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Expert in Groundwater

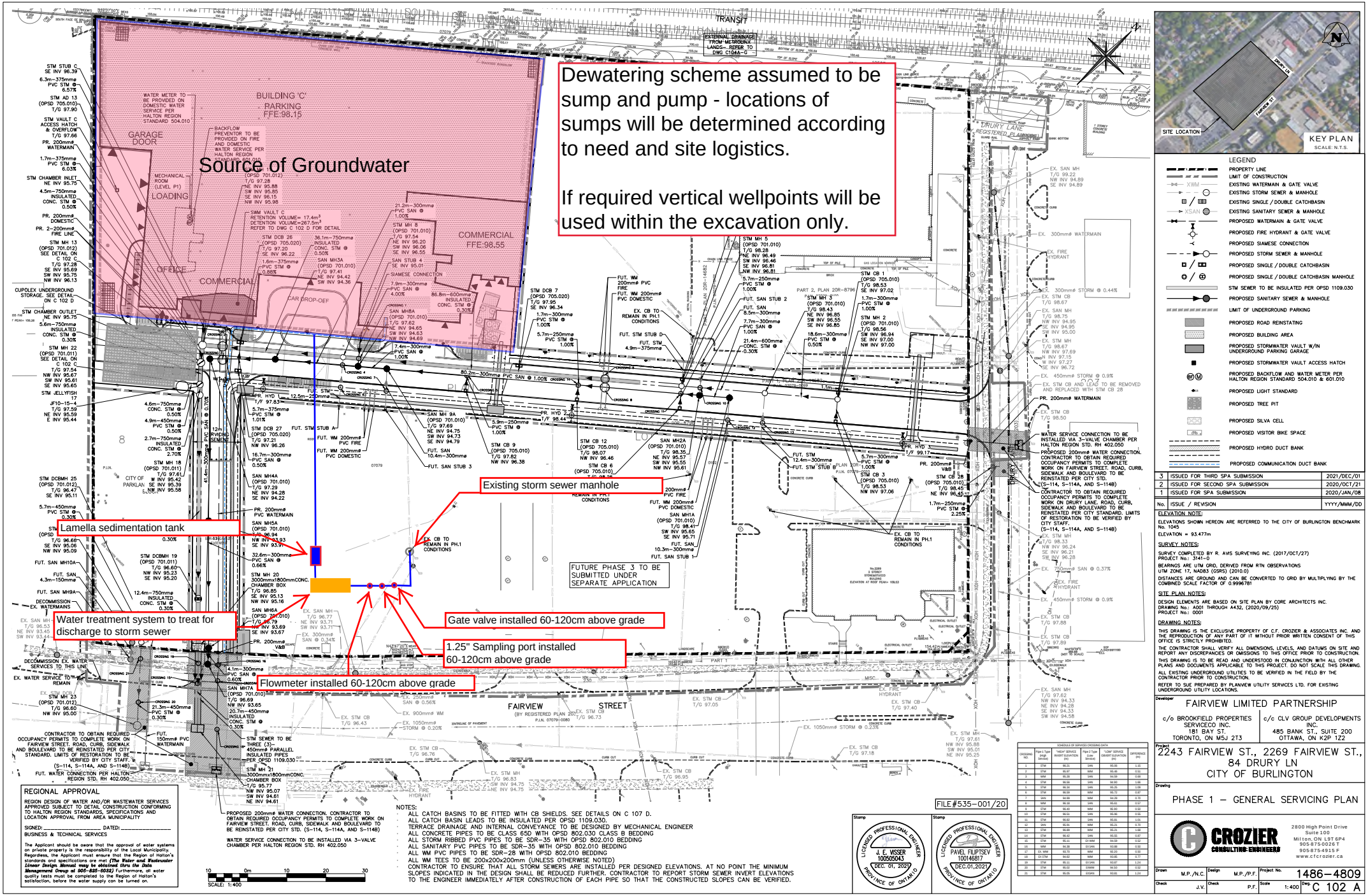
Dewatering Plan

Project Name: Fairview and Drury Lane Phase 1

2243 Fairview Street, Toronto, Ontario

Client: Multiplex

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t +1 (416) 792–3999 | info@wjgl.com | wjgl.com
Registered Office; Unit 253, 250 Eglinton Avenue West, M4R 1A7, Toronto, ON



No.	ISSUE / REVISION	YYYY/MMM/DD
3	ISSUED FOR THIRD SPA SUBMISSION	2021/DEC/01
2	ISSUED FOR SECOND SPA SUBMISSION	2020/OCT/21
1	ISSUED FOR SPA SUBMISSION	2020/JAN/08

ELEVATION NOTE:
ELEVATIONS SHOWN HEREON ARE REFERRED TO THE CITY OF BURLINGTON BENCHMARK No. 1045
ELEVATION = 93.477m

SURVEY NOTES:
SURVEY COMPLETED BY R. AVIS SURVEYING INC. (2017/OCT/27)
PROJECT No.: 3141-0
BEARINGS ARE UTM GRID, DERIVED FROM RTN OBSERVATIONS
UTM ZONE 17, NAD83 (CSRS) (2010.0)
DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996781

SITE PLAN NOTES:
DESIGN ELEMENTS ARE BASED ON SITE PLAN BY CORE ARCHITECTS INC.
DRAWING No.: A001 THROUGH A432, (2020/09/25)
PROJECT No.: 0001

DRAWING NOTES:
THIS DRAWING IS THE EXCLUSIVE PROPERTY OF C.F. CROZIER & ASSOCIATES INC. AND THE REPRODUCTION OF ANY PART OF IT WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.
THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT. DO NOT SCALE THIS DRAWING.
ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
REFER TO SUE PREPARED BY PLANVIEW UTILITY SERVICES LTD. FOR EXISTING UNDERGROUND UTILITY LOCATIONS.

Developer
FAIRVIEW LIMITED PARTNERSHIP
c/o BROOKFIELD PROPERTIES SERVICECO INC.
181 BAY ST.
TORONTO, ON M5J 2T3
c/c CLV GROUP DEVELOPMENTS INC.
485 BANK ST., SUITE 200
OTTAWA, ON K2P 1Z2

Project
2243 FAIRVIEW ST., 2269 FAIRVIEW ST., 84 DRURY LN
CITY OF BURLINGTON

Drawing
PHASE 1 – GENERAL SERVICING PLAN

FILE #535-001/20

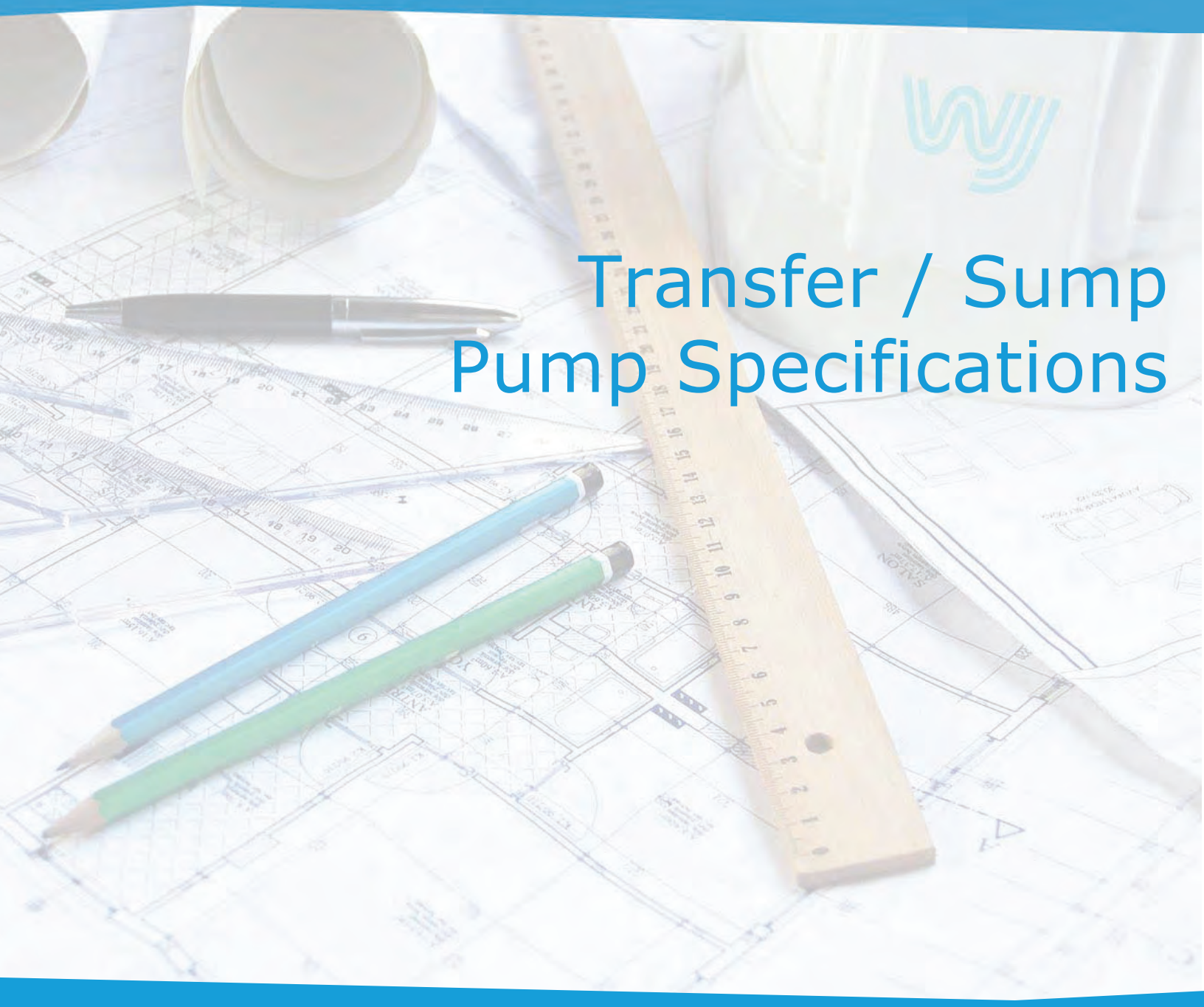
Stamp: LICENSED PROFESSIONAL ENGINEER J. E. WISSER 100505043 DEC. 01, 2021 PROVINCE OF ONTARIO

