

SIDE MOUNTING FLOAT SWITCH

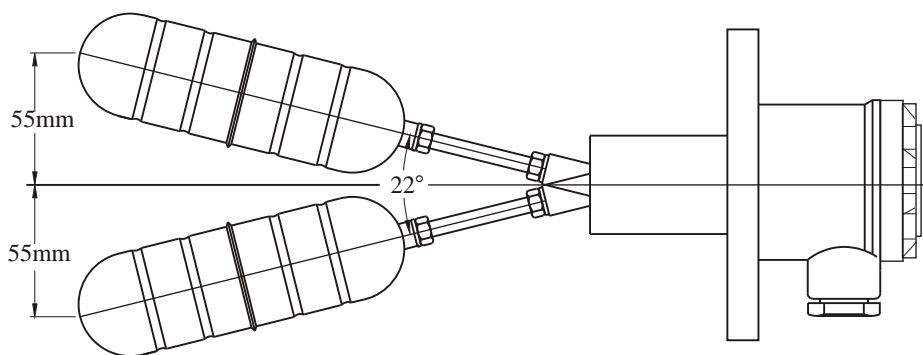
PRINCIPLE

Simple theory as liquid buoyancy is utilized for the main principle of this "YFF" series. A change of liquid level correspondingly travels the float to extreme levels up and down. The reed switch is thus "NC" and "NO" exchanged as well as the permanent magnet on pivot will have mutual repulsion to the other one inside on the housing for like poles, which the Microswitch is button-pushed by magnet to states "NO" and "NC" exchanging likewise.

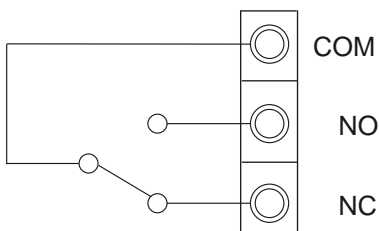
FEATURES

The side mounted float level sensor (YFF series) are manufactured specifically for horizontal mounting in a tank or vessel. They work well as high or low level control.

1. Both MicroSwitch type and Reed Switch are available. The MicroSwitch type is usable even at ambient temp. of 100°C max.
2. Mounting flanges are custom-specifiable. (JIS, DIN, ANSI).
3. A rich variety of floats can be suited different specific gravity (S.G.) of liquid.(Custom-made)
4. Liquid-wetted party material can be selected for SUS304 or SUS316 as well as enclosure explosion proof model.



WIRING



REED SWITCH ---- 1A, 30W 220Vac/200Vdc (YFF20, 45, 55, 8)
 MICRO SWITCH ---- 5A/250Vac

CONFIGURATION CUTTING DRAWINGS

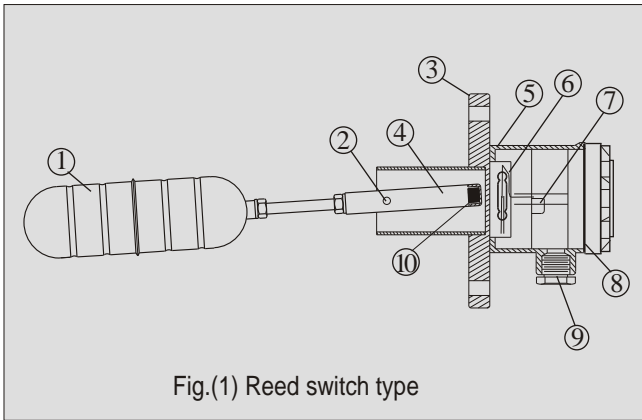


Fig.(1) Reed switch type

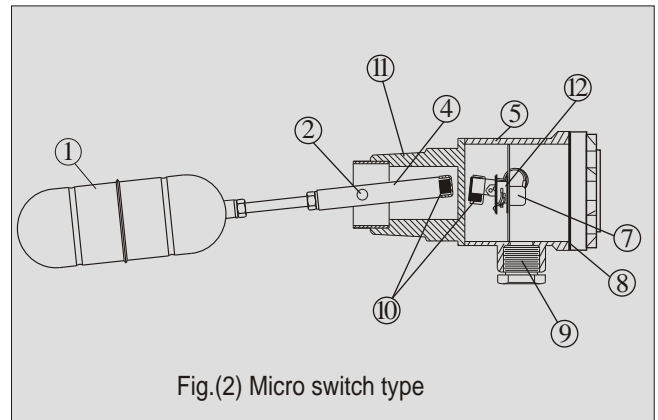


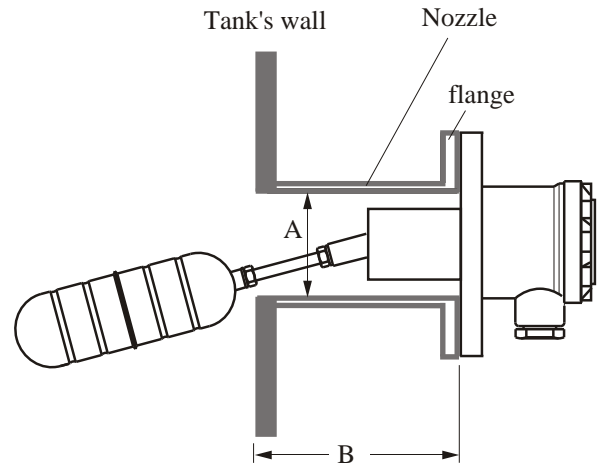
Fig.(2) Micro switch type

- | | | | |
|-----------|----------------|-------------|-----------------|
| 1. Float | 4. Pivot | 7. Terminal | 10. Magnet |
| 2. Shaft | 5. Housing | 8. O-ring | 11. Screw |
| 3. Flange | 6. Reed Switch | 9. Conduit | 12. Microswitch |

► The diameter and length of the connecting pipe (of a tank) are in a direct ratio.

