



Dŵr Cymru
Welsh Water

Meter Specifications

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Meter Size – 15 mm						
Description	Elster V210P	Elster V200P	Elster V210H (AMR)		Elster V200H (AMR)	
Part Number	LUM-210P	LUSTM4264	LUQHB5078	LUQHB5077	LUSHB5787	LUSHB5788
Type	Rotary Piston (Manifold)	Rotary Piston (In-Line)	Rotary Piston Hybrid (Manifold)		Rotary Piston Hybrid (In-line)	
S/N Structure	YYM#####	YYT#####	YYE#####		YYF#####	
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	Polymer		Polymer	
Output Pulse Vol.	1 Litre	1 Litre	0.1 Litre		0.1 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 (AMR)	Elster V200H (AMR)
Part Number	LUQTM4520	LUSTC5303	LUQHC5172	LUSHC5082
Type	Rotary Piston (Manifold)	Rotary Piston (In-Line)	Rotary Piston Hybrid (Manifold)	Rotary Piston Hybrid (In-line)
S/N Structure	YYM#####	YYT#####	YYE#####	YYF#####
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	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	20.3 l/h	20.3 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	5.0 m ³ /h	5.0 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)	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 (AMR)		Elster V200H (AMR)
Part Number	LUQTD4119	LUSTD5607	LUQHD5274	LUQHD5272	LUSHD5082
Type	Rotary Piston (Manifold)	Rotary Piston (In-Line)	Rotary Piston Hybrid (Manifold)		Rotary Piston Hybrid (In-line)
S/N Structure	YYM#####	YYT#####	YYE#####		YYF#####
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 (AMR)
Part Number	LUSTF5213	LUSHF5082
Type	Rotary Piston (In-Line)	Rotary Piston Hybrid (In-line)
S/N Structure	YYT#####	YYF#####
Meter Specifications		
Meter Connection	G 1 ½"	G 1 ½"
Meter Length	260 mm	260 mm
Flow Ratio (Q3/Q1)	R160	R160
Starting Flow Rate	12 l/h	12 l/h
Minimum Flow Rate – Q1	62.5 l/h	62.5 l/h
Transitional Flow Rate – Q2	100 l/h	100 l/h
Permanent Flow Rate – Q3	10 m ³ /h	10 m ³ /h
Overload Flow Rate – Q4	12.5 m ³ /h	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 (AMR)	Elster H4000 (Long ISO Body)	Elster H5000	ABB Aquamaster4
Part Number	LUSTM5811	LUSHG5082	LUPPA4868	LURPA4539	FEW412.R.0040.S2.B.R.E.81.L.B1- RCC..SC2...AD1
Type	Rotary Piston (In- Line)	Rotary Piston Hybrid (In-line)	Woltmann	Woltmann Hybrid	Electromagnetic (Battery Powered)
S/N Structure	YYT#####	YYF#####	YYW#####	YYN#####	3K#####
Meter Specifications					
Meter Connection	G 2"	G 2"	PN16 Flanged	PN16 Flanged	PN16 Flanged
Meter Length	300 mm	300 mm	300 mm	300 mm	200 mm
Flow Ratio (Q3/Q1)	R160	R200	R126	R500	R160
Starting Flow Rate	20 l/h			N/A	N/A
Minimum Flow Rate – Q1	0.10 m ³ /h	0.08 m ³ /h	0.5 m ³ /h	0.08 m ³ /h	0.16 m ³ /h
Transitional Flow Rate – Q2	0.16 m ³ /h	0.13 m ³ /h	0.81 m ³ /h	0.13 m ³ /h	0.25 m ³ /h
Permanent Flow Rate – Q3	16 m ³ /h	16 m ³ /h	63 m ³ /h	40 m ³ /h	25 m ³ /h
Overload Flow Rate – Q4	20 m ³ /h	20 m ³ /h	79 m ³ /h	50 m ³ /h	31 m ³ /h
Number of Max Index Dials	5	6	6	7	7
Meter Material	Brass	Brass	Cast Iron	Cast Iron	Carbon Steel
Output Pulse Vol.	1 Litre	1 Litre	1 Litres	10/100 Litres	Programmable
Pulse Unit (Part Number)	Not Included (PR6)	Built In (Wired)	Not Included (PR7 K1)	Built In (Wired)	Not Included (WABC2010/01)
Is Meter WRAS approved for contaminated land	N/A	N/A	N/A	N/A	N/A
Is Meter MID compliant	Yes	N/A	Yes	Yes	Yes

