

D901 / D902



Flow Measurement Device (FMD)

PN25

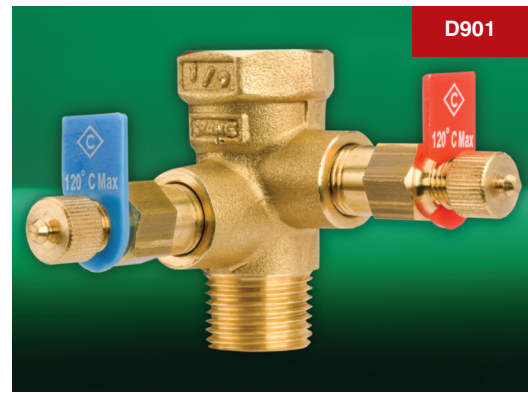
Features & Benefits

- **D901** Flow Measurement Device is suitable for systems where pipes have been sized on the basis that pipe frictional losses lie in the range 100 to 400 Pa/m
- **D902** Flow Measurement Device (1/2"/15mm size only) is suitable for the measurement of ultra-low flows in the range 0.015 to 0.06 l/sec e.g. flows to fan coil units
- Square edged entrance orifice plates with tappings for P84 insertion style test points
- Flow measurement accuracy of ±3%

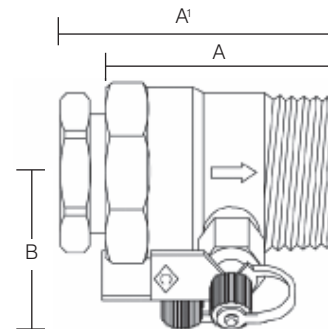
Please note: The fitting of P82 test points will give an increased temperature rating of 180°C.

Materials

PART	MATERIAL	SPECIFICATION
Body and Integral Orifice	DZR copper alloy	BS EN 12165 CW602N
P84 Pressure Test Point	DZR copper alloy	BS EN 12164 CW602N



Dimensional Drawing



Dimensions, Coefficients & Weights

FIG. NO.	SIZE	END TO END		CENTRE-TO-TOP B (mm)	FLOW (Kv)	HEAD LOSS (K)	KVS	WEIGHT (kg)
		A (mm)	A1 (mm)					
D901	1/2"/DN15	57	66	55	2.8	13.5	2.2	0.29
	3/4"/DN20	58	-	61	6.1	9.1	4.7	0.30
	1"/DN25	66	-	65	11.9	6.1	8.6	0.40
	1 1/4"/DN32	72	-	71	23.4	4.8	16.6	0.50
	1 1/2"/DN40	72	-	73	36.2	3.7	24.5	0.54
	2"/DN50	82	-	79	71.6	2.4	46.1	0.77
D902	1/2"/DN15	57	66	55	0.57	333	0.54	0.29

Pressure/Temperature Ratings

Threaded

TEMPERATURE (°C)	-10 to 100	110	120
PRESSURE (BAR)	25	23.4	21.8

Compression

TEMPERATURE (°C)	-10 to 30	65	120
PRESSURE (BAR)	16	10	5

Intermediate pressure ratings shall be determined by interpolation.

Maximum temperature 120°C

Note: In line with BS EN 1254/2, the maximum pressure must not exceed 16 bar when using compression adaptors.

*Except pressure rating exceeds BS.



PRESSURE RATING: PN25

SPECIFICATION: FMDs conform to BS 7350*:1990.

END CONNECTIONS:

D901 - Sizes 1/2" to 2"

Inlet: BS EN 10226 formerly BS 21 (ISO 7) taper female. Outlet: BS EN 10226 formerly BS 21 (ISO 7) taper male.

D901/D902 - Sizes 1/2" Inlet: (ISO 228) parallel female supplied with compression adaptor to suit 15mm BS EN 1057: Half hard R250 copper tube.

Outlet: BS EN 10226 formerly BS 21 (ISO 7) taper male. Discard adaptor if connecting steel pipe.