Stamp: LICENSED PROFESSIONAL ENGINEER PAVEL FILIPTSEV 100146817 DEC.01,2021 PROVINCE OF ONTARIO

CROZIER CONSULTING ENGINEERS
2800 High Point Drive Suite 100
Milton, ON L9T 6P4
905-875-0026 T
905-875-4915 F
www.cfcrozier.ca

Drawn	M.P./N.C.	Design	M.P./P.F.	Project No.	1486–4809
Check	J.V.	Check	P.F.	Scale	1:400
				Dwg.	C 102 A

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Transfer / Sump Pump Specifications

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Canada

TSURUMI

BUILT FOR WORK



CONTRACTOR / MINING PUMPS

HIGH HEAD & HIGH VOLUME DEWATERING PUMP
KTZ SERIES

Dewatering Pumps • Accessories

KTZ

High head and high volume dewatering





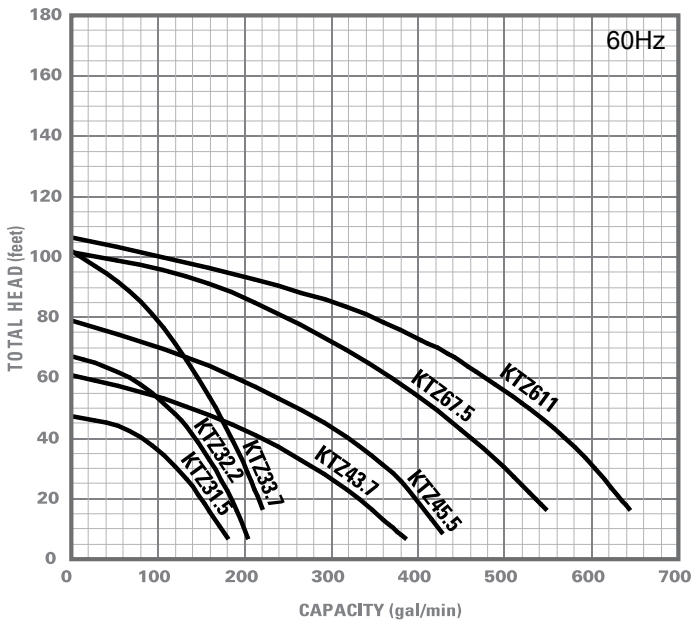
Field conversions from high volume to high head are quick and easy: simply change the impeller, suction cover, and discharge.

Material

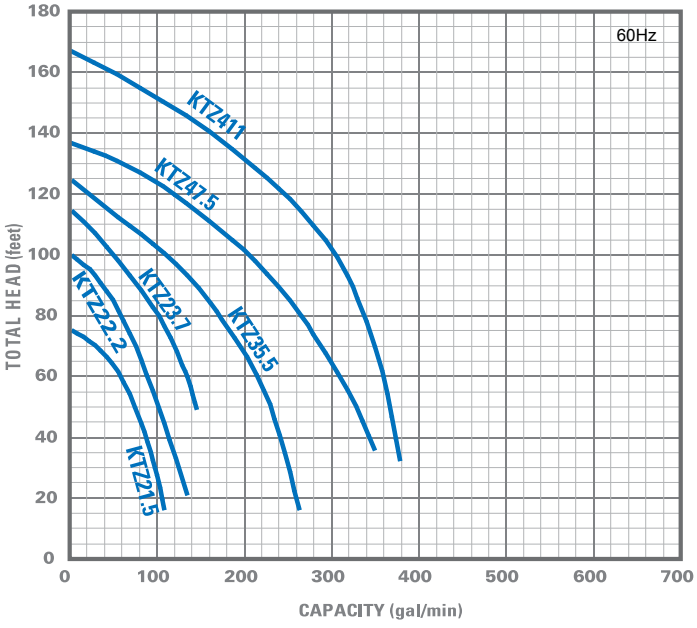
Impeller:	High Chrome Iron
Casing:	Cast Iron
Mechanical Seal:	Silicon Carbide
Motor Frame:	Cast Iron
Shaft:	420 Stainless Steel
Fasteners:	304 Stainless Steel
Cable:	PVC, Chloroprene Rubber

Performance Curves

High Volume



High Head



Canada TSURUMI

KTZ pumps convert between high head and high volume in minutes!

Features

- Higher Pumping Heads
- High Head versus High Volume Conversion Capabilities
- High Pressure Rated Mechanical Seals
- Rugged All Iron Construction
- Anti-Wicking Cable Entrance
- Dual Silicon Carbide Mechanical Seals
- Tsurumi's Exclusive Oil Lifter
- Internal Thermal Motor Protection





The **KTZ series** is designed to withstand the most demanding conditions, including the highly abrasive liquids found in the construction, aggregate and mining markets. Versatility is increased as each pump model has the capability of easily converting between high head and high volume performance with a simple change of impeller and wear plate. KTZ pumps utilize 3600RPM motors to achieve higher heads. All KTZ series pumps incorporate high-chrome impellers for maximum wear life! Isolated dual silicon carbide mechanical seals are used to provide superior motor protection.

All KTZ series pumps come standard with high pressure mechanical seals capable of operating pressures of 71 PSI to allow operation at a combined submergence and discharge pressure of 164 ft. This exceeds our competition's standard design by a wide margin and offers longer mechanical seal life for a more reliable pump operating system.

Because the highest pressures are experienced on the 10 and 15 horsepower KTZ models, Tsurumi has incorporated Pressure Relief Ports on these pumps allowing the mechanical seal to only see the pressure developed by the sump submergence level. This has virtually eliminated the premature wear and failure of mechanical seals in higher head pumping applications.

	PUMP SPECIFICATIONS			MOTOR SPECIFICATIONS				DIMENSIONS			
Model	Discharge Size (inch)	Maximum Capacity (gpm)	Maximum Head (feet)	Output (hp)	Pole (rpm)	Insulation Class	Voltages	Diameter (inch)	Height (inch)	C.W.L.* (inch)	Weight (lbs.)
KTZ 21.5	2	106	75	2	2 - 3600	F	208 / 230 / 460 / 575	9 1/4	21 9/16	4 3/4	66
KTZ 31.5	3	180	47	2	2 - 3600	F	208 / 230 / 460 / 575	9 1/4	21 9/16	4 3/4	66
KTZ 22.2	2	132	100	3	2 - 3600	F	208 / 230 / 460 / 575	9 1/4	22 3/8	4 3/4	75
KTZ 32.2	3	203	67	3	2 - 3600	F	208 / 230 / 460 / 575	9 1/4	22 3/8	4 3/4	75
KTZ 23.7	2	143	115	5	2 - 3600	F	208 / 230 / 460 / 575	11 1/8	24 5/8	5 7/8	139
KTZ 33.7	3	219	102	5	2 - 3600	F	208 / 230 / 460 / 575	11 1/8	24 5/8	5 7/8	139
KTZ 43.7	4	386	61	5	2 - 3600	F	208 / 230 / 460 / 575	11 1/8	24 5/8	5 7/8	139
KTZ 35.5	3	260	125	7.5	2 - 3600	F	208 / 230 / 460 / 575	12 1/16	25 11/16	5 7/8	181
KTZ 45.5	4	428	79	7.5	2 - 3600	F	208 / 230 / 460 / 575	12 1/16	25 11/16	5 7/8	181
KTZ 47.5	4	349	137	10	2 - 3600	F	208 / 230 / 460 / 575	13	26	7 1/2	231
KTZ 67.5	4 or 6	549	102	10	2 - 3600	F	208 / 230 / 460 / 575	13	26	7 1/2	236
KTZ 411	4	377	167	15	2 - 3600	F	208 / 230 / 460 / 575	14 11/16	31 1/4	7 1/2	293
KTZ 611	4 or 6	645	107	15	2 - 3600	F	208 / 230 / 460 / 575	14 11/16	31 1/4	7 1/2	300

TSURUMI PUMP

KTZE - SERIES
DEWATERING PUMPS (AUTO TYPE)