UNIT: mm

Pipe dia. (A)	45-50	50-55	55-60	60-65	65-70
Length (B) (Max.)	130	140	150	160	170



SPECIFICATION

SPEC. MODEL	Operating Temp.	Electrical Contact	Contact Capacity	Contact Element	Housing Spec.	Applicable S.G.
YFF10BHM	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.25
YFF 10CEM	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.65
YFF10CEM....SA	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.65
YFF10CEQ	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.65
YFF10CEQ....SA	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.65
YFF10CLO	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.65
YFF10CLO....SA	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.65
YFF10DFM	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.55
YFF10DFM....SA	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.55
YFF10DFQ	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.55
YFF10DFQ....SA	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.55
YFF10HEQ	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	SUS304 IP65	0.8
YFF12CEM	-10°C~100°C	SPDT(1C)X2	5A/250Vac	Microswitch	SUS304 IP65	0.65
YFF20BHM	-40°C~200°C	SPDT(1C)	1A, 60W 220Vac/200Vdc	Reed Switch	Aluminum Alloy IP65	0.25
YFF20CEM	-40°C~200°C	SPDT(1C)	1A, 30W 220Vac/200Vdc	Reed Switch	Aluminum Alloy IP65	0.65
YFF20CEQ	-40°C~200°C	SPDT(1C)	1A, 30W 220Vac/200Vdc	Reed Switch	Aluminum Alloy IP65	0.65
YFF20DFM	-40°C~200°C	SPDT(1C)	1A, 30W 220Vac/200Vdc	Reed Switch	Aluminum Alloy IP65	0.55
YFF20DFQ	-40°C~200°C	SPDT(1C)	1A, 30W 220Vac/200Vdc	Reed Switch	Aluminum Alloy IP65	0.55
YFF20DLO	-40°C~200°C	SPDT(1C)	1A, 30W 220Vac/200Vdc	Reed Switch	Aluminum Alloy IP65	0.55
YFF30A3Q	-10°C~120°C	SPST(1A)	1A, 50W 240Vac/200Vdc	Reed Switch	SUS304 IP65	0.7

※ Model no. with "...SA"certified by Germany GL, USA ABS marine grade, the prices are subject to be different.
Please notify when placing an order if necessary.

SPECIFICATION

MODEL \ SPEC.	Operating Temp.	Electrical Contact	Contact Capacity	Contact Element	Housing Spec.	Applicable S.G.
YFF40DFM	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.55
YFF45DFM	-40°C~200°C	SPDT(1C)	1A, 60W 220Vac/200Vdc	Reed switch	Aluminum Alloy IP65	0.55
YFF50DFM	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.55
YFF50DFM....SA	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.55
YFF55DFM	-40°C~200°C	SPDT(1C)	1A, 60W 220Vac/200Vdc	Reed switch	Aluminum Alloy IP65	0.55
YFF62DFM	-10°C~350°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.55
YFF70/71BHM	-10°C~100°C	SPDT(1C)	3A/250Vac	Microswitch	SUS316 Ex d IIB T3~T6	0.25
YFF70/71CFM	-10°C~100°C	SPDT(1C)	3A/250Vac	Microswitch	SUS316 Ex d IIB T3~T6	0.65
YFF70/71DFM	-10°C~100°C	SPDT(1C)	3A/250Vac	Microswitch	SUS316 Ex d IIB T3~T6	0.55
YFF73GLO	-10°C~100°C	SPDT(1C)	3A/250Vac	Microswitch	SUS316 Ex d IIB T3~T6	0.7
YFF75DFM	-10°C~100°C	SPDT(1C)	3A/250Vac	Microswitch	SUS316 Ex d IIB T3~T6	0.55
YFF80EFM	-10°C~80°C	SPDT(1C)	1A, 30W 220Vac/200Vdc	Reed switch	PC IP65	0.60
YFF81EFM	-10°C~80°C	SPDT(1C)	1A, 30W 220Vac/200Vdc	Reed switch	—	0.60
YFF90GLO	-10°C~100°C	SPDT(1C)	5A/250Vac	Microswitch	Aluminum Alloy IP65	0.7

※ Model no. with "...SA" certified by Germany GL, USA ABS marine grade, the prices are subject to be different.
Please notify when placing an order if necessary.

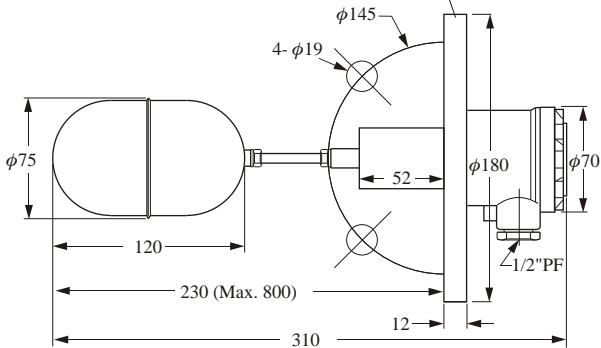
STANDARD

Order No. YFF

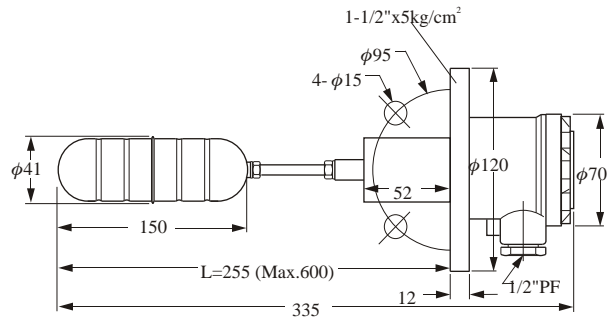
Connecting Type (Refer to page 13)
 Float Type
 10: Single Switch
 12: Dual Switch



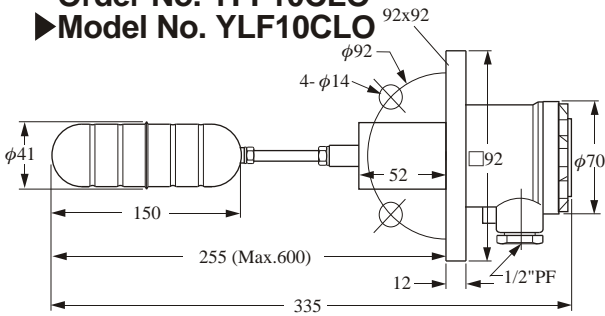
Order No. YFF10BHM Flange 3"x5kg/cm²
 Model No. YLF10BHM



