Temposonics
AN AMPHENOL COMPANY

Accessories Catalog

Level Plus®

Magnetostrictive Liquid Level Transmitters with Temposonics® Technology

Accessories for liquid level transmitters
Catalog

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Introduction

Temposonics offers a variety of floats to meet your application needs. Our floats come in a variety of sizes from 18 mm (0.71 in.) up to 203 mm (8 in.) in diameter. Float materials are available in stainless steel, FEP, Titanium, Nickel Alloy C-276 and Buna-N.
Product viscosity, specific gravity, and temperature can vary widely in a process or tank gauging application. Because of these variables and others, such as tank pressure and corrosiveness, no one float can meet all requirements. Therefore, a variety of float styles are available and we will assist you in choosing the one that best meets your requirements.

When choosing a float for your application, Temposonics recommends you choose one that has a specific gravity of at least 0.05 less than that of the measured liquid. For interface measurement, a minimum of 0.05 specific gravity differential is recommended between upper and lower liquids. Temposonics also offers a variety of meters, housings, and calibration equipment as accessories to our transmitter range. Meters are available for analog, and Modbus outputs.

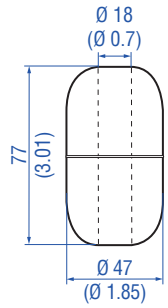
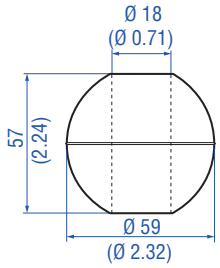
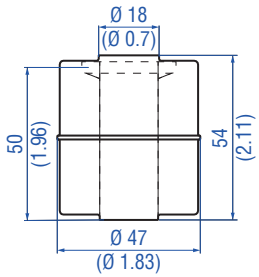
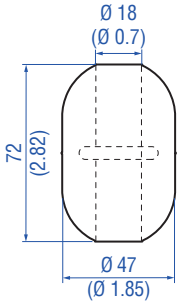
For more information, please contact the Temposonics' applications department or go to www.temposonics.com for more information.

1. Floats

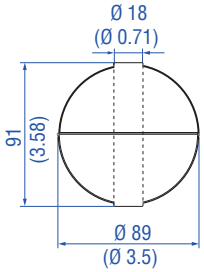
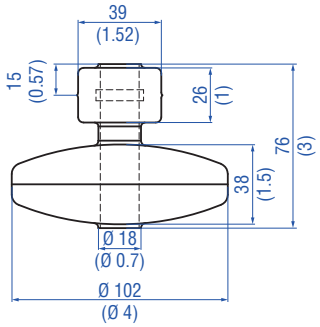
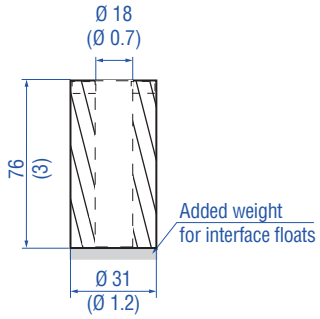
1.1 Standard product floats

General notes:

1. Be sure that the float specific gravity is at least 0.05 less than that of the measured liquid as a safety margin at ambient temperature.
2. For interface measurement: A minimum of 0.05 specific gravity differential is required between the upper and lower liquids.
3. When the magnet is not shown, the magnet is positioned at the center line of float.
4. Drawings contained in this document are for reference only. Contact the factory for engineering drawings.
5. * Standard float that can be expedited

Photo	Drawing	Max Pipe OD	Pressure	Temperature	Magnet offset	Specific gravity	Material	Part no.
		5/8"	29.3 bar (425 psi)	149 °C (300 °F)	No	0.67	Stainless steel	**251 981-2***
						0.71	Nickel Alloy C-276	**251 981-4**
		5/8"	22.4 bar (325 psi)	149 °C (300 °F)	No	0.48	Stainless steel	**251 387-2**
		5/8"	4 bar (60 psi)	149 °C (300 °F)	Yes	0.6	Stainless steel	**201 605-2***
		5/8"	69 bar (1000 psi)	149 °C (300 °F)	No	0.68	Stainless steel	**254 526-2***

