General Specifications

GS 01R21D01-00E-E

RXF
Magnetic Flowmeter
Integral Flowmeter
Remote Flowtube

RXF™ Magnetic Flowmeter

The RXF magnetic flowmeter series are sophisticated products with outstanding reliability and ease of operation, developed on the basis of decades of field-proven experience.

Integral Flowmeter

Remote Flowtube

Remote Flowtube RXF600

FEATURES

- **Accuracy**
  0.5 % of rate
- **Adhesion (Electrode Coating) Diagnosis**
  By constantly monitoring the level of insulating substance on the electrodes, it is possible to determine when maintenance is required.
- **Empty Pipe Detection**
  The unit can detect if the pipe is full or drained / empty.
- **Display mode, 1 Line / 2 Line / 3 Line**
  Select between various flow parameters and 1 line, 2 line or 3 line display mode to customize our clear and versatile process indicator. The backlit LCD indicator is full dot-matrix style. At alarm condition a full description of the necessary countermeasure is indicated.
- **Optical Infrared Switches**
  These “touch through glass” optical switches allow adjustment of all meter parameters without opening the cover.
- **Conductivity Limits**
  Size 15 mm to 1000 mm (0.5 to 40 in):
  ≥ 5 µS/cm (please see page 6 for details)
- **Multi-Range / Autorange Function**
  Status input enables different range selections on request. Autorange function is also possible up to 4 ranges.
- **Bidirectional Flow Measurement**
  Flow indication and totalization in both directions is standard.
- **Preset Totalizer / Batching**
  A totalizer preset controlled by the status input is available for batch operations.
- **Positive Zero Return (PZR / 0 % Signal Lock)**
  Status input will force display and all outputs to 0 %.
- **Flexible Direction for Wiring Ports**
  The converter or the terminal box for general-purpose use can be rotated arbitrarily to change the direction of the electrical ports.
- **Lay Length acc. to ISO 13359**
  Flanged flowtubes styles, sizes 15 mm to 400 mm (0.5 to 16 in), have lay length according to ISO 13359.
- **“Easy Setup” Parameters**
  The most frequently used parameters are arranged in a group at the top.
- **High-Speed Pulse Output**
  The pulse rate goes up to 10,000 pps (pulse/second) for use with high speed applications such as short time batch processes.
- **Programmable Input / Output Configuration**

The integral flowmeter provides capability to customize the number of signal inputs and outputs.

CONTENTS

YOKOGAWA

Rota Yokogawa GmbH & Co. KG
Rheinstr. 8
D-79664 Wehr
Germany

GS 01R21D01-00E-E

4th edition February 2009 (Rü)

STANDARD SPECIFICATIONS

Converter

Excitation Method:
Pulsed DC excitation

Output Signals:
- One Current Output: 4 to 20 mA DC (load resistance: 0 to 750 Ω maximum, including cable resistance)
- One Pulse Output (*1):
  Transistor contact output (open collector) :
  Switching capacity : 30 V DC (OFF), 200 mA (ON)
  Output rate 0.0001 to 10,000 pps (pulse/second)
- One Alarm Output (*1):
  Transistor contact output (open collector) :
  Switching capacity : 30 V DC (OFF), 200 mA (ON)
- Two Status Outputs (*1):
  Transistor contact output (open collector) :
  Switching capacity : 30 V DC (OFF), 200 mA (ON)

Input Signal:
One Status Input: Dry contact
Resistance: 200 Ω or less (ON), 100 kΩ or more (OFF).

Communication Protocols:
BRAIN or HART communication signal
(Superimposed on the 4 to 20 mA DC signal)

Communication Line Conditions:
Load Resistance:
BRAIN : 250 to 600 Ω (including cable resistance)
HART : 230 to 600 Ω (including cable resistance)
Distance from Power Line: 15 cm (6 in) or more (parallel wiring should be avoided.)

BRAIN:

Communication Distance:
Up to 2 km (1.25 miles), when polyethylene insulated PVC-sheathed cables (CEV cables) are used.
Communication distance varies depending on the type of cable and wiring used.
Load Capacitance: 0.22 µF or less
Load Inductance: 3.3 mH or less
Input Impedance of Communicating Device:
10 kΩ or more (at 24 kHz)

HART:

Communication Distance:
Up to 1.5 km (0.9 mile), when using multiple twisted pair cables. Communication distance varies depending on the type of cable used.

Cable Length For Specific Applications:
Use the following formula to determine the cable length for specific applications.

$$L = \frac{65 \times 10^6}{(R \times C)} - \frac{(Cf + 10{,}000)}{C}$$

where:
L = length in m or ft
R = resistance in Ω (including barrier resistance)
C = cable capacitance in pF/m or pF/ft
Cf = maximum shunt capacitance of receiving devices in pF/m or pF/ft

Note: HART is a registered trademark of the HART Communication Foundation.

Data Security During Power Failure:
Data (parameters, totalizer value, etc.) storage by EEPROM. No back-up battery required.

Indicator:
Full dot-matrix LCD (32 x 132 pixels) (*2)

Lightning Protection:
The lightning protection is built into the current output, pulse/alarm/status input and output terminals as standard.

Protection/Rating:
- IP66, IP67, if RXFxxxG is selected
- IP68, if RXFxxxW is selected

Coating/Paint:
All items are painted with polyurethane corrosion resistant paint.
Flowtube body: RAL 7047
Connection box: Mint green coating (Munsell 5.6 BG 3.3/2.9 or its equivalent)
Converter housing: Mint green coating (Munsell 5.6 BG 3.3/2.9 or its equivalent)

Converter / Terminal Box Material:
Case and Cover: Aluminum alloy

Wiring Port Threads / Mounting:
- Electrical Connection: ANSI 1/2 NPT female
  ISO M20 x 1.5 female
- Direction of electrical connection can be changed even after delivery
  Note: In case of submersible types RXFxxxW... , or of /DHC option types the direction can not be changed after delivery.
- Terminal Connections: M4 size screw terminal

Grounding:
Grounding resistance 100 Ω or less

*1: Select one of the following 3 choices
- 1 Pulse output, 1 Status/Alarm output
- 1 Status/Alarm output, 1 Status input
- 2 Status/Alarm outputs

*2: For models without an indicator, the hand-held terminal is necessary to set and read parameters.

T30.EPS

Functions

How to Set Parameters:
The indicator's LCD and three infra-red switches enable users to set parameters without opening the cover. Parameters can also be set by means of the HHT (hand-held terminal). (*1)

Displayed Languages:
Users can choose one of the following languages : English, French, German, Italian, Japanese or Spanish. (*1)

Display Customization:
Select
- 1- line to 3- line mode
- Flowrate as
  - Instantaneous flow rate
  - Instantaneous flow rate (%)
  - Instantaneous flow rate (bar graph)
- Current output value (mA)
- Totalized value
- Tag No.
- Electrode diagnostic results

Totalizer Functionality:
The flow rate is counted one pulse at a time according to the setting of totalization pulse weights. For forward and reverse flow measurement functions, the totalized values of the flow direction (forward or reverse) and the flow direction are displayed on the indicator together with the units. The difference of totalized values between the forward and reverse flow rate can be displayed. Totalization for the reverse flow rate is carried out only when "Forward and reverse flow measurement function" is selected. (*2)

Damping Time Constant:
Time constant (63% response) can be set from 0.3 s to 200.0 s. (*2)

Span / Full Scale Flow Range Setting (20mA):
Span flows can be programmed in units such as volume flow rate, mass flow rate, time, or flow rate value. The velocity unit can also be set. (*2)
Volume Flow Rate Unit:
kcf, cf, mcf, Mgal (US),
kgal (US), gal (US), mgal (US), kbbl (US)*,
bbl (US)*, mbbl (US)*, µbbl (US)*,
Ml (Megaliter), m^3, kl (kiloliter), l (liter), cm^3
Mass Flow Rate Unit (Density must be set.):
lb (US-pound), klb (US), t (ton), kg, g
Velocity Unit:
ft, m (meter)
Time Unit:
s (sec), min, h (hour), d (day)
* "US oil" or "US beer" can be selected.
The converter will provide 20 mA output current at the programmed span / full scale flow range.

Pulse Output:
Scaled pulses can be generated by programming the "pulse unit" and the "pulse scale " parameters.
Pulse Width: Duty cycle 50% or fixed pulse width (0.05, 0.1, 0.5, 1, 20, 33, 50, 100 ms) can be selected arbitrarily.
Output Rate: 0.0001 to 10,000 pps (pulse/second) (*2)

Multi-Range / Auto Range Span Function:
Status input enables to select up to two ranges. For automatic range switching, the status of up to four ranges can be shown in status outputs and on the indicator. (*1)(*2)

Fwd / Rev Flow Measurement Functions
Flows in both forward and reverse directions can be measured. Set the parameter F20 or F21 = Fwd/Rev Rngs. The status is shown in status outputs and on the indicator during reverse flow measurement. (*1)(*2)

Totalization Switch:
The status is output if a totalized value becomes equal or greater than the set value. (*2)

Preset Totalization:
The parameter setting or status input enables the totalized value to be preset to a setting value or zero. (*1)

Positive Zero Return (PZR / 0 % Signal Lock):
Status input will force display and all outputs to 0 %. (*1)(*2)

Alarm Selection Function:
Alarms are classified into the System Alarms (hard failures), Process Alarms (such as 'Empty Pipe', 'Signal Overflow' and 'Adhesion Alarm'), Setting Alarms and Warnings. Whether alarms should be generated or not can be selected for each item. The current output generated for an alarm can be selected arbitrarily from among 2.4 mA or less, fixed to 4 mA, 21.6 mA or more, or HOLD. (*1)

Alarm Output:
Alarms are generated only for the items selected via the 'Alarm Selection Function' in menu ´G´, if relevant failures occur. (*2)

Self Diagnostic Functions:
If alarms are generated, details of the System Alarms, Process Alarms, Setting Alarms and Warnings are displayed together with concrete descriptions of countermeasures. (*1)(*2)

Flow Upper / Lower Limit Alarms:
If a flow rate becomes greater or smaller than the set value, this alarm is generated. In addition, two upper limits (H, HH) and two lower limits (L, LL) can be set. If a flow rate gets higher or lower than any of the set values, the status is output. (*2)

Adhesion (Electrode Coating) Diagnostics:
This function enables monitoring of the adhesion level of insulating substances to the electrodes. Depending on the status of adhesion, users are notified by a warning or an alarm via status outputs. (*1)(*2)

*1: Select one of the following 3 choices
- 1 Pulse output, 1 Status/Alarm output
- 1 Status/Alarm output, 1 Status input
- 2 Status/Alarm outputs

*2: For models without an indicator, the hand-held terminal is necessary to set and read parameters.

T30.EPS

Flowtubes (Remote / Integral Flowmeter)

Combined Converter selection:

- A remote flowtube for sizes of up to 400 mm can be combined with the RXFA11 Converter or the RXFA14 Converter. If a combined converter is changed from RXFA11 to RXFA14 or vice versa, a new meter factor must be adjusted by flow calibrations.
- A remote flowtube for sizes of 450 mm or larger can be combined with the RXFA11 Converter only.
- Maximum Cable Length:
  Combination of RXF remote flowtube and RXFA11: up to 200 m (660 ft)
  Combination of RXF remote flowtube and RXFA14: up to 100 m (330 ft)
- An integral flowmeter is available for sizes 15 to 400 mm as standard, sizes 450 ... 600 on request.

Wiring Port Threads / Mounting (Remote Flowtube):

- Electrical Connection: ANSI 1/2 NPT female
  ISO M20 x 1.5 female
- Direction of Electrical Connection: The direction can be changed even after delivery.
  Note: In case of submersible types RXFxxxW... or /DHC option types the direction can not be changed after delivery.
- Terminal Connection at Terminal Box: M4 size screw

Grounding:

Grounding resistance 100 Ω or less

Available Materials for Flowtubes

Part name		Material
Flowtube housing		Carbon steel
Flange		Carbon steel / Stainless steel
Pipe + Neck		Stainless steel
Terminal box (Remote flowtube) Converter housing	Case, Cover (15 to 1000 mm) (0.5 to 40 in)	Aluminum alloy

T05-1.EPS

Available Material for Lining

Hard rubber (lining code Y)
Hardness (shore D) = 78 ± 5
Temperature range: -10 ... 90 °C (14 ... 194 °F)

Available Material for Electrodes:

Stainless steel AISI316L / 1.4404
Hastelloy C276 or its equivalent (*1) / 2.4819

Electrode Construction:

Non-replaceable electrode style for flowsignal- and grounding electrodes
Internally inserted:
d = 7 mm

*1: Hastelloy is a registered trademark of Haynes International Inc.