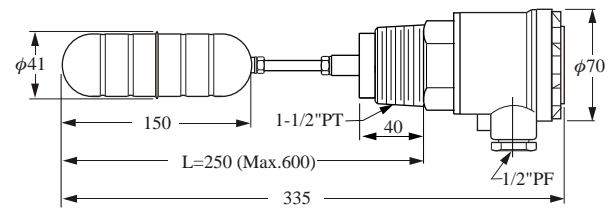
Order No. YFF10CEM
 Model No. YLF10CEM



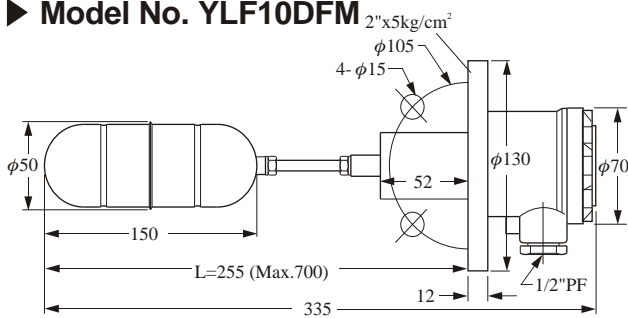
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 Model No. YLF10CLO



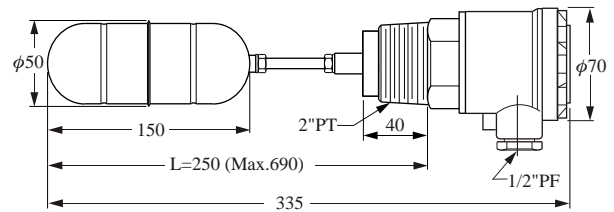
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 Model No. YLF10CEQ



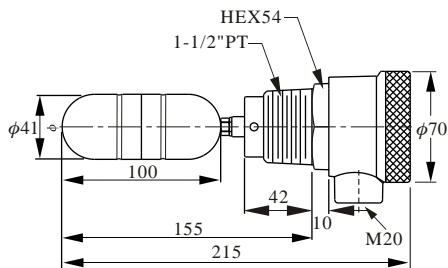
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 Model No. YLF10DFM



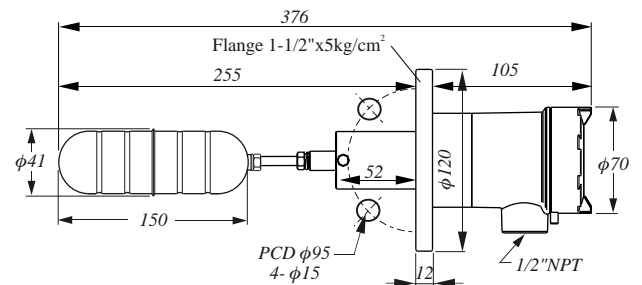
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 Model No. YLF10DFQ



Order No. YFF10HEQ
 Model No. YLF10HEQ



Order No. YFF12CEM
 Model No. YLF12CEM

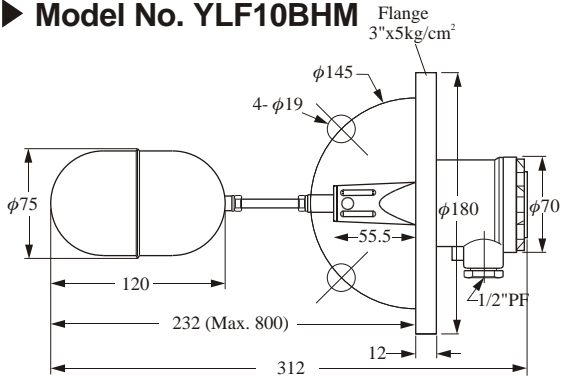


STANDARD FLANGE

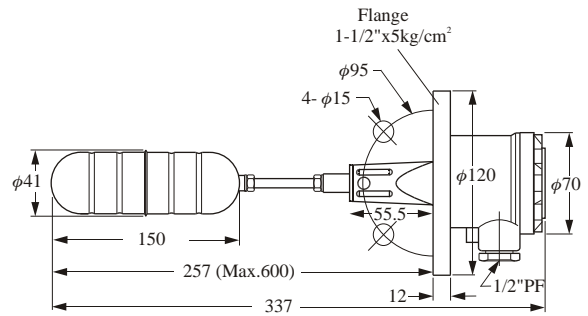
Order No. YFF13

Connecting Type (Refer to page 13)
 Float Type

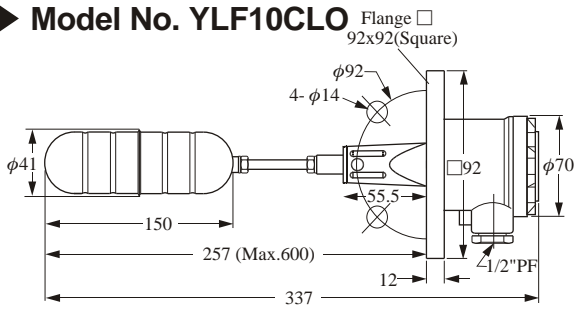
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 Model No. YLF10BHM



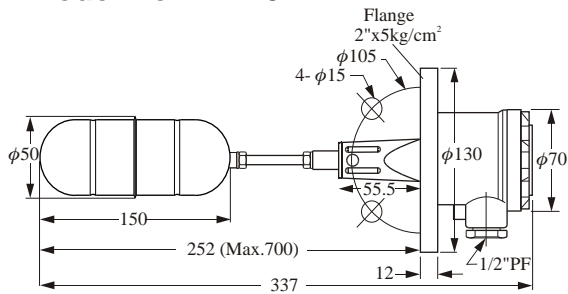
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 Model No. YLF10CEM



Order No. YFF10CLO
 Model No. YLF10CLO



Order No. YFF10DFM
 Model No. YLF10DFM



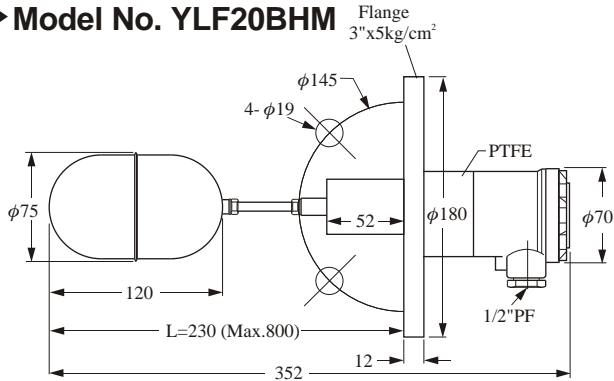
HIGH TEMP.