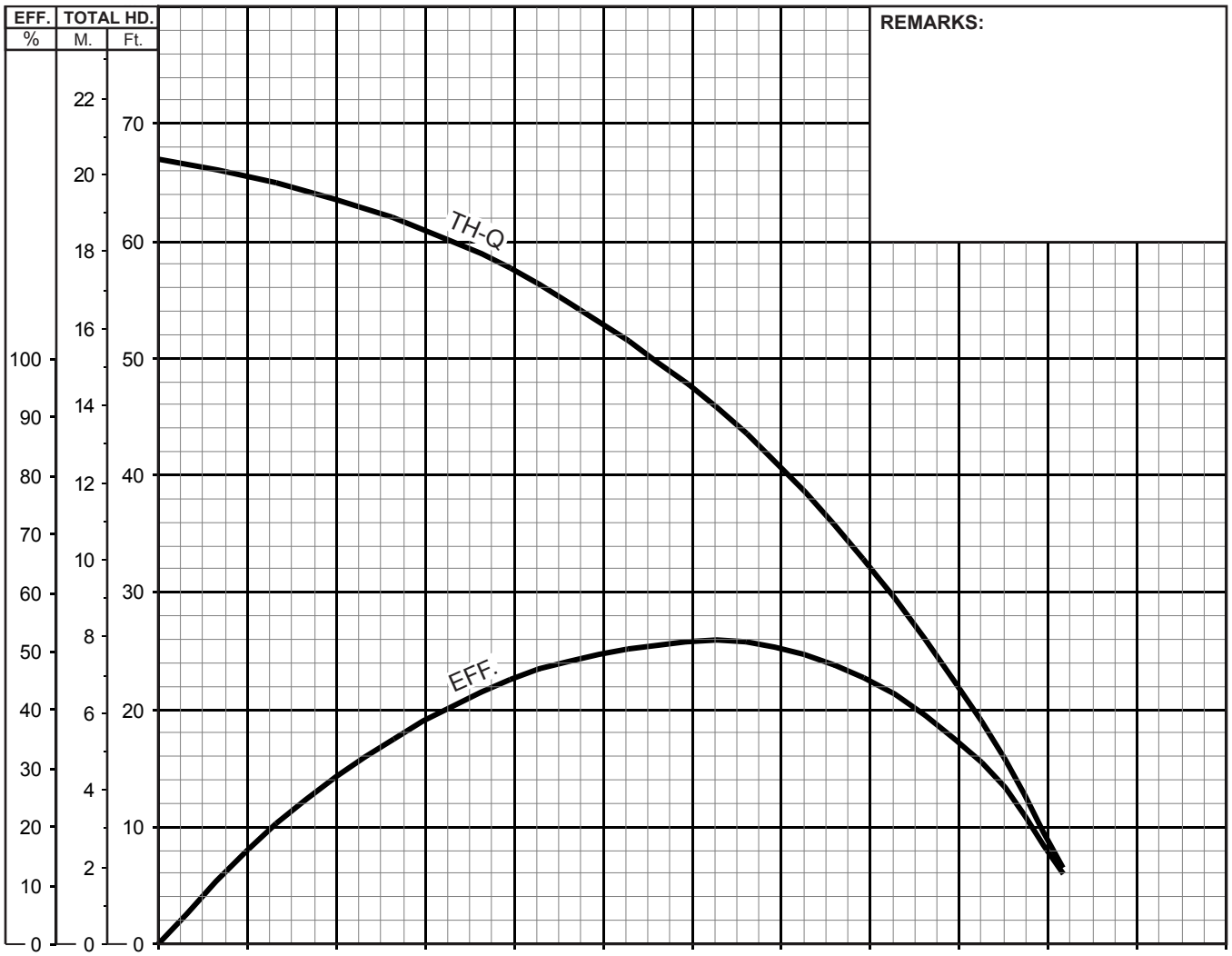
PERFORMANCE CURVE

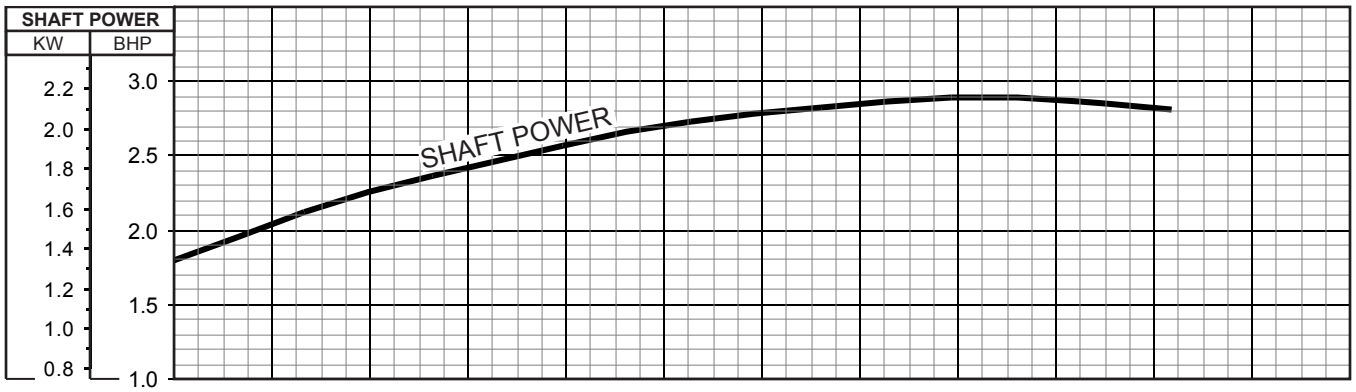
MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZE32.2-61	3"/80mm	3	2.2	3410	0.334"/8.5mm	Water	1.0	1.123 cSt.	60°F

PUMP TYPE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS
Dewatering Pump	3	208-220/460/575	9.4-9.0 / 4.5 / 3.5	60	Direct On Line	F

CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS
-	-	-	-	-	-	-	-

REMARKS:





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Pump Specifications

Project Name: Fairview and Drury Lane, Phase 1

Client: Multiplex

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BBA Pumps
Pumps for results

PT130 Electric Drive
High Efficiency Wellpoint Dewatering Pump
Max. 35 m^3/hour, Max. 20 mwc



Pump specifications:

Type	PT130E
Design	Double acting, duplex piston pump
Max. flow	35 m^3/hour (154 US GPM)
Max. pressure	20 mwc (66 ft.)
Max. suction lift	9.6 mwc (32 ft.)
Connections	4”
Electric motor	3 kW (4 Hp)
Voltage	230/400V IE2
Base frame	Hot dip galvanised
Weight (net)	575 kg (1265 lb.)

FEATURES

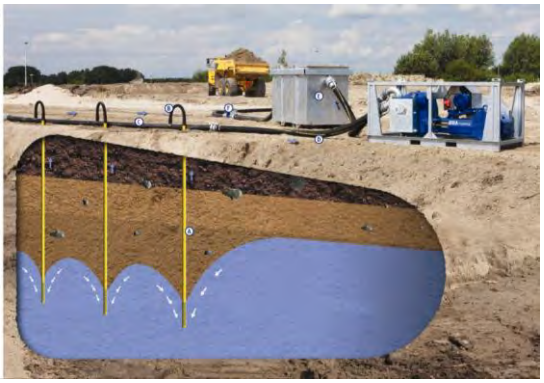
PT Wellpoint pump
The PT wellpoint pump has been designed for vertical- and horizontal dewatering applications. These positive displacement pumps are fully self-priming and are capable of handling air, water or any mixture of both without requiring a separate priming system. Furthermore, these pumps are capable of running dry indefinitely without causing damage or excessive wear to any part of the unit.

World-class performance
The PT pump package offers lowest cost of ownership and provides a reliable and durable solution to the challenges facing dewatering companies around the world. The technology has been tried and tested in the field and has revolutionised the vertical- and horizontal dewatering market on a global scale, by offering unmatched performance at minimal costs thereby improving the return on investment (ROI).

Key features PT Pumps
- Self-priming, no additional priming system required
- Excellent suction capabilities on all flows
- High pump efficiency
- Minimal power consumption reducing running costs
- Can run dry indefinitely
- Cheap and easy-to-replace wear parts
- 100% mechanical technology
- Extended unit life time

Complete package designed & built by BBA Pumps
- Complete in-house design & production
- Over 60 years of experience in the market
- Extensive testing facility in-house
- Contemporary & functional design
- Durable & eco-friendly materials

After sales service & product support
- Single supplier for parts, spares & accessories
- Dedicated customer help-desk (24h service)
- Dedicated service department in-house
- Global parts distribution network
- Optional global on-site servicing
- Extensive training options available (technical & commercial), on-site or in-house

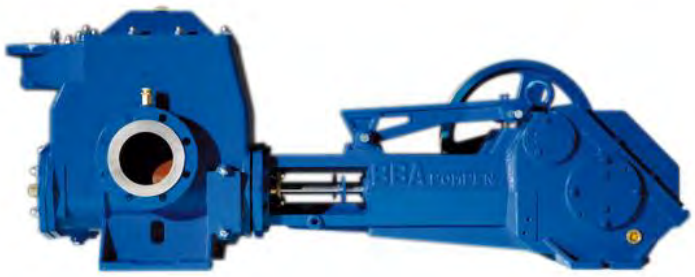


PT130 Electric Drive
High Efficiency Wellpoint Dewatering Pump
Max. 35 m^3/hour, Max. 20 mwc

STANDARD TECHNICAL SPECIFICATIONS

BBA double action piston pump

Pump type	PT130
Max. flow	35 m^3/hour (154 US GPM)
Max. head	20 mwc (66 feet)
Max. suction lift	9.6 mwc (32 ft.)
Speed	62 strokes/min
Pump casing	Cast iron GG20
Pump cover	Cast iron GG20
Cylinder liners	Stainless steel 1.4301
Piston cups	Leather
Piston rods	Stainless steel 304
Shaft seal	Gland packing
Valve rubbers	NBR
Stone catcher	Steel hot dip galvanised
Measure equipment	Vacuum gauge
Connections	Steel hot dip galvanised



Electric motor

Motor type	HMA2
Power	3 kW (4 Hp)
Speed	1480 RPM
Voltage	230/400 V
Frequency	50 Hz
Poles	4
Mounting	B3
Protection	IP55
Efficiency	IE2
PKZ	Thermal overload protection



BBA base frame

Frame	Steel hot dip galvanised
Dimensions L x B x H	1500 x 700 x 1015 mm
Dimensions L x B x H	59 x 27.5 x 40 inch
Lifting point	Fitted with single lifting point
Forklift pockets	N/A
Motor rain cover	Steel hot dip galvanised
Belt guard	Steel hot dip galvanised

PT130 Electric Drive
High Efficiency Wellpoint Dewatering Pump
Max. 35 m^3/hour, Max. 20 mwc



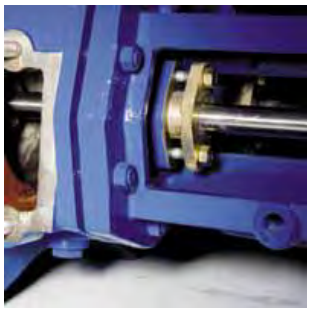
Lubrication and drive
Precisely machined drive gears and an automatic lubrication system provide excellent performance and minimal sound emissions.



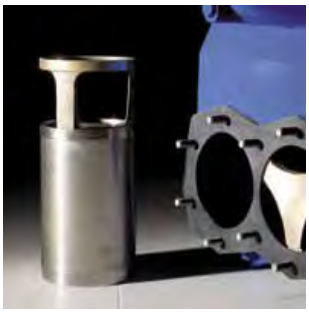
Practical valve system
The valve system is fitted with an o-ring seal and a solid bridge section for securing purposes.
This allows for quick and easy disassembly, even after prolonged use.



Easy access points
Allowing access to the cylinders, stuffing boxes and other critical areas for easy cleaning and maintenance.



Hard-wearing piston rods
The stainless steel piston rods have been carefully machined to provide an increased service life and minimal maintenance.



Exchangeable liners
The stainless steel cylinder liners can be rotated for extended service life. Fitted with a quick release system, rotating and exchanging the cylinders is simple even when servicing the pump in the field.



Standard stone catcher
All PT pumps feature a stone catcher protecting the pump internals from any suspended solids. The stone catcher has easy-access cleaning covers and comes with dual vacuum gauges to monitor pump performance.

Pictures used are for illustration purposes only.

