



AILE[®]

SHANGHAI AILE
PETROLEUM EQUIPMENT MFG.CO.,LTD.

ADD: 888 Chengliu Mid.Rd.Madong Industrial Zone
Malu Town Jiading Shanghai China.
Tel: +86-21-59900396 +86-21-59900195
Fax: +86-21-59900397
Website: www.aile-fc.com
E-mail: aile@aile-fc.com



Tank Truck Spare Parts & Vapor Recovery System Products



AILE[®]
SHANGHAI AILE
PETROLEUM EQUIPMENT MFG.CO.,LTD.



Shanghai, as the gate of international affairs between China and the world, has provided Aile with solid foundation of extraordinary development in the Petrol Equipments Industry through its own professional, devoting and dedicating enterprise spirit. Aile has built up the fame as Aircraft Carrier in the industry of China Petrol Equipment Manufacture.

Aile (Shanghai Aile Petroleum Equipment Mfg.Co.Ltd) was established in 1985 with 3 plants occupying 60,000sqm including construction area of 55,000sqm. Aile had reached 20million USD's export value by the end of year 2008 and had become an outstanding leading company in this field. Meanwhile, Aile had received the certificate from ISO9001, PEI(Petroleum, Equipment Institute), CE(Confirmite Eruopeenne), TDT (Transportowego Dozoru Technicznego), TUV(Germany) and ATEX(European Union). With the newly installed CNC(Computerized Numerical Control) equipments, the quality of the product and the efficiency of the production had been highly elevated, which had made all the production meet the satisfaction of the customer's expectation. Our products include: Nozzle, Accessories of Dispensing, Tank Truck Parts and Storage Tank Equipment which almost cover completed products in this industry. Especially the product of Vapor Recovery Nozzle, II Stage Vapor Recovery Equipments had become a technology breakthrough in China, and Aile is leading the manufacture output in domestic market.

Innovation is the key to technology improvement, and Research & Development on new products is the premises on sustaining the extending of the enterprise. We have followed the goal as "For the Satisfaction of the Customer, For the Profit of the Customer and For the Mutual Improvement with the Customer" and have successfully opened the market in America, Brazil, Argentina, Mexico, Columbia, Germany, Spain, Holland, Italy, Turkey, Greece, Indonesia, Saudi Arabia, Iran, Syria, United Arab Emirates, Australia over 70 countries over the world.

Quality Guaranteed, Customer Oriented, Technology Motivated and Talent Respected" have always been the management philosophy of Aile. We are sincerely seeking the cooperation opportunities with every customer on mutual benefit and mutual development !



President: *Aile Ge*



General Manager: *Ricky Ge*

...Though we are the best company in this field in China, we still consider us as a developing one. To us, we should always work harder than ever before, keep us on a high way, and try our best to provide our customers with the free-inspection products and best services.

In our opinion, our customers' success is our success, so to us, we aim not just to meet our customers' expectation, but to exceed them.

President *Aile Ge*

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AND HONOUR
QUALIFICATION

AILE®

• Tank Truck
Spare
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AILE[®]

SHANGHAI
AILE PETROLEUM
EQUIPMENT
MFG.CO.,LTD.

Tank Truck Spare Parts

Our Sincerely and innovated service, Throughout the word. Let AILE march to the world and be known by the same.



RKG-F-L Series Petroleum Manhole Assemblies

▶ Manhole Cover is equipped on the top of tank truck.
It is the entrance of fluid transfer operation inspection and maintaining the inside tank. It can protect the tank when involving in an emergency.
Under normal practice, vent is closed. When loading and unloading and temperature variation, it will cause the pressure variation inside the tank, such as air pressure and negative vacuum pressure, the vent of manhole cover will be closed automatically in order to keep the tank under a normal pressure.
When involving in emergency, such as a car accident, the Emergency Exhaust Valve will open the inside tank, meets the setting, in order to prevent explosion.
It is internationally accepted, and specified, by oil companies around the world to assist with the safe transportation of petroleum based products.

▶ Technique Specification:

- ◆ Setting pressure of vent discharge : 7.14Kpa
- ◆ Negative opening pressure:-2Kpa~-3Kpa
- ◆ Setting pressure of emergency exhaust valve: 0.0266Mpa±0.001Mpa
- ◆ Pressure resistance:0.254Mpa
- ◆ Meeting EN 13317:2002 Standard

RKG-F-20-L-AQS

▶ Package:

Net Weight: 18KG/PC
Gross Weight: 19KG/PC
55 x 53 x 22.5 cm/Case of 1PC

RKG-F-16-L-AQS

▶ Package:

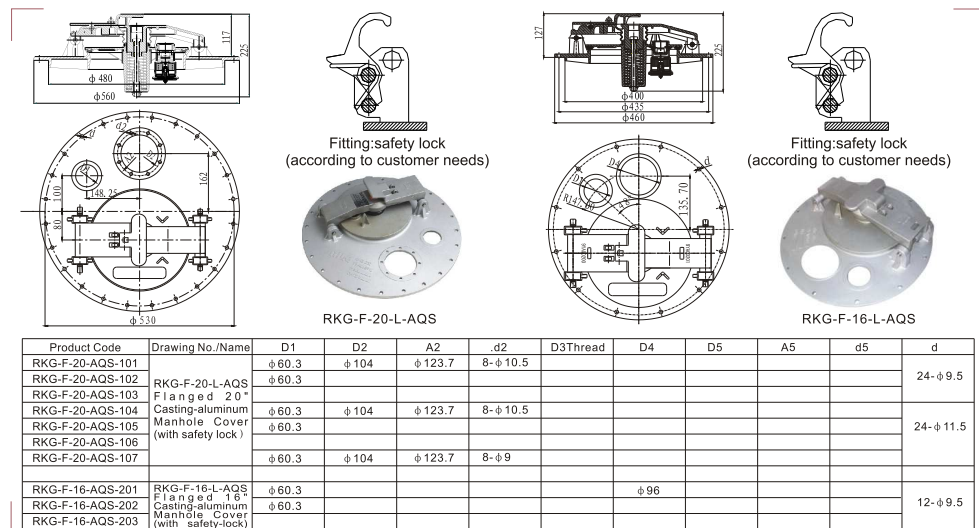
Net Weight: 16KG/PC
Gross Weight: 17KG/PC
47.5x45.5x22.5 cm/Case of 1PC

▶ Features & Benefits:

- ◆ Material: Casting Aluminum
- ◆ Pressure and vacuum vent fitted as standard for tank breathing.
- ◆ Various ratings are available to suit operational requirements.
- ◆ Spring-loaded fill cap provides emergency fire engulfment venting to NTTC DOT 406, required in the event of the tank being exposed to a fire.
- ◆ Automatic sealing of the P/V vent in a roll over situation prevents dangerous and costly spillage.
- ◆ Aluminium cover arm is also available on some variants.
- ◆ Two-stage opening allows safe release of residual compartment pressure before fully opening the fill cap.
- ◆ 250mm(10")fill hole for easy drop pipe insertion when top loading.
- ◆ High quality of baseplate and component materials, to international standards, are used for durability and performance.
- ◆ Especially, theft-proof sensor of Aluminum Alloy baseplate for Manhole Assemblies is available.



▶ AILE[®] RKG-F Series



RKG-F-16-L Series Of Aluminum Petroleum Manhole Assemblies

▶ Manhole Cover is equipped on the top of tank truck.
It is the entrance of fluid transfer operation inspection and maintaining the inside tank. It can protect the tank when involving in an emergency.
Under normal practice, vent is closed. When loading and unloading and temperature variation, it will cause the pressure variation inside the tank, such as air pressure and negative vacuum pressure, the vent of manhole cover will be closed automatically in order to keep the tank under a normal pressure.
When involving in emergency, such as a car accident, the Emergency Exhaust Valve will open the inside tank, meets the setting, in order to prevent explosion.
It is internationally accepted, and specified, by oil companies around the world to assist with the safe transportation of petroleum based products.