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Valid as of 01/04/12

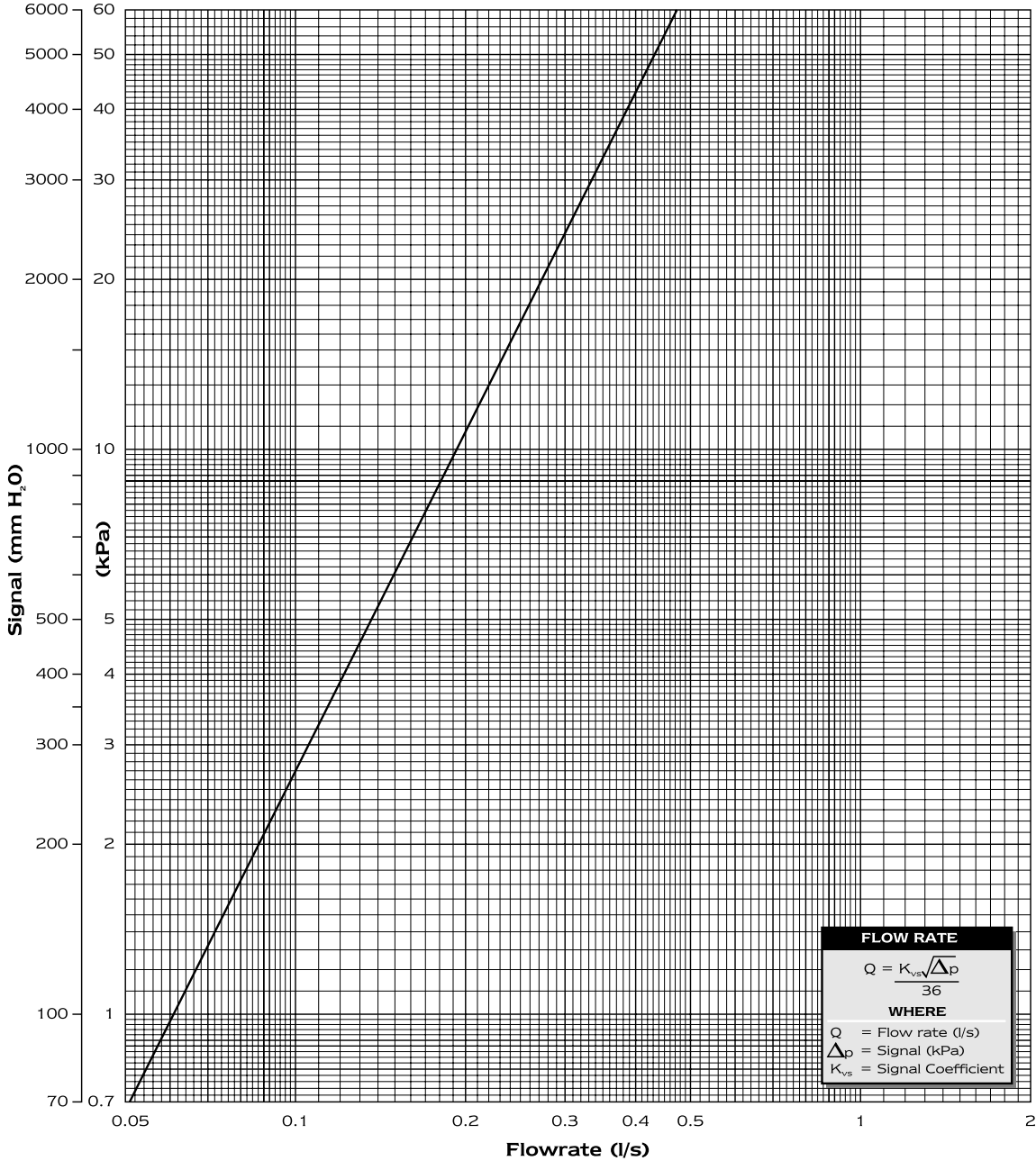
Size 1/2 (DN15) D901

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Flow Measurement Graphs

Fixed orifice devices for standard applications

Kvs = 2.2

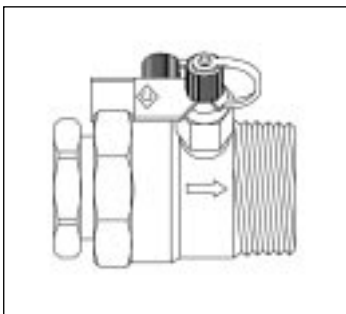


FLOW RATE

$$Q = \frac{K_{vs} \sqrt{\Delta p}}{36}$$

WHERE

Q = Flow rate (l/s)
 Δp = Signal (kPa)
 K_{vs} = Signal Coefficient



D901



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Head / Pressure Loss

The loss resulting from the insertion of the device in the pipeline may be calculated by multiplying the signal by the appropriate factor.