Overview about Sizes and Styles

Unit: mm (in)

Use	Process Connection	Lining	Remote Flowtube	Integral Flowmeter
General-purpose Use	Flange	Hard Rubber	15 (0.5)	15 (0.5)
		Hard Rubber	25 (1.0), 32 (1.25), 40 (1.5), 50 (2.0) 65 (2.5), 80 (3.0), 100 (4.0), 125 (5.0), 150 (6.0), 200 (8.0), 250 (10), 300 (12), 350 (14), 400 (16), 450(18), 500 (20), 600 (24), 700 (28), 800 (32), 900 (36), 1000 (40)	25 (1.0), 32 (1.25), 40 (1.5), 50 (2.0) 65 (2.5), 80 (3.0), 100 (4.0), 125 (5.0), 150 (6.0), 200 (8.0), 250 (10), 300 (12), 350 (14), 400 (16)
Submersible Style	Flange	Hard Rubber	15 (0.5)	—
		Hard Rubber	25 (1.0), 32 (1.25), 40 (1.5), 50 (2.0), 65 (2.5), 80 (3.0), 100 (4.0),125 (5.0), 150 (6.0), 200 (8.0), 250 (10), 300 (12), 350 (14), 400 (16), 450 (18), 500 (20), 600 (24), 700 (28), 800 (32), 900 (36), 1000 (40)	

T21.EPS

STANDARD PERFORMANCE

Reference Conditions:

Similar to BS EN 29104 (1993); ISO 9104 (1991)

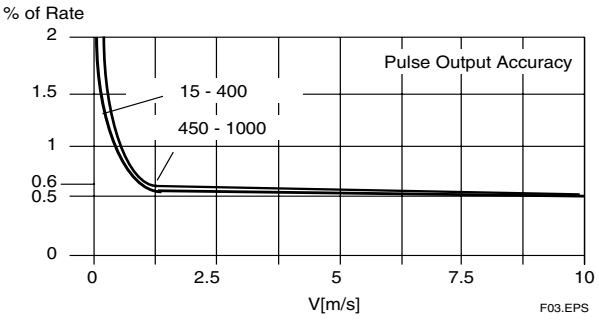
- Fluid temperature: 20 °C ±10 °C (+68 °F ±18 °F)
- Ambient temperature: 25 °C ± 5 °C (+77 °F ±9 °F)
- Warm-up time: 30 min
- Straight runs
  Upstream > 10 x DN
  Downstream > 5 x DN
- Properly grounded
- Properly centered

Accuracy (at reference conditions)

Pulse Output Accuracy:

Size mm (in)	Flow Velocity V m/s (ft/s)	Accuracy
15 (0.5) to 400 (16)	V < 0.25 (0.8)	± 2.5 mm/s
	0.25 ≤ V ≤ 10 (0.8) (33)	± 0.5 % of Rate ± 1.25 mm/s
450 (18) to 1000 (40)	V < 0.25 (0.8)	± 3.75 mm/s
	0.25 ≤ V < 10 (0.8) (33)	± 0.5 % of Rate ± 2.5 mm/s

T02.EPS



Current Output Accuracy:

Pulse output accuracy plus 0.05 % of Span

Repeatability:

± 0.175 % of Rate (V ≥ 1 m/s (3.3 ft/s))

± 0.05 % of Rate ± 1.25 mm/s (V<1 m/s (3.3 ft/s))

Temperature coefficient:

If fluid temperature is outside 20 °C ± 10°C please allow additional error of
< ± 0.02 % of reading / °C process temperature
typical:
< ± 0.01 % of reading / °C process temperature

Maximum Power Consumption:

Integral Flowmeter: 12 W
Remote Flowtube:
Combined with RXFA11: 20 W
Combined with RXFA14: 12 W

Insulation Resistance (Performance / Requirements):

Integral Flowmeter :
100 MΩ between power terminals and ground terminal at 500 V DC
100 MΩ between power terminals and each output/status input terminal at 500 V DC
20 MΩ between ground terminal and each output/status input terminal at 100 V DC
20 MΩ between output/status input terminals at 100 V DC
Remote Flowtube:
100 MΩ between excitation terminals and each signal terminal at 500 V DC
100 MΩ between signal terminals at 500 V DC (*1)

Withstand Voltage (Performance):

Integral Flowmeter
Between power supply terminals and ground terminal: 1390 V AC for 2 s
Between power supply terminals and input/output terminals: 1390 V AC for 2 s
Remote Flowtube
Between excitation current terminal and ground terminal: 1500 V AC for 1 min
Between signal terminals and ground terminal 1500 V AC for 1 min
Between signal terminals and excitation current terminal: 2000 V AC for 1 min (*1)

Safety Requirement Standards:

EN 61010-1

- Altitude at installation site: Max. 2000 m above sea level
- Installation category based on IEC 1010:
  Overvoltage category II ("II" applies to electrical equipment which is supplied from the fixed installation like distribution board.)
- Pollution degree based on IEC 1010
  Pollution degree 2 ("Pollution degree" describes the degree to which a solid, liquid, or gas which deteriorates dielectric strength or surface resistivity is adhering. "2" applies to a normal indoor atmosphere.)

EMC Conformity Standards:

EN 61326
EN 61000-3-2, EN 61000-3-3

⚠ CAUTION

*1:
- Before performing the Insulation Resistance Test or the Withstand Voltage Test please obey the following caution:
  - Following the relevant test, wait for more than 10 s after the power supply has been turned off before removing the cover.
  - After testing, be sure to use a resistor for discharge and return the short bar to its correct position.
  - Screws must be tightened to a torque of 1.18 Nm or more.
  - After closing the cover, the power supply can be restored.

Pressure Equipment Directive (PED):
Module: H
Type of Equipment: Piping
Type of Fluid: Liquid (*1), see table below
Group of Fluid: 2

Model	DN [mm]	PS [MPa] (*2)	PS * DN [MPa * mm] (rounded up)	Category liquid (*1) (diagram 9)
RXF015	15	10.21	153.15	SEP (*3)
RXF025	25	10.21	255.25	SEP (*3)
RXF032	32	10.21	326.72	SEP (*3)
RXF040	40	10.21	408.4	SEP (*3)
RXF050	50	10.21	510.5	SEP (*3)
RXF065	65	10.21	663.65	SEP (*3)
RXF080	80	10.21	816.8	SEP (*3)
RXF100	100	10.21	1021	SEP (*3)
RXF125	125	10.21	1276.25	SEP (*3)
RXF150	150	10.21	1531.5	SEP (*3)
RXF200	200	10	2000	SEP (*3)
RXF250	250	6.3	1575	I
RXF300	300	6.3	1890	I
RXF350	350	4	1400	I
RXF400	400	4	1600	I
RXF450	450	4	1800	I
RXF500	500	4	2000	I
RXF600	600	4	2400	I
RXF700	700	1	700	I
RXF800	800	1	800	I
RXF900	900	1	900	I
RXF10L	1000	1	1000	I

T10-1.EPS

Notes:
(*1) definition of “Liquid” according PED regulation article 3, section 1.3(b)
(*2) PS : Maximum allowable pressure for flowtube;
in case of ASME flanges the value of PS is based on:
class 150, flange material A105: PS = 1.96MPa
class 300, flange material A105: PS = 5.11MPa
class 600, flange material A105: PS = 10.21MPa
(*3) SEP = Sound Engineering Practice according article 3 section 3

NORMAL OPERATING CONDITIONS

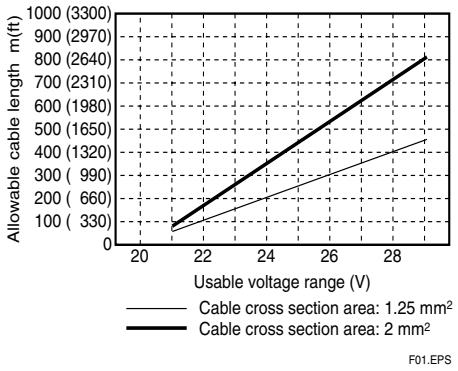
Ambient Temperature: -40 °C to 60 °C (-40 °F to 140 °F)
- Minimum temperature should also be limited according to minimum fluid temperature of linings.
- Indicator’s operating range (integral flowmeter): -20 °C to 60 °C (-5 °F to 140 °F)
- Maximum temperature should be 50 °C (122 °F) in the case of 24V (Power supply code 2).

Ambient Humidity: 0 to 100 %
Lengthy continuous operation at 95 % humidity or more is not recommended.

Power Supply (integral type):
Power supply suffix code 1:
- AC specifications
  Rated power supply: 100 to 240 V AC, 50/60 Hz
  (Operating voltage range: 80 to 264 V AC)
- DC specifications
  Rated power supply: 100 to 120 V DC
  (Operating voltage range: 90 to 130 V DC)

Power supply suffix code 2:
- AC specifications
  Rated power supply: 24 V AC, 50/60 Hz
  (Operating voltage range: 20.4 to 28.8 V AC)
- DC specifications
  Rated power supply: 24 V DC
  (Operating voltage range: 20.4 to 28.8 V DC)

Supplied Power and Cable Length for 24V (Power Supply Code 2)

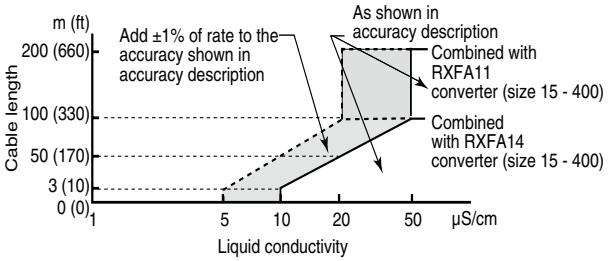


F01.EPS

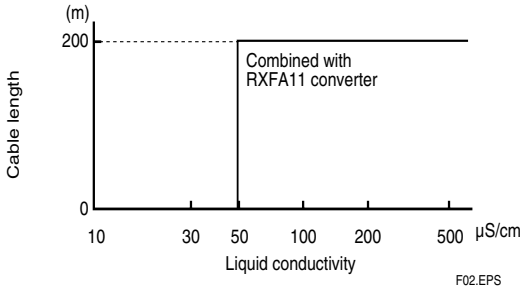
Fluid Conductivity:
Size 15 to 400 mm (0.5 to 16 in): 5 µS/cm or larger
Size 450 to 1000 mm (18 to 40 in): 50 µS/cm or larger

Cable Length and Liquid Conductivity (Remote Flowtube):

Size 15 to 400 mm (0.5 to 16 in)



Size 450 to 1000 mm (18 to 40 in)



Vibration Conditions:

Level of vibration in conformity with IEC 60068-2-6 (SAMA 31.1-1980)

- Integral flowmeter (size 15 to 300 mm (0.5 to 12 in)): 1 G or less (frequency 250 Hz or less)
- Remote Flowtube (size 15 to 300 mm (0.5 to 12 in)): 2 G or less (frequency 250 Hz or less)

Note: Avoid locations with much vibration (where the pipe vibration frequency is 250 Hz or more), which may cause damage to the equipment.

Measurable Flow Rate Range:

SI Units (Size: mm, Flow rate: m³/h)

Size (mm)	0 to Min. Span Flow Rate (0.3 m/s)	0 to Max. Span Flow Rate (10 m/s)	Default settings (m³/h)
15	0 to 0.190 m³/h	0 to 6.361 m³/h	2.5
25	0 to 0.530	0 to 17.671	5
32	0 to 0.867	0 to 28.967	10
40	0 to 1.357	0 to 45.23	15
50	0 to 2.120	0 to 70.68	20
65	0 to 3.583	0 to 119.45	50
80	0 to 5.428	0 to 180.95	75
100	0 to 8.482	0 to 282.74	100
125	0 to 13.254	0 to 441.7	150
150	0 to 19.086	0 to 636.1	250
200	0 to 33.930	0 to 1130.9	400
250	0 to 53.016	0 to 1767.1	600
300	0 to 76.341	0 to 2544.6	1000
350	0 to 103.92	0 to 3463	1200
400	0 to 135.12	0 to 4523	1500
450	0 to 171.768	0 to 5725	2000
500	0 to 212.07	0 to 7068	3000
600	0 to 305.37	0 to 10178	4000
700	0 to 415.65	0 to 13854	5000
800	0 to 542.88	0 to 18095	7000
900	0 to 687.09	0 to 22902	9000
1000	0 to 848.25	0 to 28274	10000

T11.EPS

Fluid Temperature and Pressure:

The fluid temperature range is for hard rubber: -10°C to 90°C (14°F to 194°F).

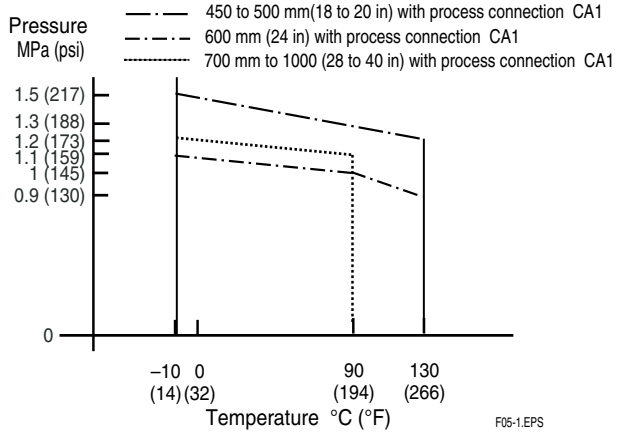
The following tables and figures show maximum allowable fluid pressure for the instrument.

