

AQUAFLUX Electromagnetic Flowmeters

... the specialist for water and
wastewater measurements



- Polypropylene or KTW-approved hard rubber liner
- For flowrates from 10l/h to 300 000 m³/h or 0.4 to 1 350 000 US Gal/min and more
- Meter sizes DN 10-3000 and 3/8"-120", fitting length also in conformity with ISO

Variable area flowmeters

Vortex flowmeters

Flow controllers

Electromagnetic flowmeters

Ultrasonic flowmeters

Mass flowmeters

Level measuring instruments

Communications engineering

Engineering systems & solutions



AQUAFLUX Electromagnetic Flowmeters

– the specialists for water and sewage

AQUAFLUX

flowmeters measure the volumetric flowrate of electrically conductive liquids.

Fields of application

- Water and wastewater
- Environmental engineering
- Abrasion resistance: more than adequate for the application fields
- Chemical resistance: alkaline solutions (e.g. NaOH) up to 50% at 20°C / 68°F acids (e.g. HNO₃) up to 5% at 20°C / 68°F

Calibrated on **EN 45 001** certified calibration rigs, accuracy of calibration better than 99.97% of the measured value.



Modular design:

- separate version with connection box (see photo), signal converter in field housing or as 19" plug-in version
- compact version, various signal converters for direct mounting on the primary head

IP 67 as standard, equivalent to NEMA 6, (IP 68 on request), permanently submersible, suitable for ground burial

Fully welded housing, absolutely tight, rugged, resistant to corrosion



For flowrates from 10l/h to 300 000 m³/h or 0.4 to 1350000 US Gal/min and more

Meter sizes DN 10-3000 and 3/8"-120", fitting length also in conformity with ISO

Technical data

Meter sizes	
Compact systems	DN 10 - 1600 and 3/8" - 64"
AQUAFLUX F (separate)	DN 10 - 3000 and 3/8" - 120"
Pipe flanges	
to DIN 2501 (= BS 4504)	DN 10 - 50 and DN 80 / PN 40 DN 65 and DN 100 - 150 / PN 16 DN 200 - 1000 / PN 10 DN 1100 - 2000 / PN 6 DN 2200 - 3000 / PN 2.5 3/8" - 24" / Class 150lb / RF 14" - 120" / Class B or D / FF
to ANSI B 16.5 to AWWA	
Electrical conductivity	
	≥ 20 µS/cm
Temperatures	
Compact systems	Ambient temperature Process temperature - 25 to + 60°C - 25 to ≤ + 60°C - 13 to + 140°F + 23 to ≤ + 140°F - 25 to + 140°C - 25 to ≤ + 290°C - 13 to + 104°F + 23 to ≤ + 194°F
AQUAFLUX F (separate)	- 25 to + 60°C - 25 to ≤ + 290°C - 13 to + 140°F + 23 to ≤ + 194°F
Max. allowable operating data	
	Process temperature, operating pressure and vacuum load for the liner, refer to Page 6 "Limits"
Insulation class of field coils	
	E
Electrode design	
DN 10 - 3000 / 3/8" - 120" Option DN350 - 3000 / 14" - 120"	flat elliptical electrodes, solidly fitted, surface-polished field-replaceable electrodes WE
Protection category (EN 60 529 / IEC 529)	
Standard	IP67, equivalent to NEMA 6 (with field replaceable electrodes WE: IP65, equivalent to NEMA 4/4X)
Option	IP68, equivalent to NEMA 6
Grounding rings	
	available as an option
Materials	
<u>Measuring tube</u>	stainless steel 1.4301 (or higher materials number), equivalent to SS 304
<u>Liner</u>	
DN 10 - 0020 / 3/8" - 3/4"	Teflon®-PTFE
DN 25 - 0150 / 1" - 6"	Polypropylen
DN 200 - 3000 / 8" - 120"	hard rubber
<u>Electrodes</u>	
Standard	Hastelloy C4
Option	stainless steel 1.4571 or SS 316 Ti, titanium
Field replaceable WE	stainless steel 1.4571 or SS 316 Ti
<u>Connecting flanges*</u>	
DIN: DN 10 - 50, DN 80 (3/8" - 2", 3")	steel 1.0402 (C 22) or AISI C 1020
DIN: DN 65, ≥ DN 100 (≥ 4")	steel 1.0501 (RST 37.2) or AISI C 1035
ANSI	steel ASTM A 105N
<u>Housing*</u>	
DN 10 - 40 / 3/8" - 1 1/2"	GTW-S 30 (malleable cast iron)
≥ DN 50 / ≥ 2"	sheet steel
<u>Terminal box*</u>	
AQUAFLUX F (separate)	die-cast aluminium
<u>Grounding rings (option)</u>	stainless steel 1.4571 or SS 316 Ti

* with polyurethane coating

Teflon® is a registered trademark of DuPont

Background
Water Wastewater
Abrasive, corrosive and hot products
Non-contact measurement K > 0,05 µS/cm
Food, Beverage, Pharmaceutical
High Pressure and special connections
Integral and Remote
Signal converter Remote
Calibration / Measuring Principle
Sizing / instal- lation guides
Ordering guide

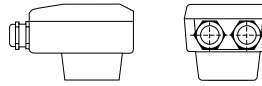
Dimensions and weights

PLEASE NOTE !

