

Frese Metering Station

DN15-DN50

Application

The metering station is designed for measuring the flow in heating and cooling systems.

It is equipped with P/T-plugs which are compatible with flow measuring instruments using needle-based probes.

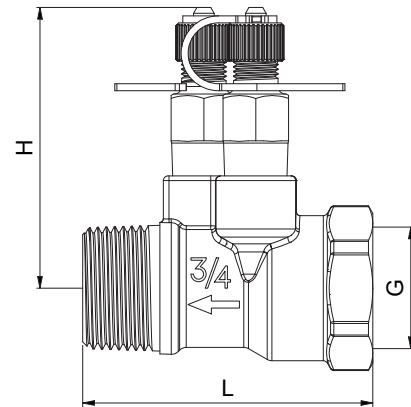
The measuring instrument is connected to the P/T-plugs to read the pressure drop over the metering station.

The flow is calculated based on the Kv-value for the ΔP -signal of the metering station.



Technical data

Housing:	DZR Brass
O-rings:	EPDM
Pressure class:	PN25
Temperature range:	-10°C to +110°C
Kv-tolerance (ΔP-signal):	+/-3% (according to BS7350)
Thread:	ISO 228
Media:	Water, glycolic-ethylene and glycolic-propylene mixtures up to 50%



Dimensions and item numbers

Frese no.	Size	Kv		Dimensions		
		Kv- ΔP signal For flow verification	Kv-total For pump dimensioning	G [mm]	L [mm]	H [mm]
38-1015	DN15X	0.263	0.25	1/2"	60	57
38-1016	DN15U	0.55	0.61	1/2"	60	57
38-1017	DN15L	1.15	1.23	1/2"	60	57
38-1018	DN15	2.80	3.63	1/2"	60	57
38-1019	DN20	5.33	7.56	3/4"	62	60
38-1020	DN25	9.72	13.6	1"	68	63
38-1021	DN32	20.25	30.8	1-1/4"	72	69
38-1022	DN40	30.23	48.1	1-1/2"	72	72
38-1023	DN50	55.07	85.5	2"	82	78

Example:

Flow: 650 l/h \Rightarrow 0.65 m³/h

Size DN15: Kv ΔP -signal = 2.8 & Kv-total = 3.63

Measured ΔP signal = $(0.65/2.8)^2 = 0.054$ Bar \Rightarrow 5.4 kPa

Pressure loss for pump calculation $\Delta P = (0.65/3.63)^2 = 0.032$ Bar \Rightarrow 3.2 kPa

The unique venturi design secures a higher signal for the manometer to provide more accurate flow measurement and at the same time provides a low pressure loss to save pump energy.

For optimum accuracy the metering station should be installed with 5 x pipe diameter of straight pipe upstream and 2 x pipe diameter downstream, the pipe having equal diameter as the metering station.

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