Process connection	Max. Pressure [MPa / psi] @ amb. temp	Max. Pressure [MPa / psi] @ 90°C	Available Size Hard rubber
BD1	1.0 / 145	0.98 / 142	200 to 600
BD2	1.6 / 232	1.56 / 226	065 to 400
BD3	2.5 / 362	2.44 / 353	150 to 200
BD4	4.0 / 580	3.91 / 566	015 to 200
CD1	1.0 / 145	0.93 / 134	200 to 10L
CD2	1.6 / 232	1.49 / 216	065 to 600
CD3	2.5 / 362	2.33 / 337	150 to 600
CD4	4.0 / 580	3.73 / 540	015 to 600
CD5	6.3 / 913	5.88 / 852	015 to 300
CD6	10 / 1450	9.33 / 1352	015 to 200
CE2	1.6 / 232	1.49 / 216	065
CA1	1.95 / 283	1.77 / 256	015 to 400 *1)
CA2	5.11 / 741	4.66 / 675	015 to 080 *2)
CA4	See figure below	See figure below	015 to 150
FA1	1.95 / 283	1.77 / 256	450 to 600
FA2	5.11 / 741	4.66 / 675	100 to 200
FA4	10.21 / 1480	9.32 / 1351	050 to 300

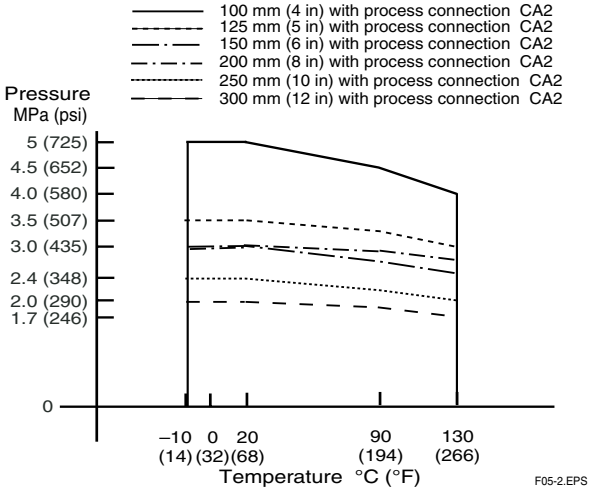
T33.EPS

*1) for CA1 size 450 to 10L see figure below

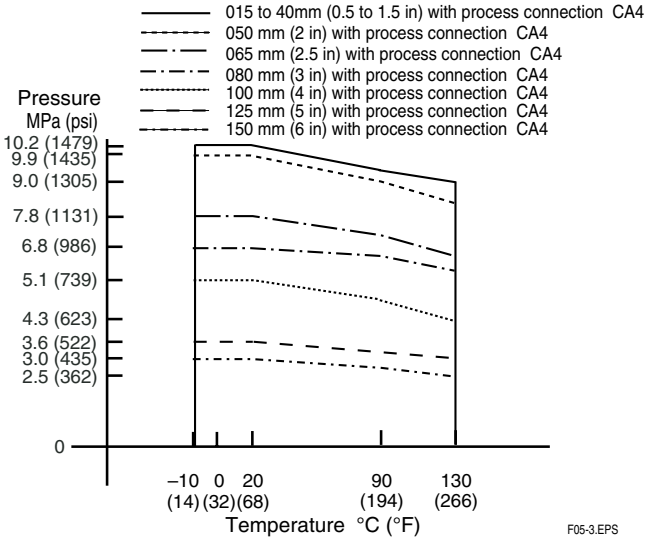
*2) for CA2 size 100 to 300 see figure below
for CA2 size 350 to 600 see rating for CA1



F05-1.EPS



F05-2.EPS

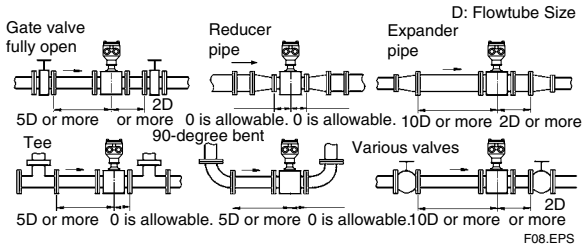


F05-3.EPS

CAUTIONS FOR INSTALLATION

Mounting of Flowmeter and Required Lengths of Straight Runs

(See JIS B7554 “Electromagnetic flowmeters. ”)



Required straight runs

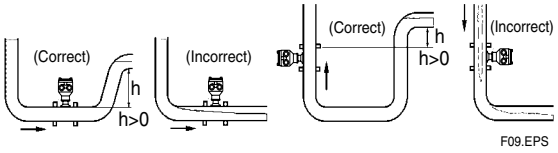
- Do not install anything in the vicinity that may interfere with the magnetic field, induced signal voltages, or flow velocity distributions of the flowmeter.
- A straight run may not be required on the downstream side of the flowmeter. However, if a downstream valve or other fitting causes irregularity deviation in flows, provide a straight run of 2D to 3D on the downstream side.
- Highly recommend to mount valves on the downstream side so that deviated flows do not occur in the flowtube and to avoid startup from an empty condition.

Maintaining Stable Fluid Conductivity

Do not install the flowmeter where fluid conductivity tends to become uneven. If chemicals are fed near the upstream side of an electromagnetic flowmeter, they may affect the flowmeter’s indications. To avoid this situation, it is recommended that the chemical feed ports are located on the downstream side of the flowmeter. If it is unavoidable that chemicals must be fed on the upstream side, provide a sufficient length of straight run (approximately 50D) to ensure the proper mixture of fluids.

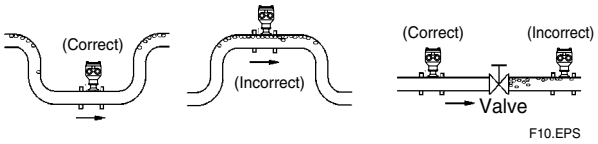
Piping Configuration

- Pipes must be fully filled with liquids.
  It is essential that pipes remain filled at all times, or flow rate indications may be affected and measurement errors may be caused.
- Pipes shall be designed so as to maintain the flowtube always filled with fluids.
- Vertical mounting is effective in cases where fluids tend to separate or solid matter may be precipitated. When employing vertical mounting, direct the fluids from the bottom to the top to ensure that pipes remain fully filled.



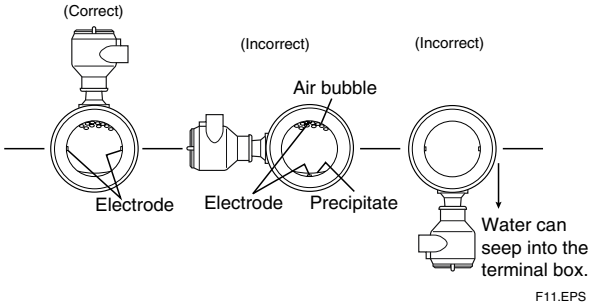
Mounting Positions

- Avoid Air Bubbles:
  - If air bubbles enter a measurement pipe, flow rate indications may be affected and measurement errors may be caused.
  - In cases where fluids contain air bubbles, piping must be designed to prevent them from accumulating in the measurement pipe of a flowtube.
  - If a valve exists near the flowtube, try to mount the flowtube on the valves upstream side in order to prevent a possible reduction of pressure inside the pipe, thereby avoiding the possibility of air bubbles.



Avoiding of Air Bubbles

- Mounting Orientation:
  - If electrodes are perpendicular to the ground, air bubbles near the top or precipitates at the bottom may cause measurement errors.
  - Ensure that the terminal box of a remote flowtube and converter of an integral style are mounted above the piping to prevent water from entering them.



Mounting Orientation

ACCESSORIES

Remote Flowtube:

Hexagonal wrench: 2 pcs.

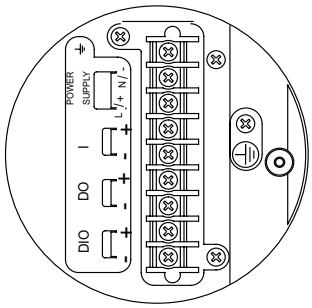
Integral Flowmeter:

Time lag Fuse (T2.0A, 250 V): 1 pc.
Hexagonal wrench: 2 pcs.

TERMINAL CONFIGURATION AND TERMINAL WIRING

Integral Flowmeter

Terminal configuration



Terminal wiring

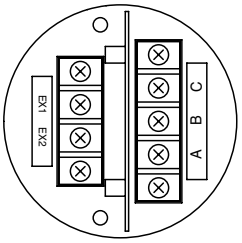
Terminal Symbols	Description
⏚	Functional grounding
N/- L/+	Power supply
I+ I-	Current output 4 to 20mA DC
DO+ DO-	Pulse output/Alarm output/ Status output
DIO+ DIO-	Alarm output/Status output Status input
⏚	Protective grounding (Outside of the terminal)

F41.EPS

Remote Flowtube

Note : If RXF Remote Flowtube is ordered with option /L***, signal- and excitation cable will be supplied with the flowtube. Cable RXFC must not be ordered. If submersible style RXFxxxW... or condensation proof option /DHC is selected, waterproof glands and signal- and excitation cables are attached. Cable length must be defined by using option code /L***.

Terminal configuration



size 15 to 1000 mm (0.5 to 40 in)

Terminal wiring

Terminal Symbols	Description
A B C	Flow signal output
EX1 EX2	Excitation current input
⏚	Protective grounding (Outside of the terminal)

F42.EPS

Recommended Excitation, Power and Output cable:

Use polyvinyl chloride insulated and shielded portable power cables.

- Outer diameter: 6.6 to 12 mm (0.26 to 0.47 in)
- Nominal Cross section: 0.5 to 2.5 mm²

LAY-LENGTH TABLE

Size	Lay length code		
	1	3	4
RXF015 to 080	200	not applicable	not applicable
RXF100 t0 125	250		
RXF150	300		
RXF200	350		
RXF250	450		
RXF300	500		
RXF350	550		
RXF400	600		
RXF450	690	650	600
RXF500	750	650	600
RXF600	800	780	600
RXF700	900	910	700
RXF800	1050	1040	800
RXF900	1200	1170	900
RXF10L	1300	n/a	1000

RECOMMENDED GASKETS BETWEEN FLOWTUBES AND USER'S FLANGES

Use compressed non-asbestos fiber gaskets, PTFE gaskets or gaskets which have equivalent elasticity.

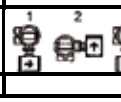
CABLE RXFC (FOR REMOTE INSTALLATION)

Model	Suffix Code	Option Code	Description	Restrictions
RXFC			Dedicated cable for RXF magnetic flowmeter series	
Cable ends	-0 -4		No termination, one set of termination parts for M4 screws is attached Terminated	not for L250 to L500
Signal cable length	-Lxxx		max. 200m for use with RXFA11; max. 100m with RXFA14 the following lengths can be ordered (e.g. 5m = L005): 2m, 5m, 10m, 15m, 20m, 25m, 30m, 35m, 40m, 45m, 50m, 60m, 70m, 80m, 90m, 100m, 150m, 200m, 250m, 300m, 350m, 400m, 450m, 500m	
Termination kits		/Cx	Quantity of additional termination kits x = 1 to 9: quantity 1 to 9; x = A: quantity 10; x = B: quantity 20; x = C: quantity 30; x = D: quantity 40; x = E: quantity 50; x = F: quantity 100	
Excitation cable length		/Axxx	Designate the excitation cable length identical to the signal cable lenght as described above.	select the same length xxx as for signal cable Lxxx

MODEL AND SUFFIX CODE

RXF STANDARD (Flange Type)

