

CORONA ER

Electronic Meter | Multi-Jet

DIEHL
Metering



APPLICATION

Fully electronic compact water meter with impeller scanning for recording volume. Highly accurate recording of all billing data at medium temperatures up to 90 °C.

FEATURES

- ▶ Inbuilt radio module 868 MHz
- ▶ Electronic sensor control for recording flow rate
- ▶ Lithium battery, lifetime up to 12 years
- ▶ Optical ZVEI interface equipped as standard
- ▶ Adjustable reading date for billing
- ▶ Rotatable integrator
- ▶ Single-line 7-digit display for easy meter reading

CORONA ER

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ELECTRONIC - BASIC FEATURES

CORONA ER	
Ambient class	OIML R49 class C / MID E2 + M1
Protection class	IP 54 or IP 68 for cold and warm water meter
Interfaces	Optical ZVEI, radio

Note: IZAR@SET / HYDRO-SET Software for configuration of meters, readout of measured values and printout of meter logs. Available under www.diehl.com/metering (Products - downloads)

TECHNICAL DATA DISPLAY

CORONA ER	
Display indication	LCD, 7-digit
Unit	m ³ /h - l/h - m ³ - l
Total values	9,999.999 - 999,999.9 - 99,999.99 - 9,999.999
Values displayed	Flow rate

SUPPLY VOLTAGE

CORONA ER			
Operating voltage	UN	VDC	3.0 (lithium battery)
Battery lifetime			Up to 12 years
Nominal power	PN	μW	30

INTERFACES - OVERVIEW

CORONA ER	
Optical	ZVEI interface for communication, M-Bus protocol
Radio	868 MHz, real data, Open Metering Standard

RADIO INTERFACE - SPECIFICATION

CORONA ER		
Frequency	MHz	868
Protocol		Real data, open metering
Transmission power	mW	10
Transmission interval	sec.	64
Communication		BLUETOOTH OPTOHEAD and HYDRO-SET or IZAR@MOBILE

CORONA ER^{DN 15 - 20}

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GENERAL

			DN 15 - 20					
Temperature range	°C	30 (for cold water meter) / 90 (for warm water meter)						
Ambient operating temperature	°C	0 ... 55						
Ambient storage temperature	°C	-20 ... 55						
Nominal pressure	PN	bar	10 / 16					
Mounting position	In any position, also overhead							

TECHNICAL DATA

Nominal diameter	DN	mm	15	15	15	20	20	20
Nominal flow rate	Q ₃	m ³ /h	2.5	2.5	2.5	4	4	4
Overall length	L	mm	110	130	165	105	130	190
Overload flow rate	Q ₄	m ³ /h	3.125	3.125	3.125	5	5	5
Transition flow rate	Q ₂	l/h	32	32	32	51	51	51
Minimum flow rate	Q ₁	l/h	20*	20*	20*	32*	32*	32*
Starting flow rate		l/h	3 - 4	3 - 4	3 - 4	5 - 6	5 - 6	5 - 6
Pressure loss at Q ₃	Δp	mbar	615	615	615	620	620	620
Flow rate at 0.1 bar pressure loss		m ³ /h	0.962	0.962	0.962	1.607	1.607	1.607

* at R 125

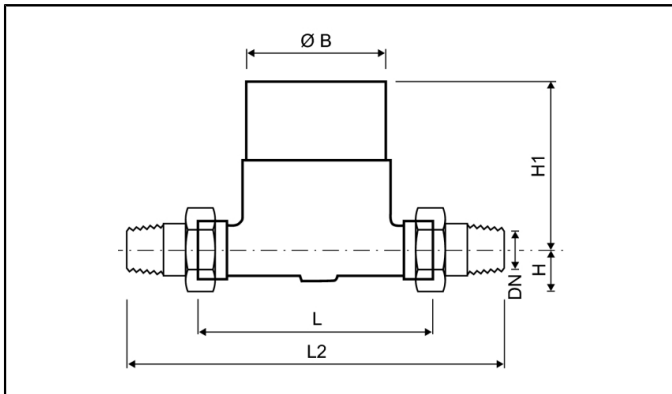
APPROVAL

Nominal diameter	DN	mm	15	15	15	20	20	20
Nominal flow rate	Q ₃	m ³ /h	2.5	2.5	2.5	4	4	4
Overall length	L	mm	110	130	165	105	130	190
MID (LNE 12552 LNE 13629) - T30			•	•	•	•	•	•
MID (DE-07-MI001-PTB008 LNE 13629) - T90			•	•	•	•	•	•
Dynamic range (Q ₃ /Q ₁)	R		80 / 100 / 125	80 / 100 / 125	80 / 100 / 125	80 / 100 / 125	80 / 100 / 125	80 / 100 / 125