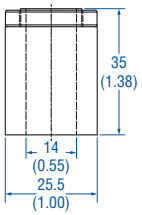
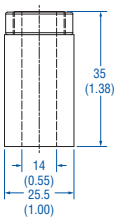
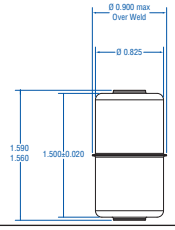
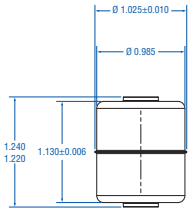
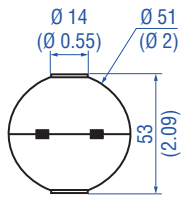
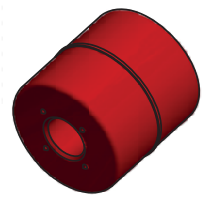
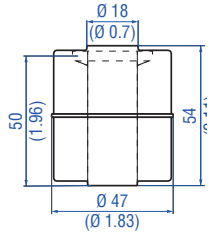
Controlling design dimensions are in millimeters and measurements in ( ) are in inches

Photo	Drawing	Max Pipe OD	Pressure	Temperature	Magnet offset	Specific gravity	Material	Part no.
		5/8"	22.4 bar (325 psi)	149 °C (300 °F)	No	0.45	Stainless steel	**251 469-2**
		5/8"	8.6 bar (125 psi)	149 °C (300 °F)	Yes	0.65	Stainless steel	**252 228-4**
		5/8"	17.2 bar (250 psi)	104 °C (220 °F)	Yes	0.45	Buna-N	**201 643-2***

1.2 LLE product floats

General notes:

1. Be sure that the float specific gravity is at least 0.05 less than that of the measured liquid as a safety margin at ambient temperature.
2. When the magnet is not shown, the magnet is positioned at the center line of float.
3. Drawings contained in this document are for reference only. Contact the factory for engineering drawings.
4. * Standard float that can be expedited

Photo	Drawing	Max Pipe OD	Pressure	Temperature	Magnet offset	Specific gravity	Material	Part no.
		10 mm	17.2 bar (250 psi)	104 °C (220 °F)	No	0.75	Nitrile	**201 120**
		7 mm	17.2 bar (250 psi)	104 °C (220 °F)	No	0.7	Nitrile	**201 999**
		7 mm	10.3 bar (150 psi)	149 °C (300 °F)	No	0.6	Stainless steel	**404 834**
		10 mm	19 bar (275 psi)	149 °C (300 °F)	No	0.68	Stainless steel	**404 835**
		10 mm	51.7 bar (750 psi)	149 °C (300 °F)	No	0.68	Stainless steel	**561 612**
		10 mm	4 bar (58 psi)	80 °C (176 °F)	No	0.53	Polypropy-lene	**254 886**

Controlling design dimensions are in millimeters and measurements in ( ) are in inches

1.3 RefineME interface floats

General notes:

1. RefineME Interface Floats are for a maximum pipe OD of 5/8"
2. For interface measurement: A minimum of 0.05 specific gravity differential is required between the upper and lower liquids.
3. When the magnet is not shown, the magnet is positioned at the center line of float.
4. Drawings contained in this document are for reference only. Contact the factory for engineering drawings.
5. * Standard float that can be expedited