▶ Technique Specification:

- ◆ Setting pressure of vent discharge : 7.14Kpa
- ◆ Negative opening pressure:-2Kpa~-3Kpa
- ◆ Setting pressure of emergency exhaust valve: 0.0266Mpa±0.001Mpa
- ◆ Pressure resistance:0.254Mpa
- ◆ Meeting EN 13317:2002 Standard

RKG-F-16-LC-TS

RKG-F-16-H-AQS

▶ Package:

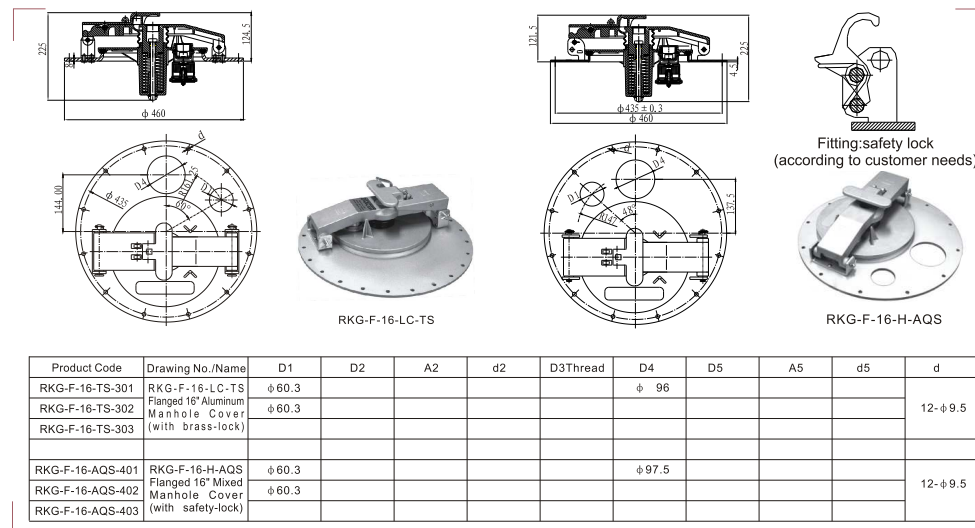
Net Weight: 15.50 KG/PC
Gross Weight: 17.50KG/PC
47.5x45.5x22.5 cm/Case of 1PC

▶ Features & Benefits:

- ◆ Material: Extend aluminum plate
- ◆ Pressure and vacuum vent fitted as standard for tank breathing.
- ◆ Various ratings are available to suit operational requirements.
- ◆ Spring-loaded fill cap provides emergency fire engulfment venting to NTTC DOT 406, required in the event of the tank being exposed to a fire.
- ◆ Automatic sealing of the P/V vent in a roll over situation prevents dangerous and costly spillage.
- ◆ Aluminium cover arm is also available on some variants.
- ◆ Two-stage opening allows safe release of residual compartment pressure before fully opening the fill cap.
- ◆ 250mm(10")fill hole for easy drop pipe insertion when top loading.
- ◆ High quality of baseplate and component materials, to international standards, are used for durability and performance.
- ◆ Especially, theft-proof sensor of Aluminum Alloy baseplate for Manhole Assemblies is available.



▶ AILE[®] RKG-F Series



RKG Series Of 16 Inch Steel Petroleum Manhole Assemblies

- ▶ Manhole Cover is equipped on the top of tank truck.
It is the entrance of fluid transfer operation inspection and maintaining the inside tank. It can protect the tank when involving in an emergency.
Under normal practice, vent is closed. When loading and unloading and temperature variation, it will cause the pressure variation inside the tank, such as air pressure and negative vacuum pressure, the vent of manhole cover will be closed automatically in order to keep the tank under a normal pressure.
When involving in emergency, such as a car accident, the Emergency Exhaust Valve will open the inside tank, meets the setting, in order to prevent explosion.
It is internationally accepted, and specified, by oil companies around the world to assist with the safe transportation of petroleum based products.

▶ Technique Specification:

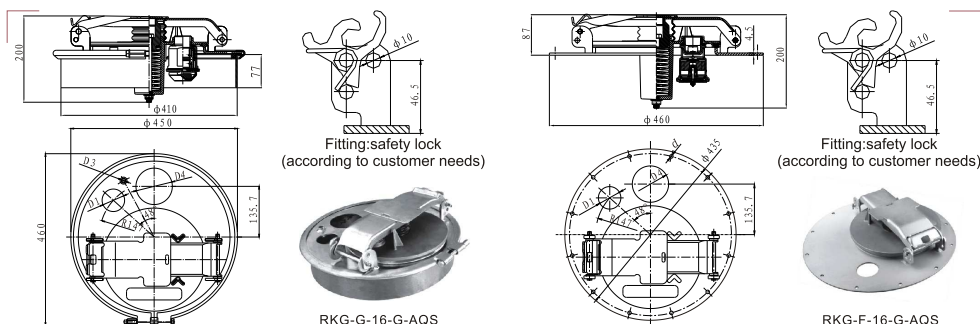
- ◆ Setting pressure of vent discharge : 7.14Kpa
- ◆ Negative opening pressure:-2Kpa~-3Kpa
- ◆ Setting pressure of emergency exhaust valve:
0.0266Mpa±0.001Mpa
- ◆ Pressure resistance:0.254Mpa
- ◆ Meeting EN 13317:2002 Standard

RKG-G-16-G-AQS RKG-F-16-G-AQS

▶ Package:

Net Weight: 15.50 KG/PC
Gross Weight: 17.50KG/PC
47.5x45.5x22.5 cm³/Case of 1PC

▶ AILE[®] RKG Series



Product Code	Drawing No./Name	D1	D2	A2	d2	D3Thread	D4	D5	A5	d5	d
RKG-G-16-501	RKG-G-16-G-AQS	φ60.3				BSPP1/4"	φ97.5				
RKG-G-16-502	Clamped 16" Steel	φ60.3					φ97.5				
RKG-G-16-503	Manhole Cover	φ60.3									
RKG-G-16-504	(with safety-lock)										
RKG-F-16-601	RKG-F-16-G-AQS	φ60.3					φ97.5				
RKG-F-16-602	Flanged 16" Steel	φ60.3									12-φ9.5
RKG-F-16-603	Manhole Cover										
	(with safety-lock)										

RKG Series Of 20 Inch Steel Petroleum Manhole Assemblies

- ▶ Manhole Cover is equipped on the top of tank truck.
It is the entrance of fluid transfer operation inspection and maintaining the inside tank. It can protect the tank when involving in an emergency.
Under normal practice, vent is closed. When loading and unloading and temperature variation, it will cause the pressure variation inside the tank, such as air pressure and negative vacuum pressure, the vent of manhole cover will be closed automatically in order to keep the tank under a normal pressure.
When involving in emergency, such as a car accident, the Emergency Exhaust Valve will open the inside tank, meets the setting, in order to prevent explosion.
It is internationally accepted, and specified, by oil companies around the world to assist with the safe transportation of petroleum based products.

▶ Technique Specification:

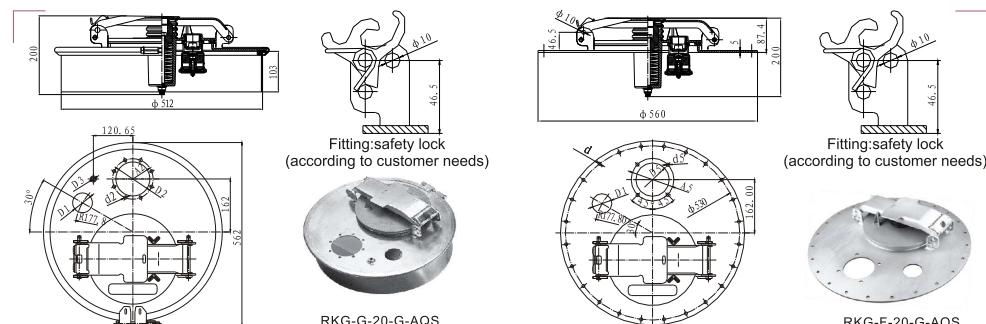
- ◆ Setting pressure of vent discharge : 7.14Kpa
- ◆ Negative opening pressure:-2Kpa~-3Kpa
- ◆ Setting pressure of emergency exhaust valve:
0.0266Mpa±0.001Mpa
- ◆ Pressure resistance:0.254Mpa
- ◆ Meeting EN 13317:2002 Standard

RKG-G-20-G-AQS RKG-F-20-G-AQS

▶ Package:

Net Weight: 18KG/PC
Gross Weight: 19.8KG/PC
55 x 53 x 22.5 cm³/Case of 1PC

▶ AILE[®] RKG Series



Product Code	Drawing No./Name	D1	D2	A2	d2	D3Thread	D4	D5	A5	d5	d
RKG-G-20-701	RKG-G-20-G-AQS	φ60.3	φ104	φ123.7	8-φ10.5	BSPP1/4"					
RKG-G-20-702	Clamped 20" Steel	φ60.3	φ104	φ123.7	8-φ10.5						
RKG-G-20-703	Manhole Cover	φ60.3									
RKG-G-20-704	(with safety-lock)										
RKG-G-20-705		φ60.3	φ104	φ123.7	8-φ9	BSPP1/4"					
RKG-G-20-706		φ60.3	φ104	φ123.7	8-φ9						
RKG-F-20-801	RKG-F-20-G-AQS	φ60.3									
RKG-F-20-802	Flanged 20" Steel	φ60.3									
RKG-F-20-803	Manhole Cover										
	(with safety-lock)										

- ▶ HYF-01 API Bottom Loading Valve is used in tank truck for loading and unloading petrol kind of liquids. HYF-02 without handle is normally used for loading only. HYF-01 has a handle with two-stage for controlling different flow rates while loading or unloading. The light weight and heavy-duty valve is designed and tested to meet API standards, the outer nose end is hard-anodised aluminum alloy and be easily rotated to prevent uneven wear caused by terminal and unloading couplings. The valve is constructed with TMA standard 4-inch tank truck flange and mounting lugs for AILE Air Interlock.

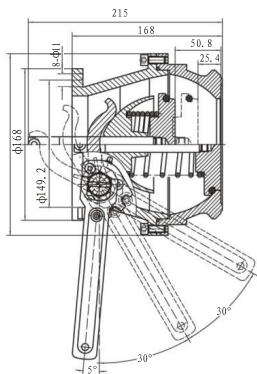
Body: Aluminum alloy
API adaptor end: Hard-coated aluminum
POPPET: Stainless steel
Shaft and latch plate: Stainless steel
CAM: Brass
HANDLE: Aluminum alloy
Seals: Viton & Buna-N
Standard: Meet API R P 1004
TTMA Standard.

Net Weight: 5 KG/PC
Gross Weight: 6.4KG/PC
23x19x26 cm³/Case of 1PC

Product #	Type	IN.	KG.
HYF-01	With Handle	4.00	6.00
HYF-02	Without Handle	4.00	5.80

- ◆ Heat-treated, aluminum alloy body and flange
- ◆ Hard-coated aluminum API adaptor end
- ◆ Stainless steel poppet, shaft, and latch plate
- ◆ H62 brass cam
- ◆ Cast Aluminum Alloy Handle
- ◆ Viton seals
- ◆ Meets API RP 1004 specifications
- ◆ TTMA Standards
- ◆ Two-stage fixed aluminum handle gives positive indication of flow rates.
- ◆ Conforms to API RP1004 for total compatibility with API couplers.
- ◆ Lightweight die cast aluminum construction with high-octane fuels and additives.
- ◆ Viton seals are standard for compatibility with high-octane fuels and additives.
- ◆ Hydrodynamic design minimises pressure drop for high flow rates.
- ◆ Stainless steel operating shaft, cam and poppet stem for durability.
- ◆ Top mounting for hose interlock.

Shaft Seal
Cover Seal
Flange Seal
Handle (for HYF-01)
API Adaptor End



HYF-01



HYF-02

- ▶ HYF-U-01 API Bottom Loading Valve is used in tank truck for loading and unloading petrol kind of liquids. HYF-U-02 without handle is normally used for loading only. HYF-U-01 has a handle with two-stage for controlling different flow rates while loading or unloading. The light weight and heavy-duty valve is designed and tested to meet API standards, the outer nose end is hard-anodised aluminum alloy and be easily rotated to prevent uneven wear caused by terminal and unloading couplings. The valve is constructed with TTMA standard 4-inch tank truck flange and mounting lugs for AILE Air Interlock.

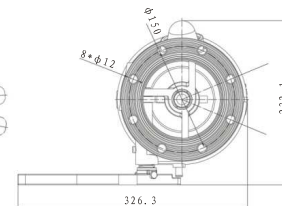
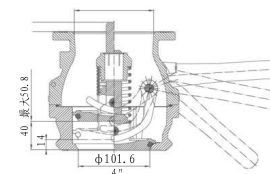
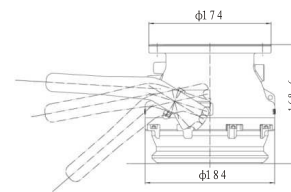
Body: Aluminum alloy
API adaptor end: Hard-coated aluminum
POPPE T: Stainless steel
Shaft and latch plate: Stainless steel
CAM: Brass
HANDLE: Aluminum alloy
Seals: Viton & Buna-N
Standard: Meet API R P 1004
TTMA Standard.

Net Weight: 6 KG/PC
Gross Weight: 6.33KG/PC
74x41x22 cm³/Case of 6PC

Product #	Type	IN.	KG.
HYF-U-01	With Handle	4.00	6.00
HYF-U-02	Without Handle	4.00	5.80

- ◆ Heat-treated, aluminum alloy body and flange
- ◆ Hard-coated aluminum API adaptor end
- ◆ Stainless steel poppet, shaft, and latch plate
- ◆ H62 brass cam
- ◆ Cast Aluminum Alloy Handle
- ◆ Viton seals
- ◆ Meets API RP 1004 specifications
- ◆ TTMA Standards
- ◆ Two-stage fixed aluminum handle gives positive indication of flow rates.
- ◆ Conforms to API RP1004 for total compatibility with API couplers.
- ◆ Lightweight die cast aluminum construction with high-octane fuels and additives.
- ◆ Viton seals are standard for compatibility with high-octane fuels and additives.
- ◆ Hydrodynamic design minimises pressure drop for high flow rates.
- ◆ Stainless steel operating shaft, cam and poppet stem for durability.
- ◆ Top mounting for hose interlock.
- ◆ Sight glass for detecting liquids

Shaft Seal
Cover Seal
Flange Seal
Handle (for HYF-U-01)
API adaptor end



HYF-U-01



HYF-U-02

DG-API Dust Cap

► This lightweight, API Dust Cap shields valuable bottom loading valves from destructive outside elements. The cap easily couples on. API bottom loading adaptors use a reliable Buna-N gasket. The corrosion-resistant cap comes with forged brass cam arms and a heavy-duty attached chain.

Package:

Net Weight: 1.33kg/pc
Gross Weight: 1.11kg/pc
48x44x40cm³/case of 20pc

Ordering Specifications:

product#	SIZE	MATERIAL
DG-API-D	4"	Epoxy Coated Aluminum

Features & Benefits:

- ◆ Meets API Rp1004 Specifications
- ◆ Operation with one handle (DG-API-A)
- ◆ High quality and lightweight aluminum Pressure
- ◆ Die cast body
- ◆ 19" stainless steel chain for attachment to API
- ◆ Bottom Loading Valves (see page 5, 6)
- ◆ Locking hole for wire seals: center sealing (DG-API-A)
side sealing (DG-API-D)

AILE[®] DG-API



DG-API-D



DG-API-A

JDKJ Series Of Gravity Couplers

► AILE's Gravity Couplers optimize the connection between 4" API adaptors and a 4" hose connection, ensuring safe, fast unloading. It has been redesigned with an interior "lip" that makes hook-ups easier. JDKJ series of Gravity Couplers are specifically designed for use with API Bottom Loading Valves when discharging product and with coupling to any adaptor made in accordance with API Rp 1004.