CORONA ER^{DN 15 - 20}

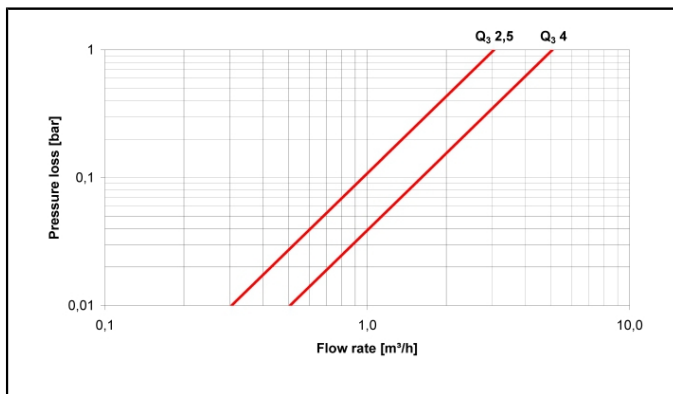
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DIMENSIONS

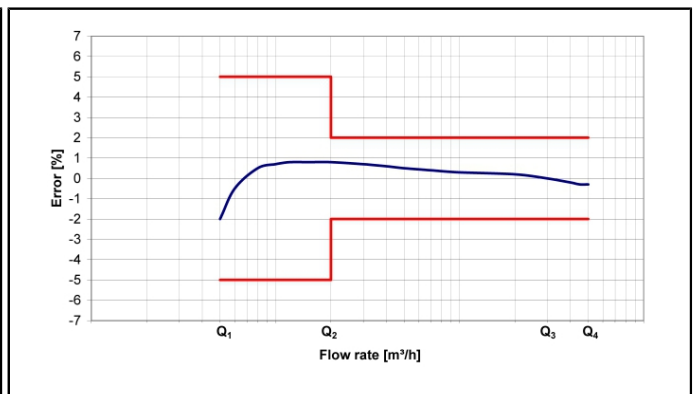


Nominal diameter	DN	mm	15	15	15	20	20	20
Nominal flow rate	Q ₃	m ³ /h	2.5	2.5	2.5	4	4	4
Overall length	L	mm	110	130	165	105	130	190
Overall length with coupling	L2	mm	186	206	241	181	206	266
Connection thread on meter		Inch	G ³ / ₄ B	G ³ / ₄ B	G ³ / ₄ B	G1B	G1B	G1B
Connection thread of coupling		Inch	R ¹ / ₂	R ¹ / ₂	R ¹ / ₂	R ³ / ₄	R ³ / ₄	R ³ / ₄
Height	H	mm	20	20	20	20	20	20
Height	H1	mm	75	75	75	75	75	75
Width	B	mm	62	62	62	62	62	62
Weight without coupling		kg	0.8	1	1.3	0.8	1	1.5
Weight with coupling		kg	1	1.2	1.5	1.3	1.5	2

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph

CORONA ER^{DN 25 - 50} | HORIZONTAL

Electronic Meter | Multi-Jet

GENERAL

DN 25 - 50 HORIZONTAL			
Temperature range	°C	30 (for cold water meter) / 90 (for warm water meter)	
Ambient operating temperature	°C	0 ... 55	
Ambient storage temperature	°C	-20 ... 55	
Nominal pressure	PN	bar	16
Mounting position	Horizontal		

TECHNICAL DATA

Nominal diameter	DN	mm	25	32	40	50
Nominal flow rate	Q ₃	m ³ /h	6.3	6.3	10	10
Overall length	L	mm	260	260	300	270
Overload flow rate	Q ₄	m ³ /h	7.9	7.9	12.5	12.5
Transition flow rate	Q ₂	l/h	202	202	320	320
Minimum flow rate	Q ₁	l/h	79*	79*	125*	125*
Starting flow rate		l/h	35	60	100	100
Pressure loss at Q ₃	Δp	mbar	170	240	200	240
Flow rate at 0.1 bar pressure loss		m ³ /h	2.68	4.35	6.45	6.45