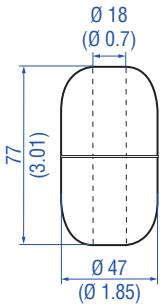
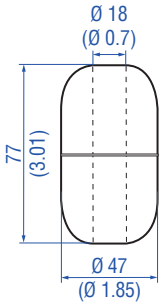
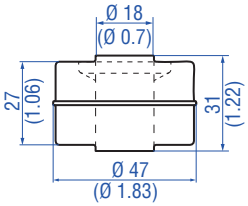
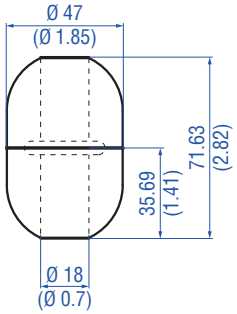
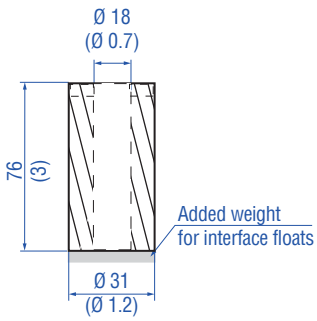
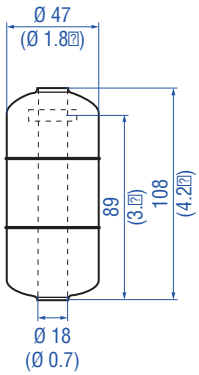
Photo	Drawing	Max Pipe OD	Pressure	Temperature	Magnet offset	Specific gravity	Material	Part no.
		5/8"	29.3 bar (425 psi)	149 °C (300 °F)	No	0.93	Stainless steel	**251 982□2□**
							Nickel Alloy C-276	**251 982□4**
		5/8"	29.3 bar (425 psi)	149 °C (300 °F)	No	1.06	Stainless steel	**251 983□2□**
							Nickel Alloy C-276	**251 983□4**
		5/8"	4 bar (60 psi)	149 °C (300 °F)	Yes	0.93	Stainless steel	**201 606□2□**
		5/8"	69 bar (1000 psi)	149 °C (300 °F)	No	0.93	Stainless steel	**254 894□2**

Photo	Drawing	Max Pipe OD	Pressure	Temperature	Magnet offset	Specific gravity	Material	Part no.
		5/8"	17.2 bar (250 psi)	104 °C (220 °F)	Yes	0.8 – 0.86	Buna-N	**201 649□2**
						0.91 – 0.96	Buna-N	**201 650□2**

1.4 SoClean and LLH sanitary floats

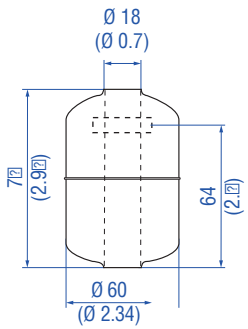
General notes:

1. Be sure that the float specific gravity is at least 0.05 less than that of the measured liquid as a safety margin at ambient temperature.
2. For interface measurement: A minimum of 0.05 specific gravity differential is required between the upper and lower liquids.
3. Sanitary polish is available for stainless-steel floats up to 200 Grit/Ra 25.
4. Electropolish is available for stainless-steel floats up to 240 Grit/Ra 15.
5. When the magnet is not shown, the magnet is positioned at the center line of float.
6. Drawings contained in this document are for reference only. Contact the factory for engineering drawings.
7. * Standard float that can be expedited

Photo	Drawing	Max Pipe OD	Pressure	Temperature	Magnet offset	Specific gravity	Material	Part no.
		5/8"	10.3 bar (150 psi)	149 °C (300 °F)	Yes	0.66	Stainless steel 200 Grit / Ra 25 µin (0.625 µm)	**401 513□2□**
							Nickel Al□loy C-276 200 Grit / Ra 25 unin (0.625 µm)	**402368□2**
							Stainless steel 240 Grit / Ra 15 µin (0.375 µm)	**401 513□4**
							Nickel Al□loy C-276 240 Grit / Ra 15uin (0.375 µm)	**402 368□4**

Note for part no. 401513-X and 402368-X:

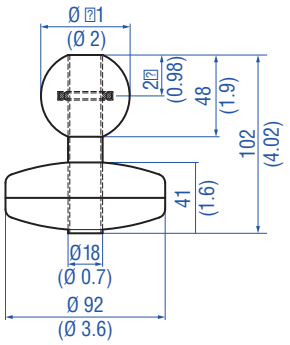
- Float meets 3A Sanitary specifications.
- Use this float with all Sanitary transmitter wells as other floats may enter the inactive zone when the tank is emptied.