Ordering Specifications:

Product #	Description	in.	mm.	Lbs.	Kg.
JDKJ-801	Male cam and groove	3.00	76.2	4.00	1.81
JDKJ-802	Male cam and groove	4.00	101.6	5.00	2.27
JDKJ-803	Male-NPT thread	3.00	76.2	4.00	1.81
JDKJ-804	Male-BSP thread	3.00	76.2	4.00	1.81
JDKJ-805	Male-NPT thread	4.00	101.6	4.31	1.96
JDKJ-806	Male-BSP thread	4.00	101.6	4.31	1.96

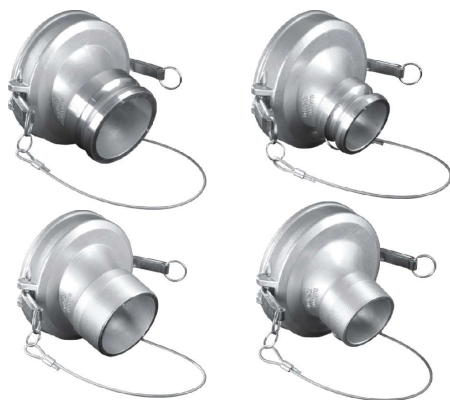
Package:

Net Weight: 2.06Kg/pc
Gross Weight: 2.15kg/pc
43 x43 x32cm³/case of 8pc

Features & Benefits:

- ◆ "lip" in the 12-o'clock position centres the coupler with API adaptor for solid connection.
- ◆ Easier for operator to handle.
- ◆ Available with either CAM LOCK coupler or NPT/ BSP female threads at the hose connection.
- ◆ Stainless steel chain meeting with standard 4" API RP-1004 tank truck adaptors with Aluminum body and Buna-N seals.
- ◆ Available with viton seals. (Please contact AILE for details.)
- ◆ Heavy pressure casting make products get light weight and smooth and beautiful appearance.

AILE[®] JDKJ



FV Series of 4 inch Emergency Foot Valve

► AILE's FV Series of Emergency Foot Valves now make product handling safer. The emergency valve has a shear groove that meets 49 CFR 178.345-8. The seat area of the valve is located inside of the tank shell as required by DOT regulations. The valve gives you the advantage of a faster flow rate while fitting a standard 4" TTMA sump. The high flow rate is established by a full opening throat area. Emergency valves are available in 90 degree elbow type 4" TTMA Flanges and mechanical or air assisted. Specifically designed for ease of maintenance, high flow and durability. The simplistic design of this valve makes it ideally suited to oil companies and transporters of petroleum products who require a tough, reliable, high flow emergency valve.

Package:

Net Weight: 7.8 KG/PC
Gross Weight: 8KG/PC
38x32x35 cm³/Case of 6PC



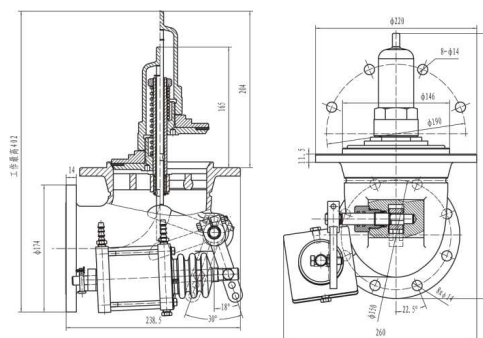
Features & Benefits:

- ◆ High Flow Rate
- ◆ Fits Std 4" TTMA Sump
- ◆ Shear section per TTMA, RP84-92 and meets DOT 49 CFR 178.345-8
- ◆ Force ratings from TTMA RP86-92
- ◆ Shear Groove meets DOT 406 requirements
- ◆ Optional External Air Cylinder available
- ◆ Available in flanged version
- ◆ Seals-viton
- ◆ High quality die cast body and component materials, to international standards, are used for durability and performance.
- ◆ Lightweight aluminium construction for increased payloads.
- ◆ High lift poppet for maximum flow.
- ◆ External shear groove meets TTMA and NTTC DOT 406 to limit product spillage in the event of an accident.
- ◆ Closure by self-centring plunger and durable compression spring.
- ◆ Brass cam with bearing boot on plunger stem for smooth operation and extended life.
- ◆ Double O-ring seals on camshaft for improved sealing and ease of maintenance.
- ◆ Push Rod Adaptor or Eye Bolt available for mechanical vent or top operation. Meeting EN 13308:2002 Standard

Replacement Parts:

PART	SIZE	DESCRIPTION
FV-A-4-W-YI	4"	4" Round Std/seal Flanged outlet
FV-C-4-W-YI	4"	4" Round Std/seal Flanged outlet

AILE[®] FV Series of 4 inch Emergency Foot Valve



Fitting: Top emergency operator (according to customer needs)

Fitting: Manual mechanical operator (according to customer needs)



FV-C-4-W-YI



FV-A-4-W-YI

FV Series of 4 inch Emergency Foot Valve

► AILE's FV Series of Emergency Foot Valves now make product handling safer. The emergency valve has a shear groove that meets 49 CFR 178.345-8. The seat area of the valve is located inside of the tank shell as required by DOT regulations. The valve gives you the advantage of a faster flow rate while fitting a standard 4" TTMA sump. The high flow rate is established by a full opening throat area. Emergency valves are available in 90 degree elbow type 4" TTMA Flanges and mechanical or air assisted. Specifically designed for ease of maintenance, high flow and durability. The simplistic design of this valve makes it ideally suited to oil companies and transporters of petroleum products who require a tough, reliable, high flow emergency valve.

► Package:

Net Weight: 7.8 KG/PC
Gross Weight: 8KG/PC
38x32x35 cm³/Case of 6PC



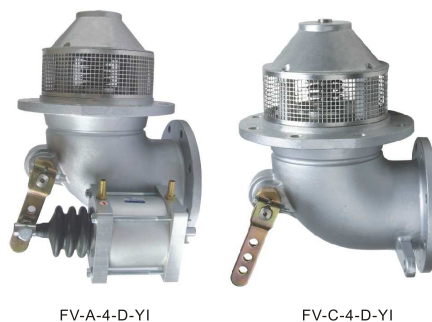
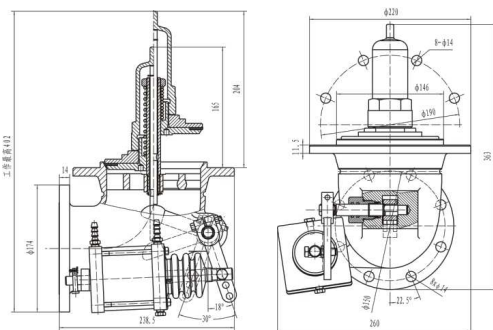
► Features & Benefits:

- ◆ High Flow Rate
- ◆ Fits Std 4" TTMA Sump
- ◆ Shear section per TTMA, RP84-92 and meets DOT 49 CFR 178.345-8
- ◆ Force ratings from TTMA RP86-92
- ◆ Shear Groove meets DOT 406 requirements
- ◆ Optional External Air Cylinder available
- ◆ Available in flanged version
- ◆ Seals-viton
- ◆ High quality die cast body and component materials, to international standards, are used for durability and performance.
- ◆ Lightweight aluminium construction for increased payloads.
- ◆ High lift poppet for maximum flow.
- ◆ External shear groove meets TTMA and NTTC DOT 406 to limit product spillage in the event of an accident.
- ◆ Closure by self-centring plunger and durable compression spring.
- ◆ Brass cam with bearing boot on plunger stem for smooth operation and extended life.
- ◆ Double O-ring seals on camshaft for improved sealing and ease of maintenance.
- ◆ Push Rod Adaptor or Eye Bolt available for mechanical vent or top operation. Meeting EN 13308:2002 Standard

► Replacement Parts:

PART	SIZE	DESCRIPTION
FV-A-4-D-YI	4"	4" Round Std/seal Flanged outlet
FV-C-4-D-YI	4"	4" Round Std/seal Flanged outlet

► AILE[®] FV Series of 4 inch Emergency Foot Valve



FV-A-4-D-YI

FV-C-4-D-YI

FV-B-4-D-YE 4 Inch Emergency Foot Valve

► AILE's Emergency Foot Valves now make product handling safer. The emergency valve has a shear groove that meets 49 CFR 178.345-8. The seat area of the valve is located inside of the tank shell as required by DOT regulations. The valve gives you the advantage of a faster flow rate while fitting a standard 4" TTMA sump. The high flow rate is established by a full opening throat area. Emergency valves are available in 90 degree elbow type 4" TTMA Flanges and mechanical or air assisted. Specifically designed for ease of maintenance, high flow and durability. The simplistic design of this valve makes it ideally suited to oil companies and transporters of petroleum products who require a tough, reliable, high flow emergency valve.