Meter Size – 50 mm					
Description	Elster H4000 (Short ISO Body)	Elster H4000 (Long ISO Body)	Elster H4000 (Kent Length)	Elster H5000	ABB Aquamaster4
Part Number	LUPPB4854	LUPPB4868	LUPPB4871	LURPB4516	FEW412.R.0050.S2.B.R.E.81.L.B1- RCC..SC2...AD1
Type	Woltmann			Woltmann Hybrid	Electromagnetic (Battery Powered)
S/N Structure	YYW#####			YYN#####	3K#####
Meter Specifications					
Meter Connection	PN16 Flanged			PN16 Flanged	PN16 Flanged
Meter Length	200 mm	300 mm	311 mm	200 mm	200 mm
Flow Ratio (Q3/Q1)	R126			R800	R160
Minimum Flow Rate – Q1	0.5 m ³ /h			0.08 m ³ /h	0.25 m ³ /h
Transitional Flow Rate – Q2	0.81 m ³ /h			0.13 m ³ /h	0.40 m ³ /h
Permanent Flow Rate – Q3	63 m ³ /h			63 m ³ /h	40 m ³ /h
Overload Flow Rate – Q4	79 m ³ /h			79 m ³ /h	50 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 – 80 mm					
Description	Elster H4000 (Short ISO Body)	Elster H4000 (Long ISO Body)	Elster H4000 (Kent Length)	Elster H5000	ABB Aquamaster4
Part Number	LUPPD4854	LUPPD4868	LUPPD4871	LURPD4516	FEW412.R.0080.S2.B.R.E.81.L.B1- RCC..SC2...AD1
Type	Woltmann			Woltmann	Electromagnetic (Battery Powered)
S/N Structure	YYW#####			YYN#####	3K#####
Meter Specifications					
Meter Connection	PN16 Flanged			PN16 Flanged	PN16 Flanged
Meter Length	200 mm	350 mm	413 mm	200 mm	200 mm
Flow Ratio (Q3/Q1)	R125			R800	R160
Minimum Flow Rate – Q1	1.28 m ³ /h			0.20 m ³ /h	0.63 m ³ /h
Transitional Flow Rate – Q2	2.05 m ³ /h			0.32 m ³ /h	1.0 m ³ /h
Permanent Flow Rate – Q3	160 m ³ /h			160 m ³ /h	100 m ³ /h
Overload Flow Rate – Q4	200 m ³ /h			200 m ³ /h	125 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 – 100 mm					
Description	Elster H4000 (Short ISO Body)	Elster H4000 (Long ISO Body)	Elster H4000 (Kent Length)	Elster H5000	ABB Aquamaster4
Part Number	LUPPE4854	LUPPE4868	LUPPE4871	LURPE4516	FEW412.R.0100.S2.B.R.E.81.L.B1- RCC..SC2...AD1
Type	Woltmann			Woltmann Hybrid	Electromagnetic (Battery Powered)
S/N Structure	YYW#####			YYN#####	3K#####
Meter Specifications					
Meter Connection	PN16 Flanged			PN16 Flanged	PN16 Flanged
Meter Length	250 mm	350 mm	483 mm	250 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 (Short ISO Body)	Elster H4000 (Long ISO Body)	Elster H5000	ABB Aquamaster4
Part Number	LUPPG4854	LUPPG4868	LURPG4545	FEW412.R.0150.S2.B.R.E.81.L.B1- RCC..SC2...AD1
Type	Woltmann		Woltmann	Electromagnetic (Battery Powered)
S/N Structure	YYW#####		YYN#####	3K#####
Meter Specifications				
Meter Connection	PN16 Flanged		PN16 Flanged	PN16 Flanged
Meter Length	300 mm	500 mm	300 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	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 – 200 mm	
Description	ABB Aquamaster4
Part Number	FEW412.R.0200.S2.B.R.E.81.L.B1-RCC..SC2...AD1
Type	Electromagnetic (Battery Powered)
S/N Structure	3K#####
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 Aquamaster4
Part Number	FEW412.R.0250.S2.B.R.E.81.L.B1-RCC..SC2...AD1
Type	Electromagnetic (Battery Powered)
S/N Structure	3K#####
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 Aquamaster4
Part Number	FEW412.R.0300.S2.B.R.E.81.L.B1-RCC..SC2...AD1
Type	Electromagnetic (Battery Powered)
S/N Structure	3K#####
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 – 350 mm	
Description	ABB Aquamaster4
Part Number	FEW412.R.0350.S2.B.R.E.81.L.B1-RCC..SC2...AD1
Type	Electromagnetic (Battery Powered)
S/N Structure	3K#####
Meter Specifications	
Meter Connection	PN16 Flanged
Meter Length	550 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 – 400 mm	
Description	ABB Aquamaster4
Part Number	FEW412.R.0400.S2.B.R.E.81.L.B1-RCC..SC2...AD1
Type	Electromagnetic (Battery Powered)
S/N Structure	3K#####
Meter Specifications	
Meter Connection	PN16 Flanged
Meter Length	600 mm
Flow Ratio (Q3/Q1)	R160
Minimum Flow Rate – Q1	15.6 m ³ /h
Transitional Flow Rate – Q2	25.0 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 – 450 mm	
Description	ABB Aquamaster4
Part Number	FEW412.R.0450.S2.B.R.E.81.L.B1-RCC..SC2...AD1
Type	Electromagnetic (Battery Powered)
S/N Structure	3K#####
Meter Specifications	
Meter Connection	PN16 Flanged
Meter Length	700 mm
Flow Ratio (Q3/Q1)	R160
Minimum Flow Rate – Q1	15.6 m ³ /h
Transitional Flow Rate – Q2	25.0 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 Aquamaster4
Part Number	FEW412.R.0500.S2.B.R.E.81.L.B1-RCC..SC2...AD1
Type	Electromagnetic (Battery Powered)
S/N Structure	3K#####
Meter Specifications	
Meter Connection	PN16 Flanged
Meter Length	770 mm
Flow Ratio (Q3/Q1)	R160
Minimum Flow Rate – Q1	25.0 m ³ /h
Transitional Flow Rate – Q2	40.0 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