		5/8"	22.4 bar (325 psi)	149 °C (300 °F)	Yes	0.63	Stainless steel 200 Grit / Ra 25 µin (0.625 µm)	**200 931□6**
							Stainless steel 240 Grit / Ra 15 µin (0.375 µm)	**200 931□8**

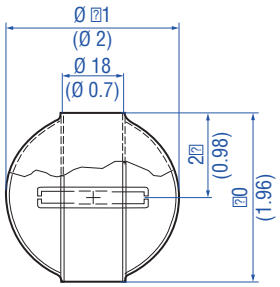
Note for part no. 200931-X:

- Float meets 3A Sanitary specifications.
- Float will enter inactive zone when the tank is empty.

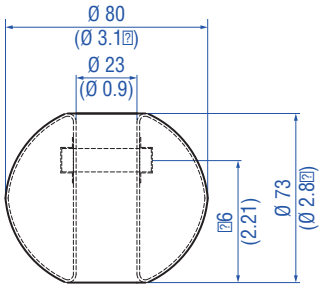
Controlling design dimensions are in millimeters and measurements in ( ) are in inches

Photo	Drawing	Max Pipe OD	Pressure	Temperature	Magnet offset	Specific gravity	Material	Part no.
		5/8"	8.6 bar (125 psi)	149 °C (300 °F)	Yes	0.48	Stainless steel 240 Grit / Ra 15 µin (0.375 µm)	**252 228-2**

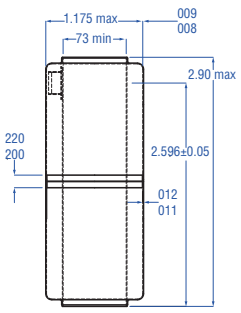
Note for part no. 252 228-2
Use this float with all Sanitary transmitter wells as other floats may enter the inactive zone when the tank is emptied.

		5/8"	22.4 bar (325 psi)	149 °C (300 °F)	No	0.74	Stainless steel 200 Grit / Ra 25 µin (0.625 µm)	**251 234-2**

Note for part no. 251 234-2:
- Float may enter the inactive zone. Consult factory about viability of usage.

		5/8"	64 bar (928 psi)	149 °C (300 °F)	Yes	0.86	Stainless steel 240 Grit / Ra 15 µin (0.375 µm)	**560 564-2**

Note for part no. 560 564-2
- Float meets 3A Sanitary specifications.
- Float may enter the inactive zone. Consult factory about viability of usage.

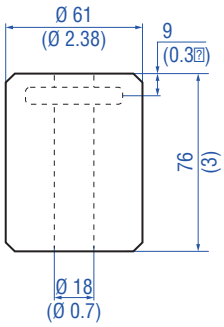
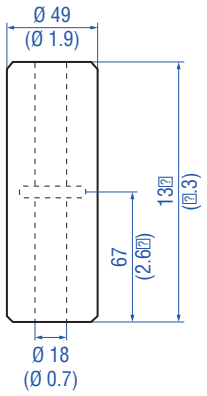
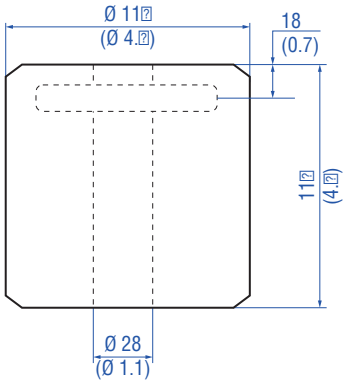
		5/8"	64 bar (80 psi)	149 °C (300 °F)	Yes	0.86	Stainless steel 200 Grit / Ra 25 µin (0.625 µm)	**403 3-4**