FV-B-4-D-YE

► Package:

Net Weight: 7.3KG/PC
Gross Weight: 7.5KG/PC
38x26x27 cm³/Case of 1PC



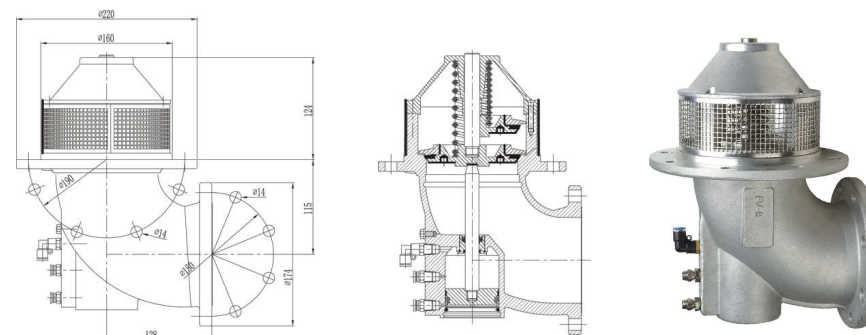
► Features & Benefits:

- ◆ High Flow Rate
- ◆ Fits Std 4" TTMA Sump
- ◆ Shear section per TTMA, RP84-92 and meets DOT 49 CFR 178.345-8
- ◆ Force ratings from TTMA RP86-92
- ◆ Shear Groove meets DOT 406 requirements
- ◆ Internal Air Cylinder
- ◆ Available in flanged version & Filter net
- ◆ Seals-viton
- ◆ High quality die cast body and component materials, to international standards, are used for durability and performance.
- ◆ Lightweight aluminium construction for increased payloads.
- ◆ High lift poppet for maximum flow.
- ◆ External shear groove meets TTMA and NTTC DOT 406 to limit product spillage in the event of an accident.
- ◆ Closure by self-centring plunger and durable compression spring.
- ◆ Brass cam with bearing boot on plunger stem for smooth operation and extended life.
- ◆ Double O-ring seals on camshaft for improved sealing and ease of maintenance.
- ◆ Push Rod Adaptor or Eye Bolt available for mechanical vent or top operation. Meeting EN 13308:2002 Standard

► Replacement Parts:

PART	DESCRIPTION
FV-B-4-D-YE	4" Round Std/seal Flanged outlet

► AILE[®] FV-B-4-D-YE 4 Inch Emergency Foot Valve



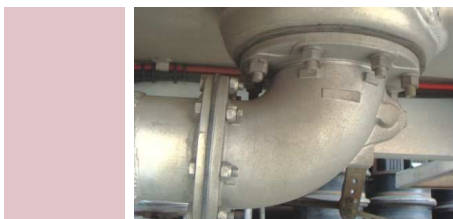
FV-B-4-D-YE

FV-C-3-D-F Emergency Foot Valve

► AILE 's FV-C-3-D-F Emergency Foot Valves now make product handling safer. The emergency valve has a shear groove that meets 49 CFR 178.345-8. The seat area of the valve is located inside of the tank shell as required by DOT regulations. The valve gives you the advantage of a faster flow rate while fitting a standard 3 " TTMA sump. The high flow rate is established by a full opening throat area. Emergency valves are available in 90 degree elbow type 3 " TTMA Flanges and mechanical or air assisted. Specifically designed for ease of maintenance, high flow and durability. The simplistic design of this valve makes it ideally suited to oil companies and transporters of petroleum products who require a tough, reliable, high flow emergency valve.

► **Package:**

Net Weight: 3.8KG/PC
Gross Weight: 4KG/PC
38x26x27 cm³/Case of 1PC



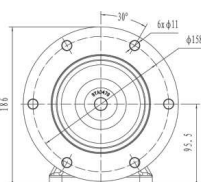
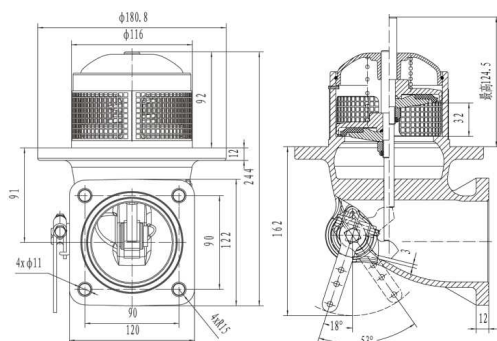
► **Features & Benefits:**

- ◆ High Flow Rate
- ◆ Fits Std 3 " TTMA Sump
- ◆ Shear section per TTMA, RP84-92and meets DOT 49 CFR 178.345-8
- ◆ Force ratings from TTMA RP86-92
- ◆ Shear Groove meets DOT 406 requirements
- ◆ Available in flanged version & Filter net
- ◆ Seals-viton
- ◆ High quality die cast body and component materials, to international standards, are used for durability and performance.
- ◆ Lightweight aluminium construction for increased payloads.
- ◆ High lift poppet for maximum flow.
- ◆ External shear groove meets TTMA and NTTC DOT 406 to limit product spillage in the event of an accident.
- ◆ Closure by self-centring plunger and durable compression spring.
- ◆ Brass cam with bearing boot on plunger stem for smooth operation and extended life.
- ◆ Double O-ring seals on camshaft for improved sealing and ease of maintenance.
- ◆ Push Rod Adaptor or Eye Bolt available for mechanical vent or top operation. Metting EN 13308:2002 Standard

► **Replacement Parts:**

PART	DESCRIPTION
FV-C-3 -D-F	3 " Square Std/seal Flanged outlet

► **AILE[®] FV-C-3-D-F Emergency Foot Valve**



Fitting:Manual mechanical operator
(according to customer needs)



FV-C-3-D-F

FV-C-3-D-YE Emergency Foot Valve

► AILE 's FV-C-3-D-YE Emergency Foot Valves now make product handling safer. The emergency valve has a shear groove that meets 49 CFR 178.345-8. The seat area of the valve is located inside of the tank shell as required by DOT regulations. The valve gives you the advantage of a faster flow rate while fitting a standard 3 " TTMA sump. The high flow rate is established by a full opening throat area. Emergency valves are available in 90 degree elbow type 3 " TTMA Flanges and mechanical or air assisted. Specifically designed for ease of maintenance, high flow and durability. The simplistic design of this valve makes it ideally suited to oil companies and transporters of petroleum products who require a tough, reliable, high flow emergency valve.

► **Package:**

Net Weight: 3.8KG/PC
Gross Weight: 4KG/PC
38x26x27 cm³/Case of 1PC



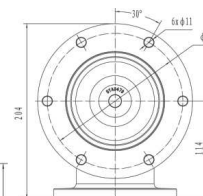
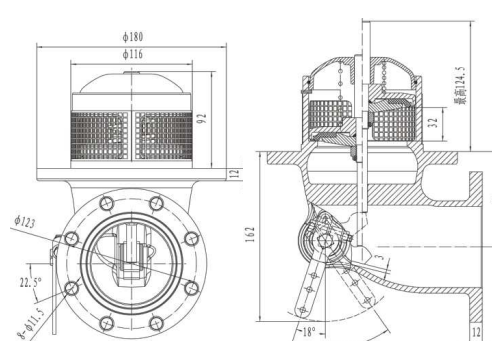
► **Features & Benefits:**

- ◆ High Flow Rate
- ◆ Fits Std 3 " TTMA Sump
- ◆ Shear section per TTMA, RP84-92and meets DOT 49 CFR 178.345-8
- ◆ Force ratings from TTMA RP86-92
- ◆ Shear Groove meets DOT 406 requirements
- ◆ Available in flanged version & Filter net
- ◆ Seals-viton
- ◆ High quality die cast body and component materials, to international standards, are used for durability and performance.
- ◆ Lightweight aluminium construction for increased payloads.
- ◆ High lift poppet for maximum flow.
- ◆ External shear groove meets TTMA and NTTC DOT 406 to limit product spillage in the event of an accident.
- ◆ Closure by self-centring plunger and durable compression spring.
- ◆ Brass cam with bearing boot on plunger stem for smooth operation and extended life.
- ◆ Double O-ring seals on camshaft for improved sealing and ease of maintenance.
- ◆ Push Rod Adaptor or Eye Bolt available for mechanical vent or top operation. Metting EN 13308:2002 Standard

► **Replacement Parts:**

PART	DESCRIPTION
FV-C-3-D-YE	3 " Round Std/seal Flanged outlet

► **AILE[®] FV-C-3-D-YE Emergency Foot Valve**



Fitting:Manual mechanical operator
(according to customer needs)



FV-C-3-D-YE

FV-B-3-D-F Emergency Foot Valve

► AILE's FV-B-3-D-F Emergency Foot Valves now make product handling safer. The emergency valve has a shear groove that meets 49 CFR 178.345-8. The seat area of the valve is located inside of the tank shell as required by DOT regulations. The valve gives you the advantage of a faster flow rate while fitting a standard 3" TTMA sump. The high flow rate is established by a full opening throat area. Emergency valves are available in 90 degree elbow type 3" TTMA Flanges and mechanical or air assisted. Specifically designed for ease of maintenance, high flow and durability. The simplistic design of this valve makes it ideally suited to oil companies and transporters of petroleum products who require a tough, reliable, high flow emergency valve.