General-purpose Use/Submersible Style

	Model		Description	Restrictions
Size	RXF015		DN15 / 0.5"	
	RXF025		DN25 / 1"	
	RXF032		DN32 / 1.25"	
	RXF040		DN40 / 1.5"	
	RXF050		DN50 / 2"	
	RXF065		DN65 / 2.5"	
	RXF080		DN80 / 3"	
	RXF100		DN100 / 4"	
	RXF125		DN125 / 5"	
	RXF150		DN150 / 6"	
	RXF200		DN200 / 8"	
	RXF250		DN250 / 10"	
	RXF300		DN300 / 12"	
	RXF350		DN350 / 14"	
	RXF400		DN400 / 16"	
	RXF450		DN450 / 18"	remote flowtube only
	RXF500		DN500 / 20"	remote flowtube only
	RXF600		DN600 / 24"	remote flowtube only
	RXF700		DN700 / 28"	remote flowtube only
	RXF800		DN800 / 32"	remote flowtube only
	RXF900		DN900 / 36"	remote flowtube only
	RXF10L		DN1000 / 40"	remote flowtube only
Use		G	General Type	
		W	Submersible Type flowtube junctionbox is potted with electrode- and excitation cable attached	only for -R ,-P, -T, -N only with option /L***
Output Communication Converter Style		-E	Integral flowmeter, 4-20mA DC; HART	up to RXF400
		-D	Integral flowmeter, 4-20mA DC; BRAIN	up to RXF400
		-R	Remote Flowtube including converter RXFA14G, HART	up to RXF400
		-P	Remote Flowtube without converter (usage RXFA14G)	up to RXF400
		-T	Remote Flowtube including converter RXFA11G, HART	
		-N	Remote Flowtube without converter (use RXFA11G)	
Power Supply		1	Version 100-240 VAC / 100-120 VDC	
		2	Version 24 VAC / VDC	
		N	Remote flowtube without converter	only for -P, -N
Lining		Y	Hard Rubber	
Electrode Material		L	AISI316L / 1.4404	
		H	Hastelloy C276 equivalent / 2.4819	
Electrode Structure		1	Non - replaceable	
Grounding Electrode Material		N	No grounding electrode	
		L	AISI316L / 1.4404	
		H	Hastelloy C276 equivalent / 2.4819	
Process Connection -[]D[] or -[]E[] *3 Flange type Hole pattern , flange diameter, flange thickness, flange facing diameter according to EN1092-1		-BD1	EN PN10 (Flange stainless steel)	RXF200 to RXF600
		-BD2	EN PN16 (Flange stainless steel) *4	RXF065 to RXF400
		-BD3	EN PN25 (Flange stainless steel)	RXF150 to RXF200 *6
		-BD4	EN PN40 (Flange stainless steel)	RXF015 to RXF200
		-CD1	EN PN10 (Flange carbon steel)	RXF200 to RXF10L
		-CD2	EN PN16 (Flange carbon steel) *4	RXF065 to RXF600
		-CD3	EN PN25 (Flange carbon steel)	RXF150 to RXF600 *6
		-CD4	EN PN40 (Flange carbon steel)	RXF015 to RXF600
		-CD5	EN PN63 (Flange carbon steel)	RXF015 to RXF300 *5
		-CD6	EN PN100 (Flange carbon steel)	RXF015 to RXF300
		-CE2	EN PN16 (Flange carbon steel)	RXF065, 8-hole flange
Process Connection -[]A[] Flange type Hole pattern , flange diameter, flange facing diameter according to ASME B16.5 (RXF015 to RXF600) ASME B16.47 Series B (RXF700 to RXF10L)		-CA1	ASME Class 150 (Flange carbon steel)	RXF015 to RXF10L
		-CA2	ASME Class 300 (Flange carbon steel)	RXF015 to RXF600
		-CA4	ASME Class 600 (Flange carbon steel)	RXF015 to RXF150
		-FA1	ASME Class 150 (fully rated = 1.96 MPas) (Flange carbon steel)	RXF450 to RXF600
		-FA2	ASME Class 300 (fully rated = 5.11MPas) (Flange carbon steel)	RXF100 to RXF200
		-FA4	ASME Class 600 (fully rated = 10.21MPas) (Flange carbon steel)	RXF050 to RXF300
Lay Length *1		1	Standard according to lay-length table on page 10	
		3	Lay length according to lay-length table on page 10	from RXF450 to RXF10L
		4	Lay length according to lay-length table on page 10	from RXF450 to RXF10L
Electrical Connection		-2	ANSI 1/2 NPT female	
		-4	ISO M20x1.5 female	
Display		1	Integral flowmeter / Remote converter with horizontal indicator	 *2
		2	Integral flowmeter / Remote converter with vertical indicator *2	
		N	Integral flowmeter without indicator / Remote flowtube *2	
Calibration		B	Standard (0.5%)	

*1: Standard lay length (-[][][]1) according ISO 13359 for RXF015 to RXF400
*2: Not for output communication code ´-T´
*3: Instrument flange will connect to customer pipe flange according to EN 1092-1
*4: For RXF065 4-hole flange
*5: For RXF015 toRXF040 with PN63 flange rating flange dimensions are identical to PN100 flange dimensions
*6: For RXF015 to RXF125 with PN25 flange rating please select PN40 flange rating -BD4 or CD4
For RXF150 with PN25 flange rating, note that the PN25 flange dimensions are identical to PN40 flange dimensions

OPTION CODE

Option code for flowtubes (combinations possible)	/***	Comment for selected option code (restrictions for selected option code)
Stainless Steel Tag Plate (additional)	/SCT	TAG-No. max 16 digits (HART Software Tag-No. max 8 digits programmable)
Condensation Proof	/DHC	- only for remote flowtube - flowtube junctionbox is potted with electrode- and excitation cable attached - cable length must be specifed with additional option /L***
Cable length per customer specification (signal cable and excitation cable are provided)	/L***	Limitation in length is: - RXFA11G: max. 200 m - RXFA14G: max. 100 m incremental steps for length: - 2 m, 5 m and multiple of 5 m (002, 005, 010, 015 ...) **for "W" Style (submersible)** two cables attached and sealed with PU potting in flowtube junctionbox other cable ends headshrunk sealed, termination parts are attached **for /DHC** two cables attached and sealed with PU potting in flowtube junctionbox other cable ends terminated for connection to RXFA11/14 converter **otherwise** both ends terminated but not attached
Active Pulse-Output	/EM	Active pulses are output to drive external electromagnetic counter directly using converters internal power supply. Standard Trans. output is disarmed. - Output voltage: 24 V DC (+/-20 %) - Output current 30 - 150 mA - Pulse rate: 0.0001 - 2 pps (pulse/second) - Pulse width: 20, 33, 50 or 10 0ms.
Lightning Protection	/A	Mandatory for output communication type -T2. Else not available
Epoxy Resin Coating	/X1	Epoxy resin coating with alkali- resistance instead of standard polyurethane resin coating. The colour is the same as standard type.
Material Certificate	/E01	Material certificate for flange, flowtube and electrode acc. EN10204- 3.1
Welding Certificate	/WP	1. Welder/Welding Operator Performance Qualification for flange welding (or Welder Qualification Record) 2. Welding Procedure Specification (WPS) 3. Procedure Qualification Record (PQR) Each certificate to be attached. The customer's name and job name to be specified when ordered.
Dye Penetration Test	/PT	Dye Penetrant Test certificate for the welded flanges to be attached.
Hydrostatic Test	/T01	This test verifies the absence of leaks by applying water pressure (which are determined under process connection conditions) to the mounted electrodes in the flowtube for 10 minutes. Test results are described in the Note column of a test certificate (QIC = calibration certificate).
Mass Unit Setting	/MU	The flow rate span, transmission pulse weight, and totalizer display pulse weight can be set in terms of mass unit. Specify the density of the process fluid when ordering in addition to the mass flow rate span, transmission pulse weight (for mass unit),and totalizer display pulse weight (for mass unit). When ordering a remote flowtube, parameters for 'Mass Unit Setting' will be set in the corresponding converter before shipment. 1. Density a. Available Numerics: Specify the numeric within the value of 0.0001 to 32000. And it can be up to five digits, to a maximum of 32000 ignoring the decimal point. A fraction is limited to the fourth decimal place. b. Available density units: kg/m^3, lb/gal, lb/cf Example: A water density is about 1000kg/m^3. In this case specify "1000kg/m^3". However a density is changed by temperature. Specify the actual density. (The 1000kg/m^3 is equivalent to 8.345lb/gal and 62.43lb/cf.) 2. The mass flow rate span, transmission pulse weight, and totalizer display pulse weight a. Available Numerics: Specify the numeric within the value of 0.0001 to 32000. And it can be up to five digits, to a maximum of 32000 ignoring the decimal point. A fraction is limited to the fourth decimal place. b. Mass Units Available mass units: t, kg, g, klb, lb Available time units: /d, /h, /min, /s Note1: In case of specifying the mass flow span, calculate the volumetric flow span by the setting density, and specify the available value in the mass flow span. Note2: In case of transmission pulse weight and totalizer display pulse weight, specify the mass unit which was specified as the flow unit.

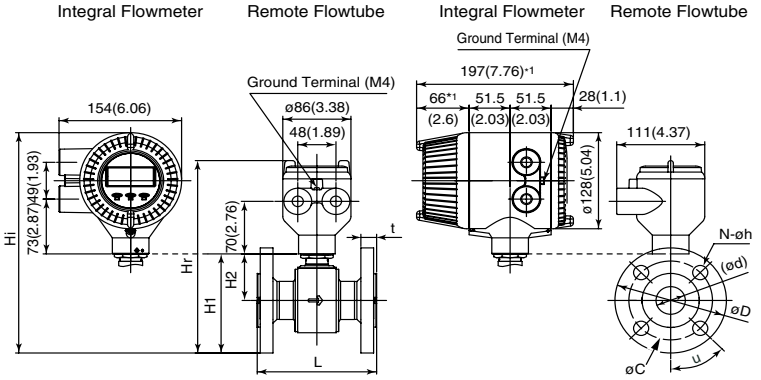
EXTERNAL DIMENSIONS

RXF015-RXF050

Unit: mm (approx. in)

RXF015
RXF025
RXF032
RXF040
RXF050

G W — D E N P R T 1 2 N Y D □ 1 □ — B C F A D 1 2 4 5 6 1



Model	Process Connection		BD4 / CD4 (EN PN40)					CD5 (EN PN63)					CD6 (EN PN100)				
	Size code		015	025	032	040	050	015	025	032	040	050	015	025	032	040	050
	Size		15 (0.5)	25 (1)	32 (1.25)	40 (1.5)	50 (2)	15 (0.5)	25 (1)	32 (1.25)	40 (1.5)	50 (2)	15 (0.5)	25 (1)	32 (1.25)	40 (1.5)	50 (2)
	Lining code		Y	D,Y	D,Y	D,Y	D,Y	Y	D,Y	D,Y	D,Y	D,Y	Y	D,Y	D,Y	D,Y	D,Y
Remote flowtube / Integral flowmeter	Lay length (code 1)	L $^{0}_{-3}$	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	250 (9.84)	250 (9.84)	250 (9.84)	250 (9.84)	200 (7.87)	250 (9.84)	250 (9.84)	250 (9.84)	250 (9.84)
	Lay length (code 3)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Lay length (code 4)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Outside diameter	øD	95 (3.74)	115 (4.53)	140 (5.51)	150 (5.90)	165 (6.49)	105 (4.13)	140 (5.51)	155 (6.10)	170 (6.69)	180 (7.08)	105 (4.13)	140 (5.51)	155 (6.10)	170 (6.69)	195 (7.67)
	Thickness (*)2	t	19 0.75	21 (0.83)	21 (0.83)	21 (0.83)	23 (0.91)	23 (0.91)	27 (1.06)	27 (1.06)	29 (1.14)	29 (1.14)	23 (0.91)(	27 (1.06)	27 (1.06)	29 (1.14)	31 (1.22)
	Inner diameter of lining	ød	14 (0.55)	27 (1.06)	33.3 (1.31)	38 (1.50)	48.5 (1.91)	14 (0.55)	27 (1.06)	33.3 (1.31)	38 (1.50)	48.5 (1.91)	14 (0.55)	27 (1.06)	33.3 (1.31)	38 (1.50)	46.3 (1.82)
	Pitch circle	øC	65 (2.56)	85 (3.35)	100 (3.94)	110 (4.33)	125 (4.92)	75 (2.95)	100 (3.94)	110 (4.33)	125 (4.92)	135 (5.31)	75 (2.95)	100 (3.94)	110 (4.33)	125 (4.92)	145 (5.71)
	Bolt hole intervall	u°	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
	Hole diameter	øh	14 (0.55)	14 (0.55)	18 (0.71)	18 (0.71)	18 (0.71)	14 (0.55)	18 (0.71)	22 (0.87)	22 (0.87)	22 (0.87)	14 (0.55)	18 (0.71)	22 (0.87)	22 (0.87)	26 (1.02)
	Number of holes	N	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Height	H1	134.5 (5.29)	145 (5.71)	157 (6.18)	170 (6.69)	184.5 (7.26)	139.5 (5.49)	157.5 (6.20)	164.5 (6.47)	180 (7.08)	192 (7.56)	139.5 (5.49)	157.5 (6.20)	164.5 (6.47)	180 (7.08)	199.5 (7.85)
	Height	H2	87 (3.42)	87.5 (3.44)	87 (3.42)	95 (3.74)	102 (4.01)	87 (3.42)	87.5 (3.44)	87 (3.42)	95 (3.74)	102 (4.01)	87 (3.42)	87.5 (3.44)	87 (3.42)	95 (3.74)	102 (4.01)
Remote flowtube	Max. Height	Hr	259.5 (10.21)	270 (10.63)	282 (11.10)	295 (11.61)	309.5 (12.18)	264.5 (10.41)	282.5 (11.12)	289.5 (11.39)	305 (12.00)	317 (12.48)	264.5 (10.41)	282.5 (11.12)	289.5 (11.39)	305 (12.00)	324.5 (12.77)
	Weight kg (lb) approx. (*)3		6 (12)	7 (15)	10 (21)	10 (22)	11 (24)	7 (14)	10 (21)	12 (26)	14 (31)	14 (31)	7 (14)	9 (20)	12 (25)	14 (30)	17 (36)
Integral flowmeter	Max. Height	Hi	296.5 (11.67)	307 (12.08)	319 (12.55)	332 (13.07)	346.5 (13.64)	301.5 (11.87)	319.5 (12.57)	326.5 (12.85)	342 (13.46)	354 13.93	301.5 (11.87)	319.5 (12.57)	326.5 (12.85)	342 (13.46)	361.5 (14.23)
	Weight kg (lb) approx.(*)3		8 (16)	9 (19)	11 (25)	12 (26)	13 (28)	8 (18)	11 (24)	14 (29)	15 (33)	16 (35)	8 (18)	11 (24)	13 (29)	15 (33)	18 (40)