Controlling design dimensions are in millimeters and measurements in ( ) are in inches

1.5 RefineME FEP floats

General notes:

1. Be sure that the float specific gravity is at least 0.05 less than that of the measured liquid as a safety margin at ambient temperature.
2. For interface measurement: A minimum of 0.05 specific gravity differential is required between the upper and lower liquids.
3. When the magnet is not shown, the magnet is positioned at the center line of float.
4. Drawings contained in this document are for reference only. Contact the factory for engineering drawings.
5. Floats 251 939, 251 119, and 251 120 should not be used in hazardous areas. Please consult Installation and operation manual for further details.

Photo	Drawing	Max Pipe OD	Pressure	Temperature	Magnet offset	Specific gravity	Material	Part no.
		5/8"	1.7 bar (25 psi	38 °C (100 °F)	Yes	0.86	FEP	**201 109□2**
						0.93	FEP	**251 115□2**
						1.06	FEP	**251 116□2**
		5/8"	1.7 bar (25 psi	38 °C (100 °F)	No	0.86	FEP	**251 939□2**
		5/8"	1.7 bar (25 psi	38 °C (100 °F)	Yes	0.93	FEP	**251 119□2**
						1.06	FEP	**251 120□2**

1.6 Long-gauge floats

General notes:

1. Be sure that the float specific gravity is at least 0.05 less than that of the measured liquid as a safety margin at ambient temperature.
2. For interface measurement: A minimum of 0.05 specific gravity differential is required between the upper and lower liquids.
3. When the magnet is not shown, the magnet is positioned at the center line of float.
4. Drawings contained in this document are for reference only. Contact the factory for engineering drawings.
5. * Standard float that can be expedited

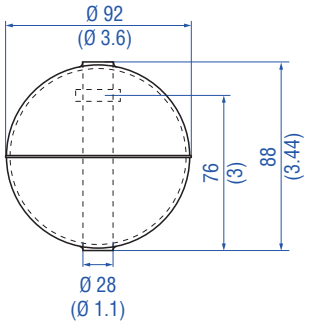
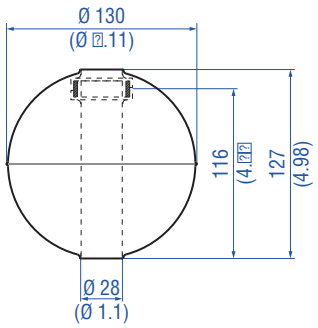
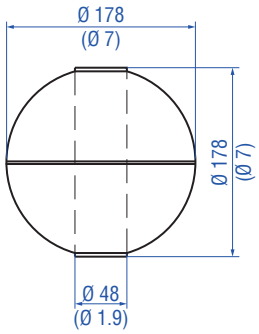
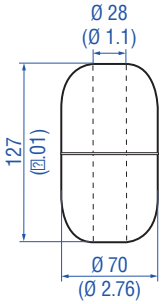
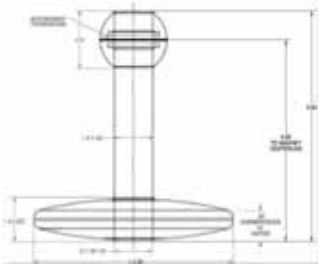
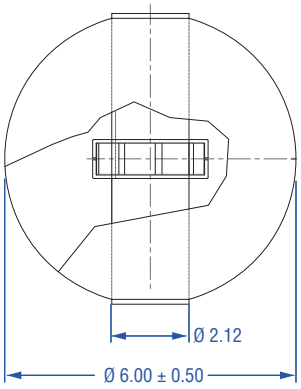
Photo	Drawing	Max Pipe OD	Pressure	Temperature	Magnet offset	Specific gravity	Material	Part no.
		7/8"	29.3 bar (425 psi)	149 °C (300 °F)	Yes	0.⍰4	Stainless steel	**252 961⍰2⍰**
						0.6⍰	Nickel Alloy C⍰276	**252 961⍰4**
						0.93	Stainless steel	**252 962⍰2**
						0.93	Nickel Alloy C⍰276	**252962⍰4**
						1.06	Stainless steel	**252 963⍰2**
						1.06	Nickel Alloy C⍰276	**252 963⍰4**
		7/8"	44.8 bar (650 psi)	149 °C (300 °F)	Yes	0.44	Stainless steel	**201 248⍰2**
						0.⍰2	Nickel Alloy C⍰276	**201 248⍰4**
						0.93	Stainless steel	**252 959⍰2**
						0.93	Nickel Alloy C⍰276	**252 959⍰4**
						1.06	Stainless steel	**252 960⍰2**
						1.06	Nickel Alloy C⍰276	**252 960⍰4**
		7/8"	17.2 bar (250 psi)	149 °C (300 °F)	No	0.44	Stainless steel	**251 426⍰2**
						0.47	Nickel Alloy C⍰22⍰⍰	**251 426⍰4**
						0.93	Stainless steel	**251 42⍰⍰2**
						0.93	Nickel Alloy C⍰22⍰⍰	**251 42⍰⍰4**
						1.06	Stainless steel	**251 428⍰2**