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Tank Specifications

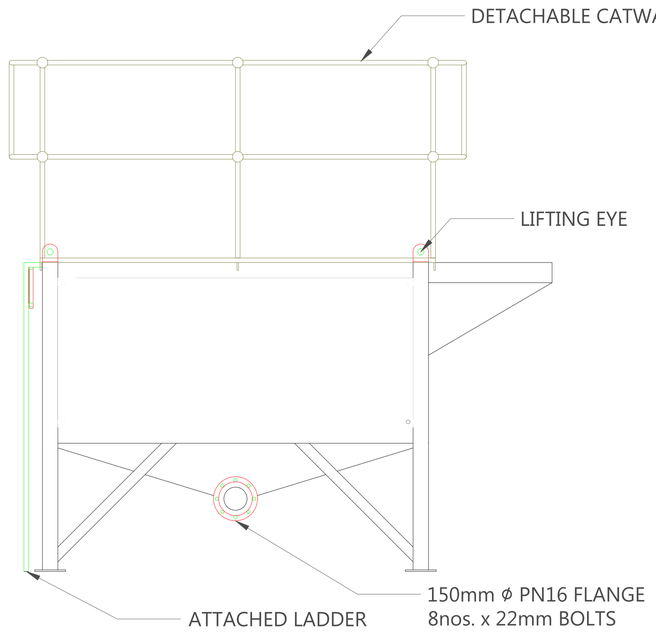
Project Name: Fairview and Drury Lane Phase 1

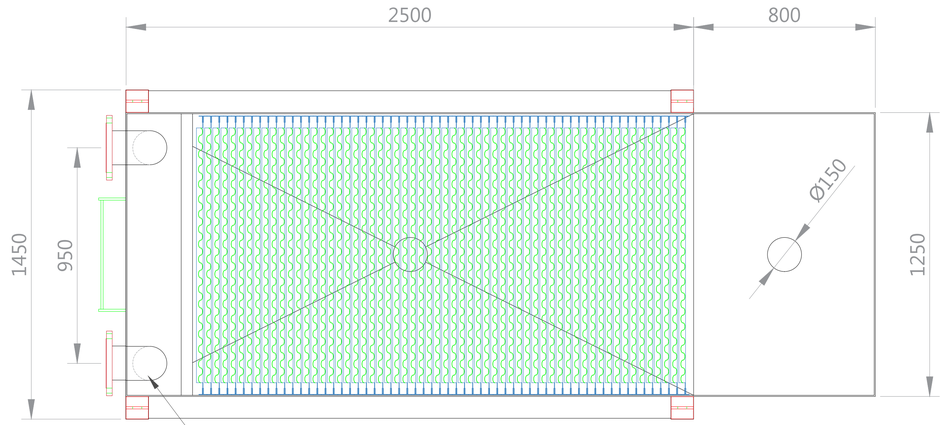
Client: Multiplex

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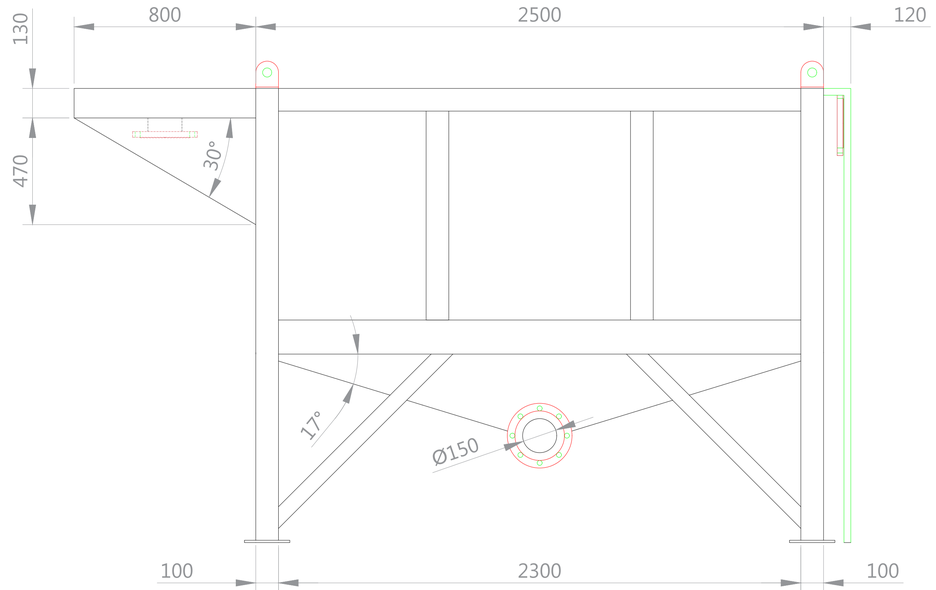




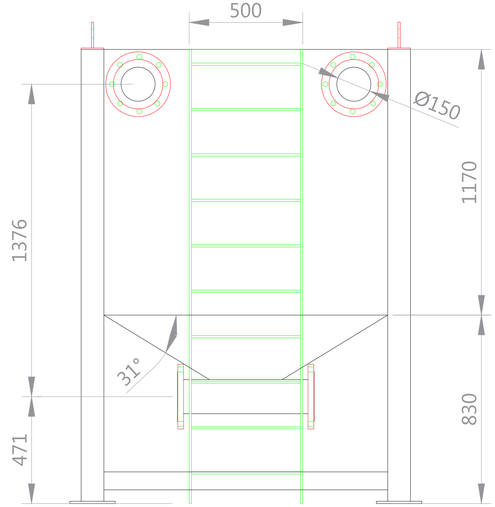


TOP

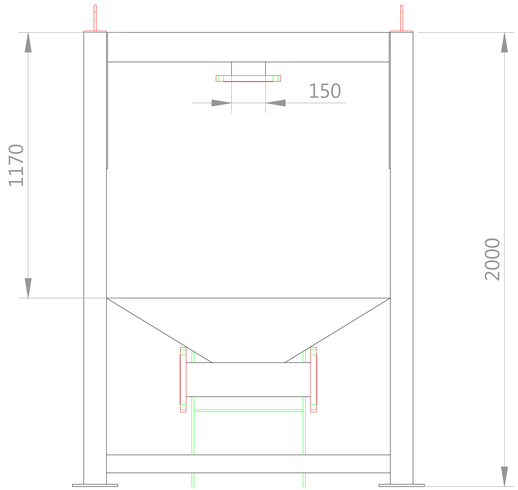
LAMELLA PLATES (INDICATIVE ONLY)
APPROX. 60nos. x 30mm CENTRES w/ 2nos. HAND HOLES ON TOP EDGE
FOR EASE OF FITTING AND REMOVING FOR CELANING.



SIDE



REAR



FRONT

WJ GROUNDWATER
Expert in Groundwater

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e: info@wjgl.com
w: www.wjgl.ca

Notes:

1) Do not scale from drawing. Refer to indicated dimensions only.

REV. NO.	DRAWN BY:	CHECKED BY:	DATE:	REASON FOR REVISION:
00	GA	TT	15/08/2019	Issue for Review

PROJECT NAME:

DRAWING TITLE:
Siltbuster Tank Details

DWG NO:

SCALE: AS INDICATED

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Flowmeter Specification

Project Name: Fairview and Drury Lane, Phase 1

Client: Multiplex

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iMAG 4700 Series
FLANGED MAGMETER

Seametrics
Precision Flow Measurement
An ONICON Brand



iMAG 4700p


iMAG 4700


iMAG 4700-300


iMAG 4700r
(Remote Display)

RIGHT METER FOR
- Water & Wastewater Treatment
- Municipal
- Pump skids
- Pump stations
- Packaged plants
- Filtration systems
- Reclaimed water
- Hydraulic fracturing

Features
- Easy setup
- Minimal straight pipe
- Mounted or remote rate & total
- Tamper-evident seal
- Certified to NSF/ANSI standard 61
- IP68 rated
- No moving parts

The **iMAG-Series** is the most economical flanged electromagnetic flowmeter on the market. With electrodes designed to discourage fouling, it is available in 3" to 12" pipe in municipal or industrial water, waste and reclaimed water, pump stations, and packaged plant applications. Minimal straight pipe requirements allow iMAG-Series meters to be used in piping configurations where there is little space between the meter and an elbow.

iMAG-Series meters are CE certified, certified to NSF/ANSI standard 61 and are rated IP68 for applications where the meter may be operated under water to a depth of at least 10 feet (3 meters) continuously.

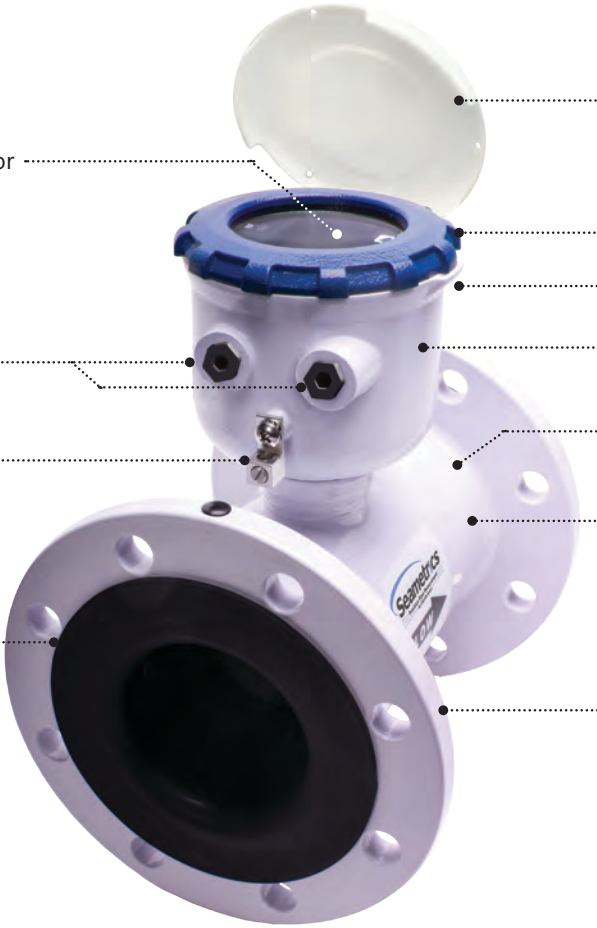
The display can be meter mounted or remote, and both rate and total indication are standard. Rate and total units and pulse scaling can be set via the front panel touch key pad by the user. Bidirectional flow reading is standard with totals available in forward, reverse, net flow, batch forward flow, and batch reverse flow. Batch totals can be reset.