The **total dimension for the height** is obtained from **dimension b** (see table) **plus the height** of the terminal box or the signal converter, see drawings.

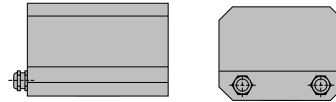
The **total weight** is made up of the weight of the signal converter (see table) **plus** the weight of the terminal box or signal converter, see below.

Terminal box



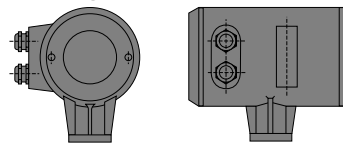
Weight approx. 0.5 kg (1.1 lb)

IFC 010 K and IFC 020 K signal converter



Weight approx. 1.6 kg (3.6 lb)

IFC 090 K signal converter



Weight approx. 2.3 kg (5.1 lb)

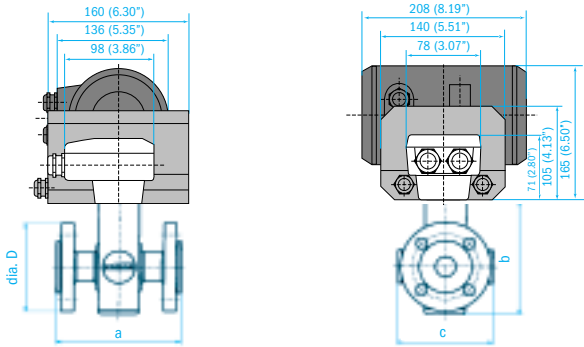
Flange connections to ...				Dimensions in mm (inches)
DIN 2501 (= BS 4504)	DN 10- 300	PN40, 16, 10		see table
	DN350-1000	PN 10		see table
	DN350-1000	PN25		see table, dimension "a _{standard} " + 200 mm
	≥ DN1200	PN 6, 2.5		information supplied on request
ANSI B 16.5	3/8"-24"	150 lb / RF		see table
		≥ 300 lb / RF		dimensions supplied on request
AWWA	≥ 14"	Class B, D / FF		dimensions supplied on request

- Dimension "a" without flange gaskets: not included with flowmeter, to be provided by customer.
- Meter size 3/8": flange connection 1/2"