Photo	Drawing	Max Pipe OD	Pressure	Temperature	Magnet offset	Specific gravity	Material	Part no.
		5/8"	22.4 bar (325 psi)	149 °C (300 °F)	No	0.66	Stainless steel	**201 232□2□**
						0.70	Nickel Alloy C□276	**201 232□4**
						0.93	Stainless steel	**201 233□2**
		5/8"	275 psi (19 bar)	149 °C (300 °F)	Yes	0.97	Stainless steel	**252999□2**
		5/8"	450 psi (31 bar)	149 °C (300 °F)	Yes	0.4	Stainless steel	**201□15□2**

** Internal diameter for these floats is 34.8 mm (1.37 in.)

Controlling design dimensions are in millimeters and measurements in ( ) are in inches

2. Process meters and enclosures

2.1 Analog process meters

Photo	Description	Part no.
	**□□D Display □niversal Analog Process Meter** (Contact Temposonics for more options including explosion proof housings.) 6 Digit LED display **□nput□**Analog 4…20 mA **Output□**None 110 VAC Input Power 32 point linearization Includes 24 Vdc transmitter supply **Material□**Standard 1/8 in. DIN, high impact plastic, NEMA Type 4X front panel	**380 0□1**
	**□□D Display □niversal Analog Process Meter □2 □elays□** (Contact Temposonics for more options including explosion proof housings.) 6 Digit LED display **□nput□**Analog 4…20 mA **Output□**2 relays 110 VAC Input Power 32 point linearization Includes 24 Vdc transmitter supply **Material□**Standard 1/8 in. DIN, high impact plastic, NEMA Type 4X front panel	**380 0□2**
	**□□D Display □niversal Analog Process Meter □4 □elays□** (Contact Temposonics for more options including explosion proof housings.) 6 Digit LED display **□nput□**Analog 4-20 mA **Output□**4 relays 110 VAC Input Power 32 point linearization Includes 24 Vdc transmitter supply **Material□**Standard 1/8 in. DIN, high impact plastic, NEMA Type 4X front panel	**380 0□3**
	**□□D Display □niversal Analog Process Meter □2 □elays□ 4□20 mA□** (Contact Temposonics for more options including explosion proof housings.) 6 Digit LED display **□nput□**Analog 4…20 mA **Output□**4…20 mA and 2 relays 110 VAC Input Power 32 point linearization Includes 24 Vdc transmitter supply **Material□**Standard 1/8 in. DIN, high impact plastic, NEMA Type 4X front panel	**380 095**
	**□oop Powered Analog Meter** Loop Powered on 4…20 mA output Displays loop current, engineering units, and/or value Selectable on screen engineering units IP 67 / NEMA Type 4X Intrinsically Safe, backlight	**380 088**