Domestic Fire Sprinkler Meter	
Description	Kamstrup Multical 21
Part Number	02140COL817
Type	Ultrasonic (Battery Powered)
S/N Structure	#####
Meter Specifications	
Meter Connection	G1B
Meter Length	130mm
Flow Ratio (Q3/Q1)	R250
Minimum Flow Rate – Q1	16 l/h
Transitional Flow Rate – Q2	16 l/h
Permanent Flow Rate – Q3	4 m ³ /h
Overload Flow Rate – Q4	5 m ³ /h
Number of Max Index Dials	5
Meter Material	Moulded Composite
Output Pulse Vol.	10 litres
Pulse Unit (Part Number)	2101/..02/..03 (IP65 – Indoor use only)
Is Meter WRAS approved for contaminated land	N/A
Is Meter MID compliant	Yes

Appendix

Images

<p>Elster V210 Polymer</p> 	<p>Elster V200 Polymer</p> 	<p>Elster V210 Brass</p> 	<p>Elster V200 Brass</p> 	<p>Elster V210 Hybrid Polymer</p> 	<p>Elster V200 Hybrid Polymer</p> 	<p>Elster V200 Hybrid Brass</p> 
<p>Elster H4000</p> 		<p>Elster H5000</p> 		<p>ABB Aquamaster</p> 		<p>Kamstrup Multical 21</p> 

Manuals

Elster V200/V210

Specifications Sheet - ELS10119_V200_V210_Specsheet_V3_HW.pdf
Brochure - ELS10139_V200_V210_Brochure_V2_INT.pdf

Elster V200H (AMR)/V210H (Hybrid)

Specifications Sheet - V200H (AMR)_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 Aquamaster4

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