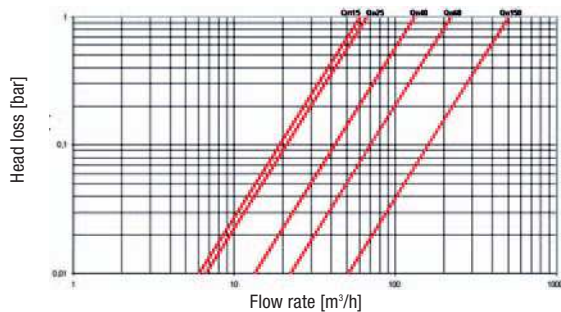




#### OPTION

- Max. operation temperature 130 °C achieved with totalizer extension (for model 453)

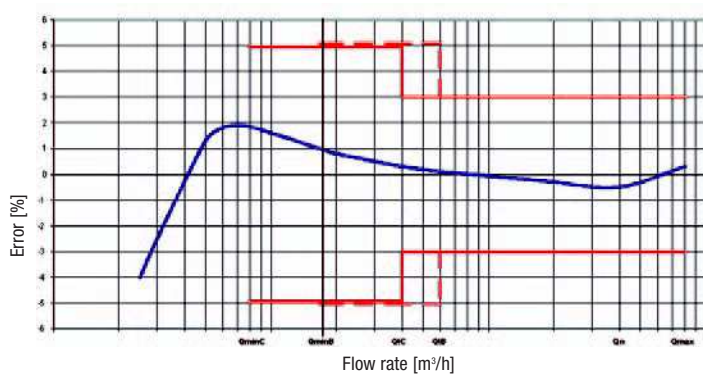
#### HEAD LOSS DIAGRAM WS-XKA



#### NOTE

HYDROMETER contact water meter models 453 and 455 can be supplied calibrated on request.

#### TYPICAL ERROR CURVE WS-XKA



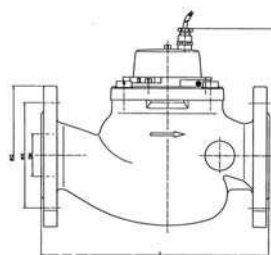
#### APPLICATIONS

- For horizontal installation
- For hot water up to 120 °C
- Max. operation temperature 130 °C achieved with totalizer extension
- Metrological class C
- Construction dimensions to DIN ISO 4064 or DIN 19 625
- Operating pressure up to 16 bars (up to PN 40 on demand)
- Contact load (without series resistor) max. 24 V, (protective low voltage), 0.2 A
- Volume measuring device to measure thermal quantities, to charge the consumption of warm water.
- Possibility of remote transmission of quantities of flow.

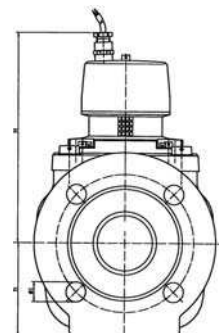
#### CHARACTERISTICS

- Easily removable reed-switch.
- Completely dry-running – no measuring gears running in water.
- Totalizer capsulated, evacuated, submersible.
- No obstruction in reading because of sealed totalizer avoiding condensation.
- For easy reading the complete head part with totalizer can be turned to any position.
- Outstanding continuance of accuracy even with extreme charges ( $Q_{max}$ ) because of vane bearing being of ring sapphire and carbide metal
- As a safeguard against magnetic influences, a sealable antimagnetic screen is fitted on the meter
- The pulse transmitter is fitted with a 100  $\Omega$   $\frac{1}{4}$  W series resistor (length of cable: 3 m).  
Can be supplied without series resistor on request!
- Considerably extended measuring range towards small flows compared to documentation of metrological class.