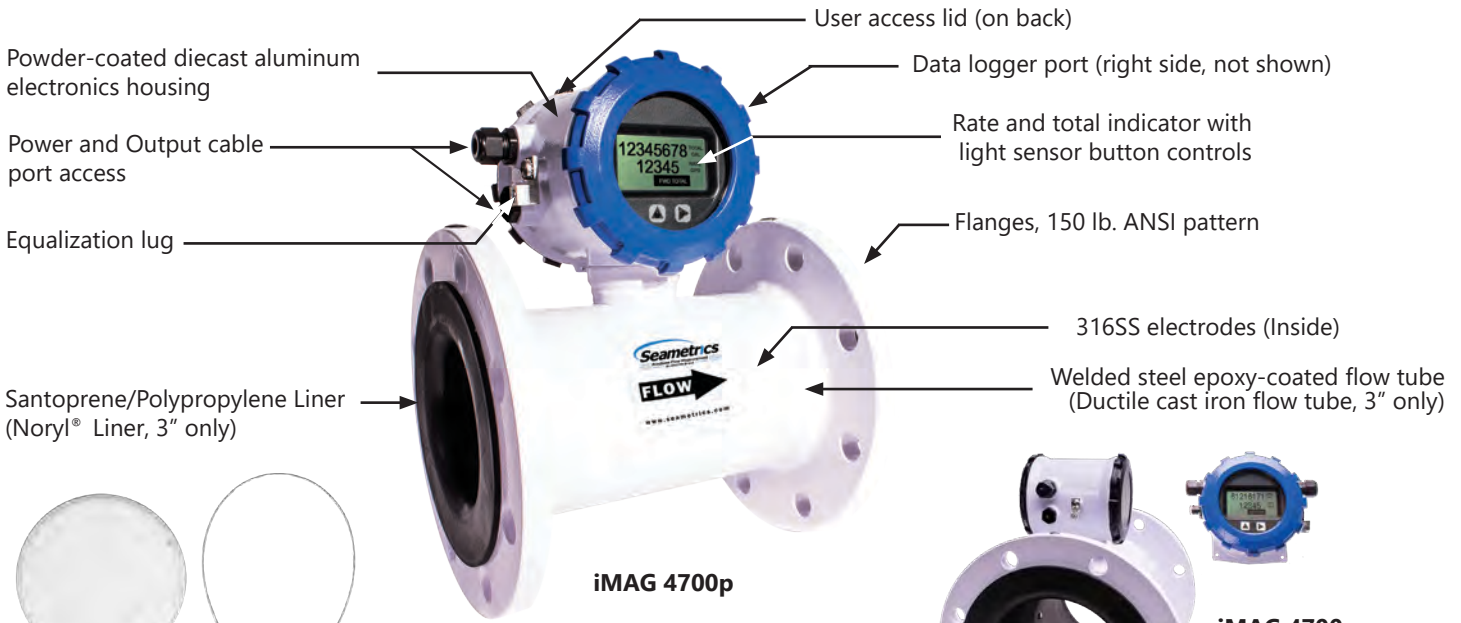
A power/output cable allows outputs for use with a variety of Seametrics and other displays and controls for remote reading and telemetry applications. Pulse output is standard on all models and 4-20mA passive current loop is standard on the iMAG 4700p. In addition, 4-20mA loop, HART protocol, high speed digital, and Modbus® protocol outputs are optional on the externally powered units, depending on model.

Contact Your Supplier

ISO 9001 Certified Company
PROUDLY MADE IN THE USA

Features





iMAG 4700p

iMAG 4700r
(Remote indicator)

Snap on faceplate cover and lanyard for imag4700p and iMAG4700r

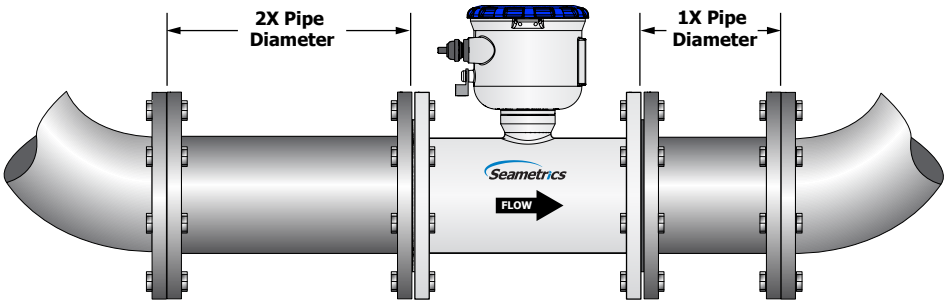
Features



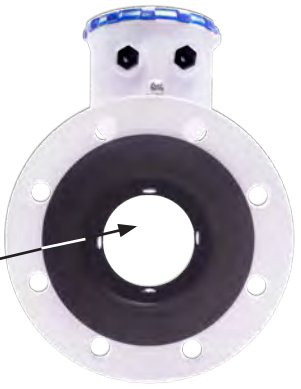
- Built-in Data Logger *(Optional)*
- Bidirectional Flow Reading *(Standard)*
- Pulse Scaled Output *(Standard)*
- 4-20mA Output *(Optional*)*
- HART Protocol Output *(Optional*)*
- Modbus® Protocol Output *(Optional*)*
- High Speed Digital Output *(Optional*)*
- Battery Power *(iMAG 4700 battery model only)*
- External DC Power *(Optional*)*
- Integrated AC Power Supply *(Optional*)*
- Remote Display *(iMAG 4700r)*

Quickly and easily change Total Volume Units, Flow Rate Units, Pulse Output Scaling, and many other settings using the two light sensor button controls on the display panel.

** Some optional items only available on some configurations. See last page for further details.*



Minimal straight pipe requirements to ease installation in tight quarters.



No moving parts to break or foul!

Specifications

Pipe Sizes		3", 4", 6", 8", 10", 12"				
Flanges		150 lb. ANSI Pattern				
Pressure		150 psi (10.3 bar) line pressure				
Temperature	**Operating**	10˚ to 140˚ F (-12˚ to 60˚ C)				
	Storage	-40˚ to 158˚ F (-40˚ to 70˚ C)				
Accuracy		±0.75% of reading on iMAG 4700p and 4700r (±1.0% iMAG 4700), ±0.025% of full-scale flow from low flow cutoff to maxi. flow rate of 10 m/sec				
Low Flow Cutoff		0.5% of maximum flow rate				
Material	**Body** *(3" only)*	Ductile cast iron, powder coated				
	Body *(4"-12")*	Welded steel, epoxy-coated				
	Liner *(3" only)*	Noryl®				
	Liner *(4"-12")*	Santoprene flange/Polypropylene liner body				
	Electronics Housing	Powder-coated diecast aluminum				
	Electrodes	316 stainless steel				
	O-ring (3" only)	EPDM				
Display	**Type**	128x64 dot-matrix LCD				
	Digits	5 Digit Rate			8 Digit Total	
	Units *Please Note: All iMAG meters are factory set for gallons per minute (GPM) rate and gallons total. If other units are required, they can be set in the field.*	Rate Volume Units		Rate Time Units	Total Volume Units	
		Gallons Liters Barrels(42 gal) Cubic Feet Cubic Meters	Million Gallons[2] Mega Liters[2] Imperial Gallons Million Imperial Gallons[2]	Second Minute Hour Day	Gallons Gallons x 10 Gallons x 100 Gallons x 1000 Million Gallons Liters Kilo Liters Mega Liters	Barrels (42 gal) Cubic Meters Cubic Meters x 1000 Cubic Feet Cubic Feet x 1000 Second Foot Day Million Cubic Feet	Acre Feet Acre Inches Imperial Gallons Imperial Gallons x 1000 Million Imperial Gallons Fluid Ounces
	Bidirectional[1]	Forward Total, Reverse Total, Net Total, Batch Forward Total, Batch Reverse Total (Batch totals can be reset)				
Power	**DC Power**	9-36 Vdc @ 250 mA max, 30 mA average				
	Battery Backup **(Not for use as primary power)**	DC powered units: Two lithium 3.6V 'D' batteries, replaceable. AC powered units: One 9V alkaline battery, replaceable.				
	AC Power *(iMAG 4700r and 4700p only)*	85-264Vac, 50/60Hz, 0.12A				
	Battery *(iMAG 4700 only)*	One lithium 7.2V 'D' size battery pack, replaceable.				
Scaled Pulse Output	**Signal**	Current sinking pulse, isolated, 36 Vdc at 10 mA max				
	Pulse Rates	User-scalable from 0.1 to 99,999.9 volume units/pulse. Pulse width is one-half of pulse period with minimum pulse width of 2.5 ms, 200 pulses/sec max. For battery option meters, pulse width varies with frequency, 150 pulses/sec max.				
Options	**4-20mA Current Loop**	Isolated, passive, 24Vdc, 650 Ω maximum current loop				
	HART/4-20mA	HART protocol over 4-20mA line				
	High Speed Digital Output *(iMAG 4700 & 4700p only)*	Isolated, open collector, 24 Vdc				
	Serial Communications	Isolated, asynchronous serial RS485 (Reconfigurable for RS232 or 3.3V CMOS), Modbus® RTU protocol (factory selectable)				
Cable	**Power/Output Cable**	20ft (6m) standard length polyurethane jacketed cable—for power and outputs (lengths up to 200' available).				
	Remote Display Cable *(iMAG 4700r)*	20ft (6m) standard length polyurethane jacketed cable—for connection between meter and remote display (lengths up to 200' available).				
Conductivity		>20 microSiemens/cm				
Empty Pipe Detection		Hardware/software, conductivity-based				
Regulatory		CE (EN 61326), 4"-12" certified to NSF/ANSI standard 61 60°C (140°F); 3" certified to NSF/ANSI standard 61 Cold Water 23°C (73.4°F)				
Environmental		NEMA 6P, IP68 (10ft (3m) depth, continuously)				