Order No. YFF20

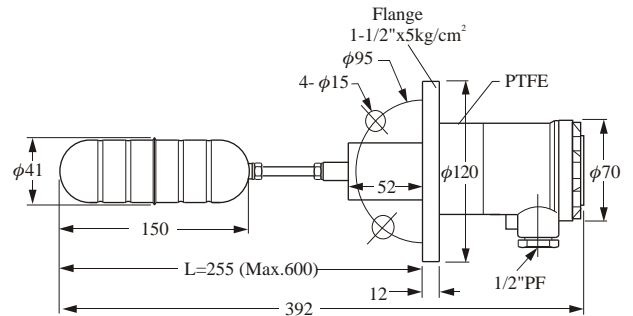
Connecting Type
(Refer to page 13)
Float Type



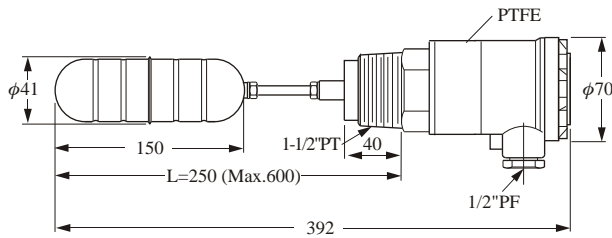
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Model No. YLF20BHM



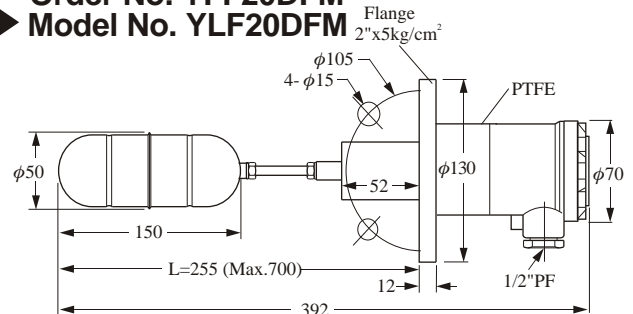
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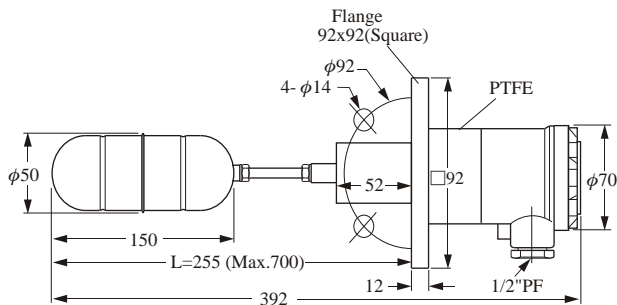
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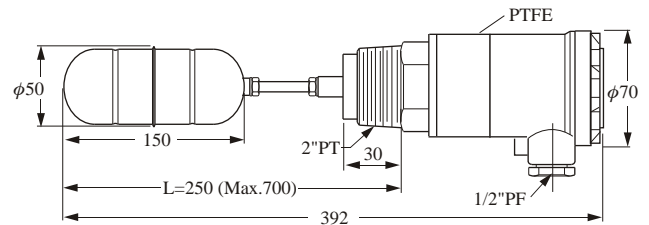
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Model No. YLF20DFM



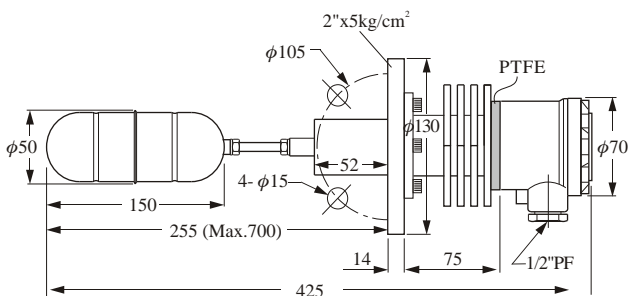
Order No. YFF20DLO
Model No. YLF20DLO



Order No. YFF20DFQ
Model No. YLF20DFQ



Order No. YFF62DFM
Model No. YLF62DFM



ANTI-ACID / ALKALINE

PRINCIPLE

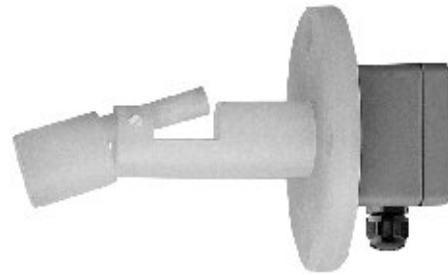
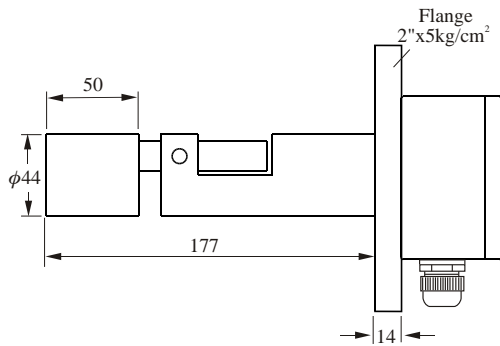
When the solid polypropylene float is flooded by a liquid, its weight is reduced by the buoyancy of the liquid and the float moves upward. Thus, a permanent magnet that built in the float actuates the reed switch in the sensor body to work the "NO" and "NC" exchanges.