* at R 80

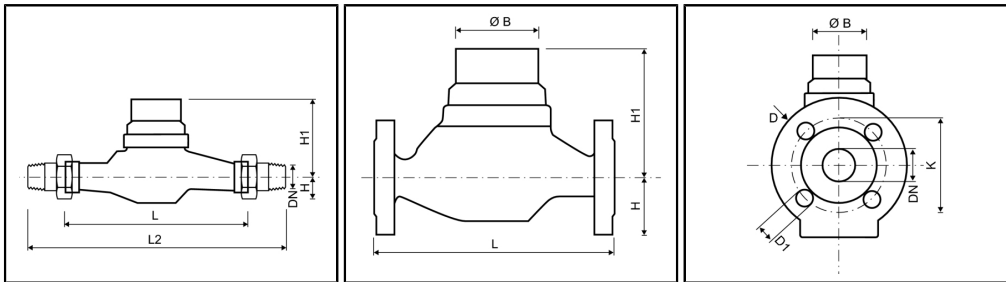
APPROVAL

Nominal diameter	DN	mm	25	32	40	50
Nominal flow rate	Q ₃	m ³ /h	6.3	6.3	10	10
Overall length	L	mm	260	260	300	270
MID (LNE 14587) - T30/T90			•	•	•	•
Dynamic range (Q ₃ /Q ₁)	R		50 / 63 / 80	50 / 63 / 80	50 / 63 / 80	50 / 63 / 80

CORONA ER_{DN 25 - 50} | HORIZONTAL

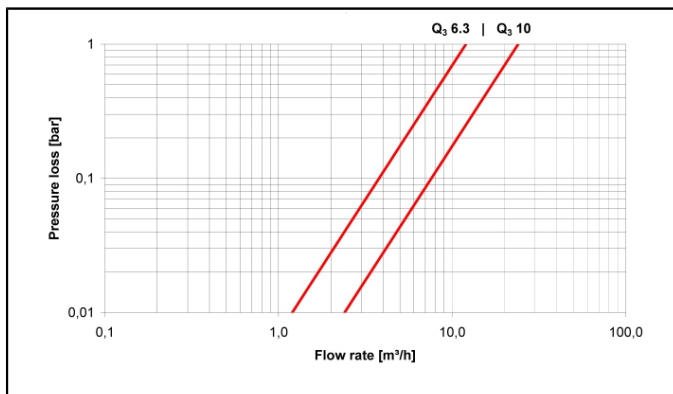
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DIMENSIONS

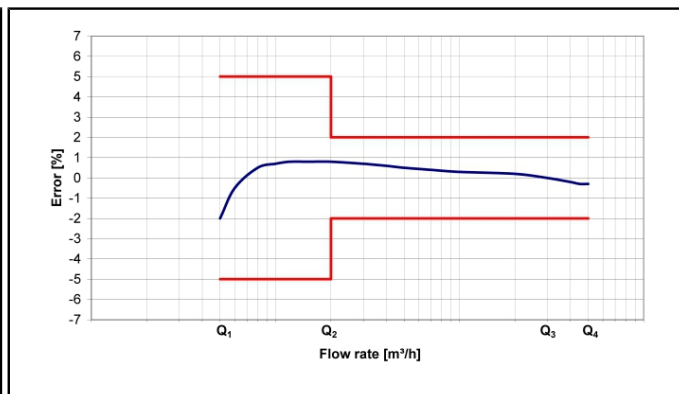


Nominal diameter	DN	mm	25	32	40	50
Nominal flow rate	Q ₃	m ³ /h	6.3	6.3	10	10
Overall length	L	mm	260	260	300	270
Overall length with coupling	L2	mm	378	378	438	408
Connection thread on meter		Inch	G1¼B / G1½B	G1½B	G2B	G2½B
Connection thread of coupling		Inch	R1 / R1¼	R1	R1½	R2
Flange diameter	D	mm	115	-	150	165
Hole circle diameter	K	mm	85	-	110	125
Number of screwholes		pcs	4	-	4	4
Screw hole diameter	D1	mm	18	-	18	18
Height	H	mm	45	45	50	85
Height	H1	mm	110	110	125	125
Width	B	mm	62	62	62	62
Weight without coupling		kg	2.9	2.9	5.1	-
Weight with coupling		kg	3.6	3.6	6.0	-
Weight with flanges		kg	4.9	-	8.6	14.2

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph

CORONA ER^{DN 25 - 40} | VERTICAL

Electronic Meter | Multi-Jet

GENERAL

			DN 25 - 40 VERTICAL		
Temperature range	°C		30 (for cold water meter) / 90 (for warm water meter)		
Ambient operating temperature	°C		0 ... 55		
Ambient storage temperature	°C		-20 ... 55		
Nominal pressure	PN	bar	16		
Mounting position			Rising pipe, downpipe		

