter)	417F 25A 16K FF JIS B2220
	203R	1" Class 150 RF ASME B16.5-2003	
	223R	1" Class 300 RF ASME B16.5-2003	
	Thread connections (installation length: 300mm, float not removable)		
	4000	G1/4" female thread	6030 1/2" NPT(f)
	4010	G3/8" female thread	6040 3/4" NPT(f)
	4020	G1/2" female thread	6842 DN25 TriClamp ISO 2852
	4030	G3/4" female thread	6840 DN25 TriClamp DIN 32676
	6010	1/4" NPT(f)	6640 RD52x1/6" DIN11851
	6020	3/8" NPT(f)	
(25)	Flange connections		
	317B	DN40 PN 40 Form B1 DIN EN 1092-1	426R 40A 10K RF JIS B2220
	317D	DN40 PN 40 Form D DIN EN 1092-1	427R 40A 16K RF JIS B2220
	205R	1½" 150 lbs RF ASME B16.5-2003	426F 40A 10K FF JIS B2220
	225R	1½" 300 lbs RF ASME B16.5-2003	427F 40A 16K FF JIS B2220
	Thread connections (installation length: 300mm, float not removable)		
	4030	G3/4" female thread	6060 1-1/4" NPT(f)
	4040	G1" female thread	6862 DN50 TriClamp ISO 2852
	4050	G1-1/4" female thread	6860 DN50 TriClamp DIN 32676
	6040	3/4" NPT(f)	6660 RD78x1/6" DIN 11851
	6050	1" NPT(f)	
(40)	Flange connections		
	321B	DN50 PN40 Form B1 DIN EN 1092-1	207R 2½" Class 150 RF ASME B16.5-2003
	321D	DN50 PN40 Form D DIN EN 1092-1	227R 2½" Class 300 RF ASME B16.5-2003
	325B	DN65 PN16 Form B1 DIN EN 1092-1	431R 50A 10K RF JIS B2220
	325D	DN65 PN16 Form D DIN EN 1092-1	432R 50A 16K RF JIS B2220
	326B	DN65 PN40 Form B1 DIN EN 1092-1	431F 50A 10K FF JIS B2220
	326D	DN65 PN40 Form D DIN EN 1092-1	432F 50A 16K FF JIS B2220
	206R	2" Class 150 RF ASME B16.5-2003	
	226R	2" Class 300 RF ASME B16.5-2003	
	Thread connections (installation length: 300mm, float not removable)		
	4050	G1-1/4" female thread	6060 1-1/4" NPT(f)
	4060	G1-1/2" female thread	6070 1-1/2" NPT(f)
	4070	G2" female thread	6080 2" NPT(f)
(50)	Flange connections		
	330B	DN80 PN16 Form B1 DIN EN 1092-1	209R 3½" Class 150 RF ASME B16.5-2003
	330D	DN80 PN16 Form D DIN EN 1092-1	229R 3½" Class 300 RF ASME B16.5-2003
	331B	DN80 PN40 Form B1 DIN EN 1092-1	441R 50A 16K FF JIS B2220
	331D	DN80 PN40 Form D DIN EN 1092-1	442R 50A 16K FF JIS B2220
(80)	Flange connections		



	208R	3" Class 150 RF ASME B16.5-2003	441F	50A 16K FF JIS B2220
	228R	3" Class 300 RF ASME B16.5-2003	442F	50A 16K FF JIS B2220
	Thread connections (installation length: 300mm, float not removable)			
	4070	G2" female thread	6080	2" NPT(f) (350mm)
	4080	G2-1/2" female thread	6090	2-1/2" NPT(f) (350mm)
	4090	G3" female thread	6092	3" NPT(f) (350mm)
	Flange connections			
(1H)	335B	DN100 PN16 Form B1 DIN EN 1092-1	341B	DN125 PN40 Form B1 DIN EN 1092-1
	335D	DN100 PN16 Form D DIN EN 1092-1	341D	DN125 PN40 Form D DIN EN 1092-1
	336B	DN100 PN40 Form B1 DIN EN 1092-1	210R	4" Class 150 RF ASME B16.5-2003
	336D	DN100 PN40 Form D DIN EN 1092-1	230R	4" Class 300 RF ASME B16.5-2003
	340B	DN125 PN16 Form B1 DIN EN 1092-1	211R	5" Class 150 RF ASME B16.5-2003
	340D	DN125 PN16 Form D DIN EN 1092-1	231R	5" Class 300 RF ASME B16.5-2003
	Flange connections			
(H5)	345B	DN150 PN16 Form B1 DIN EN 1092-1	346D	DN150 PN40 Form D DIN EN 1092-1
	345D	DN150 PN16 Form D DIN EN 1092-1	212R	6" Class 150 RF ASME B16.5-2003
	346B	DN150 PN40 Form B1 DIN EN 1092-1	232R	6" Class 300 RF ASME B16.5-2003