YFF80EFM --- PC Housing
YFF81E --- Without Housing

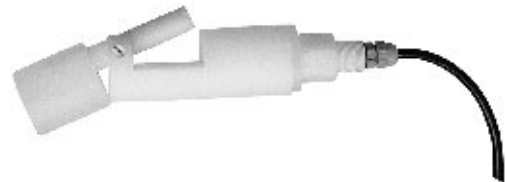
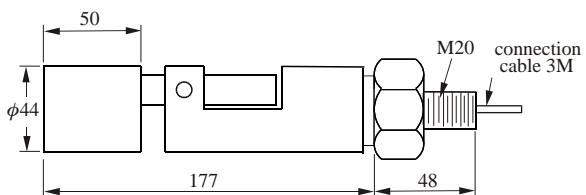
Wetted parts : P.P.

Cable spec. : PVC 3x0.75 mm²

Order No. YFF80EFM
► **Model No. YLF80EFM**

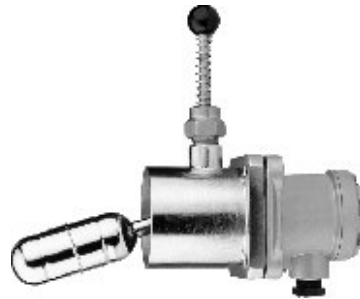
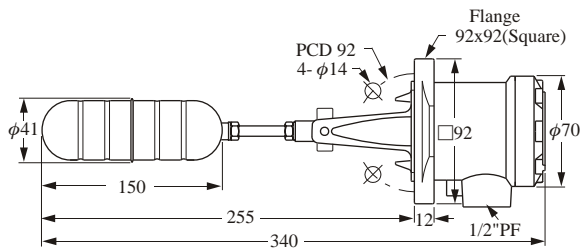


Order No. YFF81E
► **Model No. YLF81E**



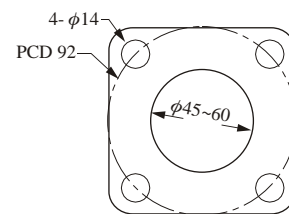
SQUARE FLANGE & TEST ACCESSORY

Order No. YFF90CLO
 Model No. YLF90CLO

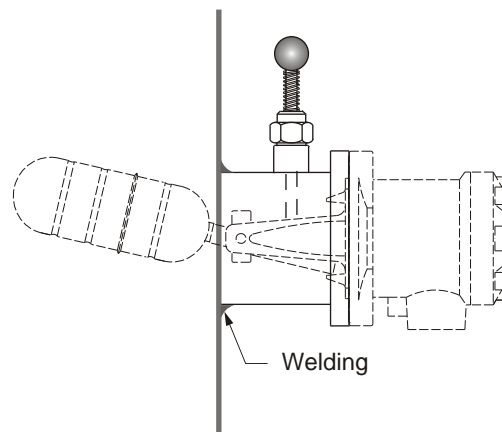
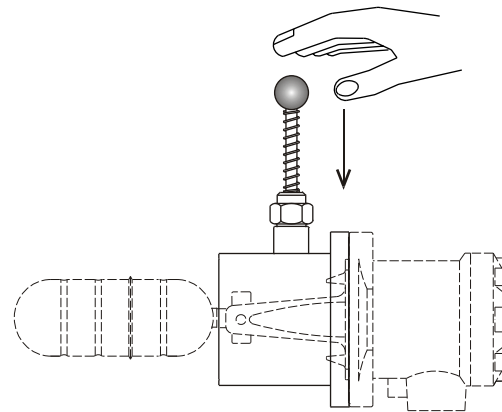
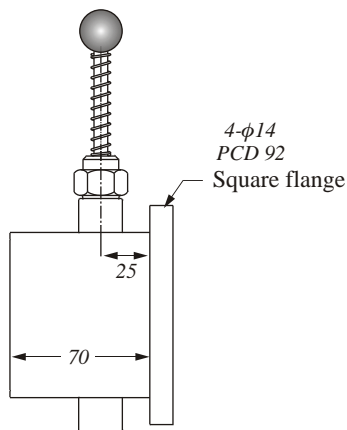


1. Housing material: Aluminum (IP65)
2. Suitable S.G.: >0.65
3. Operation temp.: -10~100°C
4. Contact form: SPDT(1C)
5. Contact rating: 5A/250Vac
6. Operation pressure: 15kg/cm²
7. Wetted parts: SUS304
8. Weight: approx. 1.2 kg

Drill Hole



Test Accessory (Optional)
 Order No. YFFB-0300
 Material: SS41



MARINE ASSOCIATION APPROVALS

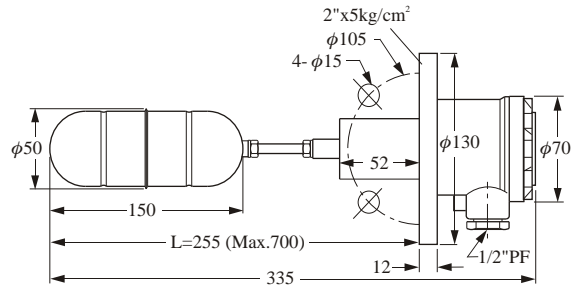


Germanischer Lloyd
(Germany)

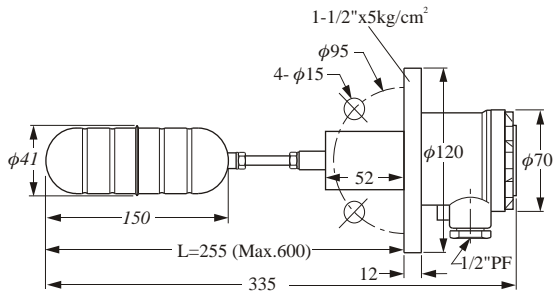


American Bureau of
Shipping (USA)

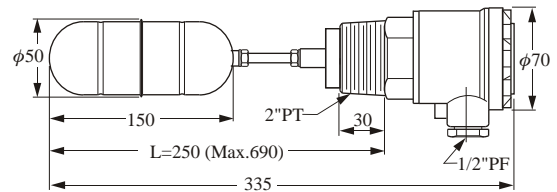
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Model No. YLF10DFM...SA