Model	Process Connection		CA1 (ASME Class 150)					CA2 /FA2 (ASME Class 300)					CA4 /FA4 (ASME Class 600)				
	Size code		015	025	032	040	050	015	025	032	040	050	015	025	032	040	050
	Size		15 (0.5)	25 (1)	32 (1.25)	40 (1.5)	50 (2)	15 (0.5)	25 (1)	32 (1.25)	40 (1.5)	50 (2)	15 (0.5)	25 (1)	32 (1.25)	40 (1.5)	50 (2)
	Lining code		Y	D,Y	D,Y	D,Y	D,Y	Y	D,Y	D,Y	D,Y	D,Y	Y	D,Y	D,Y	D,Y	D,Y
Remote flowtube / Integral flowmeter	Lay length (code 1)	L $^{0}_{-3}$	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	250 (9.84)	250 (9.84)
	Lay length (code 3)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Lay length (code 4)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Outside diameter	øD	90 (3.54)	110 (4.33)	115 (4.53)	125 (4.92)	150 (5.90)	95 (3.74)	125 (4.92)	135 (5.31)	155 (6.10)	165 (6.49)	95 (3.74)	125 (4.92)	135 (5.31)	155 (6.10)	165 (6.49)
	Thickness (*)2	t	12.6 (0.50)	15.7 (0.62)	17.3 (0.68)	18.9 (0.74)	20.5 (0.81)	15.7 (0.62)	18.9 (0.74)	20.5 (0.81)	22.1 (0.87)	23.7 (0.93)	17.3 (0.68)	20.5 (0.81)	23.7 (0.93)	25.3 (1.00)	28.4 (1.12)
	Inner diameter of lining	ød	14 (0.55)	27 (1.06)	33.3 (1.31)	38 (1.50)	48.5 (1.91)	14 (0.55)	27 (1.06)	33.3 (1.31)	38 (1.50)	48.5 (1.91)	14 (0.55)	27 (1.06)	33.3 (1.31)	38 (1.50)	46.3 (1.82)
	Pitch circle	øC	60.3 (2.37)	79.4 (3.12)	88.9 (3.50)	98.4 (3.87)	120.7 (4.75)	66.7 (2.62)	88.9 (3.50)	98.4 (3.87)	114.3 (4.50)	127 (5.00)	66.7 (2.62)	88.9 (3.50)	98.4 (3.87)	114.3 (4.50)	127 (5.00)
	Bolt hole intervall	u°	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	22.5	45.0	45.0	45.0	45.0	22.5
	Hole diameter	øh	15.7 (0.62)	15.7 (0.62)	15.7 (0.62)	15.7 (0.62)	19.1 (0.75)	15.7 (0.62)	19.1 (0.75)	19.1 (0.75)	22.4 (0.88)	19.1 (0.75)	15.7 (0.62)	19.1 (0.75)	19.1 (0.75)	22.4 (0.88)	19.1 (0.75)
	Number of holes	N	4	4	4	4	4	4	4	4	4	8	4	4	4	4	8
	Height	H1	132 (5.19)	142.5 (5.61)	144.5 (5.69)	157.5 (6.20)	177 (6.97)	134.5 (5.29)	150 (5.90)	154.5 (6.08)	172.5 (6.79)	184.5 (7.26)	134.5 (5.29)	150 (5.90)	154.5 (6.08)	172.5 (6.79)	184.5 (7.26)
	Height	H2	87 (3.42)	87.5 (3.44)	87 (3.42)	95 (3.74)	102 (4.01)	87 (3.42)	87.5 (3.44)	87 (3.42)	95 (3.74)	102 (4.01)	87 (3.42)	87.5 (3.44)	87 (3.42)	95 (3.74)	102 (4.01)
Remote flowtube	Max. Height	Hr	257 (10.11)	267.5 (10.53)	269.5 (10.61)	282.5 (11.12)	302 (11.89)	259.5 (10.21)	275 (10.82)	279.5 (11.00)	297.5 (11.71)	309.5 (12.18)	259.5 (10.21)	275 (10.82)	279.5 (11.00)	297.5 (11.71)	309.5 (12.18)
	Weight kg (lb) approx. (*)3		4 (9)	5 (11)	7 (15)	7 (16)	8 (18)	5 (11)	7 (15)	9 (20)	10 (22)	11 (24)	5 (12)	7 (15)	10 (21)	11 (24)	13 (28)
Integral flowmeter	Max. Height	Hi	294 (11.57)	304.5 (11.98)	306.5 (12.06)	319.5 (12.57)	339 (13.34)	296.5 (11.67)	312 (12.28)	316.5 (12.46)	334.5 (13.16)	346.5 (13.64)	296.5 (11.67)	312 (12.28)	316.5 (12.46)	334.5 (13.16)	346.5 (13.64)
	Weight kg (lb) approx.		6 (12)	7 (15)	8 (18)	9 (20)	10 (22)	7 (15)	9 (19)	11 (23)	12 (26)	13 (28)	7 (15)	9 (19)	11 (25)	13 (28)	15 (32)

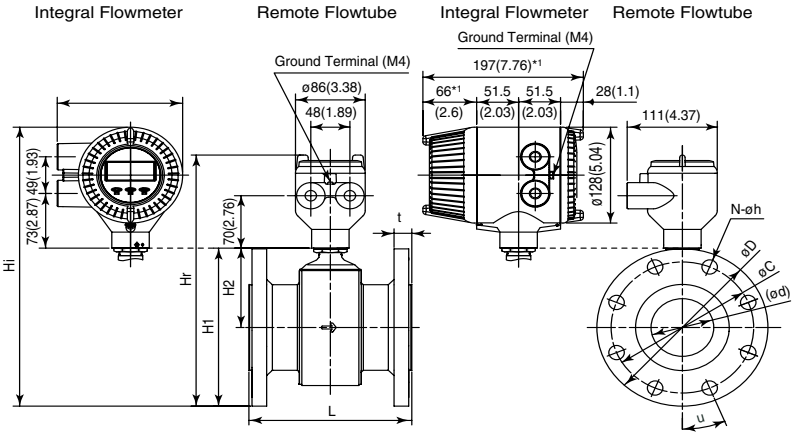
*1: When indicator code N is selected, subtract 12 mm (0.47 in) from the value in the figure.
*2: Flange thickness including lining at flange facing area.
*3: Waterproof glands and a cable are attached to each submersible style flowtube. Add 9.5 kg (20.9 lb) per 30m length to the weight in the table.

F30.EPS

RXF065-RXF125

Unit: mm (approx. in)

RXF065
RXF080 G — D E N P R T 1 2 N D T Y □ 1 □ — B C F A D 1 2 4 5 6 1
RXF100 W
RXF125



Model	Process Connection		BD2 / CD2 / CE2 (EN PN16)				BD4 / CD4 (EN PN40)				CD5 (EN PN63)				CD6 (EN PN100)			
	Size code		065	080	100	125	065	080	100	125	065	080	100	125	065	080	100	125
	Size		65 (2.5)	80 (3)	100 (4)	125 (5)	65 (2.5)	80 (3)	100 (4)	125 (5)	65 (2.5)	80 (3)	100 (4)	125 (5)	65 (2.5)	80 (3)	100 (4)	125 (5)
	Lining code		D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y
	Lay length (code 1)	L $^{0}_{-3}$	200 (7.87)	200 (7.87)	250 (9.84)	250 (9.84)	200 (7.87)	200 (7.87)	250 (9.84)	300 (11.81)	250 (9.84)	250 (9.84)	300 (11.81)	300 (11.81)	250 (9.84)	250 (9.84)	300 (11.81)	350 (13.77)
	Lay length (code 3)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Lay length (code 4)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Remote flowtube	Outside diameter	øD	185 (7.28)	200 (7.87)	220 (8.66)	250 (9.84)	185 (7.28)	200 (7.87)	235 (9.25)	270 (10.63)	205 (8.07)	215 (8.46)	250 (9.84)	295 (11.61)	220 (8.66)	230 (9.05)	265 (10.43)	315 (12.40)
	Thickness (*)2	t	21 (0.83)	23 (0.91)	23 (0.91)	26 (1.02)	25 (0.98)	27 (1.06)	27 (1.06)	30 (1.18)	29 (1.14)	31 (1.22)	33 (1.30)	38 (1.50)	33 (1.30)	35 (1.38)	39 (1.53)	44 (1.73)
Integral flowmeter	Inner diameter of lining	ød	64.3 (2.53)	76.9 (3.03)	102.5 (4.03)	127.7 (5.03)	64.1 (2.52)	77.1 (3.03)	102.5 (4.03)	127.7 (5.03)	64.3 (2.53)	76.9 (3.03)	96.3 (3.79)	123.7 (4.87)	60.1 (2.37)	70.9 (2.79)	99.3 (3.91)	113.7 (4.47)
	Pitch circle	øC	145 (5.71)	160 (6.30)	180 (7.08)	210 (8.26)	145 (5.71)	160 (6.30)	190 (7.48)	220 (8.66)	160 (6.30)	170 (6.69)	200 (7.87)	240 (9.45)	170 (6.69)	180 (7.08)	210 (8.26)	250 (9.84)
	Bolt hole intervall	u°	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
	Hole diameter	øh	18 (0.71)	18 (0.71)	18 (0.71)	18 (0.71)	18 (0.71)	18 (0.71)	22 (0.87)	26 (1.02)	22 (0.87)	22 (0.87)	26 (1.02)	30 (1.18)	26 (1.02)	26 (1.02)	30 (1.18)	33 (1.30)
	Number of holes	N	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Height	H1	204.5 (8.05)	215 (8.46)	240 (9.45)	257 (10.11)	204.5 (8.05)	215 (8.46)	247.5 (9.74)	267 (10.51)	214.5 (8.44)	222.5 (8.76)	255 (10.04)	279.5 (11.00)	222 (8.74)	230 (9.05)	262.5 (10.33)	289.5 (11.39)
	Height	H2	112 (4.41)	115 (4.53)	130 (5.12)	132 (5.19)	112 (4.41)	115 (4.53)	130 (5.12)	132 (5.19)	112 (4.41)	115 (4.53)	130 (5.12)	132 (5.19)	112 (4.41)	115 (4.53)	130 (5.12)	132 (5.19)
Remote flowtube	Max. Height	Hr	329.5 (12.97)	340 (13.38)	365 (14.36)	382 (15.03)	329.5 (12.97)	340 (13.38)	372.5 (14.66)	392 (15.43)	339.5 (13.36)	347.5 (13.68)	380 (14.95)	404.5 (15.92)	347 (13.66)	355 (13.97)	387.5 (15.25)	414.5 (16.31)
	Weight kg (lb) approx. (*)3		11 (23)	13 (28)	14 (31)	20 (43)	12 (26)	14 (31)	17 (38)	24 (54)	15 (34)	18 (39)	25 (56)	36 (80)	20 (43)	23 (51)	30 (66)	53 (116)
Integral flowmeter	Max. Height	Hi	366.5 (14.42)	377 (14.84)	402 (15.82)	419 (16.49)	366.5 (14.42)	377 (14.84)	409.5 (16.12)	429 (16.88)	376.5 (14.82)	384.5 (15.13)	417 (16.41)	441.5 (17.38)	384 (15.11)	392 (15.43)	424.5 (16.71)	451.5 (17.77)
	Weight kg (lb) approx.		12 (27)	15 (32)	16 (35)	21 (47)	14 (29)	16 (35)	19 (42)	26 (57)	17 (37)	20 (43)	27 (59)	38 (84)	22 (47)	25 (55)	327 (70)	55 (120)

Model	Process Connection		CA1 (ASME Class 150)				CA2 / FA2 (ASME Class 300)				CA4 / FA4 (ASME Class 600)			
	Size code		065	080	100	125	065	080	100	125	065	080	100	125
	Size		65 (2.5)	80 (3)	100 (4)	125 (5)	65 (2.5)	80 (3)	100 (4)	125 (5)	65 (2.5)	80 (3)	100 (4)	125 (5)
	Lining code		D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y
	Lay length (code 1)	L $^{0}_{-3}$	200 (7.87)	200 (7.87)	250 (9.84)	250 (9.84)	200 (7.87)	250 (9.84)	250 (9.84)	300 (11.81)	250 (9.84)	250 (9.84)	300 (11.81)	350 (13.77)
	Lay length (code 3)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Lay length (code 4)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
Remote flowtube	Outside diameter	øD	180 (7.08)	190 (7.48)	230 (9.05)	255 (10.04)	190 (7.48)	210 (8.26)	255 (10.04)	280 (11.02)	190 (7.48)	210 (8.26)	275 (10.82)	330 (12.99)
	Thickness (*)2	t	23.7 (0.93)	25.3 (1.00)	25.3 (1.00)	26.3 (1.04)	26.9 (1.06)	30 (1.18)	33.2 (1.31)	37.4 (1.47)	31.6 (1.24)	34.8 (1.37)	41.1 (1.62)	48.5 (1.91)
Integral flowmeter	Inner diameter of lining	ød	64.3 (2.53)	76.9 (3.03)	102.5 (4.03)	127.7 (5.03)	64.3 (2.53)	76.9 (3.03)	99.3 (3.91)	123.7 (4.87)	60.1 (2.37)	70.9 (2.79)	96.3 (3.79)	113.7 (4.47)
	Pitch circle	øC	139.7 (5.50)	152.4 (6.00)	190.5 (7.50)	215.9 (8.50)	149.2 (5.87)	168.3 (6.62)	200 (7.87)	235 (9.25)	149.2 (5.87)	168.3 (6.62)	215.9 (8.50)	266.7 (10.50)
	Bolt hole intervall	u°	45.0	45.0	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
	Hole diameter	øh	19.1 (0.75)	19.1 (0.75)	19.1 (0.75)	22.4 (0.88)	22.4 (0.88)	22.4 (0.88)	22.4 (0.88)	22.4 (0.88)	22.4 (0.88)	22.4 (0.88)	25.4 (1.00)	28.4 (1.12)
	Number of holes	N	4	4	8	8	8	8	8	8	8	8	8	8
	Height	H1	202 (7.95)	210 (8.26)	245 (9.64)	259.5 (10.21)	207 (8.15)	220 (8.66)	257.5 (10.13)	272 (10.70)	207 (8.15)	220 (8.66)	267.5 (10.53)	297 (11.69)
	Height	H2	112 (4.41)	115 (4.53)	130 (5.12)	132 (5.19)	112 (4.41)	115 (4.53)	130 (5.12)	132 (5.19)	112 (4.41)	115 (4.53)	130 (5.12)	132 (5.19)
Remote flowtube	Max. Height	Hr	327 (12.87)	335 (13.18)	370 (14.56)	384.5 (15.13)	332 (13.07)	345 (13.58)	382.5 (15.05)	397 (15.62)	332 (13.07)	345 (13.58)	392.5 (15.45)	422 (16.61)
	Weight kg (lb) approx. (*)3		10 (21)	12 (25)	16 (33)	19 (41)	12 (27)	17 (37)	25 (55)	34 (74)	15 (33)	20 (44)	36 (79)	64 (140)
Integral flowmeter	Max. Height	Hi	364 (14.33)	372 (14.64)	407 (16.02)	421.5 (16.59)	369 (14.52)	382 (15.03)	419.5 (16.51)	434 (17.08)	369 (14.52)	382 (15.03)	429.5 (16.90)	459 (18.06)
	Weight kg (lb) approx.		12 (25)	13 (29)	17 (37)	21 (45)	14 (31)	18 (40)	27 (59)	35 (78)	17 (37)	22 (48)	38 (83)	65 (143)