► **Package:**

Net Weight: 3.8KG/PC
Gross Weight: 4KG/PC
38x26x27 cm³/Case of 1PC



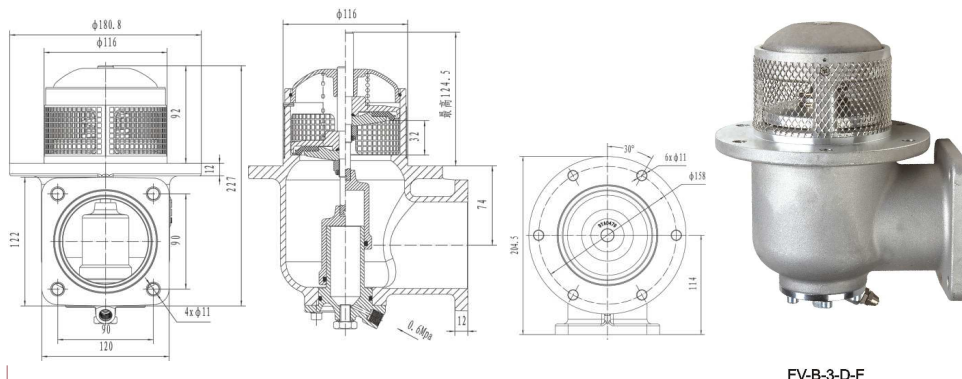
► **Features & Benefits:**

- ◆ High Flow Rate
- ◆ Fits Std 3" TTMA Sump
- ◆ Shear section per TTMA, RP84-92 and meets DOT 49 CFR 178.345-8
- ◆ Force ratings from TTMA RP86-92
- ◆ Shear Groove meets DOT 406 requirements
- ◆ Internal Air Cylinder
- ◆ Available in flanged version & Filter net
- ◆ Seals-viton
- ◆ High quality die cast body and component materials, to international standards, are used for durability and performance.
- ◆ Lightweight aluminium construction for increased payloads.
- ◆ High lift poppet for maximum flow.
- ◆ External shear groove meets TTMA and NTTC DOT 406 to limit product spillage in the event of an accident.
- ◆ Closure by self-centring plunger and durable compression spring.
- ◆ Brass cam with bearing boot on plunger stem for smooth operation and extended life.
- ◆ Double O-ring seals on camshaft for improved sealing and ease of maintenance.
- ◆ Push Rod Adaptor or Eye Bolt available for mechanical vent or top operation. Meeting EN 13308:2002 Standard

► **Replacement Parts:**

PART	DESCRIPTION
FV-B-3-D -F	3" Square Std/seal Flanged outlet

► **AILE FV-B-3-D-F Emergency Foot Valve**



FV-B-3-D-F

FV-B-3-D-YE Emergency Foot Valve

► AILE's FV-B-3-D-YE Emergency Foot Valves now make product handling safer. The emergency valve has a shear groove that meets 49 CFR 178.345-8. The seat area of the valve is located inside of the tank shell as required by DOT regulations. The valve gives you the advantage of a faster flow rate while fitting a standard 3" TTMA sump. The high flow rate is established by a full opening throat area. Emergency valves are available in 90 degree elbow type 3" TTMA Flanges and mechanical or air assisted. Specifically designed for ease of maintenance, high flow and durability. The simplistic design of this valve makes it ideally suited to oil companies and transporters of petroleum products who require a tough, reliable, high flow emergency valve.

► **Package:**

Net Weight: 3.8KG/PC
Gross Weight: 4KG/PC
38x26x27 cm³/Case of 1PC



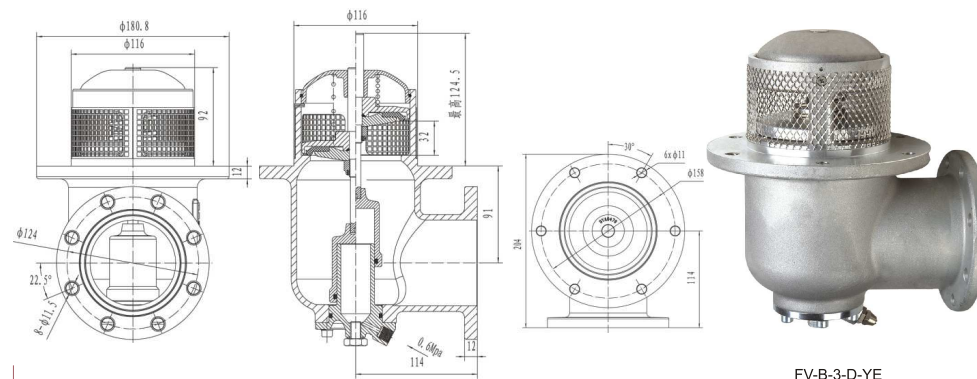
► **Features & Benefits:**

- ◆ High Flow Rate
- ◆ Fits Std 3" TTMA Sump
- ◆ Shear section per TTMA, RP84-92 and meets DOT 49 CFR 178.345-8
- ◆ Force ratings from TTMA RP86-92
- ◆ Shear Groove meets DOT 406 requirements
- ◆ Internal Air Cylinder
- ◆ Available in flanged version & Filter net
- ◆ Seals-viton
- ◆ High quality die cast body and component materials, to international standards, are used for durability and performance.
- ◆ Lightweight aluminium construction for increased payloads.
- ◆ High lift poppet for maximum flow.
- ◆ External shear groove meets TTMA and NTTC DOT 406 to limit product spillage in the event of an accident.
- ◆ Closure by self-centring plunger and durable compression spring.
- ◆ Brass cam with bearing boot on plunger stem for smooth operation and extended life.
- ◆ Double O-ring seals on camshaft for improved sealing and ease of maintenance.
- ◆ Push Rod Adaptor or Eye Bolt available for mechanical vent or top operation. Meeting EN 13308:2002 Standard

► **Replacement Parts:**

PART	DESCRIPTION
FV-B-3-D -YE	3" Round Std/seal Flanged outlet

► **AILE FV-B-3-D-YE Emergency Foot Valve**



FV-B-3-D-YE

- ▶ **REV-1** Air operated vapor vents are used to connect tank compartments to the rollover rail vapor recovery system, effectively sealing the tank compartments when transporting, then opening to allow vapor flow during loading and unloading. Handle fuel vapors safely and efficiently with this lightweight aluminum vapor valve. The air-operated valve allows fast vapor flow during loading and unloading. The poppet is designed to open into the tank, preventing accidental leakage from product surges or from a tank truck rollover. Easy-to-use air line connections are located outside the compartment for convenient installation and maintenance.

► **Package:**

Net Weight: 1.5Kg/pc
Gross Weight: 1.69kg/pc
58 x26 x27cm³/case of 8pc

► **Features & Benefits:**

- ◆ 4 " high-capacity design provides superior flow for faster loading and unloading
- ◆ Multiple mounting options, stainless steel spring, 1/4 " NPT air lineholes
- ◆ Minimum operating pressure, 60 PSI; units begin to sequence at 50 PSI and begin to exhaust at 40PSI
- ◆ For use with 20 " manhole, 4 " TTMA bolt pattern mounting
- ◆ Safe inward opening valve, easy maintenance of viton O'Ring seals
- ◆ Built in sequencing feature allows control of emergency valve if desired

REV- II Vapor Vent Valve

- ▶ REV-II Air operated vapor vents are used to connect tank compartments to the rollover rail vapor recovery system, effectively sealing the tank compartments when transporting, then opening to allow vapor flow during loading and unloading. Handle fuel vapors safely and efficiently with this lightweight aluminum vapor valve. The air-operated valve allows fast vapor flow during loading and unloading. The poppet is designed to open into the tank, preventing accidental leakage from product surges or from a tank truck rollover. Easy-to-use air line connections are located outside the compartment for convenient installation and maintenance.

