



Dŵr Cymru
Welsh Water

Meter Specifications

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| Meter Size – 15 mm | | | | | | |
|--|--------------------------|-------------------------|---------------------------------|------------------|--------------------------------|------------------|
| Description | Elster V210P | Elster V200P | Elster V210H | | Elster V200H | |
| Part Number | LUM-210P | LUSTM4264 | LUQHB5059 | LUQHB5071 | LUSHB5781 | LUSHB5783 |
| Type | Rotary Piston (Manifold) | Rotary Piston (In-Line) | Rotary Piston Hybrid (Manifold) | | Rotary Piston Hybrid (In-line) | |
| Meter Specifications | | | | | | |
| Meter Connection | G1 ½" | G ¾" | G 1 ½" | | G ¾" | |
| Meter Length | N/A | 134 mm | N/A | | 134 mm | |
| Flow Ratio (Q3/Q1) | R400 | R400 | R400 | | R400 | |
| Starting Flow Rate | 1 l/h | 1 l/h | 1 l/h | | 1 l/h | |
| Minimum Flow Rate – Q1 | 6.25 l/h | 6.25 l/h | 6.25 l/h | | 6.25 l/h | |
| Transitional Flow Rate – Q2 | 10 l/h | 10 l/h | 10 l/h | | 10 l/h | |
| Permanent Flow Rate – Q3 | 2.5 m ³ /h | 2.5 m ³ /h | 2.5 m ³ /h | | 2.5 m ³ /h | |
| Overload Flow Rate – Q4 | 3.125 m ³ /h | 3.125 m ³ /h | 3.125 m ³ /h | | 3.125 m ³ /h | |
| Number of Max Index Dials | 5 | 5 | 6 | | 6 | |
| Meter Material | Polymer | Polymer body | Polymer | | Polymer | |
| Output Pulse Vol. | 1 Litre | 1 Litre | 1 Litre | | 1 Litre | |
| Pulse Unit (Part Number) | Not Included (PR6) | Not Included (PR6) | Not Compatible | Built In (Wired) | Not Compatible | Built In (Wired) |
| Is Meter WRAS approved for contaminated land | Yes | N/A | N/A | | N/A | |
| Is Meter MID compliant | Yes | Yes | Yes | | Yes | |

| Meter Size – 20 mm | | | | | |
|--|--------------------------|-------------------------|---------------------------------|------------------|--------------------------------|
| Description | Elster V210 | Elster V200 | Elster V210H | | Elster V200H |
| Part Number | LUQTM4520 | LUSTC5303 | LUQHC5159 | LUQHC5171 | LUSHC5284 |
| Type | Rotary Piston (Manifold) | Rotary Piston (In-Line) | Rotary Piston Hybrid (Manifold) | | Rotary Piston Hybrid (In-line) |
| Meter Specifications | | | | | |
| Meter Connection | G 1 ½" | G 1" | G 1 ½" | | G 1" |
| Meter Length | N/A | 165 mm | N/A | | 165 mm |
| Flow Ratio (Q3/Q1) | R250 | R250 | R315 | | R315 |
| Starting Flow Rate | 2 l/h | 2 l/h | | | |
| Minimum Flow Rate – Q1 | 16.0 l/h | 16.0 l/h | 12.7 l/h | | 12.7 l/h |
| Transitional Flow Rate – Q2 | 25.6 l/h | 25.6 l/h | | | |
| Permanent Flow Rate – Q3 | 4.0 m ³ /h | 4.0 m ³ /h | 4.0 m ³ /h | | 4.0 m ³ /h |
| Overload Flow Rate – Q4 | 5.0 m ³ /h | 5.0 m ³ /h | | | |
| Number of Max Index Dials | 5 | 5 | 6 | | 6 |
| Meter Material | Brass | Brass | Polymer Brass | | Brass |
| Output Pulse Vol. | 1 Litre | 1 Litre | 1 Litre | | 1 Litre |
| Pulse Unit (Part Number) | Not Included (PR6) | Not Included (PR6) | Not Compatible | Built In (Wired) | Built In (Wired) |
| Is Meter WRAS approved for contaminated land | Yes | N/A | N/A | | N/A |
| Is Meter MID compliant | Yes | Yes | Yes | | Yes |