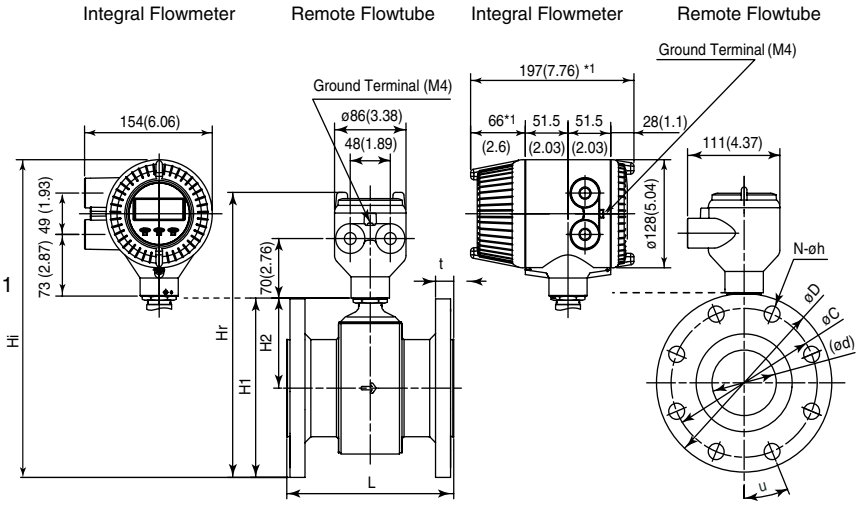
*1: When indicator code N is selected, subtract 12 mm (0.47 in) from the value in the figure.
*2: Flange thickness including lining at flange facing area.
*3: When submersible type or option code DHC is selected, waterproof glands and cables are attached.
Add 9.5 kg (20.9 lb) per 30m length to the weight in the table.

F31.EPS

RXF150, RXF200

Unit: mm (approx. in)

RXF150 G — D E N P R T 1 2 N D T Y □ 1 □ — B C F A D 1 2 3 4 5 6 1
RXF200 W



Model	Process Connection		BD1 CD1	BD2 / CD2		BD3 / CD3		BD4 / CD4		CD5		CD6		CA1		CA2 / FA2		CA4 FA4
	Size code		200	150	200	150	200	150	200	150	200	150	200	150	200	150	200	150
	Size		200 (8)	150 (6)	200 (8)	150 (6)	200 (8)	150 (6)	200 (8)	150 (6)	200 (8)	150 (6)	200 (8)	150 (6)	200 (8)	150 (6)	200 (8)	150 (6)
	Lining code		D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y
Remote flowtube	Lay length (code 1)	L $^{0}_{-3}$	350 (13.77)	300 (11.81)	350 (13.77)	300 (11.81)	350 (13.77)	300 (11.81)	350 (13.77)	350 (13.77)	400 (15.74)	350 (13.77)	400 (15.74)	300 (11.81)	350 (13.77)	300 (11.81)	350 (13.77)	350 (13.77)
	Lay length (code 3)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Lay length (code 4)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Outside diameter	øD	340 (13.38)	285 (11.22)	340 (13.38)	300 (11.81)	360 (14.17)	300 (11.81)	375 (14.76)	345 (13.58)	415 (16.33)	355 (13.97)	430 (16.92)	280 (11.02)	345 (13.58)	320 (12.59)	380 (14.95)	355 (13.97)
	Thickness (*)2	t	29 (1.14)	25 (0.98)	29 (1.14)	31 (1.22)	35 (1.38)	31 (1.22)	39 (1.53)	39 (1.53)	47 (1.85)	47 (1.85)	57 (2.24)	26.9 (1.06)	32 (1.26)	38 (1.50)	44.7 (1.76)	50.7 (2.00)
Integral flowmeter	Inner diameter of lining	ød	205.1 (8.07)	156.3 (6.15)	205.1 (8.07)	154.3 (6.07)	205.1 (8.07)	154.3 (6.07)	201.1 (7.91)	146.3 (5.76)	193.1 (7.60)	142.3 (5.60)	183.1 (7.21)	156.3 (6.15)	205.1 (8.07)	150.3 (5.91)	197.1 (7.76)	142.3 (5.60)
	Pitch circle	øC	295 (11.61)	240 (9.45)	295 (11.61)	250 (9.84)	310 (12.20)	250 (9.84)	320 (12.59)	280 (11.02)	345 (13.58)	290 (11.41)	360 (14.17)	241.3 (9.50)	298.5 (11.75)	269.9 (10.62)	330.2 (12.99)	292.1 (11.50)
	Bolt hole intervall	u°	22.5	22.5	15.0	22.5	15.0	22.5	15.0	22.5	15.0	15.0	15.0	22.5	22.5	15.0	15.0	15.0
	Hole diameter	øh	22 (0.87)	22 (0.87)	22 (0.87)	26 (1.02)	26 (1.02)	26 (1.02)	30 (1.18)	33 (1.30)	36 (1.42)	33 (1.30)	36 (1.42)	22.4 (0.88)	22.4 (0.88)	22.4 (0.88)	25.4 (1.00)	28.4 (1.12)
	Number of holes	N	8	8	12	8	12	8	12	8	12	12	12	8	8	12	12	12
	Height	H1	343 (13.50)	292.5 (11.51)	343 (13.50)	300 (11.81)	353 (13.89)	300 (11.81)	360.5 (14.19)	322.5 (12.69)	380.5 (14.97)	327.5 (12.89)	388 (15.27)	290 (11.41)	345.5 (13.60)	310 (12.20)	363 (14.29)	327.5 (12.89)
	Height	H2	173 (6.81)	150 (5.90)	173 (6.81)	150 (5.90)	173 (6.81)	150 (5.90)	173 (6.81)	150 (5.90)	173 (6.81)	150 (5.90)	173 (6.81)	150 (5.90)	173 (6.81)	150 (5.90)	173 (6.81)	150 (5.90)
Remote flowtube	Max. Height	Hr	468 (18.42)	417.5 (16.43)	468 (18.42)	425 (16.73)	478 (18.81)	425 (16.73)	485.5 (19.11)	447.5 (17.61)	505.5 (19.89)	452.5 (17.81)	513 (20.19)	415 (16.33)	470.5 (18.52)	435 (17.12)	488 (19.21)	452.5 (17.81)
	Weight kg (lb) approx. (*)3		32 (70)	25 (54)	32 (70)	32 (70)	41 (91)	32 (70)	53 (116)	56 (122)	86 (189)	70 (155)	119 (262)	22 (49)	35 (76)	45 (100)	65 (144)	76 (167)
Integral flowmeter	Max. Height	Hi	505 (19.87)	454.5 (17.89)	505 (19.87)	462 (18.18)	515 (20.27)	462 (18.18)	522.5 (20.56)	484.5 (19.07)	542.5 (21.35)	489.5 (19.26)	550 (21.65)	452 (17.79)	507.5 (19.97)	472 (18.58)	525 (20.66)	489.5 (19.26)
	Weight kg (lb) approx.		34 (74)	26 (58)	34 (74)	34 (74)	43 (95)	34 (74)	55 (120)	57 (126)	88 (193)	72 (159)	121 (265)	24 (53)	36 (79)	47 (103)	67 (147)	78 (170)

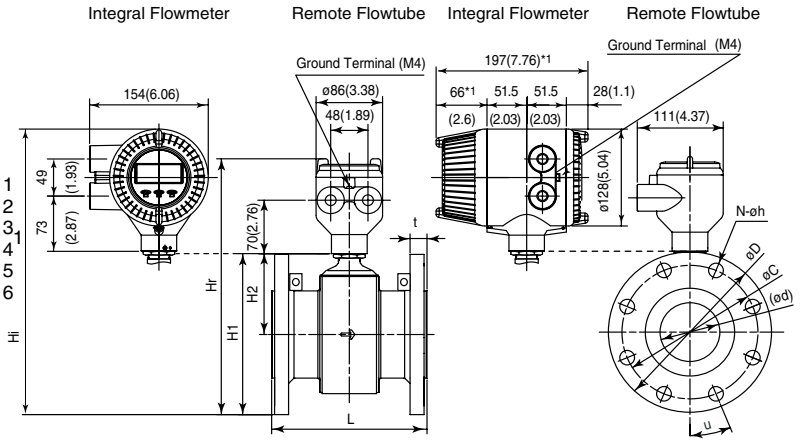
*1: When indicator suffix code N is selected, subtract 12 mm (0.47 in) from the value in the figure.
*2: Flange thickness including lining at flange facing area.
*3: When submersible type or option code DHC is selected, waterproof glands and cables are attached.
Add 9.5 kg (20.9 lb) per 30m length to the weight in the table.

F32.EPS

RXF250-RXF400

Unit: mm (approx. in)