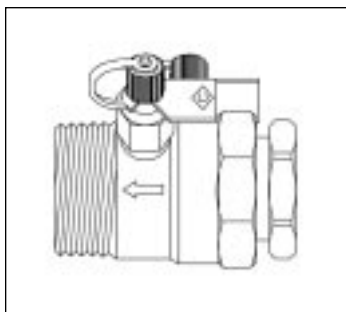
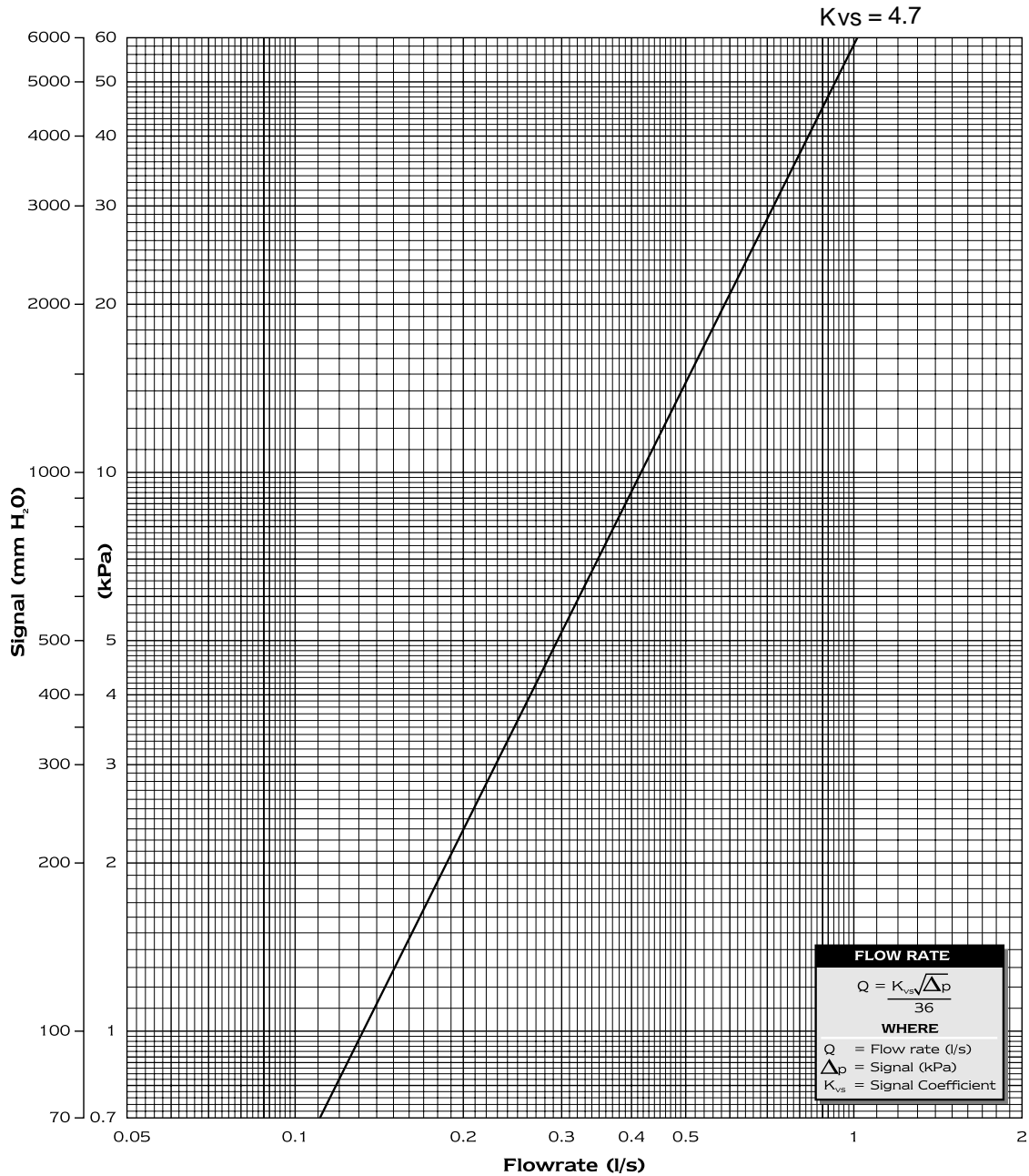
Fig No.
D901

Factor
0.62

Size 3/4 (DN20) D901

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Fixed orifice devices for standard applications



D901

Head / Pressure Loss

The loss resulting from the insertion of the device in the pipeline may be calculated by multiplying the signal by the appropriate factor.