| Meter Size – 25 mm | | | | | |
|--|--------------------------|-------------------------|---------------------------------|------------------|--------------------------------|
| Description | Elster V210 | Elster V200 | Elster V210H | | Elster V200H |
| Part Number | LUQTD4119 | LUSTD5607 | TBC | TBC | LUR-120 |
| Type | Rotary Piston (Manifold) | Rotary Piston (In-Line) | Rotary Piston Hybrid (Manifold) | | Rotary Piston Hybrid (In-line) |
| Meter Specifications | | | | | |
| Meter Connection | G 2" | G 1 ¼" | G 2" | | G 1 ¼" |
| Meter Length | N/A | 199 mm | N/A | | 199mm |
| Flow Ratio (Q3/Q1) | R250 | R160 | R250 | | R160 |
| Starting Flow Rate | 6 l/h | 6 l/h | 6 l/h | | 6 l/h |
| Minimum Flow Rate – Q1 | 25.2 l/h | 39.4 l/h | 25.2 l/h | | 39.4 l/h |
| Transitional Flow Rate – Q2 | 40.32 l/h | 63.0 l/h | 40.32 l/h | | 63.0 l/h |
| Permanent Flow Rate – Q3 | 6.3 m ³ /h | 6.3 m ³ /h | 6.3 m ³ /h | | 6.3 m ³ /h |
| Overload Flow Rate – Q4 | 7.875 m ³ /h | 7.875 m ³ /h | 7.875 m ³ /h | | 7.875 m ³ /h |
| Number of Max Index Dials | 5 | 5 | 6 | | 6 |
| Meter Material | Brass | Brass | Brass | | Brass |
| Output Pulse Vol. | 1 Litre | 1 Litre | 1 Litre | | 1 Litre |
| Pulse Unit (Part Number) | Not Included (PR6) | Not Included (PR6) | Not Compatible | Built In (Wired) | Built In (Wired) |
| Is Meter WRAS approved for contaminated land | Yes | N/A | N/A | | N/A |
| Is Meter MID compliant | Yes | Yes | Yes | | Yes |

| Meter Size – 30 mm | | |
|--|-------------------------|--------------------------------|
| Description | Elster V200 | Elster V200H |
| Part Number | LUSTF5213 | LUR-166 |
| Type | Rotary Piston (In-Line) | Rotary Piston Hybrid (In-line) |
| Meter Specifications | | |
| Meter Connection | G 1 ½" | G 1 ½" |
| Meter Length | 260 mm | 260 mm |
| Flow Ratio (Q3/Q1) | R160 | R250 |
| Starting Flow Rate | 12 l/h | |
| Minimum Flow Rate – Q1 | 62.5 l/h | 40 l/h |
| Transitional Flow Rate – Q2 | 100 l/h | |
| Permanent Flow Rate – Q3 | 10 m ³ /h | 10 m ³ /h |
| Overload Flow Rate – Q4 | 12.5 m ³ /h | |
| Number of Max Index Dials | 5 | 6 |
| Meter Material | Brass | Brass |
| Output Pulse Vol. | 1 Litre | 1 Litre |
| Pulse Unit (Part Number) | Not Included (PR6) | Built In (Wired) |
| Is Meter WRAS approved for contaminated land | N/A | N/A |
| Is Meter MID compliant | Yes | Yes |

| Meter Size – 40 mm | | | |
|---|-------------------------|--------------------------------|------------------------|
| Description | Elster V200 | Elster V200H | Elster H5000 |
| Part Number | LUSTM5811 | LUR-167 | LURPA4539 |
| Type | Rotary Piston (In-Line) | Rotary Piston Hybrid (In-line) | Woltmann Hybrid |
| Meter Specifications | | | |
| Meter Connection | G 2" | G 2" | PN16 Flanged |
| Meter Length | 300 mm | 300 mm | 300 mm |
| Flow Ratio (Q3/Q1) | R160 | R200 | R500 |
| Starting Flow Rate | 20 l/h | | N/A |
| Minimum Flow Rate – Q1 | 0.10 m ³ /h | 0.08 m ³ /h | 0.08 m ³ /h |
| Transitional Flow Rate – Q2 | 0.16 m ³ /h | | 0.13 m ³ /h |
| Permanent Flow Rate – Q3 | 16 m ³ /h | 16 m ³ /h | 40 m ³ /h |
| Overload Flow Rate – Q4 | 20 m ³ /h | | 50 m ³ /h |
| Number of Max Index Dials | 5 | 6 | 7 |
| Meter Material | Brass | Brass | Cast Iron |
| Output Pulse Vol. | 1 Litre | 1 Litre | 10/100 Litres |
| Pulse Unit (Part Number) (Part Number) | Not Included (PR6) | Built In (Wired) | Built In (Wired) |
| Is Meter WRAS approved for contaminated land | N/A | N/A | N/A |
| Is Meter MID compliant | Yes | N/A | Yes |

