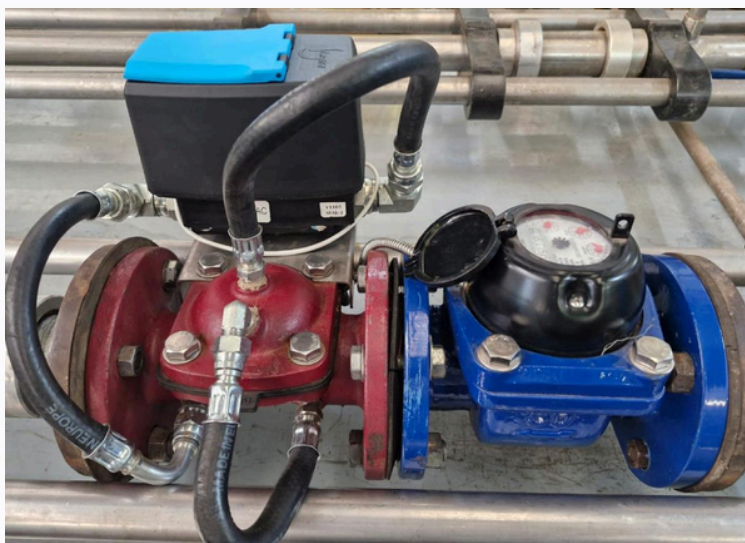




Technical Brochure: Smart Pre-Payment Bulk Water Meter



BENEFITS TO THE MUNICIPALITY

1. Settable user consumption alerts
 - a. Possible leak detection (Automated notification via Leak Alert™)
 - b. Burst pipe detection: default 1000 litre flow over 2 hours ** (Automated notification via Leak Alert™)
2. Consumer / Water Authority ability to set daily/weekly/monthly water limit
 - a. Over-limit daily/weekly/monthly warnings
3. Meter bypass detection notification, based on consumption analysis
4. Ability to profile time of usage per zone / area / stand
5. Automatic generation of water consumption report per zone / area / stand
6. Centralized meter reading:
 - a. Fixed Network: Flexible meter reading intervals, typically daily or weeklyOR
 - b. Drive-by / walk-by: relevant meter data i. last 5 months billing usage
7. No Fixed Network infrastructure management headaches (no sim cards)
8. All gathered data exportable to municipal billing system
9. System compatible to most billing systems
10. Optionally, Daily/weekly/monthly water usage notification in Rand value to consumer via e-mail
11. GPS coordinates for each meter at time of installation
12. Asset management and tracking exportable to Municipal GIS system
13. Battery life: 10 years, based on Fixed Network reading interval

14. Various mounting options:

- Above Ground Pillar Box with display
- Encased with Piston Meter with display
- Ground Level Box
- Retrofit (No meter)

BENEFITS TO THE OWNER / CLIENT (Meter User)

1. Free Lesira Water™ App available from the Google Play Store that provides the consumer with the following information:

Cost Structure Type	CONVEN
Avg Consumption p/day (Rands)	R 6.25
Avg Consumption p/day (Litres)	808ℓ
Estimated monthly usage (Rands)	R 295.05
Estimated monthly usage (Litres)	24,240ℓ
Prev. months usage (Rands)	R 0.00
Prev. months usage (Litres)	0ℓ
Free Water Left (Litres)	0ℓ
Tariff Price (Rands / Litres)	14.49 R/kl
Current Usage in month (Rands)	R 178.00
Current Usage in month (Litres)	16,983ℓ
Possible Leak (Rands)	R 0.00
Possible Leak (Litres)	0ℓ
Totaliser (Litres)	538,017ℓ

2. Powerful first step in home water management: Empowers user to have a better water management strategy based on accurate and timeous usage information
3. Graphical display of water usage patterns, e.g., daily usage from device
4. Provides interface to set water saving goals
5. Automatic leak or excessive water usage warning via e-mail or Lesira Water™ App ***
6. Automatic Bypass detection notification via e-mail / Lesira Water™ App.

SYSTEM KEY FEATURES

Automatic Meter Reading (AMR)

2.4" Screen – Large font, user friendly Graphical Interface

LoRa enabled:

- Long Range Wireless communication, 868 MHz
- Magnetic Anti-Tamper

Battery powered, Factory replaceable

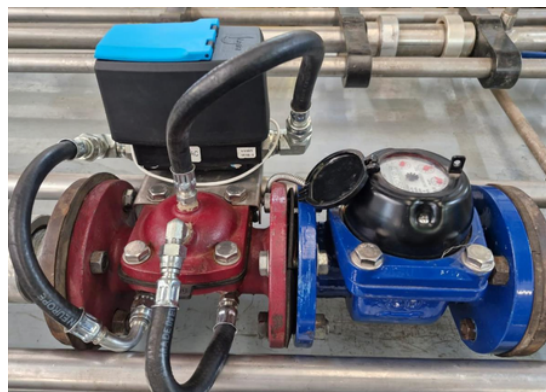
- Battery life: 10 years, dependent on communication schedule
- Conventional Precision Bulk water meter with mechanical display as backup

Meter Accuracy: Class B

Dual State Valve: Open / Closed

Operating Pressure: 0.5 – 10 bar (0.05 – 1MPa)

Working Temperature: 0.1°C - 50°C

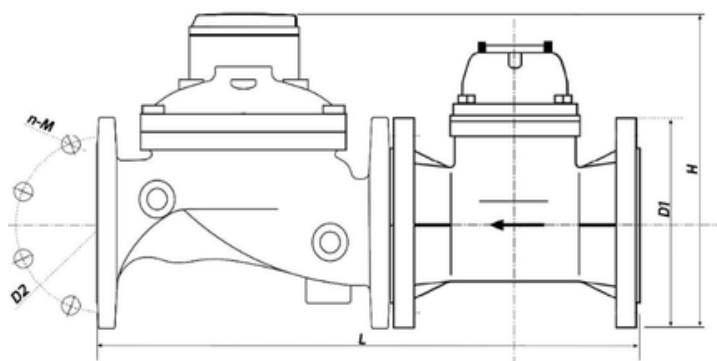


TYPICAL APPLICATIONS

Prioritizing pressurized lines users; disconnecting low priority users, triggered by external control system.