	Measuring ranges (Water 20°C, 1 mPas)			
	A	Model S: 0,5 - 5 l/h	Model P: 0,7 - 7 l/h	
	B	Model S: 1 - 10 l/h	Model P: 1,2 - 12 l/h	
	C	Model S: 1,6 - 16 l/h	Model P: 2 - 20 l/h	
	D	2,5 - 25 l/h		
	E	4 - 40 l/h		
	F	5 - 50 l/h		
	G	7 - 70 l/h		
	H	10 - 100 l/h		
	I	16 - 160 l/h		
	J	25 - 250 l/h		
	K	40 - 400 l/h		
	L	60 - 600 l/h		
	M	100 - 1000 l/h		
	N	160 - 1600 l/h		
	P	250 - 2500 l/h		
	Q	400 - 4000 l/h		
	R	600 - 6000 l/h		
	S	1000 - 10000 l/h		
	T	1600 - 16000 l/h		
	U	2500 - 25000 l/h		
	V	4000 - 40000 l/h		
	W	Model S: 6000 - 60000 l/h	Model P: 5500 - 55000 l/h	
	X	8000 - 80000 l/h		
	2	10000 - 100000 l/h		
	4	13000 - 130000 l/h		
	Heating / cooling			
	0	without heating / Cooling		
	1	Heating / cooling, connection EO12 mm	(stainless steel)	
	2	Heating / cooling, connection DN15, PN 40	(stainless steel)	
	3	Heating / cooling, connection ½" Class 150 ANSI	(stainless steel)	
	4	Heating / cooling, connection ½" NPT (F)	(stainless steel)	
	Damping / spring stop			
	0	without		
	F	with liquid damping		
	G	with Gas damping		
	A	with Spring stop		
	S	with Gas damping and spring stop		
	Self draining			
	0	without		
	L	with self draining body		
	-	Certificates		
	0	without		
	1	Certificate of compliance with the order 2.1		
	2	Test report 2.2		
	B	Inspection certificate 3.1 with material certificate (DIN EN 10204:2004)		
	C	Inspection certificate 3.2 with material certificate (DIN EN 10204:2004)		
	N	Material certificate NACE		
	-	Display		
	S	Standard display housing, Process temperature ≤ 150°C for electrical output,		



	Process temperature ≤ 200°C for local indication
V	Standard display housing forward advanced, process temperature ≤ 350°C
E	Stainless steel display housing IP67, working temperature ≤ 150°C
H	Stainless steel display housing IP67 forward advanced, process temperature ≤ 350°C
T	Standard display housing with pressure compensation, Process temperature ≤ 150°C for electrical output, Process temperature ≤ 200°C for local indication
W	Standard display housing with pressure compensation forward advanced, process temperature ≤ 350°C
Scale	
1	%-Scale (Water)
2	Measuring range-Scale (Water)
F	Double-scale (acc. customer preference)
4	%-Scale (Media)
5	Measuring range-Scale (Media)
Switches / electrical output	
0	without
1	1 x inductive switch, Type SJ 3,5 N
2	2 x inductive switch, Type SJ 3,5 N
3	1 x inductive switch, Type SJ 3,5 SN (safety design)
4	2 x inductive switch, Type SJ 3,5 SN (safety design)
6	Transmitter ES with HART-protocol, 4-20 mA, EEx ia
7	Transmitter ES with HART-protocol, 4-20 mA, EEx ia / 2x NAMUR-switch
8	Transmitter ES with HART-protocol, 4-20 mA, EEx ia / 1x NAMUR-switch, 1x pulse output
9	Transmitter ES with Profibus PA, EEx ia
C	1 x microswitch
D	2 x microswitch
E	1 x inductive switch, Type SB 3,5-E2, three wire
F	2 x inductive switch, Type SB 3,5-E2, three wire
G	1 x induktiver Grenzkontakt NCB2-12GM40-Z0
I	Transmitter ES with HART-protocol and counter module
K	Transmitter ES with Foundation Fieldbus
- Accessories	
0	without
X	special (separate specification necessary)
- Design	
H	Heinrichs
K	Kobold