| Meter Size – 50 mm | | |
|--|------------------------|------------------------|
| Description | Elster H4000 | Elster H5000 |
| Part Number | LUPPB4854 | LURPB4516 |
| Type | Woltmann | Woltmann Hybrid |
| Meter Specifications | | |
| Meter Connection | PN16 Flanged | PN16 Flanged |
| Meter Length | 200/300 mm | 300 mm |
| Flow Ratio (Q3/Q1) | R126 | R800 |
| Minimum Flow Rate – Q1 | 0.5 m ³ /h | 0.08 m ³ /h |
| Transitional Flow Rate – Q2 | 0.81 m ³ /h | 0.13 m ³ /h |
| Permanent Flow Rate – Q3 | 63 m ³ /h | 63 m ³ /h |
| Overload Flow Rate – Q4 | 79 m ³ /h | 79 m ³ /h |
| Number of Max Index Dials | 6 | 7 |
| Meter Material | Cast Iron | Cast Iron |
| Output Pulse Vol. | 1 Litres | 10/100 Litres |
| Pulse Unit (Part Number) | Not Included (PR7 K1) | Built In (Wired) |
| Is Meter WRAS approved for contaminated land | N/A | N/A |
| Is Meter MID compliant | Yes | Yes |

| Meter Size – 80 mm | | |
|--|------------------------|------------------------|
| Description | Elster H4000 | Elster H5000 |
| Part Number | LUPPD4854 | LURPD4516 |
| Type | Woltmann | Woltmann |
| Meter Specifications | | |
| Meter Connection | PN16 Flanged | PN16 Flanged |
| Meter Length | 200/350 mm | 350 mm |
| Flow Ratio (Q3/Q1) | R125 | R800 |
| Minimum Flow Rate – Q1 | 1.28 m ³ /h | 0.20 m ³ /h |
| Transitional Flow Rate – Q2 | 2.05 m ³ /h | 0.32 m ³ /h |
| Permanent Flow Rate – Q3 | 160 m ³ /h | 160 m ³ /h |
| Overload Flow Rate – Q4 | 200 m ³ /h | 200 m ³ /h |
| Number of Max Index Dials | 6 | 7 |
| Meter Material | Cast Iron | Cast Iron |
| Output Pulse Vol. | 1 Litres | 10/100 Litres |
| Pulse Unit (Part Number) | Not Included (PR7 K1) | Built In (Wired) |
| Is Meter WRAS approved for contaminated land | N/A | N/A |
| Is Meter MID compliant | Yes | Yes |

| Meter Size – 100 mm | | | |
|--|------------------------|------------------------|--|
| Description | Elster H4000 | Elster H5000 | ABB Aquamaster3 |
| Part Number | LUPPE4854 | LURPE4516 | FER221.100.K.1.S.4.S2 B.1.B.1.A.2.A.6.G.5.Y.1-AD.....V2.CWA |
| Type | Woltmann | Woltmann Hybrid | Electromagnetic (Battery Powered) |
| Meter Specifications | | | |
| Meter Connection | PN16 Flanged | PN16 Flanged | PN16 Flanged |
| Meter Length | 250/350 mm | 350 mm | 250 mm |
| Flow Ratio (Q3/Q1) | R125 | R800 | R160 |
| Minimum Flow Rate – Q1 | 1.28 m ³ /h | 0.20 m ³ /h | 1.0 m ³ /h |
| Transitional Flow Rate – Q2 | 2.05 m ³ /h | 0.32 m ³ /h | 1.6 m ³ /h |
| Permanent Flow Rate – Q3 | 160 m ³ /h | 160 m ³ /h | 160 m ³ /h |
| Overload Flow Rate – Q4 | 200 m ³ /h | 200 m ³ /h | 200 m ³ /h |
| Number of Max Index Dials | 6 | 7 | 7 |
| Meter Material | Cast Iron | Cast Iron | Carbon Steel |
| Output Pulse Vol. | 1 Litres | 10/100 Litres | Programmable |
| Pulse Unit (Part Number) | Not Included (PR7 K1) | Built In (Wired) | Not Included (WABC2010/01) |
| Is Meter WRAS approved for contaminated land | N/A | N/A | N/A |
| Is Meter MID compliant | Yes | Yes | Yes |