2.2 Mod□us process meters

Photo	Description	Part no.
	**Multivaria□le Mod□us Process Meter** Display levels in feet, inches, and 16ths of an inch □**nput**□RS485 Modbus RTU **Output**□2 Form A relays and 4…20 mA 110 VAC Input Power 16 point linearization Includes 24 Vdc transmitter supply **Material**□Standard 1/8 in. DIN, high impact plastic, NEMA Type 4X front panel	**380 086**
	□**ingle** □**aria**□**le Mod**□**us Process Meter** (Contact Temposonics for more options including explosion proof housings.) 6 Digit Display in Decimal Format Display 1 process variable without interrupting Master/Slave communication □**nput**□RS485 Modbus RTU **Output**□2 Form A relays and 4…20 mA 110 VAC Input Power 16 point linearization Includes 24 Vdc transmitter supply **Material**□Standard 1/8 in. DIN, high impact plastic, NEMA Type 4X front panel	**380 094**

2.3 Process meter enclosures

Photo	Description	Part no.
	□□**MA** □**nclosures** □□**ingle** □□**MA 4**□ *(NEMA Enclosures are available for most process meters, please contact factory for more information.)*	**401 150**
	□□**MA** □**nclosures** □ **Dual** □□**MA 4**□ *(NEMA Enclosures are available for most process meters, please contact factory for more information.)*	**401 151**

2.4 Mod□us Terminals

Photo	Description	Part no.
	**Touchscreen Mod□us Terminal** Displays up to 16 tanks (2 levels, temp, volume) Displays levels in ft., in, and 16ths in. □**nput**□up to 16 Modbus transmitters **Output**□Modbus Pictorial display of tanks Touchscreen Mounted in NEMA 4 box Class 1, Div. 2, Groups ABCD ATEX/IECEx Ex ic nA IIC T4 Gc Includes Power Supply Calibrate from Screen	**28089**□□□ □□□□ **280898**□□ □**10**□□

3. Programming and hardware

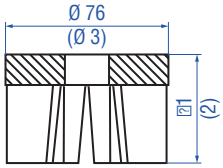
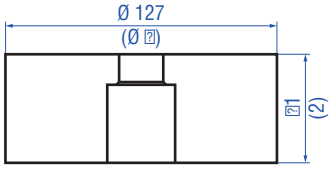
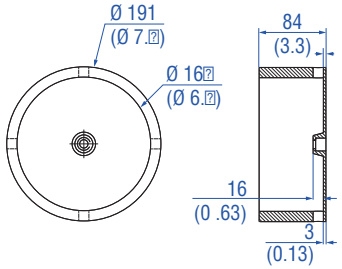
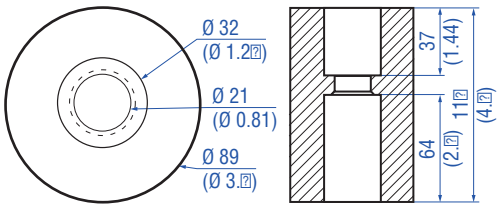
3.1 Setup software

Photo	Description	Part no.
	PC Dashboard on CD	551 019

3.2 Hardware

Photo	Description	Part no.
	USB to RS485 adapter	380 068
	RS485 to USB adapter converter	380 114

4. Magnet and weight assem□lies

Photo	Drawing	Description	Part no.
		**150 l□. Pull Magnet** For Tank SLAYER□ level transmitter. (Washer must be removed before installation)	**560 604**
		**□tandard 11 l□. □ eight** For LP-Series transmitters	**401 059**
		**□ow □iftoff 11 l□. □ eight Assem□ly**	**402 364**
		**□arrow 11 l□. □ eight** Use with LP-Series transmitters	**402 64□**

Controlling design dimensions are in millimeters and measurements in ( ) are in inches

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