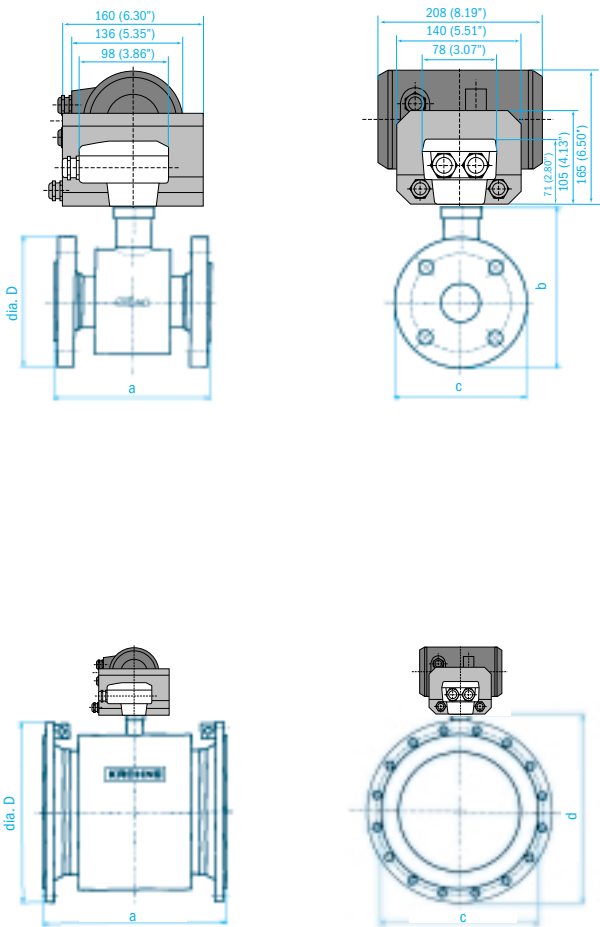
Nominal size		Dimensions in mm (inches)										Approx. weight in kg (lb)	
DIN	ANSI	a (fitting length)			b		c		dia. D			with DIN flanges	with ANSI flanges
DN	PN (psig)	inches	Standard	ISO 13 359	ANSI				DIN, ISO	ANSI			
10	40 (580)	3/8	150 (5.91)	-	150 (5.91)	165 (6.50)	121 (4.76)	90 (3.54)	88.9 (3.50)	5 (11.0)	6 (13.2)		
15	40 (580)	1/2	150 (5.91)	200 (7.87)	150 (5.91)	165 (6.50)	121 (4.76)	95 (3.74)	88.9 (3.50)	5 (11.0)	6 (13.2)		
20	40 (580)	3/4	150 (5.91)	200 (7.87)	150 (5.91)	165 (6.50)	121 (4.76)	105 (4.13)	98.6 (3.88)	7 (15.4)	8 (17.6)		
25	40 (580)	1	150 (5.91)	200 (7.87)	150 (5.91)	165 (6.50)	121 (4.76)	115 (4.53)	108 (4.25)	7 (15.4)	8 (17.6)		
32	40 (580)	-	150 (5.91)	200 (7.87)	-	180 (7.09)	139 (5.47)	140 (5.51)	-	8 (17.6)	-		
40	40 (580)	1 1/2	150 (5.91)	200 (7.87)	150 (5.91)	180 (7.09)	139 (5.47)	150 (5.91)	127 (5.00)	8 (17.6)	9 (19.8)		
50	40 (580)	2	200 (7.87)	200 (7.87)	200 (7.87)	218 (8.58)	160 (6.30)	165 (6.50)	152 (6.00)	8 (17.6)	8 (17.6)		
65	16 (232)	-	200 (7.87)	200 (7.87)	-	228 (8.98)	173 (6.81)	185 (7.28)	-	10 (22)	-		
80	40 (580)	3	200 (7.87)	200 (7.87)	200 (7.87)	235 (9.25)	173 (6.81)	200 (7.87)	191 (7.50)	12 (27)	13 (29)		
100	16 (232)	4	250 (9.84)	250 (9.84)	250 (9.84)	286 (11.26)	233 (9.17)	220 (8.66)	228 (8.98)	15 (33)	18 (40)*		
125	16 (232)	-	250 (9.84)	250 (9.84)	-	297 (11.69)	233 (9.17)	250 (9.84)	-	19 (42)	-		
150	16 (232)	6	300 (11.81)	300 (11.81)	300 (11.81)	327 (12.87)	257 (10.12)	285 (11.22)	279 (10.98)	22 (49)	26 (58)*		
200	10 (145)	8	350 (13.78)	350 (13.78)	350 (13.78)	385 (15.16)	291 (11.46)	340 (13.39)	343 (13.50)	34 (75)	42 (95)*		
250	10 (145)	10	400 (15.75)	450 (17.72)	400 (15.75)	437 (17.20)	331 (13.03)	395 (15.55)	406 (16.00)	48 (107)	64 (140)*		
300	10 (145)	12	500 (19.69)	500 (19.69)	500 (19.69)	500 (19.69)	381 (15.00)	445 (17.52)	533 (21.00)	58 (128)	94 (210)*		
350	10 (145)	14	500 (19.69)	550 (21.65)	700 (27.56)	548 (21.57)	428 (16.85)	505 (19.88)	597 (23.50)	78 (172)	129 (285)*		
400	10 (145)	16	600 (23.62)	600 (23.62)	800 (31.50)	606 (23.86)	483 (19.02)	565 (22.24)	635 (25.00)	98 (217)	165 (365)*		
500	10 (145)	20	600 (23.62)	-	800 (31.50)	651 (25.63)	533 (20.98)	670 (26.38)	699 (27.50)	128 (283)	223 (492)*		
600	10 (145)	24	600 (23.62)	-	800 (31.50)	820 (32.28)	585 (23.03)	780 (30.71)	813 (32.00)	164 (362)	306 (675)*		
700	10 (145)	28	700 (27.56)	-	flanges	937 (36.89)	694 (27.32)	895 (35.24)	flanges	245 (540)	flanges		
800	10 (145)	32	800 (31.50)	-	to AWWA:	1058 (41.65)	922 (36.30)	1015 (39.96)	to AWWA:	328 (724)	to AWWA:		
900	10 (145)	36	900 (35.43)	-	dimensions	1164 (45.83)	1026 (40.39)	1115 (43.90)	dimensions	425 (1000)	weight		
1000	10 (145)	40	1000 (39.37)	-	on request	1278 (50.31)	1132 (44.57)	1230 (48.43)	on request	507 (1118)	on request		

* max. pressure rating acc. DIN flanges, see column "PN (psig)"

DN10 - 40 / 3/8" - 1 1/2"