Fig No.
D901

Factor
0.59



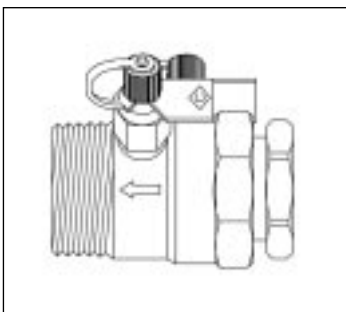
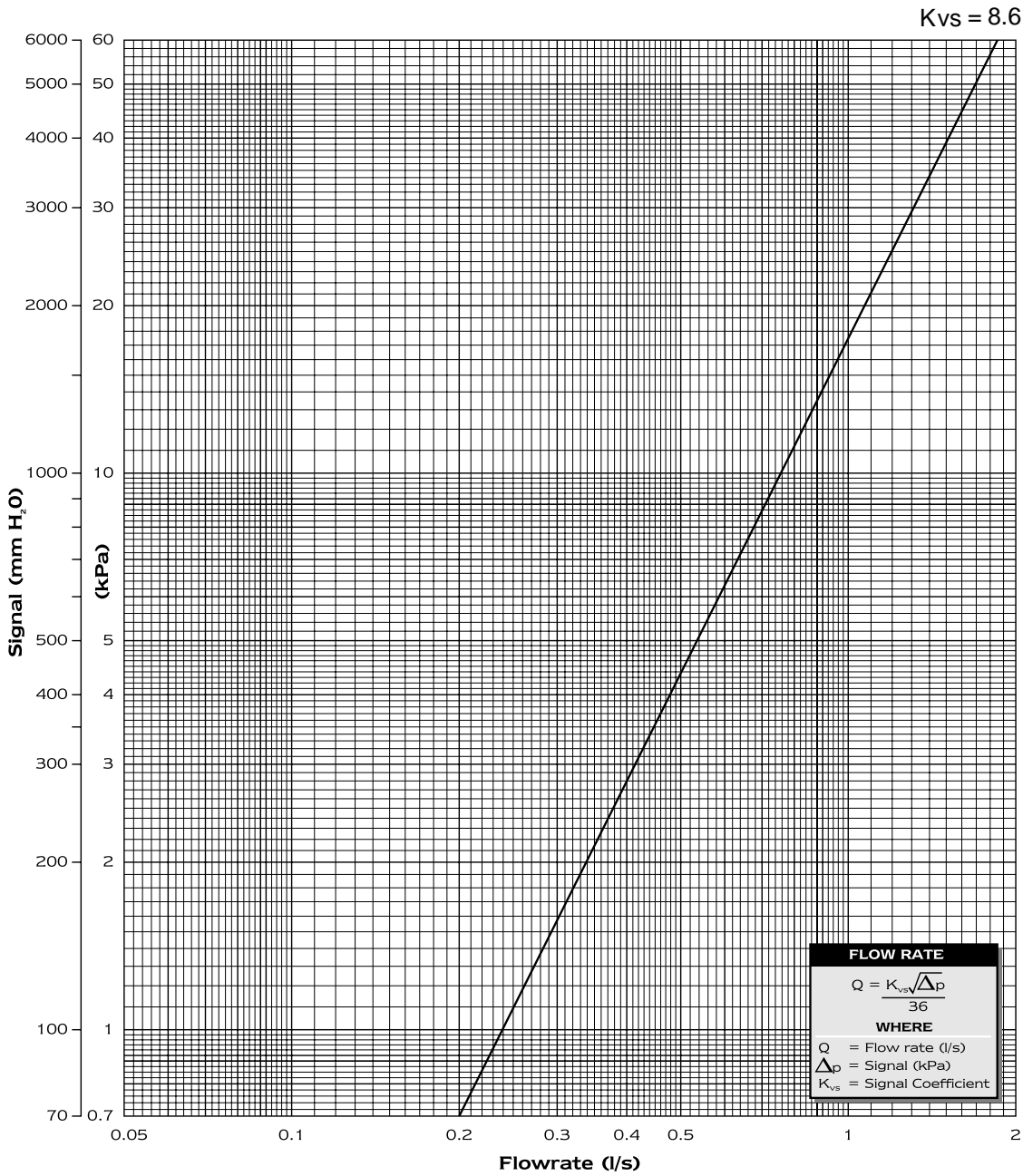
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Size 1 (DN25) D901

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Flow Measurement Graphs

Fixed orifice devices for standard applications



D901



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Head / Pressure Loss

The loss resulting from the insertion of the device in the pipeline may be calculated by multiplying the signal by the appropriate factor.