TECHNICAL DATA

Nominal diameter	DN	mm	25	32	40
Nominal flow rate	Q ₃	m ³ /h	6.3	6.3	10
Overall length	L	mm	150	150	200
Overload flow rate	Q ₄	m ³ /h	7.9	7.9	12.5
Transition flow rate	Q ₂	l/h	112	202	320
Minimum flow rate	Q ₁	l/h	79*	79*	125*
Starting flow rate		l/h	60	60	100
Pressure loss at Q ₃	Δp	mbar	170	190	240
Flow rate at 0.1 bar pressure loss		m ³ /h	2.68	4.35	6.45

* at R 80

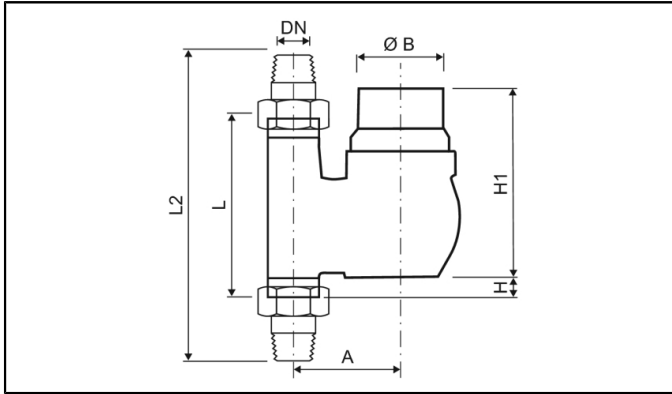
APPROVAL

Nominal diameter	DN	mm	25	32	40
Nominal flow rate	Q ₃	m ³ /h	6.3	6.3	10
Overall length	L	mm	150	150	200
MID (LNE 14587) - T30/T90			•	•	•
Dynamic range (Q ₃ /Q ₁)	R		50 / 63 / 80	50 / 63 / 80	50 / 63 / 80

CORONA ER^{DN 25 - 40} | VERTICAL

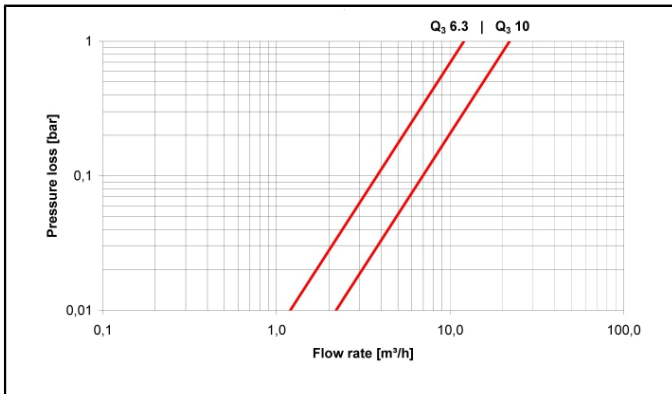
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DIMENSIONS

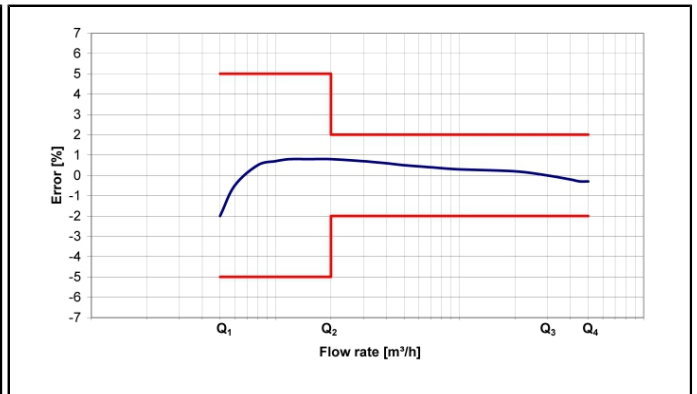


Nominal diameter	DN	mm	25	32	40
Nominal flow rate	Q ₃	m ³ /h	6.3	6.3	10
Overall length	L	mm	150	150	200
Overall length with coupling	L2	mm	268	268	338
Connection thread on meter		Inch	G1½B	G1½B	G2B
Connection thread of coupling		Inch	R1	R1¼	R1½
Height	H	mm	31	31	31
Height	H1	mm	161	161	191
Width	B	mm	62	62	62
Width	A	mm	146	146	185
Weight without coupling		kg	3.1	3.1	5.5
Weight with coupling		kg	3.7	3.7	3.7

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph