

EW473 Series Ultrasonic Flowmeters

VOLUME MEASURING COMPONENT

PRODUCT DATA



Application

Honeywell EW473 Series ultrasonic flowmeters are used for flow measurement of heating or cooling water in hydronic heating, cooling or air conditioning systems.

They are typically used with an EW545 Series energy calculator. The combination of flowmeter and energy calculator has the same functionality as a heatmeter.

EW473 Series flowmeter are equipped with two galvanically isolated digital outputs for easy connection to a calculator (potential-free).

Features

- MID approval
- No pressure loss
- Rugged design
- Indifferent to dirt in the system

Specifications

Medium	Water, quality to VDI2035
Medium temperature	2...120°C (36...248°F)
	When interface box is detached from housing: 2...200°C (36...392°F)
Ambient temperature	0...60°C (32...140°F)
Storage temperature	-35...85°C (-40...185°F)
Operating pressure	max. 16bar (232psi)
k_{vs}-values	see table below
Protection class	IP67 (interface unit)
Measuring process	Ultrasonic volume measurement
Display	LCD, 8+2-digit
Units	Flow: m ³ /h Volume: m ³
Operating voltage	230V AC, 50...60Hz

Design

EW473 Series flowmeters consist of:

- Housing with flanges and integrated ultrasonic transmitter and pickup assemblies
- Interface box
- Cable between housing and interface box, length 10m

Materials

- Valve housing made of carbon steel, painted light grey
- Transmitters made of stainless steel and brass
- Interface box made of light grey fibre glass reinforced polyamide

Flow Data

Table 1. Flow rates EW473 Series

DN	100	125	150	200	250	300	350	400	500	600	
<i>Flow rates according to MID</i>											
Minimum (qi)	m ³ /h	1.2	2	3	5	8	11.2	15	19	29.5	43
Nominal (qp)	m ³ /h	120	200	300	500	800	1,120	1,500	1,900	2,950	4,300
Maximum (qs)	m ³ /h	180	280	420	700	1,120	1,560	2,100	2,660	4,130	6,020
Dynamic range (qp/qi)		100:1	100:1	100:1	100:1	100:1	100:1	100:1	100:1	100:1	100:1
<i>Additional flow data</i>											
Starting flow rate	m ³ /h	0.6	1.0	1.5	2.5	4.0	5.6	7.5	9.5	14.75	21.5
Overload flow rate	m ³ /h	252	420	588	945	1,470	2,205	2,940	3,780	5,775	8,400

EW473 Series flowmeters should be selected in such a way that system flow rates are between qs and qi.

Dimensions

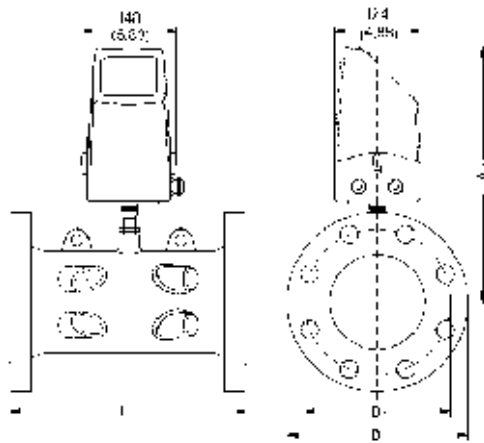


Fig. 1. Dimensions

Table 2. Dimensions

DN Size	Length L	Height A1	Width D	Bolt circle D1	Weight	Lift hug
100	350	375	220	180	15kg	
125	350	380	250	210	18kg	
150	500	390	285	240	28kg	•
200	500	414	340	295	38kg	•
250	600	440	405	355	60kg	•
300	500	466	460	410	66kg	•
350	550	495	520	470	94kg	•
400	600	507	580	525	124kg	•
500	625	558	715	650	190kg	•
600	750	609	840	770	303kg	•

NOTE: All dimensions in mm unless stated otherwise

Ordering Information

Table 3. OS-Nos. (OS=Order Specification)

Size qp	DN size	Pulse value	OS-No.	Suitable Calculator ¹
120	100	2.5 litres	EW473P8303	EW5451A8303
200	125	2.5 litres	EW473P8725	EW5451A8303
300	150	10 litres	EW473P9025	EW5451A0100
500	200	10 litres	EW473P9125	EW5451A0100
800	250	10 litres	EW473P9225	EW5451A0100
1,120	300	50 litres	EW473P9303	EW5451A9303
1,500	350	50 litres	EW473P9425	EW5451A9303
1,900	400	50 litres	EW473P9525	EW5451A9303
2,950	500	100 litres	EW473P9625	EW5451A4100
4,300	600	100 litres	EW473P9925	EW5451A4100

Mounting

- Avoid installation at the highest point in the system because air bubbles will be trapped in flowmeter
- Avoid installation at a point where there is a free outlet after flowmeter
- Flowmeter pipe section may be installed in either a horizontal or vertical position
- Calming legs before and after flowmeter are required, see Fig. 2 to Fig. 4 below

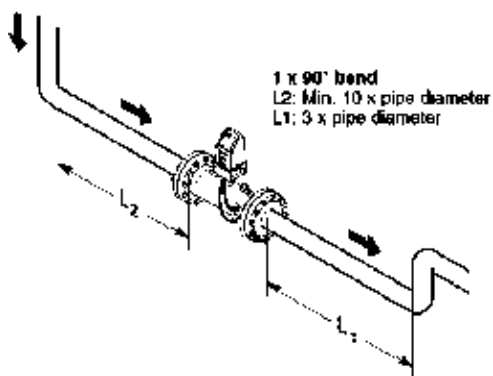


Fig. 2. Single bend

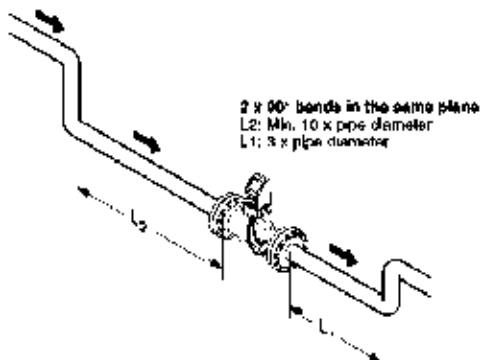


Fig. 3. Double bend

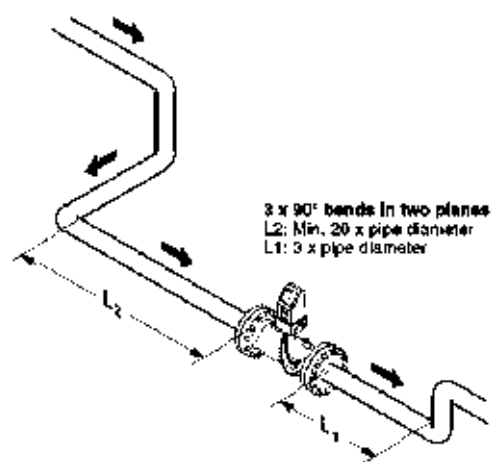


Fig. 4. Triple bend

¹ For more information on energy calculator see separate data sheet 'EW545 Series Energy Calculators'