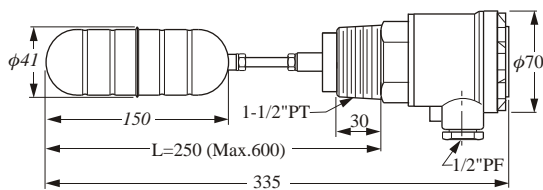
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Model No. YLF10CEM...SA



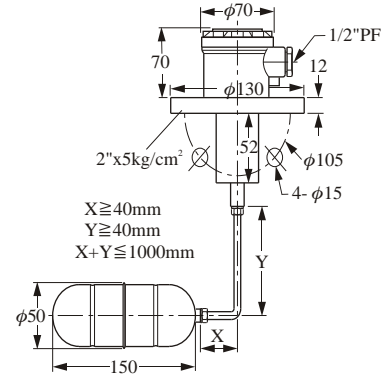
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Model No. YLF10DFQ...SA



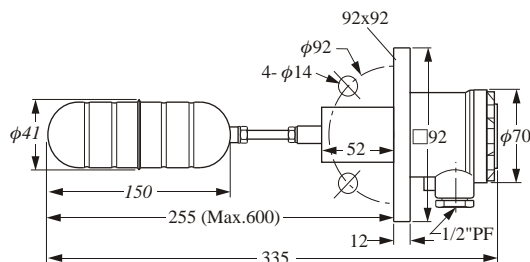
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Model No. YLF10CEQ...SA



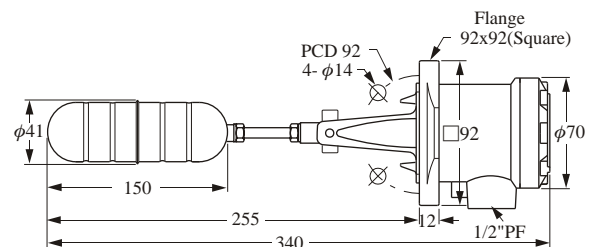
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Model No. YLF50DFM...SA



Order No. YFF 10CLO...SA
Model No. YLF10CLO...SA



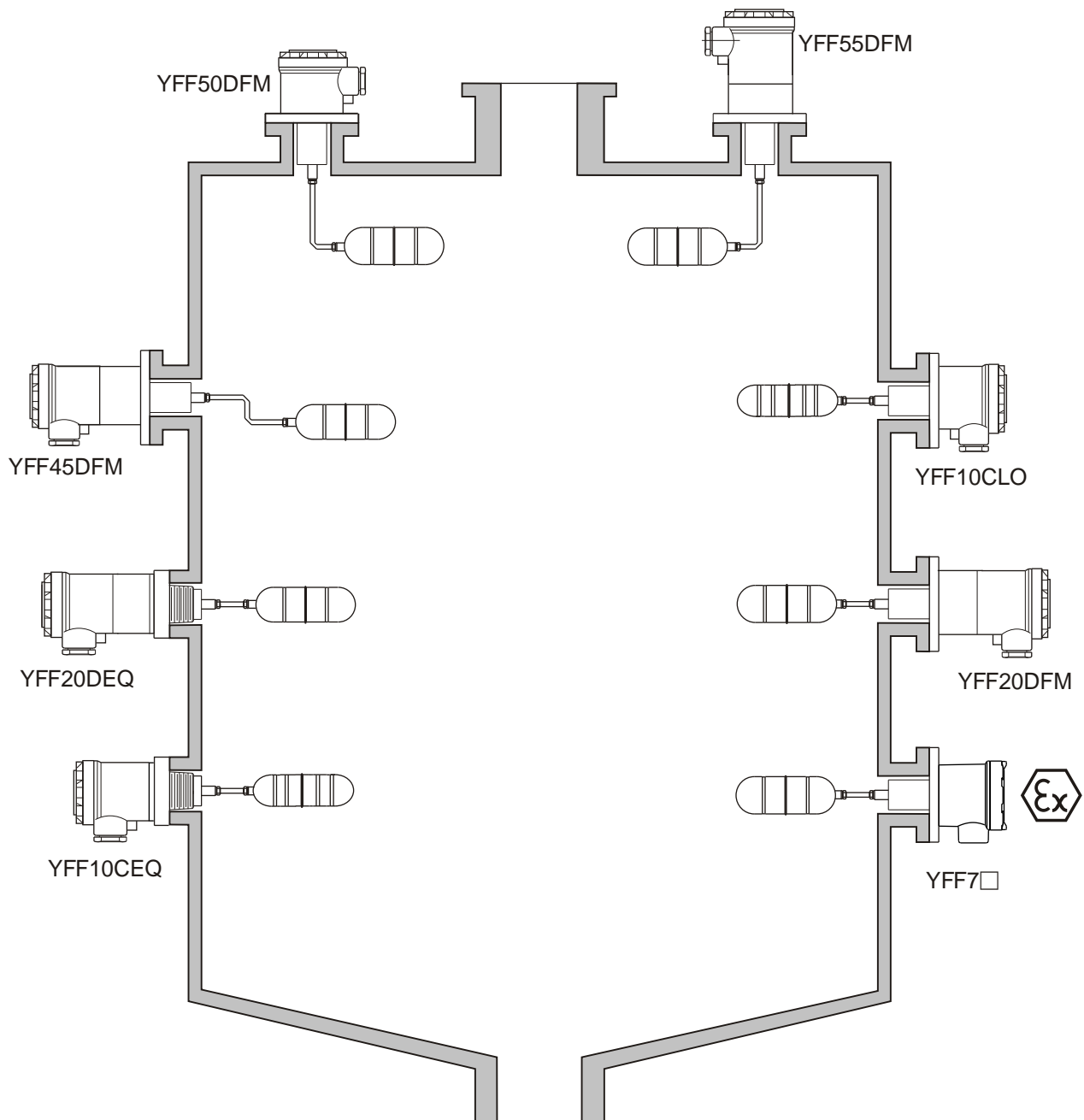
Order No. YFF90CLO...SA
Model No. YLF90CLO...SA



IMPORTANCE FOR INSTALLATION

1. SUS304/SUS316 materials is not available for corrosive application.
2. The cable duct(s) must face downward to prevent moisture sipping in.
3. The float and extension rod must be inserted into a bin completely.
4. Be sure the liquid object's S.G. before installation.
5. The mounting hole must be larger than the external diameter of float.
6. Don't mount the devices near the bin's inlet or outlet.