Fig No.
D901

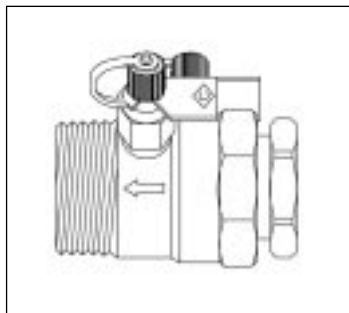
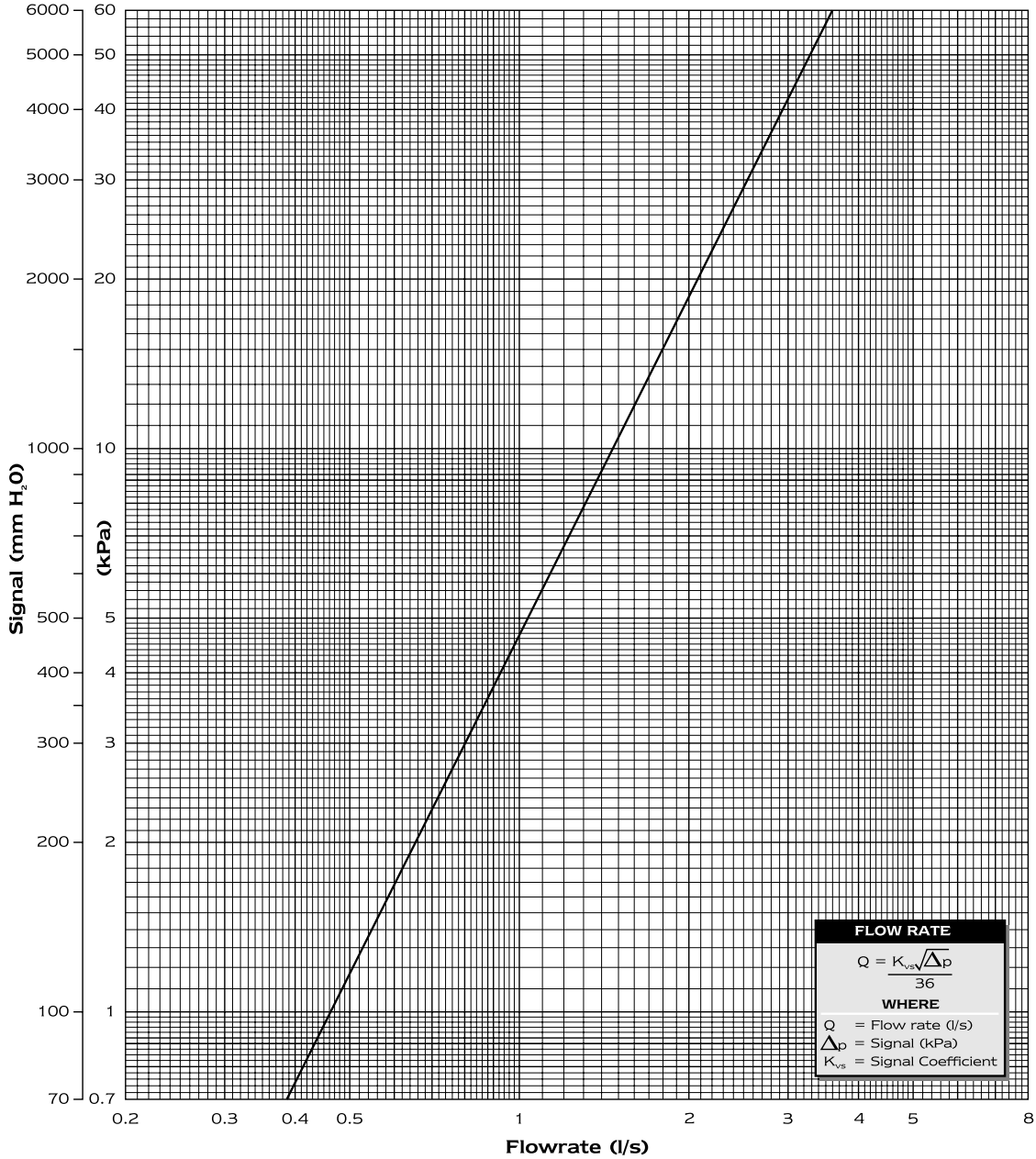
Factor
0.52

Size 1 1/4 (DN32) D901

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Fixed orifice devices for standard applications

$K_{vs} = 16.6$



D901



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Head / Pressure Loss

The loss resulting from the insertion of the device in the pipeline may be calculated by multiplying the signal by the appropriate factor.