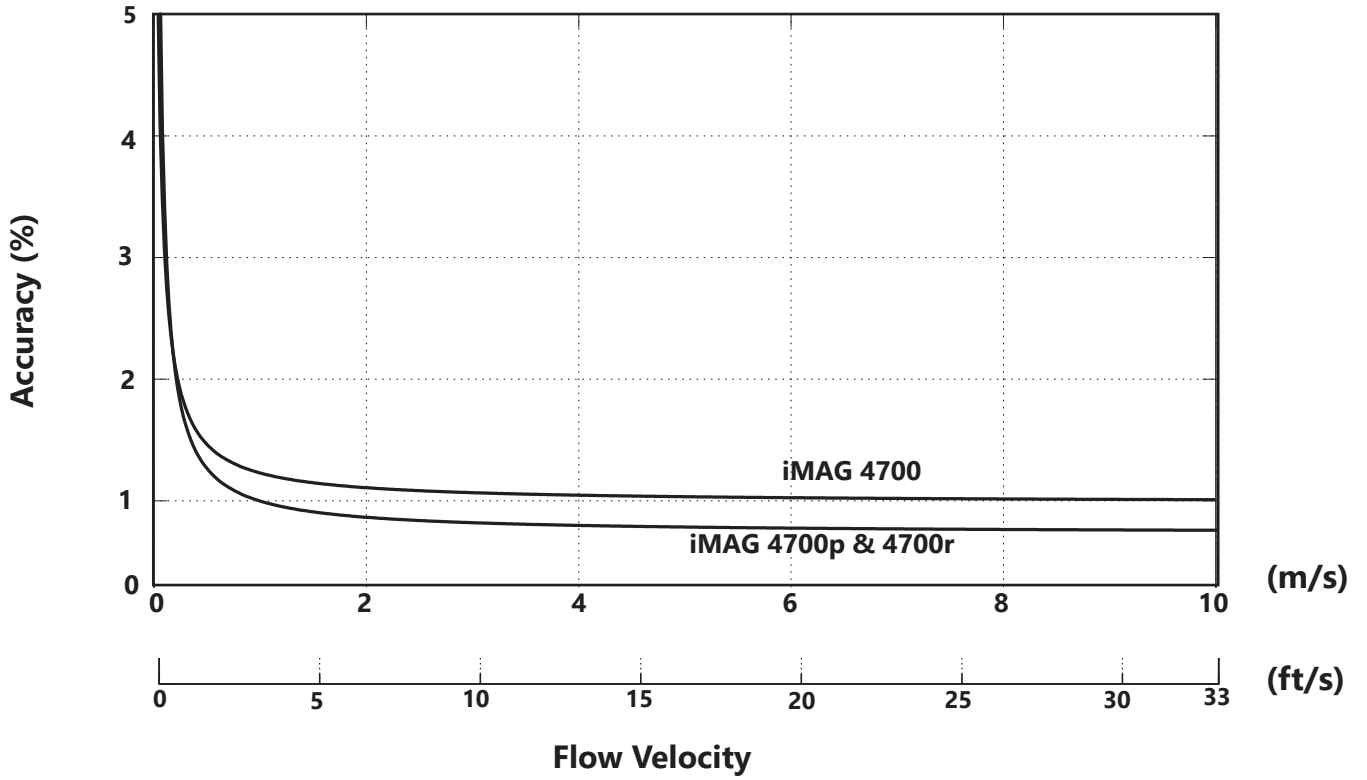
Modbus is a registered trademark of Schneider Electric.

* *Specifications subject to change. Please consult our website for the most current data (www.seametrics.com).*

[1] *If forward and reverse flow data needs to be sent to another device, either the Digital or Modbus output is required.*

[2] *Rate Time Unit is available in Day only.*

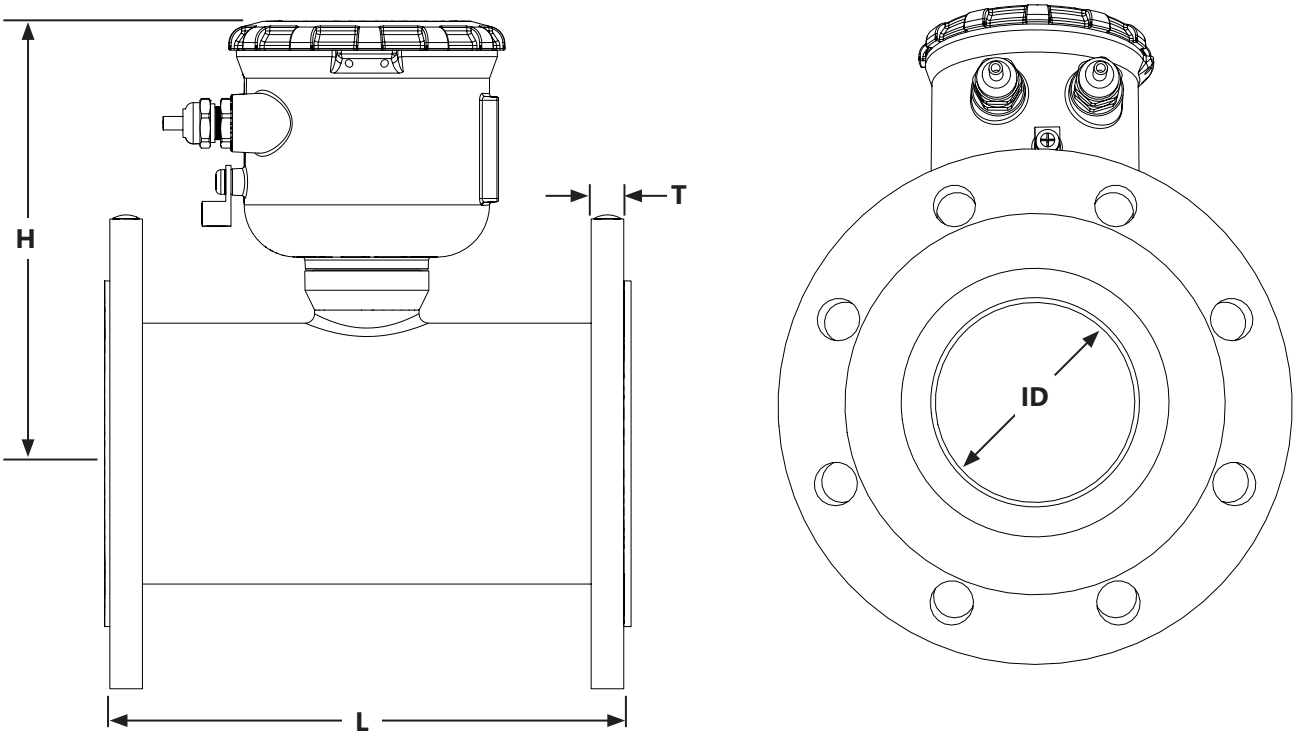
iMAG Accuracy



Flow Rate (3" - 12")

Pipe Size *(Inches in diameter)*	**3"**	**4"**	**6"**	**8"**	**10"**	**12"**
Max Flow Rate *(Gallons/Minute)*	723	1285	2891	5140	8031	11565
Cut-off (min) Flow Rate *(Gallons/Minute)*	3.62	6.43	14.46	25.70	40.15	57.82
Max Flow Rate *(Liters/Second)*	46	81	182	324	507	730
Cut-off (min) Flow Rate *(Liters/Second)*	0.23	0.41	0.91	1.62	2.54	3.65
Max Flow Velocity *(Meters/Second)*	10	10	10	10	10	10