| Meter Size – 150 mm | | | |
|--|-----------------------|------------------------|--|
| Description | Elster H4000 | Elster H5000 | ABB Aquamaster3 |
| Part Number | LUPPG4854 | LURPG4545 | FER221.150.K.1.S.4.S2 B.1.B.1.A.2.A.6.G.5.Y.1-AD.....V2.CWA |
| Type | Woltmann | Woltmann | Electromagnetic (Battery Powered) |
| Meter Specifications | | | |
| Meter Connection | PN16 Flanged | PN16 Flanged | PN16 Flanged |
| Meter Length | 300/500 mm | 500 mm | 300 mm |
| Flow Ratio (Q3/Q1) | R200 | R800 | R160 |
| Minimum Flow Rate – Q1 | 2.0 m ³ /h | 0.20 m ³ /h | 2.5 m ³ /h |
| Transitional Flow Rate – Q2 | 3.2 m ³ /h | 0.32 m ³ /h | 4.0 m ³ /h |
| Permanent Flow Rate – Q3 | 400 m ³ /h | 160 m ³ /h | 400 m ³ /h |
| Overload Flow Rate – Q4 | 500 m ³ /h | 200 m ³ /h | 500 m ³ /h |
| Number of Max Index Dials | 7 | 7 | 7 |
| Meter Material | Cast Iron | Cast Iron | Carbon Steel |
| Output Pulse Vol. | 1 Litres | 10/100 Litres | Programmable |
| Pulse Unit (Part Number) | Not Included (PR7 K1) | Built In (Wired) | Not Included (WABC2010/01) |
| Is Meter WRAS approved for contaminated land | N/A | N/A | N/A |
| Is Meter MID compliant | Yes | Yes | Yes |

| Meter Size – 200 mm | |
|--|---|
| Description | ABB Aquamaster3 |
| Part Number | FER221.200.K.1.S.4.S2.B.1.B.1.A.2.A.6.G.5.Y.1-AD.....V2.CWA |
| Type | Electromagnetic (Battery Powered) |
| Meter Specifications | |
| Meter Connection | PN16 Flanged |
| Meter Length | 350 mm |
| Flow Ratio (Q3/Q1) | R160 |
| Minimum Flow Rate – Q1 | 3.9 m ³ /h |
| Transitional Flow Rate – Q2 | 6.3 m ³ /h |
| Permanent Flow Rate – Q3 | 630 m ³ /h |
| Overload Flow Rate – Q4 | 788 m ³ /h |
| Number of Max Index Dials | 7 |
| Meter Material | Carbon Steel |
| Output Pulse Vol. | Programmable |
| Pulse Unit (Part Number) | Not Included (WABC2010/01) |
| Is Meter WRAS approved for contaminated land | N/A |
| Is Meter MID compliant | Yes |

| Meter Size – 250 mm | |
|--|---|
| Description | ABB Aquamaster3 |
| Part Number | FER221.250.K.1.S.4.S2.B.1.B.1.A.2.A.6.G.5.Y.1-AD.....V2.CWA |
| Type | Electromagnetic (Battery Powered) |
| Meter Specifications | |
| Meter Connection | PN16 Flanged |
| Meter Length | 450 mm |
| Flow Ratio (Q3/Q1) | R160 |
| Minimum Flow Rate – Q1 | 6.3 m ³ /h |
| Transitional Flow Rate – Q2 | 10 m ³ /h |
| Permanent Flow Rate – Q3 | 1000 m ³ /h |
| Overload Flow Rate – Q4 | 1250 m ³ /h |
| Number of Max Index Dials | 7 |
| Meter Material | Carbon Steel |
| Output Pulse Vol. | Programmable |
| Pulse Unit (Part Number) | Not Included (WABC2010/01) |
| Is Meter WRAS approved for contaminated land | N/A |
| Is Meter MID compliant | Yes |