Fig No.
D901

Factor
0.50

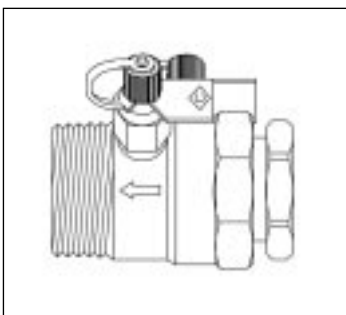
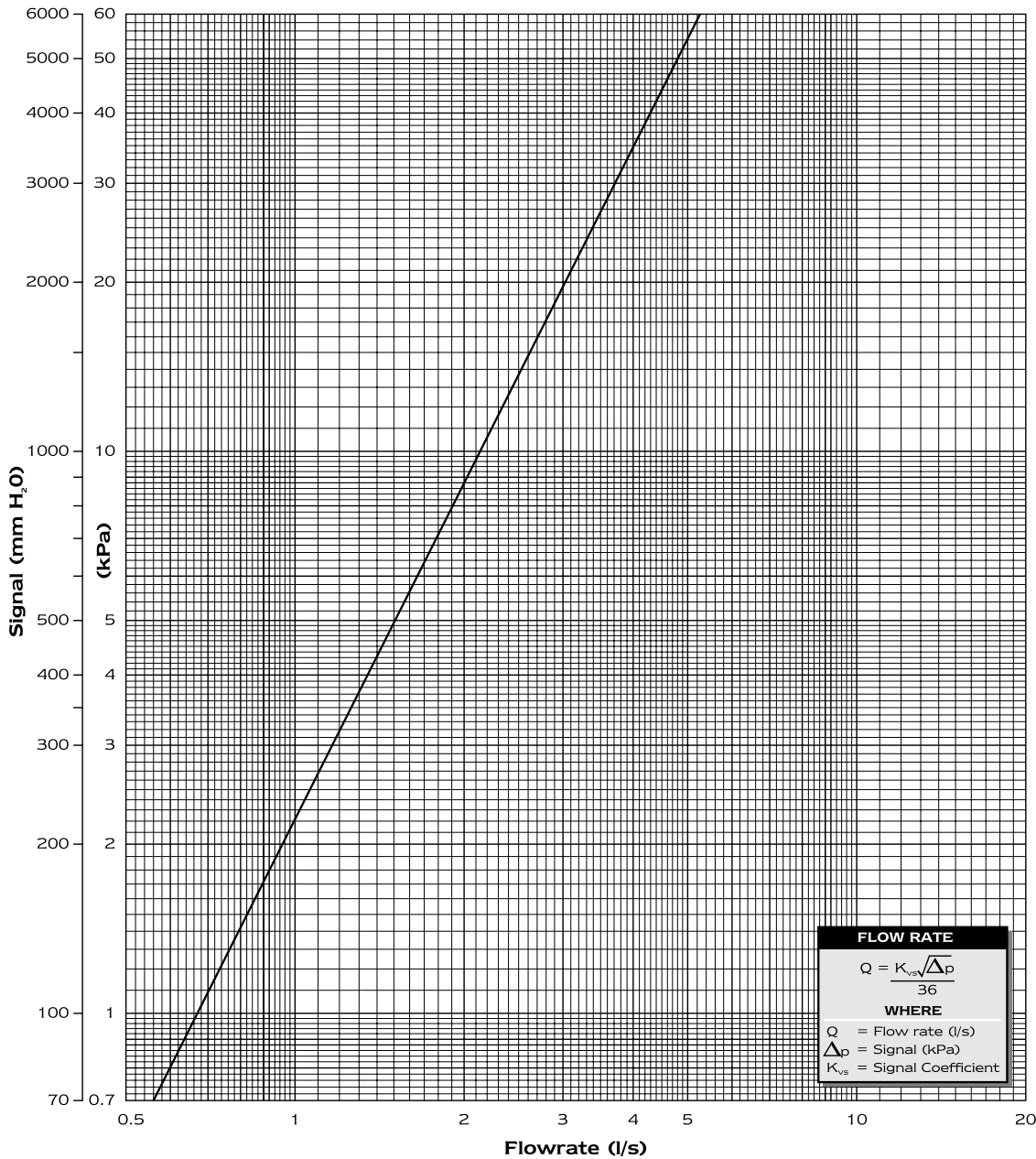
Size 1½ (DN40) D901

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Flow Measurement Graphs

Fixed orifice devices for standard applications

$K_{vs} = 24.5$



D901

Head / Pressure Loss

The loss resulting from the insertion of the device in the pipeline may be calculated by multiplying the signal by the appropriate factor.