RXF250
RXF300 G_ D E N P R T 1 2 N D T Y □ 1 □ — B C F A D 1 2 3 4 5 6
RXF350 W
RXF400



Model	Process Connection		BD1 / CD1 (EN PN10)				BD2 / CD2 (EN PN16)				CD3 (EN PN25)				CD4 (EN PN40)				CD5 (EN PN63)	
	Size code		250	300	350	400	250	300	350	400	250	300	350	400	250	300	350	400	250	300
	Size		250 (10)	300 (12)	350 (14)	400 (16)	250 (10)	300 (12)	350 (14)	400 (16)	250 (10)	300 (12)	350 (14)	400 (16)	250 (10)	300 (12)	350 (14)	400 (16)	250 (10)	300 (12)
	Lining code		D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y
	Lay length (code 1)	L $^{0}_{-3}$	450 (17.71)	500 (19.68)	550 (21.65)	600 (23.61)	450 (17.71)	500 (19.68)	550 (21.65)	600 (23.61)	450 (17.71)	500 (19.68)	550 (21.65)	600 (23.61)	450 (17.71)	500 (19.68)	550 (21.65)	600 (23.61)	450 (17.71)	500 (19.68)
	Lay length (code 3)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Lay length (code 4)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Outside diameter	øD	395 (15.55)	445 (17.51)	505 (19.87)	565 (22.24)	405 (15.94)	460 (18.10)	520 (20.46)	580 (22.83)	425 (16.73)	485 (19.09)	555 (21.84)	620 (24.40)	450 (17.71)	515 (20.27)	580 (22.83)	660 (25.97)	470 (18.50)	530 (20.86)
Remote flowtube	Thickness (*)2	t	31 (1.22)	32 (1.26)	31.5 (1.24)	31.5 (1.24)	31 (1.22)	34 (1.34)	35.5 (1.40)	37.5 (1.48)	37 (1.46)	40 (1.57)	43.5 (1.71)	45.5 (1.79)	43 (1.69)	48 (1.89)	51.5 (2.03)	55.5 (2.18)	51 (2.01)	58 (2.28)
Integral flowmeter	Inner diameter of lining	ød	259 (10.19)	309.9 (12.20)	340 (13.38)	390 (15.35)	259 (10.19)	309.9 (12.20)	340 (13.38)	390 (15.35)	259 (10.19)	305.9 (12.04)	338 (13.30)	388 (15.27)	251 (9.88)	301.9 (11.88)	330 (12.99)	380 (14.95)	247 (9.72)	293.9 (11.57)
	Pitch circle	øC	350 (13.77)	400 (15.74)	460 (18.10)	515 (20.27)	355 (13.97)	410 (16.14)	470 (18.50)	525 (20.66)	370 (14.56)	430 (16.92)	490 (19.28)	550 (21.65)	385 (15.15)	450 (17.71)	510 (20.07)	585 (23.02)	400 (15.74)	460 (18.10)
	Bolt hole intervall	u°	15.0	15.0	11.3	11.3	15.0	15.0	11.3	11.3	15.0	11.3	11.3	11.3	15.0	11.3	11.3	11.3	15.0	11.3
	Hole diameter	øh	22 (0.87)	22 (0.87)	22 (0.87)	26 (1.02)	26 (1.02)	26 (1.02)	26 (1.02)	30 (1.18)	30 (1.18)	30 (1.18)	33 (1.30)	36 (1.42)	33 (1.30)	33 (1.30)	36 (1.42)	39 (1.53)	36 (1.42)	36 (1.42)
	Number of holes	N	12	12	16	16	12	12	16	16	12	16	16	16	12	16	16	16	12	16
	Height	H1	397.5 (15.64)	412.5 (16.23)	522.5 (20.56)	577.5 (22.73)	402.5 (15.84)	420 (16.53)	530 (20.86)	585 (23.02)	412.5 (16.23)	432.5 (17.02)	547.5 (21.55)	605 (23.81)	425 (16.73)	447.5 (17.61)	560 (22.04)	625 (24.60)	435 (17.12)	455 (17.91)
	Height	H2	200 (7.87)	190 (7.48)	270 (10.63)	295 (11.61)	200 (7.87)	190 (7.48)	270 (10.63)	295 (11.61)	200 (7.87)	190 (7.48)	270 (10.63)	295 (11.61)	200 (7.87)	190 (7.48)	270 (10.63)	295 (11.61)	200 (7.87)	190 (7.48)
	Max. Height	Hr	522.5 (20.56)	537.5 (21.15)	647.5 (25.48)	702.5 (27.65)	527.5 (20.76)	545 (21.45)	655 (25.78)	710 (27.94)	537.5 (21.15)	557.5 (21.94)	672.5 (26.47)	730 (28.73)	550 (21.65)	572.5 (22.53)	685 (26.96)	750 (29.52)	560 (22.04)	580 (22.83)
Remote flowtube	Weight kg (lb) approx. (*)3		47 (102)	56 (124)	90 (198)	110 (243)	49 (107)	63 (138)	101 (223)	128 (280)	61 (133)	87 (192)	136 (299)	172 (378)	90 (197)	122 (269)	187 (412)	252 (555)	117 (257)	166 (365)
	Max. Height	Hi	559.5 (22.02)	574.5 (22.61)	684.5 (26.94)	739.5 (29.10)	564.5 (22.22)	582 (22.90)	692 (27.23)	747 (29.40)	574.5 (22.61)	594.5 (23.40)	709.5 (27.92)	767 (30.18)	587 (23.10)	609.5 (23.99)	722 (28.41)	787 (30.97)	597 (23.49)	617 (24.28)
Integral flowmeter	Weight kg (lb) approx.		48 (106)	58 (128)	92 (202)	112 (247)	50 (111)	64 (141)	103 (227)	129 (284)	62 (137)	89 (196)	139 (303)	174 (382)	91 (201)	124 (273)	189 (416)	254 (558)	119 (261)	168 (369)

Model	Process Connection		CA1 / FA1 (ASME Class 150)				CA2 (ASME Class 300)			
	Size code		250	300	350	400	250	300	350	400
	Size		250 (10)	300 (12)	350 (14)	400 (16)	250 (10)	300 (12)	350 (14)	400 (16)
	Lining code		D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y
	Lay length (code 1)	L $^{0}_{-3}$	450 (17.71)	500 (19.68)	550 (21.65)	600 (23.61)	450 (17.71)	500 (19.68)	550 (21.65)	600 (23.61)
	Lay length (code 3)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Lay length (code 4)	L $^{0}_{-3}$	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --
	Outside diameter	øD	405 (15.94)	485 (19.09)	535 (21.05)	595 (23.42)	445 (17.51)	520 (20.46)	585 (23.02)	650 (25.58)
Remote flowtube	Thickness (*)2	t	33.6 (1.32)	36.2 (1.42)	38.9 (1.53)	40.5 (1.59)	51.1 (2.01)	55.3 (2.18)	57.9 (2.28)	61.1 (2.40)
Integral flowmeter	Inner diameter of lining	ød	259 (10.19)	309.9 (12.20)	342 (13.46)	390 (15.35)	251 (9.88)	297.9 (11.72)	326 (12.83)	376 (14.80)
	Pitch circle	øC	362 (14.25)	431.8 (16.99)	476.3 (18.74)	539.8 (21.24)	387.4 (15.25)	450.8 (17.74)	514.4 (20.24)	571.5 (22.49)
	Bolt hole intervall	u°	15.0	15.0	15.0	11.3	11.3	11.3	9.0	9.0
	Hole diameter	øh	25.4 (1.00)	25.4 (1.00)	28.4 (1.12)	28.4 (1.12)	28.4 (1.12)	31.8 (1.25)	31.8 (1.25)	35.1 (1.38)
	Number of holes	N	12	12	12	16	16	16	20	20
	Height	H1	402.5 (15.84)	432.5 (17.02)	537.5 (21.15)	592.5 (23.32)	422.5 (16.63)	450 (17.71)	562.5 (22.14)	620 (24.40)
	Height	H2	200 (7.87)	190 (7.48)	270 (10.63)	295 (11.61)	200 (7.87)	190 (7.48)	270 (10.63)	295 (11.61)
	Max. Height	Hr	527.5 (20.76)	557.5 (21.94)	662.5 (26.07)	717.5 (28.24)	547.5 (21.55)	575 (22.63)	687.5 (27.06)	745 (29.32)
Remote flowtube	Weight kg (lb) approx. (*)3		50 (21)	73 (161)	107 (236)	141 (309)	100 (220)	148 (324)	218 (480)	275 (604)
	Max. Height	Hi	564.5 (22.22)	594.5 (23.40)	699.5 (27.53)	754.5 (29.69)	584.5 (23.00)	612 (24.09)	724.5 (28.51)	782 (30.78)
Integral flowmeter	Weight kg (lb) approx.		52 (114)	75 (165)	109 (240)	142 (313)	102 (224)	149 (328)	220 (483)	276 (608)

*1: When indicator suffix code N is selected, subtract 12 mm (0.47 in) from the value in the figure.
*2: Flange thickness including lining at flange facing area.
*3: When submersible type or option code DHC is selected, waterproof glands and cables are attached.
Add 9.5 kg (20.9 lb) per 30m length to the weight in the table.

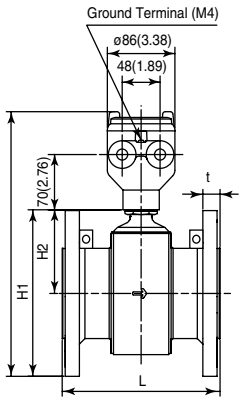
F33.EPS

RXF450-RXF600

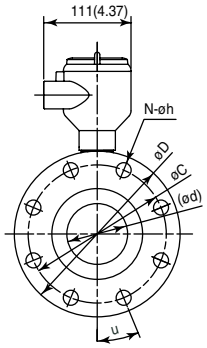
Unit: mm (approx. in)

RXF450
RXF500 G W — N T 1D 2T NY □ 1 □ — B C F A D 1 2 3 4
RXF600

Remote Flowtube



Remote Flowtube



Model	Process Connection		BD1/CD1 (EN PN10)			CD2 (EN PN16)			CD3 (EN PN25)			CD4 (EN PN40)			CA1/FA1 (ASME 150)			CA2 (ASME 300)		
	Size code		450	500	600	450	500	600	450	500	600	450	500	600	450	500	600	450	500	600
	Size		450 (18)	500 (20)	600 (24)	450 (18)	500 (20)	600 (24)	450 (18)	500 (20)	600 (24)	450 (18)	500 (20)	600 (24)	450 (18)	500 (20)	600 (24)	450 (18)	500 (20)	600 (24)
	Lining code		D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y	D,T,Y
Remote flowtube	Lay length (code 1)	L $^{0}_{-3}$	690 (27.15)	750 (29.52)	800 (31.48)	690 (27.15)	750 (29.52)	800 (31.48)	690 (27.15)	750 (29.52)	800 (31.48)	690 (27.15)	750 (29.52)	800 (31.48)	690 (27.15)	750 (29.52)	800 (31.48)	690 (27.15)	750 (29.52)	800 (31.48)
	Lay length (code 3)	L $^{0}_{-3}$	650 (25.58)	650 (25.58)	780 (30.70)	650 (25.58)	650 (25.58)	780 (30.70)	650 (25.58)	650 (25.58)	780 (30.70)	650 (25.58)	650 (25.58)	780 (30.70)	650 (25.58)	650 (25.58)	780 (30.70)	650 (25.58)	650 (25.58)	780 (30.70)
	Lay length (code 4)	L $^{0}_{-3}$	600 (23.61)	600 (23.61)	600 (23.61)	600 (23.61)	600 (23.61)	600 (23.61)	600 (23.61)	600 (23.61)	700 (27.55)	600 (23.61)	600 (23.61)	700 (27.55)	600 (23.61)	600 (23.61)	600 (23.61)	600 (23.61)	600 (23.61)	700 (27.55)
	Outside diameter	øD	615 (24.20)	670 (26.37)	780 (30.70)	640 (25.19)	715 (28.14)	840 (33.06)	670 (26.37)	730 (28.73)	845 (33.25)	685 (26.96)	755 (29.71)	890 (35.03)	635 (24.99)	700 (27.55)	815 (32.07)	710 (27.94)	775 (30.50)	915 (36.01)
	Thickness (*)2	t	33.5 (1.32)	33.5 (1.32)	34.3 (1.35)	45.5 (1.79)	49.5 (1.95)	60.3 (2.37)	51.5 (2.03)	53.5 (2.11)	64.3 (2.53)	62.5 (2.46)	62.5 (2.46)	78.3 (3.08)	43.6 (1.72)	46.8 (1.84)	52.4 (2.06)	64.3 (2.53)	67.5 (2.66)	74.6 (2.94)
	Inner diameter of lining	ød	436 (17.16)	478 (18.81)	586 (23.06)	434 (17.08)	476 (18.73)	582 (22.90)	428 (16.84)	470 (18.50)	574 (22.59)	420 (16.53)	462 (18.18)	564 (22.20)	432 (17.00)	474 (18.65)	578 (22.75)	414 (16.29)	456 (17.95)	554 (21.80)
	Pitch circle	øC	565 (22.24)	620 (24.40)	725 (28.53)	585 (23.02)	650 (25.58)	770 (30.30)	600 (23.61)	660 (25.97)	770 (30.30)	610 (24.01)	670 (26.37)	795 (31.29)	577.9 (22.74)	635 (24.99)	749.3 (29.49)	628.6 (24.74)	685.8 (26.99)	812.8 (31.99)
	Bolt hole intervall	u°	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	11.3	9.0	9.0	7.5	7.5	7.5
	Hole diameter	øh	26 (1.02)	26 (1.02)	30 (1.18)	30 (1.18)	33 (1.30)	36 (1.42)	36 (1.42)	36 (1.42)	39 (1.53)	39 (1.53)	42 (1.65)	48 (1.89)	31.8 (1.25)	31.8 (1.25)	35.1 (1.38)	35.1 (1.38)	35.1 (1.38)	41.1 (1.62)
	Number of holes	N	20	20	20	20	20	20	20	20	20	20	20	20	16	20	20	24	24	24
	Height	H1	641.5 (25.25)	761 (29.95)	864 (34.00)	654 (25.74)	783.5 (30.83)	894 (35.18)	669 (26.33)	791 (31.13)	896.5 (35.28)	676.5 (26.62)	803.5 (31.62)	919 (36.17)	651.5 (25.64)	776 (30.54)	881.5 (34.69)	689 (27.12)	813.5 (32.01)	931.5 (36.66)
	Height	H2	334 (13.14)	426 (16.77)	474 (18.65)	334 (13.14)	426 (16.77)	474 (18.65)	334 (13.14)	426 (16.77)	474 (18.65)	334 (13.14)	426 (16.77)	474 (18.65)	334 (13.14)	426 (16.77)	474 (18.65)	334 (13.14)	426 16.77	474 (18.65)
Remote flowtube	Max. Height	Hr	766.5 (30.17)	886 (34.87)	989 (38.92)	779 (30.66)	908.5 (35.75)	1019 (40.10)	794 (31.25)	916 (36.05)	1021.5 (40.20)	801.5 (31.54)	928.5 (36.54)	1044 (41.09)	776.5 (30.56)	901 (35.46)	1006.5 (39.61)	814 (32.03)	938.5 (36.93)	1056.5 (41.58)
	Weight kg (lb) approx. (*)1		142 (311)	180 (395)	273 (462)	188 (414)	259 (570)	368 (809)	243 (535)	305 (671)	439 (966)	315 (693)	389 (856)	614 (1350)	186 (408)	246 (545)	328 (722)	368 (808)	457 (1005)	689 (1515)

*1: Weight for lay length code 1
When submersible type or option code DHC is selected, waterproof glands and cables are attached.
Add 9.5 kg (20.9 lb) per 30m length to the weight in the table

*2: Flange thickness including lining at flange facing area.