#### EXECUTION WITHOUT TOTALIZER EXTENSION



#### EXECUTION WITH TOTALIZER EXTENSION



#### TECHNICAL DATA

Model		453					455
Type		WS-XKA					
Nominal Diameter	DN mm	50	65	80	100	150	
Nominal Flow	Q <sub>n</sub> m <sup>3</sup> /h	15	25	40	60	150	
Flow at 0.1 bar Head Loss	m <sup>3</sup> /h	19	21	42	70	160	
Maximum Flow (temporary)	Q <sub>max</sub> m <sup>3</sup> /h	50	50	110	140	350	
Transition Flow (Dividing Line)	Q <sub>t</sub> m <sup>3</sup> /h	1.5	1.5	1.6	2.4	15	
Lower Measurement Range	Q <sub>min</sub> m <sup>3</sup> /h	0.2	0.2	0.3	0.4	2	
Starting Flow	l/h	60	60	90	90	1000	
Flange Connection	Outside ø D mm	165	185	200	220	285	
Dimensions acc.	Bolt Hole ø K mm	125	145	160	180	240	
DIN 2501/PN 16	Number of Bolts pcs.	4	4	8 (4)*	8	8	
Height	Without Totalizer Extension	H mm	155	155	190	200	400
	With Totalizer Extension	H mm	195	195	230	240	440
		h mm	84	97	102	113	155
Length according DIN 19625	L mm	270	300	300	360	500	
Length according DIN ISO 4064	L mm	300	300	350	350	500	
Indication Range of Dial	min. l	0.05	0.05	0.05	0.05	0.5	
	max. m <sup>3</sup>	10 <sup>6</sup>	10 <sup>6</sup>	10 <sup>6</sup>	10 <sup>6</sup>	10 <sup>7</sup>	
Weight	kg	14.2	18	24	28	79.5	
Flow resistance coefficient Zeta		2.82	6.6	3.8	3.3	3.2	

\*DN 80: Can be supplied according to DIN 2532 (4 holes) on request.

In the course of further development, slight technical modifications may arise.

Available Pulse Rates:

WS-XKA 50/65/80/100 2.5 · 10 · 25 · 100 · 250 · 1000 litres/impulse

WS-XKA 150 25 · 100 · 250 · 1000 · 2500 · 10000 litres/impulse

Other executions and different pulse rates on request.

#### ORDER REFERENCES

Model	DN /PN	Type	I / Imp.	Length	Temp.	Conection	*Metrol. Cl.	HY-Part Number
453	50 / 16	WS-XKA	25	270 mm	120 °C	FI-DIN 2501	B•H	453 000 02
453	50 / 16	WS-XKA	100	270 mm	120 °C	FI-DIN 2501	B•H	453 000 04
453	50 / 16	WS-XKA	250	270 mm	120 °C	FI-DIN 2501	B•H	453 000 25
453	65 / 16	WS-XKA	25	300 mm	120 °C	FI-DIN 2501	B•H	453 000 34
453	65 / 16	WS-XKA	100	300 mm	120 °C	FI-DIN 2501	B•H	453 000 27
453	65 / 16	WS-XKA	250	300 mm	120 °C	FI-DIN 2501	B•H	453 000 36
453	80 / 16	WS-XKA	25	300 mm	120 °C	FI / 8 holes	B•H	453 000 44
453	80 / 16	WS-XKA	100	300 mm	120 °C	FI / 8 holes	B•H	453 000 45
453	80 / 16	WS-XKA	250	300 mm	120 °C	FI / 8 holes	B•H	453 000 58
453	100 / 16	WS-XKA	100	360 mm	120 °C	FI / 8 holes	B•H	453 000 62
453	100 / 16	WS-XKA	250	360 mm	120 °C	FI / 8 holes	B•H	453 000 63
455	150 / 16	WS-XKA	100	500 mm	120 °C	FI / 8 holes	B•H	455 000 84
455	150 / 16	WS-XKA	250	500 mm	120 °C	FI / 8 holes	B•H	455 000 86
455	150 / 16	WS-XKA	1000	500 mm	120 °C	FI / 8 holes	B•H	455 001 19

Note: Above mentionend types are standard products. Obviously all types are available.

\* tested to metrological class indicated!

Explanation:

WS : Woltman meter horizontal with vertical impeller axis

X : Mechanical roller counter

K : Contact outlet

A : with built in reed switch