Saving energy while ensuring adequate refreshing of the building reservoir; switching between direct city supply and local pumping station, controlled by an external control regime

Size		C	L	H	CONNECTING FLANGE		
DN	INCH				D1	D2	n-M
50	2"	68	405	210	165	125	4xM16
80	3"	125	475	265	200	160	8xM16
100	4"	145	570	300	220	180	8xM16
150	6"	205	715	390	285	240	8XM20



BULK METER FEATURES AND BENEFITS

Removable element structure, easy installation, and maintenance, register for universal use within this range detachable without Removing the meter from the pipeline.

Back-up Meter Display:

- Dry-dial, Magnetic drive sensitive action, small pressure loss
- Vacuum sealed register ensures the dial keep free from fog and Keep the reading clear in a long-term service

Selected high quality materials for steady & reliable characteristics

Technical data conform to international standard ISO 4064



BULK METER TECHNICAL DATA

Working Temperature: 0.1°C - 50°C

Water Pressure: $\leq 1\text{MPa}$

Maximum Permissible Errors:

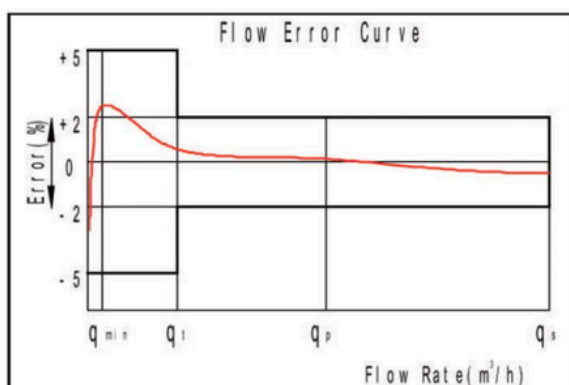
- In the lower zone from $Q_{\min}$ inclusive up to but excluding Q_t is $\pm 5\%$
- In the upper zone from Q_t inclusive up to and including Q_s is $\pm 2\%$ ($\pm 3\%$ for hot water meter)

Selected high quality materials for steady & reliable characteristics

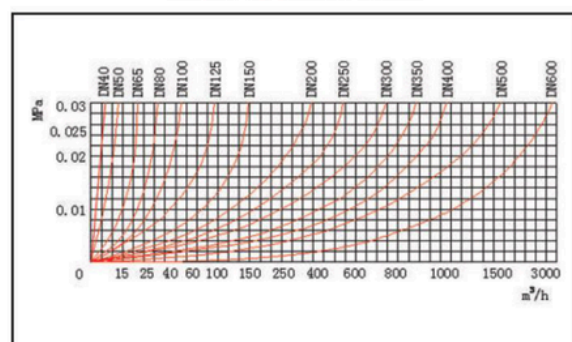
The flange dimension conforms to ISO7005-2:1988 Standard

TYPE	SIZE	CLASS	OVERLOAD FLOW (Q_s)	PERMANENT FLOW (Q_p)	TRANSITIONAL FLOW (Q_t)	MINIMUM FLOW ($Q_{\min}$)	MIN READING	MAX READING
LXLC-50A	50	B	30	15	3.0	0.45	0.0002	999,999
LXLC-80A	80	B	80	40	8.0	1.2	0.002	999,999
LXLC-100A	100	B	120	60	12	1.8	0.002	999,999
LXLC-150A	150	B	200	100	20	3	0.002	999,999

FLOW ERROR CURVE



PRESSURE LOSS DATA



BULK VALVE FEATURES AND BENEFITS

For use with Potable Water

High quality construction materials ensure reliable, long lasting operation

Full bore valve port area and hydrodynamic body ensure unobstructed flow path; minimal pressure loss with low cavitation damage

Fully supported and balanced rolling diaphragm – low actuation pressure and excellent low flow regulation performance

Ensured operation after long standby periods

Straightforward design of three major components – easy and simple on-site inline maintenance with minimal down time

Advanced design – easily connected to building command and control systems

Electrical operation; low voltage and low current NO and NC solenoids

3-way control provides powered closing under low pressure conditions



BULK VALVE TECHNICAL DATA

Working Temperature: Water up to 50°C (122°F)

Pressure Rating: PN16 (16bar/230psi)

Operating Pressure: 0.5 – 16bar

End Connections Flanged: ISO 7005-2 (PN10 & 16) ; ANSI B16.42 (#150)

Main Construction Materials:

- Main Valve Body, Cover and Actuator: Ductile Iron
- Internals: Stainless Steel & Elastomer
- Control Trim System: Brass control components / accessories
- Copper & Brass tubing & fittings
- Optional: Stainless Steel 316
- Elastomers: Nylon fabric Reinforced NR with rugged insert
- Coating: Electrostatic Polyester Powder Blue
- Optional: Epoxy Fusion-Bonded Blue

Size		WEIGHT [KG]
DN	INCH	
50	2"	9
80	3"	19
100	4"	28
150	6"	68

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