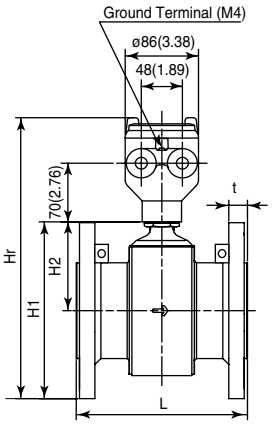
F48.EPS

RXF700-RXF10L

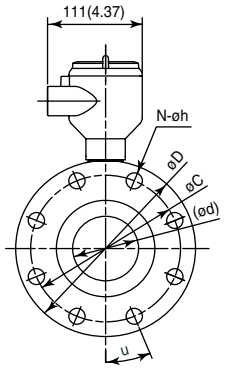
Unit: mm (approx. in)

RXF700
RXF800 G N 1 D □ 1 □ — C A 1
RXF900 W T 2 Y
RXF10L N

Remote Flowtube



Remote Flowtube



Model	Process Connection		CD1 (EN PN10)				CA1 (ASME Class 150)			
	Size code		700	800	900	10L	700	800	900	10L
	Size		700 (28)	800 (32)	900 (36)	1000 (40)	700 (28)	800 (32)	900 (36)	1000 (40)
	Lining code		D,Y	D,Y	D,Y	D,Y	D,Y	D,Y	D,Y	D,Y
Remote flowtube	Lay length (code 1)	L $^{0}_{-3}$	900 (35.42)	1050 (41.32)	1200 (47.23)	1300 (51.16)	900 (35.42)	1050 (41.32)	1200 (47.23)	1300 (51.16)
	Lay length (code 3)	L $^{0}_{-3}$	910 (35.81)	1040 (40.93)	1170 (46.04)	-- --	910 (35.81)	1040 (40.93)	1170 (46.04)	-- --
	Lay length (code 4)	L $^{0}_{-3}$	700 (27.55)	800 (31.48)	900 (35.42)	1000 (39.35)	700 (27.55)	800 (31.48)	900 (35.42)	1000 (39.35)
	Outside diameter	øD	895 (35.22)	1015 (39.94)	1115 (43.88)	1230 (48.41)	836.6 (32.92)	941.4 (37.05)	1057.3 (41.61)	1174.8 (46.23)
	Thickness (*)2	t	33 (1.30)	35 (1.38)	37 (1.46)	37 (1.46)	47.5 (1.87)	49 (1.93)	55.3 (2.18)	58.6 (2.31)
	Inner diameter of lining	ød	691 (27.19)	789 (31.05)	888 (34.95)	992 (39.04)	683 (26.88)	779 (30.66)	880 (34.63)	980 (38.57)
	Pitch circle	øC	840 (33.06)	950 (37.39)	1050 (41.32)	1160 (45.65)	795.3 (31.30)	900.2 (35.43)	1009.7 (39.74)	1120.6 (44.10)
	Bolt hole intervall	u°	7.5	7.5	6.4	6.4	4.5	3.8	4.1	4.5
	Hole diameter	øh	30 (1.18)	33 (1.30)	33 (1.30)	36 (1.42)	22.2 (0.87)	22.2 (0.87)	25.4 (1.00)	28.6 (1.13)
	Number of holes	N	24	24	28	28	40	48	44	40
	Height	H1	976.5 (38.43)	1091.5 (42.96)	1190.5 (46.85)	1297 (51.04)	947.3 (37.28)	1054.7 (41.51)	1161.65 (45.72)	1269.4 (49.96)
	Height	H2	529 (20.82)	584 (22.98)	633 (24.91)	682 (26.84)	529 (20.82)	584 (22.98)	633 (24.91)	682 (26.84)
Remote flowtube	Max. Height	Hr	1101.5 (43.35)	1216.5 (47.87)	1315.5 (51.77)	1422 (55.96)	1072.3 (42.20)	1179.7 (46.43)	1286.65 (50.64)	1394.4 (54.88)
	Weight kg (lb) approx. (*)1		273 (600)	480 (1056)	610 (1342)	740 (1628)	245 (540)	540 (1188)	680 (1496)	820 (1804)

*1: Weight for lay length code 1
When submersible type or option code DHC is selected, waterproof glands and cables are attached.
Add 9.5 kg (20.9 lb) per 30m length to the weight in the table.

*2: Flange thickness including lining at flange facing area.

Unless otherwise specified, differences in the dimensions are refering to the following table.

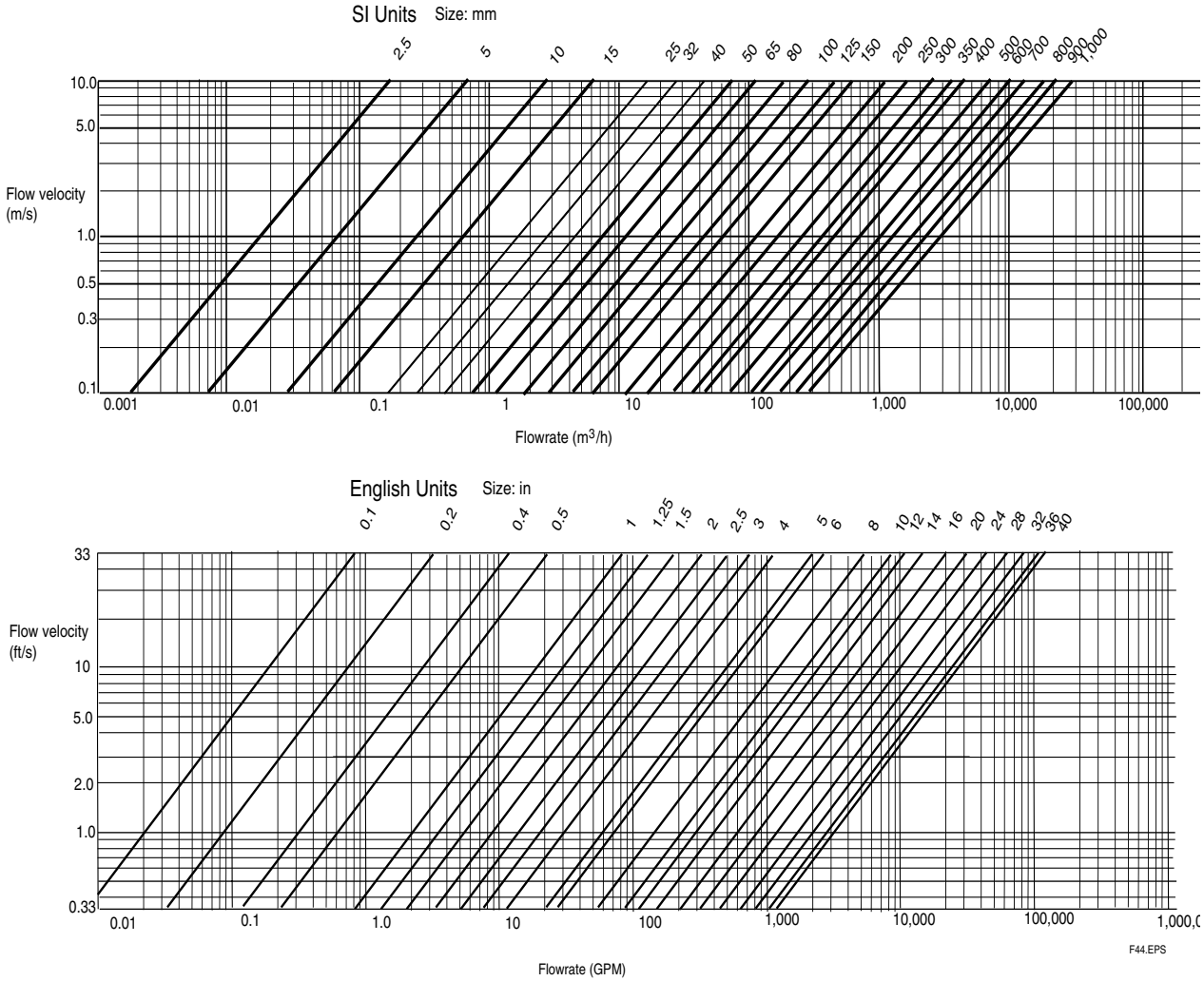
General tolerance in the dimensional outline drawing.

Unit : mm (approx.inch)

Category of basic dimension		Tolerance	Category of basic dimension		Tolerance
Above	Equal or below		Above	Equal or below	
	3 (0.12)	±0.7 (60.03)	500 (19.69)	630 (24.80)	±5.5 (62.17)
3 (0.12)	6 (0.24)	±0.9 (60.04)	630 (24.80)	800 (31.50)	±6.25 (60.25)
6 (0.24)	10 (0.39)	±1.1 (60.04)	800 (31.50)	1000 (39.37)	±7.0 (60.28)
10 (0.39)	18 (0.71)	±1.35 (60.05)	1000 (39.37)	1250 (49.21)	±8.25 (60.32)
18 (0.71)	30 (1.18)	±1.65 (60.06)	1250 (49.21)	1600 (62.99)	±9.75 (60.38)
30 (1.18)	50 (1.97)	±1.95 (60.08)	1600 (62.99)	2000 (78.74)	±11.5 (60.45)
50 (1.97)	80 (3.15)	±2.3 (60.09)	2000 (78.74)	2500 (98.43)	±14.0 (60.55)
80 (3.15)	120 (4.72)	±2.7 (60.11)	2500 (98.43)	3150 (124.02)	±16.5 (60.65)
120 (4.72)	180 (7.09)	±3.15 (60.12)			
180 (7.09)	250 (9.84)	±3.6 (60.14)			
250 (9.84)	315 (12.40)	±4.05 (60.16)			
315 (12.40)	400 (15.75)	±4.45 (60.18)			
400 (15.75)	500 (19.69)	±4.85 (60.19)			

Remarks: The numeric is based on criteria of tolerance class IT18 in JIS B 0401.

SIZING DATA (Measurable flow velocity is from 0 m/s.)



ORDERING INFORMATION

Note 1: When ordering a remote flowtube and a remote converter, specify the flow span, unit, transmission output pulse weight and totalizer display pulse weight for the order details of the flowtube.
Then these parameters will be set in the combined converter before shipment.

Note 2: Some options, if ordered, require the relevant specifications to be input when ordering.

1. Model, specification and option codes.
2. Converter for combined use (when ordering a remote type flowtube)

   Model, suffix code, optional code, and tag number (if specified) of a converter for combined use.

   Refer to “ORDERING INFORMATION” of

   GS 01R21C01-00E-E, GS 01R21C02-00E-E.
3. Tag number

NOTE

If a tag number is specified upon ordering, the parameter [C10] is set up before shipment; Up to 16 digits are programmable, and up to 16 digits can be displayed on the meter display if a display was ordered. The number programmed in [C10] is then identical to the tag number on the data plate. If additionally to the tag number a software tag number was specified upon ordering the software tag number is the number that will be programmed in [C10]. If (software) tag is provided upon ordering and if flowmeter is ordered with a display, the third line of the display will show (software) tag number (parameter C10) at start up. The possible length for programming a software tag number depends on the communication code.
RXFxxxx-D = BRAIN : up to 16 digits
RXFxxxx-E = HART : up to 8 digits
If value was not set to your requirements, it will be necessary for the appropriate value to be set by the user.

4. Flow rate spans and units

   Flow span can be specified with the numeric within the value of 0.0001 to 32000.
   And it can be up to five digits, to a maximum of 32000 ignoring the decimal point.

   And a fraction is limited to the fourth decimal place. Integral flowmeters are set to the first range in the forward direction. The identical value for the first range in forward direction is also set as the first range in reverse direction. Remote converters are set to the first range in the forward direction and reverse direction of the converter (RXFA11 or RXFA14) with which they are to be combined.

   If a flow rate span and its unit are not specified, the relevant product is delivered with the default setting in m^3/h given in table “Measurable Flow Rate Range” on page 7.
5. Transmission output pulse weight

   If specified, volume per pulse shall be set. Unless specified, the relevant product is delivered with 0.1 m^3/pulse for sizes up to RXF100 and 1 m^3/pulse for larger sizes. However DO or DIO output is set to “No function”. If needed please activate in F20/F21.
6. Totalizer display pulse weight

   If specified, volume per pulse shall be set. Unless specified, the relevant product is delivered with 0.1 m^3/pulse for sizes up to RXF100 and 1 m^3/pulse for larger sizes. However totalizer line is not displayed on indicator. If needed please activate in B40/B41/B42.
7. Fluid name

RELATED INSTRUMENTS

BT200 Brain Terminal: GS 1C0A11-E

RXFA11 Magnetic Flowmeter Remote Converter : GS 01R21C01-00E-E

RXFA14 Magnetic Flowmeter Remote Converter : GS 01R21C02-00E-E

YOKOGAWA EUROPE B.V.
Euroweg 2
3825 HD AMERSFOORT
The Netherlands
www.yokogawa.com/eu

Produced by:
ROTA YOKOGAWA
Rheinstr. 8
D-79664 Wehr
Germany

Yokogawa has an extensive sales and distribution network.
Please refer to the European web-site (www.yokogawa-europe.com) to contact your nearest representative.

YOKOGAWA