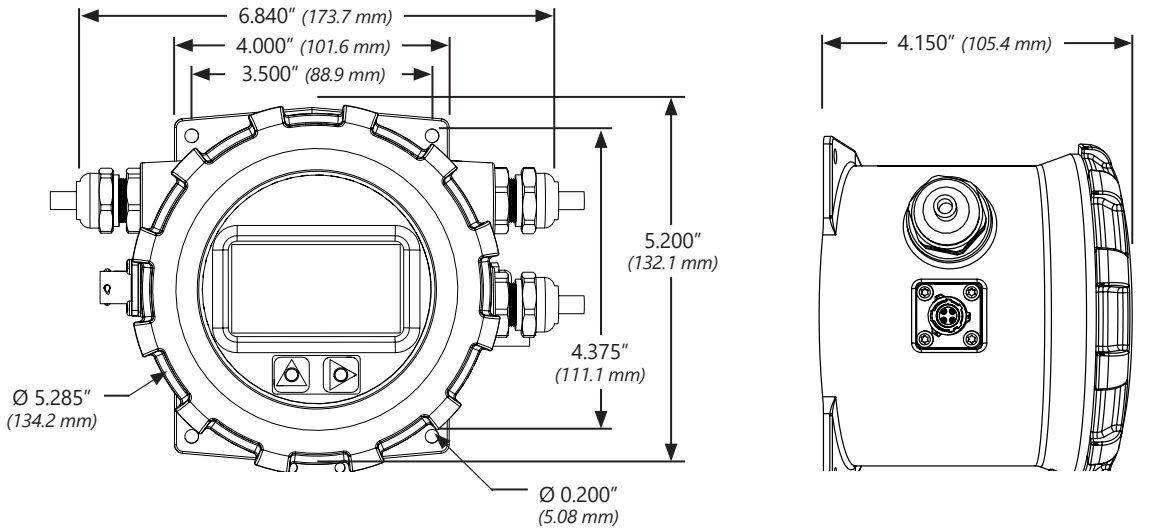
Dimensions - iMAG 4700



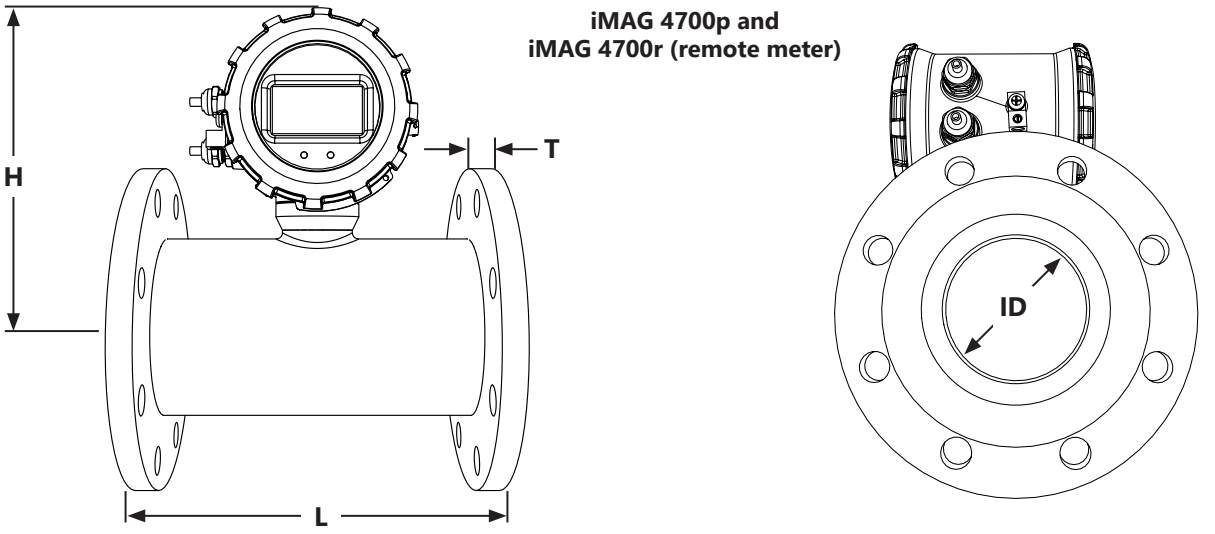
iMAG 4700 Meter Size	L		H		T		ID		Shipping Weight	
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	Kg
3"	12.25	311.15	7.08	179.8	.68	17.25	2.6	66.04	38	17
4"	10.24	260	8.3	211	.62	15.7	3.12	79	33	15
6"	12.27	312	9.1	231	.69	17.5	5.05	128	49	22
8"	14.24	362	10.1	257	.69	17.5	6.44	164	70	32
10"	18.18	462	11.2	284	.69	17.5	8.61	219	130	59
12"	19.68	500	12.2	310	.81	20.6	10.55	268	170	77
Flanges	Standard ANSI 150 lb. drilling								Cable 1 lb.	

Dimensions - iMAG 4700r and iMAG 4700p

iMAG 4700r (remote display)



iMAG 4700p and iMAG 4700r (remote meter)



iMAG Meter Size	L		H		T		ID		Shipping Weight			
									AG3000p		AG3000r	
	inch	mm	inch	mm	inch	mm	inch	mm	lbs	Kg	lbs	Kg
3" *	12.25	311.15	7.95	201.9	.68	17.25	2.6	66.04	39	17.5	40	18
4"	10.24	260	8.6	218	.62	15.7	3.12	79	34	15.5	43	19.5
6"	12.27	312	9.4	239	.69	17.5	5.05	128	50	22.5	59	27
8"	14.24	362	10.4	264	.69	17.5	6.44	164	71	32	78	35
10"	18.18	462	11.5	292	.69	17.5	8.61	219	130	59	135	61
12"	19.68	500	12.5	317	.81	20.6	10.55	268	170	77	175	79
Flanges	Standard ANSI 150 lb. drilling								Cable 1 lb.			

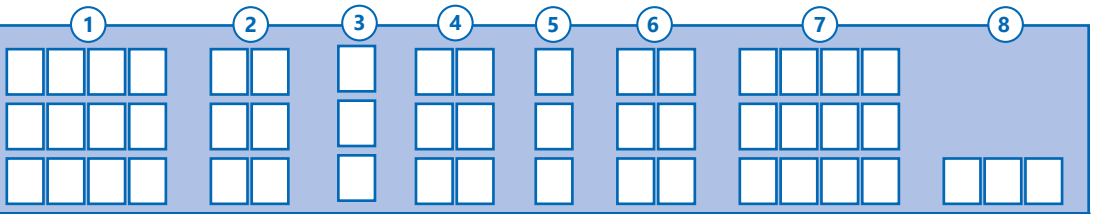
**Add 8lbs (3.5kg) for remote display. 3" Only.*

iMAG 4700 Series
FLANGED MAGMETER

Seametrics

How to Order Worksheet

iMAG 4700
iMAG 4700p
iMAG 4700r



2 Style: F1 = 150 lb ANSI Pattern

4 Power: D1 = DC 60Hz, D2 = DC 50Hz
A1 = AC 60Hz, A2 = AC 50Hz
BX = Battery

5 Outputs: X = No optional output
L = 4-20mA S = Modbus®
H = HART/4-20mA G = Digital

iMAG 4700 (Integrated Display)

1 Size	2 Style	3 Gaskets[3]	4 Power	5 Optional Output[2] (The 4700 comes standard with one pulse output)	6 Options	7 DC Power/Output Cable - 6 conductor (Must select one)
-0300 3″ -0400 4″ -0600 6″ -0800 8″ -1000 10″ -1200 12″	-F1	-X None -R Non NSF -P NSF	-D1 -D2	-X *(requires single cable for DC power & output)* -L *(requires single cable for DC power & output)* -H *(requires single cable for DC power & output)* -S *(requires dual cable for DC power & output)* -G *(requires dual cable for DC power & output)*	-XX None -01 Data Logger	-0000 No Cable *(customer will supply)* Single Dual -006S -006D 6 meter (20 ft) -015S -015D 15 meter (50 ft) -030S -030D 30 meter (100 ft) -045S -045D 45 meter (150 ft) -060S -060D 60 meter (200 ft)
			-BX	-X *(requires single cable for pulse output)*		

iMAG 4700p (Integrated Display)

1 Size	2 Style	3 Gaskets	4 Power[1]	5 Optional Output[2] (The 4700p comes standard with 4-20mA and one pulse output)	6 Options	7 DC Power/Output Cable - 8 conductor (Must select one)
-0300 3″ -0400 4″ -0600 6″ -0800 8″ -1000 10″ -1200 12″	-F1	-X None -R Non NSF -P NSF	-D1 -D2	-X *(requires single cable for DC power & output)* -H *(requires single cable for DC power & output)* -S *(requires dual cable for DC power & output)* -G *(requires dual cable for DC power & output)*	-XX None -01 Data Logger	-0000 No Cable *(customer will supply)* Single Dual -006S -006D 6 meter (20 ft) -015S -015D 15 meter (50 ft) -030S -030D 30 meter (100 ft) -045S -045D 45 meter (150 ft) -060S -060D 60 meter (200 ft)
			-A1 -A2	-X *(requires single cable for output)* -H *(requires single cable for output)* -S *(requires single cable for output)* -G *(requires single cable for output)*		

iMAG 4700r (Remote Display)

1 Size	2 Style	3 Gaskets	4 Power[1]	5 Optional Output[2] (The 4700r comes standard with one pulse output)	6 Options	7 DC Power/Output Cable - 6 conductor (Must select one)	8 Remote Display Cable - 6 conductor (Must select one)
-0300 3″ -0400 4″ -0600 6″ -0800 8″ -1000 10″ -1200 12″	-F1	-X None -R Non NSF -P NSF	-D1 -D2	-X *(requires single cable for DC power and output)* -L *(requires single cable for DC power and output)* -H *(requires single cable for DC power and output)* -S *(requires dual cable for DC power and output)*	-XX None -01 Data Logger	-0000 No Cable *(customer will supply)* Single Dual -006S -006D 6 meter (20 ft) -015S -015D 15 meter (50 ft) -030S -030D 30 meter (100 ft) -045S -045D 45 meter (150 ft) -060S -060D 60 meter (200 ft)	-006 6 meter (20 ft) -015 15 meter (50 ft) -030 30 meter (100 ft) -045 45 meter (150 ft) -060 60 meter (200 ft)
			-A1 -A2	-X *(requires single cable for output)* -L *(requires single cable for output)* -H *(requires single cable for output)* -S *(requires single cable for output)*			

Modbus is a registered trademark of Schneider Electric. Viton is a registered trademark of DuPont Corporation.

Note: All iMAG meters are factory set for gallons per minute (GPM) rate and gallons total. If other units are required, they can be programmed in the field.

[1] *AC meters come with a 1.8 meter (6 ft) AC power cable.*
[2] *You can choose up to one additional output on powered meters only.*
[3] ***If -X is selected, cutomer must provide full faced gaskets. Failure to install gaskets will void warranty. No charge for non NSF (-R) gaskets.***

Seametrics • 19026 72nd Avenue South • Kent, Washington 98032 • USA
(P) 253.872.0284 • (F) 253.872.0285 • 1.800.975.8153 • seametrics.com

LT-14249r4.2-20180531
5/31/2018

WJ GROUNDWATER
Expert in Groundwater



Flowmeter Calibration Certificate

Project Name: Fairview and Drury Lane, Phase 1

Client: Multiplex

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t +1 (416) 792–3999 | info@wjgl.com | wjgl.com
Registered Office; Unit 253, 250 Eglinton Avenue West, M4R 1A7, Toronto, ON

Calibration Certificate

TRILLIUM MEASUREMENT AND CONTROL
2800 John Street, Unit 12
Markham Ontario L3R 0E2
trillium@calflow.com
Tel: 905-305-7790
Fax: 905-305-7791
www.calflow.com

CLAS 2018-04

SCC Accredited LAB
Accréditée CCN No. 878

Calibration Conducted For:
WJ Groundwater Ltd.
1611 Eglinton Avenue West
Toronto, On

Certificate No:	2101-020-1
Purchase Order No:	CPO14611
Certificate Issue Date:	12/Jan/2021
Calibration Date:	11/Jan/2021
Due Date:	11/Jan/2022
Procedure:	SWI-005

Device Identification

Sensor/Meter:	
Model:	IMAG4700-0400-F1-BX-X-XX-006S
Manufacturer:	Seametrics
Serial No.:	092017001575
Output Type:	

Transmitter/Display			
Model:	N/A		
Manufacturer:	N/A		
Serial No.:	N/A		
K-Factor:	N/A	P /litre	Meter Factor: N/A

Statement of Compliance and Traceability

Our reference standards are traceable to the National Institute of Standards and Technology (NIST) and/or the national measurement standards of Canada.