Fig No.
D901

Factor
0.46

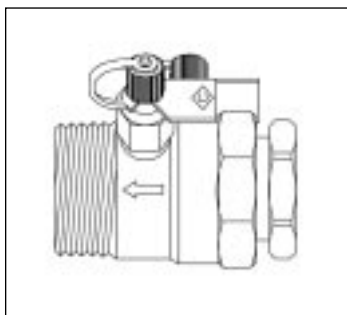
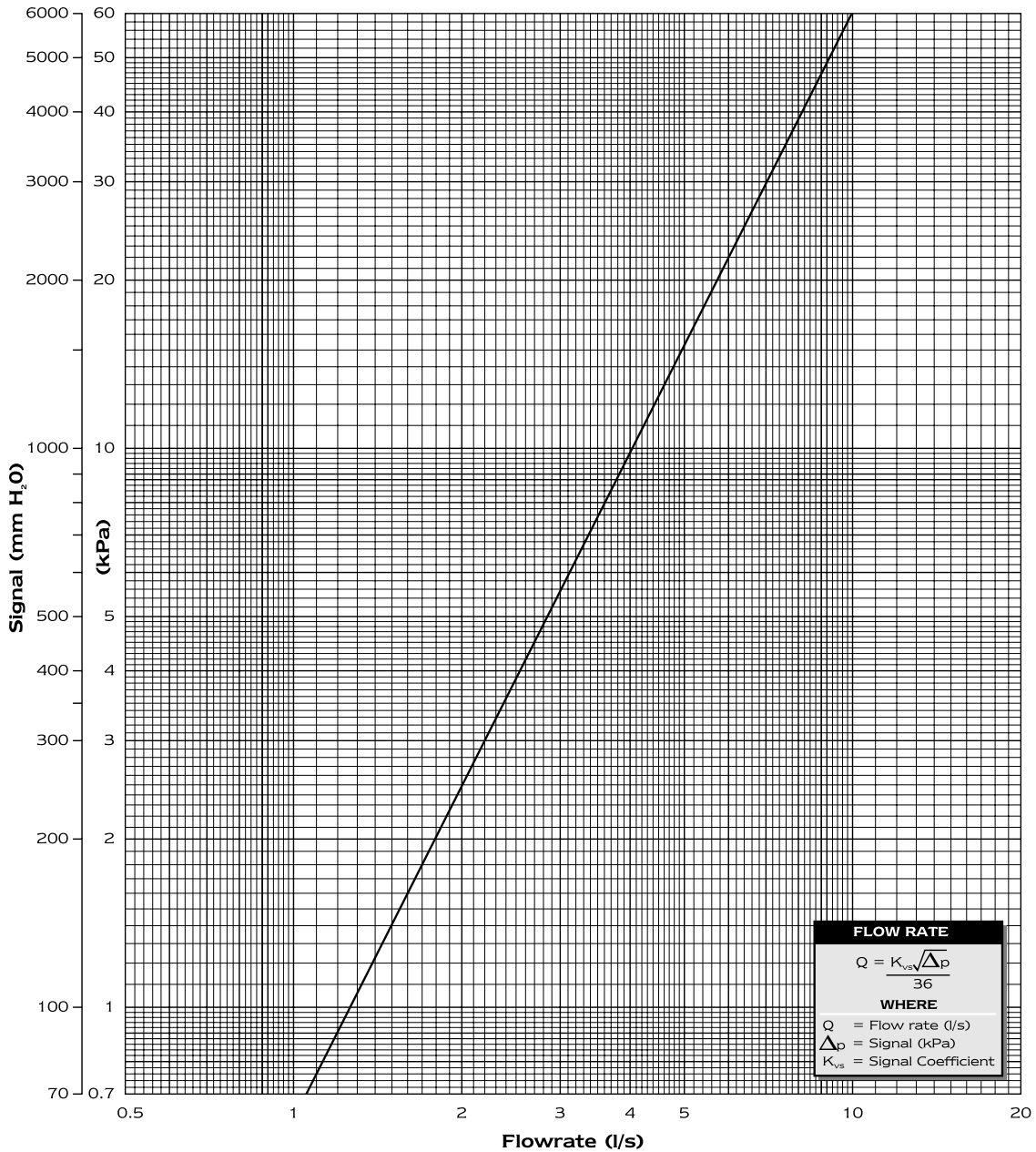


Size 2 (DN50) D901

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Fixed orifice devices for standard applications

$K_{vs} = 46.1$



D901

Head / Pressure Loss

The loss resulting from the insertion of the device in the pipeline may be calculated by multiplying the signal by the appropriate factor.