Typical Positioning



HOW TO MAKE YOUR ORDER

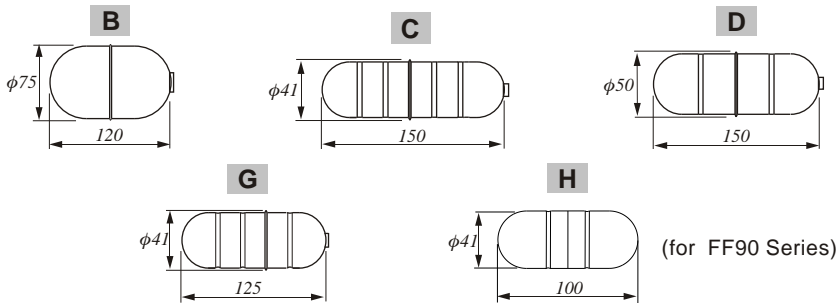
Order No. YFF **10** **C** **EM** **(S)** **(T)**
 Model No. YLF **10** **C** **EM** **(S)** **(T)**

ORDER NO.

- | | |
|--|------------------------|
| 10/16: STANDARD | 80: ANTI-ACID/ALKALINE |
| 13: STANDARD FLANGE | 81: ANTI-ACID/ALKALINE |
| 20/26: HIGH TEMP. | 90/96: SQUARE FLANGE |
| 40: DOUBLE ANGLE STANDARD | |
| 45: DOUBLE ANGLE HIGH TEMP. | |
| 50: VERTICAL STANDARD | |
| 55: VERTICAL HIGH TEMP. | |
| 62/66: HIGH TEMP RADIATOR | |
| 70: YLF70 Screw Type (Ex d II C T3~T6) | |
| 71: YLF71 Flange Type (Ex d II C T3~T6) | |
| 73: YLF73 Square Flange Type (Ex d II C T3~T6) | |
| 75: YLF75 Top Mounting Type (Ex d II C T3~T6) | |

FLOAT TYPE

- B: $\phi 75 \times 120$ (OPERATION PRESSURE 10kg/cm² S.G. 0.25)
 C: $\phi 41 \times 150$ (OPERATION PRESSURE 15kg/cm² S.G. 0.65)
 D: $\phi 50 \times 150$ (OPERATION PRESSURE 30kg/cm² S.G. 0.55)
 G: $\phi 41 \times 125$ (OPERATION PRESSURE 15kg/cm² S.G. 0.7)
 H: $\phi 41 \times 100$ (OPERATION PRESSURE 15kg/cm² S.G. 0.8)



CONNECTING TYPE

- | | | |
|-----------------|--------------------------|------------------|
| E: 1-1/2" (40A) | M: 5 kg/cm ² | W: PN 10 (10Bar) |
| F: 2" (50A) | N: 10 kg/cm ² | X: PN 16 (16Bar) |
| G: 2-1/2" (65A) | O: 150 Lbs | Y: PN 25 (25Bar) |
| H: 3" (80A) | P: 300 Lbs | Z: PN 40 (40Bar) |
| I: 4" (100A) | Q: PT | S: Others |
| J: 5" (125A) | R: PF(G) | |
| K: 6" (150A) | T: BSP | |
| L: 92x92 | U: NPT | |

CUSTOM LENGTH(L) (UNIT: mm)

TEST ACCESSORY

- ※ Tolerance of the total product length is ± 5 mm
- ※ Characteristics, specifications and dimensions are subject to change without notice.
- ※ Please contact your nearest distributor office for further information.

ENCLOSURE EXPLOSION PROOF

NEPSI PROOF No. GYJ06235 Ex d IIC T3~T6

PTB PROOF No. 05 ATEX 1025 Ex II 2G EEx d IIB T3~T6

Ex II 2D IP65 T3~T6

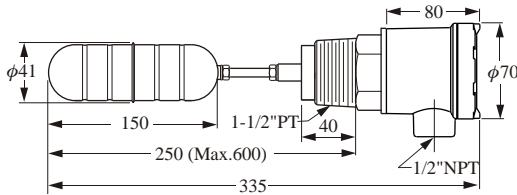
Order No. YFF

Connecting Type
(Refer to page 14)

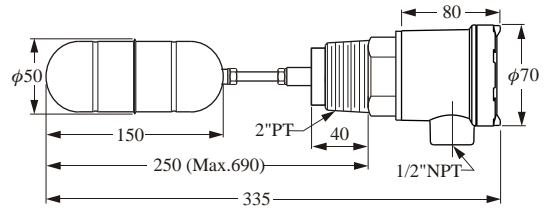
Float Type

7 : Explosion Proof (EX d IIB T4)

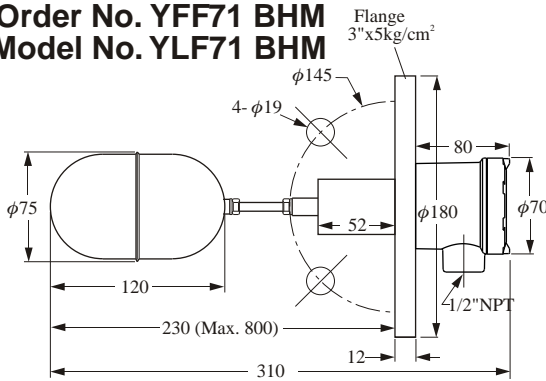
▶ Order No. YFF70 CEQ
Model No. YLF70 CEQ