The Calibration Laboratory Assessment Service (CLAS) of the National Research Council of Canada (NRC) has assessed and certified the specific calibration capabilities of this laboratory to conform with the requirements of ISO/IEC 17025:2005 and traceability to the International System of Units (SI) or to standards acceptable to the CLAS program. This certificate of calibration is issued in accordance with the conditions of certification granted by CLAS and the conditions of accreditation granted by the Standards Council of Canada (SCC). Neither CLAS nor SCC guarantee the accuracy of individual calibrations by accredited laboratories.

Measurement Uncertainty

The flow calibrations were performed using reference standards with a calibration and measurement capability of 0.052%. This is an expanded uncertainty with a coverage factor of k = 2, yielding a confidence level of approximately 95%, assuming a normal distribution. The resulting Test Uncertainty Ratio (TUR) is greater than 10:1.

Initial Condition of Device

The meter, and if applicable, any additional components were received in good condition. The meter was clean of all contaminants and the calibration was conducted as agreed upon with the customer. See "Summary of Calibration" for additional information.

Summary of Calibration

The results of this calibration certificate pertain only to the item identified under the "Device Identification" section of page 1 of this calibration certificate. The determination of whether the item is in tolerance or not is based on the original manufacturer's specifications or the customer's request and it takes into account the measurement uncertainty of Trillium's Laboratory. When a meter's error is within manufacturer's specification but can be adjusted to as close to "0" as possible, with customer permission an "As Left" certificate will be provided with details indicating what adjustment was made.

Calibration conducted by:

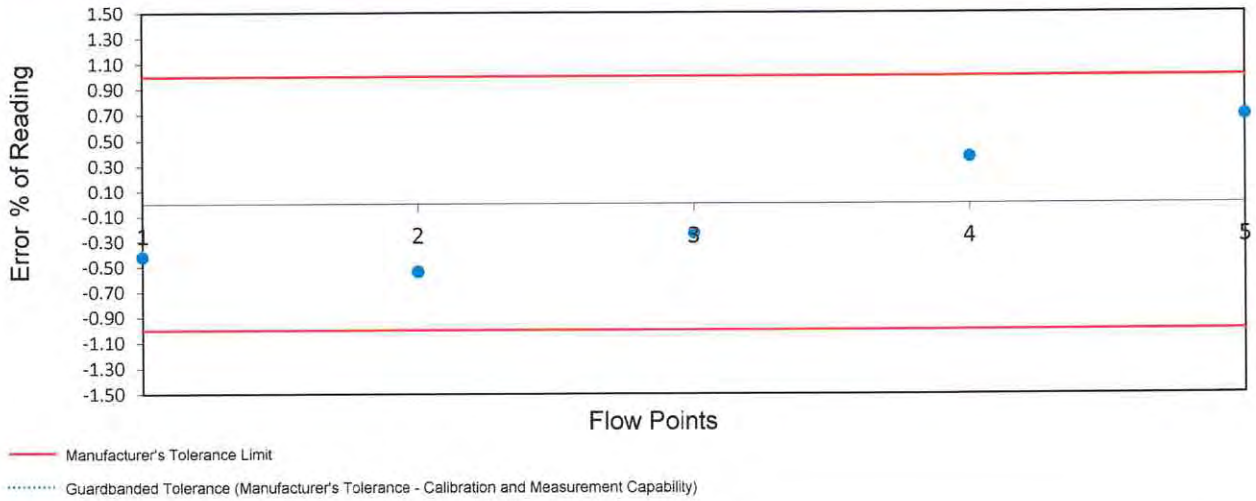
Paul Pearson - Technician

Reviewed and approved by:

Emmanuel Ankrah - Lab Manager

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As Found Results



WJ GROUNDWATER
Expert in Groundwater



Gate Valve Specifications

Project Name: Fairview and Drury Lane, Phase 1

Client: Multiplex

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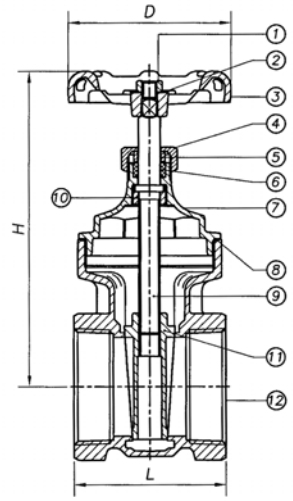
0818NL SERIES
NO LEAD BRASS FULL PORT GATE VALVE (THREADED)

Specification:

- Threads conform to ANSI / ASME B1.20.1
- Max Pressure Rating 200 PSI
- 200 PSI WOG Non-Shock - WOG pressure rating based on ambient temperature
- Max temp rating: 150°F (66°C)
- Cast no lead brass body
- Non-rising stem
- Packing material: PTFE
- Black cast hand wheel

Certification:

- NSF/ANSI Standard 61 & 372 Certified

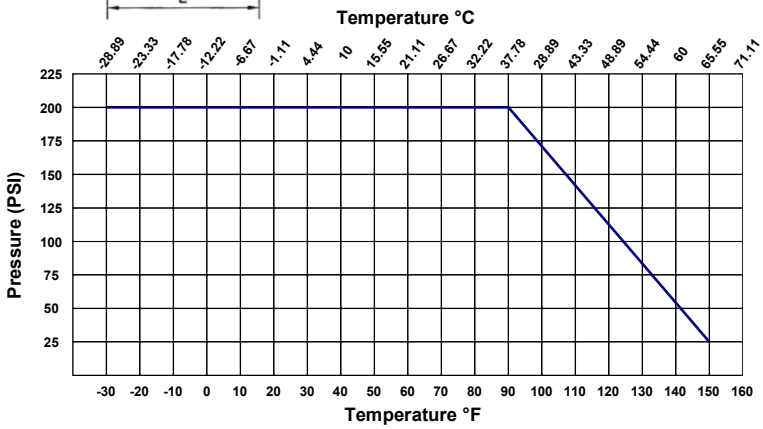


NO LEAD <0.25% Pb by weighted avg. | Third Party Certified to NSF / ANSI 372



PART LIST

ITEM NO.	DESCRIPTION	MATERIAL
1	Wheel Nut	Steel SAE 1010R
2	Name Plate	Aluminum A1100
3	Hand Wheel	Cast Iron
4	Packing Nut	Brass C89550
5	Gland Ring	Brass C89550
6	Gland Packing	PTFE M-392
7	Bonnet	Brass C89550
8	Stem Packing	Fibre "H"
9	Stem	Brass C89550
10	Lock Nut	Brass C89550
11	Disc	Brass C89550
12	Body	Brass C89550



PART NO.	DESCRIPTION	Port Size	D Diameter		L Length		H Height		Weight
		inches	inches	mm	inches	mm	inches	mm	grams
0818-02NL	1/4" FxF	0.433	2.087	53	1.713	43.5	2.913	74	275
0818-03NL	3/8" FxF	0.472	2.087	53	1.713	43.5	2.913	74	258
0818-05NL	1/2" FxF	0.531	2.087	53	1.713	43.5	2.913	74	280
0818-07NL	3/4" FxF	0.748	2.126	54	1.811	46	3.307	84	377
0818-10NL	1" FxF	0.984	2.480	63	2.126	54	3.898	99	553
0818-12NL	1-1/4" FxF	1.259	2.717	69	2.244	57	4.606	117	768
0818-15NL	1-1/2" FxF	1.496	3.150	80	2.441	62	5.079	129	1019
0818-20NL	2" FxF	1.929	3.524	89.5	2.697	68.5	5.984	152	1762
0818-25NL	2-1/2" FxF	2.441	3.976	101	3.701	94	7.874	200	2257
0818-30NL	3" FxF	2.952	4.370	111	4.016	102	8.819	224	3938
0818-40NL	4" FxF	3.622	5.000	127	4.528	115	9.882	251	5908

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Para Español, vea página 2.
Pour le français, consulter la page 3.

ULINE H-3429, H-3430, H-3431
H-3432

GATE VALVE LOCKOUT

1-800-295-5510
uline.com



ASSEMBLY

1. Select the properly sized lockout for the specific valve handle to be locked out.

ULINE PART NO.	DESCRIPTION	HANDLE DIAMETER
H-3429	Mini	1-3"
H-3430	Small	2-5"
H-3431	Medium	4-6½"
H-3432	Large	6-10"

NOTE: Cover should be loose enough when applied that it does not bind to the valve handle.

2. Rotate the lockout cover to completely surround the valve handle. (See Figure 1)

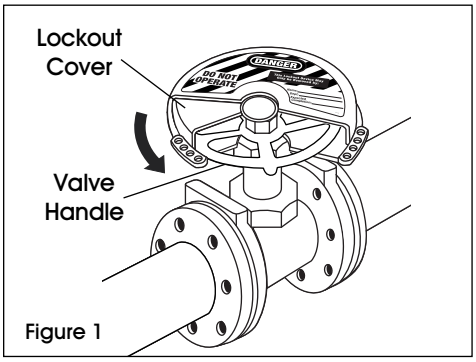
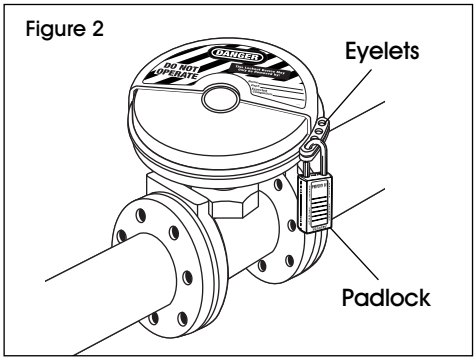
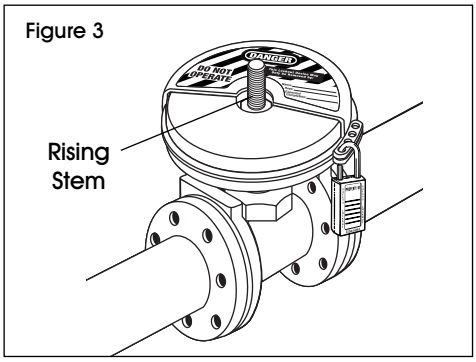


Figure 1

3. Secure with safety lockout padlock(s) by inserting shackle(s) through the overlapping locking eyelets. (See Figure 2)

Figure 2


4. To secure a valve handle that has a rising stem, cut out the circular center section of the lockout cover. (See Figure 3)

Figure 3


0421 IH-3429