► **Package:**

Net Weight: 1.375 Kg/pc
Gross Weight: 1.5kg/pc
53 x24 x25cm³/case of 8pc

► **Features & Benefits:**

- ◆ 4 " high-capacity design provides superior flow for faster loading and unloading
- ◆ Multiple mounting options, stainless steel spring, 1/4 " NPT air lineholes
- ◆ Minimum operating pressure, 60 PSI; units begin to sequence at 50 PSI and begin to exhaust at 40PSI
- ◆ For use with 16 " manhole, threaded ring mounting
- ◆ Safe inward opening valve, easy maintenance of viton O Ring seals
- ◆ Built in sequencing feature allows control of emergency valve if desired



REV-I Vapor Vent Valve
For 20" Manhole



REV-II Vapor Vent Valve
For 16" Manhole

- ▶ REV-F Air operated vapor vents are used to connect tank compartments to the rollover rail vapor recovery system, effectively sealing the tank compartments when transporting, then opening to allow vapor flow during loading and unloading. Handle fuel vapors safely and efficiently with this lightweight aluminum vapor valve. The air-operated valve allows fast vapor flow during loading and unloading. The poppet is designed to open into the tank, preventing accidental leakage from product surges or from a tank truck rollover. Easy-to-use air line connections are located outside the compartment for convenient installation and maintenance.

► **Package:**

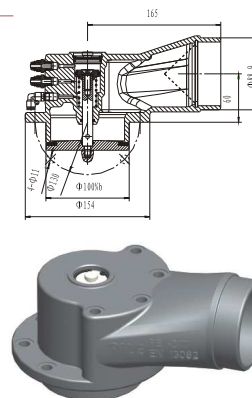
Net Weight: 1.81Kg/pc
Gross Weight: 1.875kg/pc
58x26 x27cm³/case of 8pc

► **Features & Benefits:**

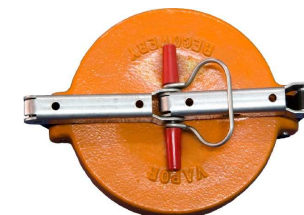
- ◆ 4 " high-capacity design provides superior flow for faster loading and unloading
- ◆ Multiple mounting options, stainless steel spring, 1/4 " NPT air lineholes
- ◆ Minimum operating pressure, 60 PSI; units begin to sequence at 50 PSI and begin to exhaust at 40PSI
- ◆ For use with 20 " manhole, 4 " TTMA bolt pattern mounting
- ◆ Safe inward opening valve, easy maintenance of viton O'Ring seals
- ◆ Built in sequencing feature allows control of emergency valve if desired



REV-F Vapor Vent Valve
For 20" Manhole



► **AILE® REV-C**



► **AILE® DG-VC Vapor Cap**

DG-VC Vapor Cap

- ▶ AILE's DG-VC Vapor Cap secures onto the vapor check valves to prevent dust and debris buildup. It also protects the vapor check valve adaptor on the line portion of a dual point fill systems. Orange in color to indicate vapor recovery lines and lockable to prevent misuse. Our vapor cap fits all 4" male quick couplings and the cam action creates a solid push down and pull up movement for fast, easy removal and replacement of cap.

► **Package:**

Net Weight: 0.63Kg/pc
Gross Weight: 2kg/pc
57x38x40cm³/ case of 30pc

► **Ordering Specifications:**

product#	SIZE	MATERIAL
DG-VC	4"	Epoxy Coated Aluminum

► **Features & Benefits:**

- ◆ Epoxy coated aluminum body
- ◆ Padlock capability
- ◆ Iron-copper infiltrated 4"cams
- ◆ Corrosion resistant steel hatches



VRV-A Vapor Recovery Adaptor

► AILE 's VRV-A Vapor Recovery Valve is mounted directly onto the recovery pipe the tank truck, it is a high-flow, low pressure drop, poppeted vapor recovery fitting that permits, Simultaneous loading (1,000+GPM) of compartments without exceeding the pressure rating of pressure vacuum vents. Unloading performance is also boosted by the VRV-A's high-flow design. Proper vapor collection-with superior flow characteristics-means vents are less likely to pop open from compartment back-pressure, minimizing the potential for atmospheric vapor loss. The sight glass will make detecting and draining liquids easy During an accidental overfill) which is fit for connecting to air interlock valve.

► Package:

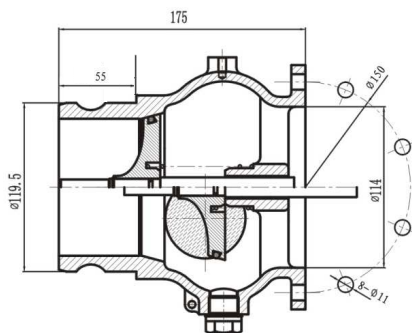
Net Weight: 2.825 Kg/pc
Gross Weight: 3.775kg/pc
42 x 40.6 x 38cm³/case of 8pc



► Features & Benefits:

- ◆ Seals: Buna
- ◆ 4" cam and groove
- ◆ hard - coated body for longer life
- ◆ with sight glass
- ◆ Designed in accordance with API RP -1004, with a standard 4" TTMA Flange
- ◆ High flow rate/low pressure drop design affords faster loading
- ◆ The vapour recovery valve is mounted directly onto the recovery pipe of the vehicle.
- ◆ The valve (VRV and gasket) must be mounted as shown in the figure.
- ◆ The gasket used should be conductive. If a non-conductive gasket is used, a conductive connection must be established via the flange screws.
- ◆ The fixing screws must not be over tightened.
- ◆ The fittings for the 6 mm air hoses must be mounted at the VRV interlock.
- ◆ The vapour tightness of the valve and the gasket must be checked.
- ◆ The electrical conductivity from the VRV across the gasket to the vapour recovery pipe must be checked.
- ◆ Metting EN 133081:2002 Standard

► AILE[®] VRV-A



VRV-E Vapor Recovery Adaptor

► AILE 's VRV-E Stage I Vapor Recovery Adaptors and Caps. Stage I Vapor Recovery Adaptors are installed in spill containment manholes on the vapor recovery riser pipe from an underground gasoline storage tank. They mate with the vapor recovery elbow on the delivery transport truck when recovery of gasoline vapors is required. Stage I Caps are installed on adaptors when not in use, to prevent gasoline vapors from escaping and to prevent water, dust and debris from entering the tank.

► Package:

Net Weight: 1.585Kg/pc
Gross Weight: 2kg/pc
55x41.5 x17.5cm³/case of 12pc

► Ordering Specifications:

Product #	Connection
VRV-E-801	NPT4"
VRV-E-802	BSPT4"

► Features & Benefits:

- ◆ Seals: Buna/Viton
- ◆ 3" vapor check poppet
- ◆ 4" female threads by 4" cam and groove
- ◆ hard - coated body for longer life

► AILE[®] VRV-E



VRV-308 Vapor Coupler

► Fast, safe vapor recovery is easy with this probed hose coupler. Hose shank end bands to a vapor recovery hose and the probe automatically opens the poppet of the vapor check valve when coupled. The coupler comes in three sizes for use with most vapor check valves and hose configurations.

The poppetted vapor returning to hose coupler design prevents vapor from escaping when disconnected and the probe automatically opens the vapor check valve when connected properly. The design also offers low restrictive vapor passage.

The body and probe are made of heat treated anodized. Aluminum, with Brass cams, stainless steel pins, and the poppet has a replaceable Buna-N "O" ring.

► Package:

Net Weight: 1.46Kg/pc
Gross Weight: 2.11kg/pc
55.5x49.5 x39.5cm³/case of 18pc

► Features & Benefits:

- ◆ The Vapor Hose Coupler is designed for maximum flow of vapor during delivery operations.
- ◆ 3" or 4" hose shank
- ◆ Lightweight aluminum body
- ◆ Internal probe for opening poppeted vapor adaptors
- ◆ Brass cams reduce wear on vapor adaptor and eliminate corrosion
- ◆ Buna-N seal

► AILE[®] VRV-308



FYTG01 Probe

- AILE 's FYTG01 is designed to be mounted through a 50mm hole and sealed with a gasket and locknut or screwed directly into a 50mm BSP thread. Access to the height adjustment for the probe or the wiring is through the top of the housing. The probe can be adjusted by loosening the internal capscrews and sliding the probe up or down to the correct sensing height.