DN50 - 300 / 2" - 12"



Tolerance details for fitting length dimensions "a"

Standard

DN ≤ 300 / ≤ 12" : ±0.5%,
min. ± 1mm / ± 0.04"

DN ≥ 350 / ≥ 14" : ±0.5%

to ISO DIS 13 359

DN ≤ 200 / ≤ 8" : +0/-3

DN ≥ 250 / ≥ 10" : +0/-5



Background	Water	Abrasive, corrosive and hot products	Non-contact measurement	Food, Beverage, Pharmaceutical	High Pressure and special connections	Signal converter	Calibration / Measuring Principle	Sizing / installation guides	Ordering guide
	Wastewater		K ≥ 0.05 µs/cm		Integral and Remote	Remote			

AQUAFLUX flowmeter

Limits for pressure and temperature

Teflon® is a registered trademark of DuPont.

Liner	Flange		Pressure rating S Class	Max. operating pressure in bar (psig) at a process temperature of ...							
	Standard	Nominal diameter		≤20 °C (≤68 °F)	≤40 °C (≤105 °F)	≤60 °C (≤140 °F)	≤80 °C (≤176 °F)	≤90 °C (≤195 °F)			
PTFE	DIN 2501	DN 10 - 20	PN 40 S	40 (580)	40 (580)	40 (580)	40 (580)	40 (580)	40 (580)		
	ANSI B 16.5	3/8" - 3/4"	150 lb S	19.7 (285)	19.6 (284)	19.0 (275)	18.7 (271)	18.1 (262)			
			300 lb O	on request							
Polypropylen	DIN 2501	DN 25 - 50, DN 80	PN 40 S	40 (580)	40 (580)	40 (580)	40 (580)	40 (580)			
	ANSI B 16.5	1" - 6"	DN 65, DN 100 - 150 PN 16 S	16 (230)	16 (230)	16 (230)	16 (230)	16 (230)			
			150 lb S	19.7 (285)	19.6 (284)	19.0 (275)	18.7 (271)	18.1 (262)			
			300 lb O	on request							
Hard rubber	DIN 2501	DN 200 - 1000	PN 10 S	10 (150)	10 (150)	10 (150)	10 (150)	-			
			PN 16 O	16 (230)	16 (230)	16 (230)	16 (230)	-			
			PN 6 / 2.5 -	on request							
	ANSI B 16.5	"8""	≥DN 1200	150 lb S	19.7 (285)	19.6 (284)	19.0 (275)	18.7 (271)	-		
				300 lb O	23.6 (342)	23.6 (342)	23.4 (342)	22.5 (342)	-		
				10" 150 lb S	19.7 (285)	19.6 (284)	19.0 (275)	18.7 (271)	-		
				300 lb O	32.1 (465)	32.1 (465)	32.1 (465)	32.1 (465)	-		
				12" 150 / 300 lb S / O	19.7 (285)	19.6 (284)	19.0 (275)	18.3 (265)	-		
				14" 150 / 300 lb S / O	17.8 (258)	17.8 (258)	17.6 (255)	16.9 (245)	-		
				16" 150 / 300 lb S / O	15.6 (226)	15.6 (226)	15.4 (223)	14.8 (214)	-		
				18" 150 / 300 lb S / O	13.8 (200)	13.8 (200)	13.7 (198)	13.1 (190)	-		
				20" 150 / 300 lb S / O	12.4 (179)	12.4 (179)	12.3 (178)	11.8 (171)	-		
				22" 150 / 300 lb S / O	11.2 (162)	11.2 (162)	11.2 (162)	10.7 (155)	-		
24" 150 / 300 lb S / O	14.2 (205)	14.2 (205)	14.1 (204)	13.6 (197)	-						
			28" - 40" -	on request							
AWWA	≥14"	B S	6 (90)	6 (90)	6 (90)	6 (90)	-				
		D O	10 (150)	10 (150)	10 (150)	10 (150)	-				

S = Standard
O = Option

Vacuum load

Liner	Meter size		Min. operating pressure in bar (psig) at product temperature of ...			
	DN mm	inches	≤20°C (≤68°F)	≤40°C (≤105°F)	≤60°C (≤140°F)	80°C (≤176°F)
PTFE	DN10 - 20	3/8" - 3/4"	0 (0)	0 (0)	0 (0)	0 (0)
Polypropylen	DN25 - 150	1" - 6"	250 (3.6)	250 (3.6)	400 (5.8)	400 (5.8)
Hardrubber	DN200 - 3000	8 - 120	250 (3.6)	250 (3.6)	400 (5.8)	400 (5.8)
	DN350 - 1000	14 - 40	500 (7.3)	500 (7.3)	600 (8.7)	600 (8.7)
	≥ DN1200	≥48"	on request	on request	on request	on request