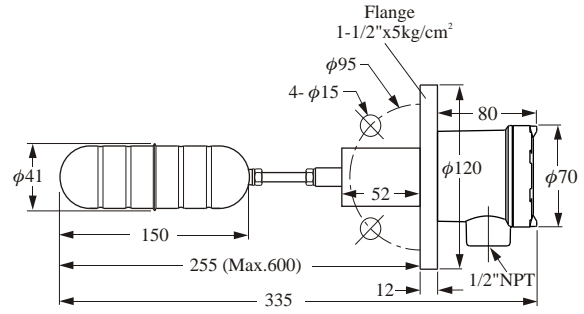
▶ Order No. YFF70 DFQ
Model No. YLF70 DFQ



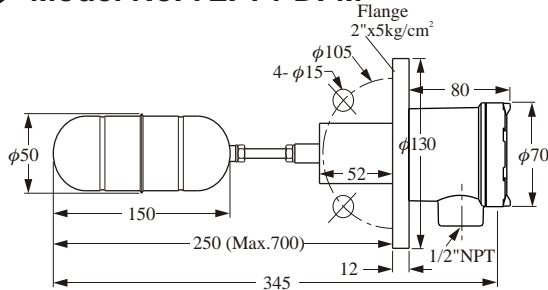
▶ Order No. YFF71 BHM
Model No. YLF71 BHM



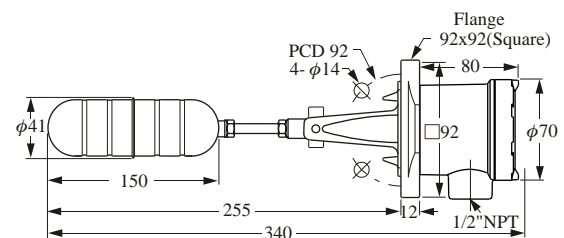
▶ Order No. YFF71 CEM
Model No. YLF71 CEM



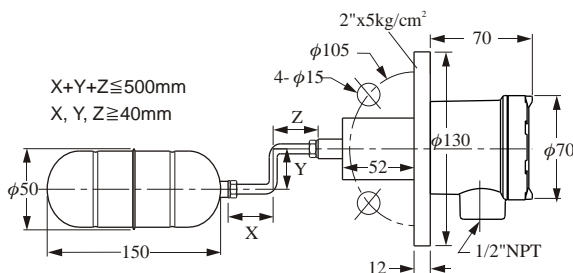
▶ Order No. YFF71 DFM
Model No. YLF71 DFM



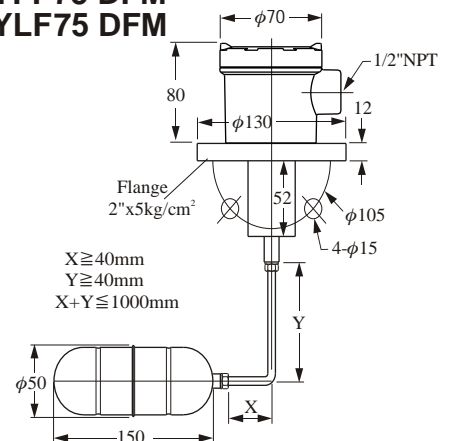
▶ Order No. YFF73 CLO
Model No. YLF73 CLO



▶ Order No. YFF74 DFM
Model No. YLF74 DFM



▶ Order No. YFF75 DFM
Model No. YLF75 DFM



HOW TO MAKE YOUR ORDER

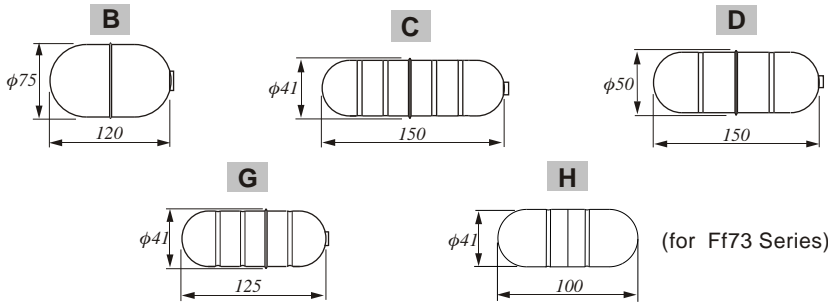
Order No. **YFF** **70** **C** **E** **M** **S** **T**
 Model No. **YLF** **70** **C** **E** **M** **S** **T**

ORDER NO. _____

70: YLF70 ENCLOSURE EXPLOSION PROOF (Ex d IIC T3~T6)
 71: YLF71 ENCLOSURE EXPLOSION PROOF (Ex d IIC T3~T6)
 73: YLF73 ENCLOSURE EXPLOSION PROOF (Ex d IIC T3~T6)
 75: YLF75 ENCLOSURE EXPLOSION PROOF (Ex d IIC T3~T6)

FLOAT TYPE _____

B: $\phi 75 \times 120$ (OPERATION PRESSURE 10 kg/cm^2 S.G. 0.25)
 C: $\phi 41 \times 150$ (OPERATION PRESSURE 15 kg/cm^2 S.G. 0.65)
 D: $\phi 50 \times 150$ (OPERATION PRESSURE 30 kg/cm^2 S.G. 0.55)
 G: $\phi 41 \times 125$ (OPERATION PRESSURE 15 kg/cm^2 S.G. 0.7)
 H: $\phi 41 \times 100$ (OPERATION PRESSURE 15 kg/cm^2 S.G. 0.8)



CONNECTING TYPE _____

E: 1-1/2" (40A)	M: 5 kg/cm^2	W: PN10 (10Bar)
F: 2" (50A)	N: 10 kg/cm^2	X: PN16 (16Bar)
G: 2-1/2" (65A)	O: 150 Lbs	Y: PN25 (25Bar)
H: 3" (80A)	P: 300 Lbs	Z: PN40 (40Bar)
I: 4" (100A)	Q: PT	S: Others
J: 5" (125A)	R: PF(G)	
K: 6" (150A)	T: BSP	
L: 92x92	U: NPT	

※ Flanges are in thickness of factory standard 12mm.

CUSTOM LENGTH(L) (UNIT: mm) _____

TEST ACCESSORY _____

- ※ Characteristics, specifications and dimensions are subject to change without notice.
- ※ Tolerance of the total product length is $\pm 5 \text{ mm}$
- ※ Please contact your nearest distributor office for further information.