| Meter Size – 300 mm | |
|--|---|
| Description | ABB Aquamaster3 |
| Part Number | FER221.300.K.1.S.4.S2.B.1.B.1.A.2.A.6.G.5.Y.1-AD.....V2.CWA |
| Type | Electromagnetic (Battery Powered) |
| Meter Specifications | |
| Meter Connection | PN16 Flanged |
| Meter Length | 500 mm |
| Flow Ratio (Q3/Q1) | R160 |
| Minimum Flow Rate – Q1 | 10 m ³ /h |
| Transitional Flow Rate – Q2 | 16 m ³ /h |
| Permanent Flow Rate – Q3 | 1600 m ³ /h |
| Overload Flow Rate – Q4 | 2000 m ³ /h |
| Number of Max Index Dials | 7 |
| Meter Material | Carbon Steel |
| Output Pulse Vol. | Programmable |
| Pulse Unit (Part Number) | Not Included (WABC2010/01) |
| Is Meter WRAS approved for contaminated land | N/A |
| Is Meter MID compliant | Yes |

| Meter Size – 450 mm | |
|--|---|
| Description | ABB Aquamaster3 |
| Part Number | FER221.450.K.1.S.4.S2.B.1.B.1.A.2.A.6.G.5.Y.1-AD.....V2.CWA |
| Type | Electromagnetic (Battery Powered) |
| Meter Specifications | |
| Meter Connection | PN16 Flanged |
| Meter Length | 700 mm |
| Flow Ratio (Q3/Q1) | R63 |
| Minimum Flow Rate – Q1 | 40 m ³ /h |
| Transitional Flow Rate – Q2 | 63 m ³ /h |
| Permanent Flow Rate – Q3 | 2500 m ³ /h |
| Overload Flow Rate – Q4 | 3125 m ³ /h |
| Number of Max Index Dials | 7 |
| Meter Material | Carbon Steel |
| Output Pulse Vol. | Programmable |
| Pulse Unit (Part Number) | Not Included (WABC2010/01) |
| Is Meter WRAS approved for contaminated land | N/A |
| Is Meter MID compliant | Yes |

| Meter Size – 500 mm | |
|--|---|
| Description | ABB Aquamaster3 |
| Part Number | FER221.500.K.1.S.4.S2.B.1.B.1.A.2.A.6.G.5.Y.1-AD.....V2.CWA |
| Type | Electromagnetic (Battery Powered) |
| Meter Specifications | |
| Meter Connection | PN16 Flanged |
| Meter Length | 770 mm |
| Flow Ratio (Q3/Q1) | R63 |
| Minimum Flow Rate – Q1 | 63.5 m ³ /h |
| Transitional Flow Rate – Q2 | 100 m ³ /h |
| Permanent Flow Rate – Q3 | 4000 m ³ /h |
| Overload Flow Rate – Q4 | 5000 m ³ /h |
| Number of Max Index Dials | 7 |
| Meter Material | Carbon Steel |
| Output Pulse Vol. | Programmable |
| Pulse Unit (Part Number) | Not Included (WABC2010/01) |
| Is Meter WRAS approved for contaminated land | N/A |
| Is Meter MID compliant | Yes |

Appendix

Images

| | | | | | | |
|---|---|--|---|--|--|--|
| <p>V210 Polymer</p>  | <p>V200 Polymer</p>  | <p>V210</p>  | <p>V200</p>  | <p>V210H Polymer</p>  | <p>V200H Polymer</p>  | <p>V200H</p>  |
| <p>H4000</p>  | | <p>H5000</p>  | | <p>ABB Aquamaster</p>  | | |

Manuals

Elster V200/V210

Specifications Sheet - ELS10119_V200_V210_Specsheet_V3_HW.pdf
Brochure - ELS10139_V200_V210_Brochure_V2_INT.pdf

Elster V200H/V210H (Hybrid)

Specifications Sheet - V200H_210H_868 wMBus ELS10098_Specsheet_V1_BM.pdf

Elster H4000

Specifications Sheet - ELS10138_H4000_Specsheet_V2_NK.pdf
Brochure - ELS10139_H4000_Brochure_V2_HW.pdf
Accuracy & Headloss Curves - H4000 Typ Acc & HL curves.pdf

Elster H5000

Specifications Sheet - ELS10138_H5000_Specsheet_V2_NK.pdf
Brochure - ELS10139_H5000_Brochure_V2_SV.pdf
Accuracy & Headloss Curves - H5000 - Typ Acc & HL Graphs.pdf

ABB Aquamaster3

Specifications Sheet - OI_FER100_FER200-EN_D.pdf
Installation Guide - OI_FET200-EN_M.pd.pdf
Frame-work User Guide - Welsh Water USER GUIDE DCWW 177 2015 Rev. 02.pdf