Fig No.
D901

Factor
0.41



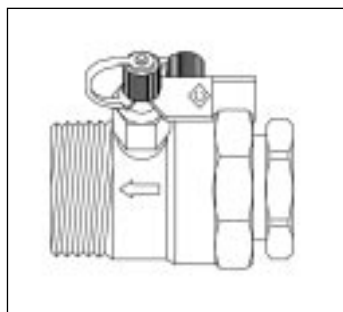
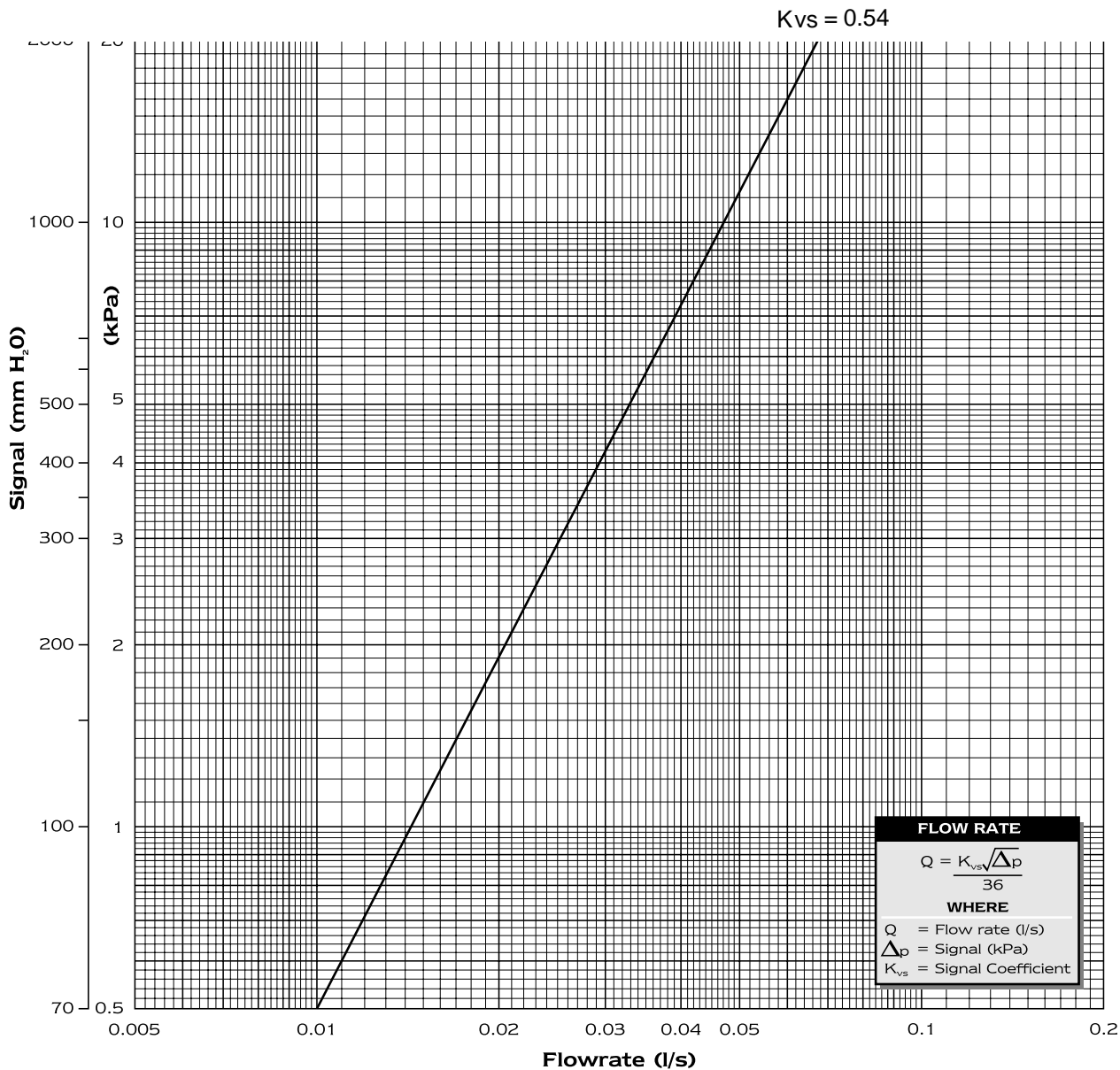
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Size 1/2 (DN15) D902

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Flow Measurement Graphs

Fixed orifice devices for low flow applications



D902

Head / Pressure Loss

The loss resulting from the insertion of the device in the pipeline may be calculated by multiplying the signal by the appropriate factor.

Fig No.
D902

Factor
0.90



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