The body has provision for two cable entries, M20 eliminating the need to mount a tee with cover in the conduit line. This allows for better connections, easier fault finding and quicker installation.

► Materials:

Aluminium lid, body & compression bush, Nitrile seals, Zinc plated screws & washers. AILE 's OVERFILL PROTECTION Probe provides all the features associated with optic overfill protection probe technology. Combined with this, the probe has some significant advantages in the areas of specialist applications.

Applications like corrosive chemicals, high temperature and low temperature require specialised materials of construction. As such, the one piece glass probe developed by AILE , solves the problems associated with these environments. The unique construction of this probe means there is no possible attack either chemically or atmospherically (temperature range from -40c to +100c).

The probes, like all Liquip probes, are designed to be totally interchangeable with other approved systems.

► Specifications:

- ◆ Will accommodate probe dia.22.3mm to 25.5mm with min. probe length 70mm.
- ◆ Maximum length of probe inside housing is 87mm.
- ◆ Maximum plate thickness for mount is
- ◆ Overall height is 101mm, overall dia. is 107mm.
- ◆ Weight 1.1 kg
- ◆ Mounting via 50mm BSP male thread or into 62mm dia.Hole.
- ◆ Made by AILE co.ltd

► Features & Benefits:

- ◆ Glass body
- ◆ Solid state electronics in the compound
- ◆ Unique light reflection system ensures accuracy
- ◆ Probe dimensions universal to existing flanges
- ◆ Self checking circuitry for fail-safe operation



CZ 01 Slot Truck Plug

- Truck plug made from ShangHai Aile company is used for overfill protection with added ground assurance. Industry standard 10 pin overfill protection plug is interchangeable with others of the same type, however incorporates no-cost wiring connectors which ensure the tanker is bonded to the gantry so long as the plug body is correctly mounted. This dissipates static electricity and prevents sparks due to differences in potential. CZ 01 series provides standard 10 pin connection for tanker system with room for an electronic dummy should this be required in a 2-wire operation.

► Features & Benefits:

- ◆ 3 and 4 bayonet fixing to industry standard
- ◆ 10 pin as standard
- ◆ Conduit ports 1/2" NPT (straight) thread, two options
- ◆ Mounting by 2 stainless steel bolts 8mm dia. via Delrin insulating bushes
- ◆ CZ 01 103 - 3 pin bayonet fastening
- ◆ Weight-1.3kg.
- ◆ Aluminium nose-cone, hard anodised
- ◆ Stainless steel pins and terminator
- ◆ Made by ShangHai AILE co.ltd

► Materials:

Where CZ 01 series differs is in the way it ensures good grounding of the tanker to the gantry and ensures dissipation of static electricity and so eliminates sparks. Hence the name "Ground Boss".

It has long been a recommended practice to break the number 10 common earth return and "force" it through the tanker frame by terminating and bolting the wire through the tank at a distance apart to ensure grounding of the tank. However the difficulty in doing this cheaply and neatly has meant that only a few tankers use the technique.

"Ground Boss" achieves this at essentially no cost by using the mounting bolts inside the plug. Internal insulating bushes ensure the only electrical path is via the external fastener, i.e. those bolted to the tanker; and the number 10 common earth wire is run from pin 10 to one bolt head and from under the other bolt head via conduit to the probes. 9 and 10 are simply looped together if required. Therefore the only way the tanker can load is by having its tank in good contact with the rack monitor earth.



► AILE CZ 01 Slot Truck Plug



Plug and Cable Assemblies

- ▶ AILE Plugs and Cables are used to connect the AILE loading rack control monitor to the vehicle mounted socket. The plugs and cables are the pathway for the control unit/sensor signals which monitor the status of the overfill prevention sensors in the vehicle compartments during loading operations.

Specifications:

Horsepower: 1/5 HP
Voltage: 220V single phase / 380V three phase
Hertz: 50/60Hz
RPM: 1450 RPM
Maximum Capacity: 120 LPM
Inlet/Outlet diameter : 3/4 Φ
Ambient Temperature: -35℃ to 65℃

Features & Benefits:

- ◆ Extremely rugged design which can withstand harsh environments and mishandling.
- ◆ Non-removable socket locator pins fitted directly into the plug housing.
- ◆ Permanent socket locator pins that won't loosen or back out.
- ◆ Internal cable retention clamp to prevent cable pull-out or twisting.
- ◆ Molded glass-reinforced polycarbonate contact block with positive locator keyways for easy disassembly/reassembly.
- ◆ Molded arrow on plug housing for easy visual alignment with socket.
- ◆ Stainless steel electrical contact, spring loaded to insure proper contact with the truck socket pins.
- ◆ Virtually indestructible polyurethane plug shell, color coded to match truck sockets.
- ◆ Heavy-duty stainless steel strain relief spring prevents the cable from bending or crimping.

AILE Plug and Cable Assemblies



AST System Testers

- ▶ Tests Thermistor and Two-Wire Optic Tank Truck Equipment and Thermistor Loading Rack Overfill Prevention Systems.
- ▶ When connected to the tank truck equipment via the system socket, the tester checks each individual thermistor or optic sensor for proper operation. It will also test electronic dummy elements that are used on tank trucks with less than six compartments. The tester verifies correct operation of the above components and indicates faults such as shorted or open wires. It may also be used to determine which compartment(s) are overfilled. There is no need to climb on top of the tank truck and open the hatch(es). Individual sensors may also be tested before installation or after removal. When the tester is connected to the rack equipment it verifies the monitor's operation by selectively testing each channel.

Features & Benefits:

- ◆ Lets you check thermistor and 2-wire optic sensing equipment on the tank truck and thermistor loading rack equipment with just one tester.
- ◆ Easy to follow test procedures.
- ◆ All operating instructions are directly on the large front and side labels of the tester.
- ◆ Lightweight and portable.
- ◆ Available with a variety of plug styles.
- ◆ The AST Tester can be used to check thermistor and 2-wire optic tank truck overfill prevention sensors and thermistor loading rack controls. These stand-alone testers are battery operated. They have an integral plug and socket for making connections to the tank truck vehicle sockets or rack plugs.

AILE AST System Testers

Earthing bolt

- ▶ It is between the Slot Truck Plug and Truck Bracket.To prevent electric shock and to reduce electrostatic discharge.

Features & Benefits:

- ◆ Meet International Industry Standard.
- ◆ Mounting by 2 stainless steel bolts, via insulated gasket.
- ◆ Prevent the accumulation of charge, resulting in electrostatic discharge and endanger equipment and personal safety.
- ◆ When the equipment chassis of insulation damage ,to promote the protection of the power movements and cut off the power.
- ◆ It can be shielded enormous electric field.



AILE Earthing bolt

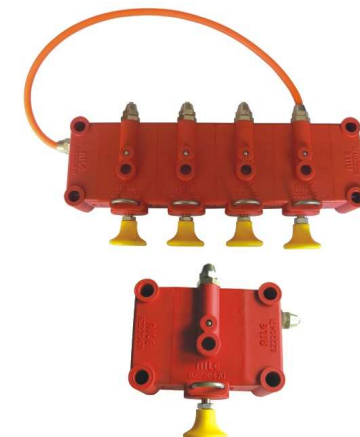
PCS Pneumatic Control Switch

- ▶ AILE 'S purpose designed small, compact and extremely rugged pneumatic control switch for the activation of pneumatically operated valves on petroleum tank trucks. The modular construction is available in different versions to suit any application. It can be used as single version or in multiple-position version to control the tank truck pneumatic system.

Features & Benefits:

- ◆ Small, compact and robust
- ◆ Universally applicable
- ◆ Simple, trouble-free fitting and operation
- ◆ Easy operation due to air pressure-supported pull button
- ◆ Emergency control switch is available

AILE PCS Pneumatic Control Switch



Materials:

Body: POM
Shaft: Brass
Seals: Viton & Buna-N

Ordering Specifications:

Product #	Number of switch	Emergency control
PCS-1	1	NO
PCS-2	2	NO
PCS-2-K	2	YES
PCS-3	3	NO
PCS-3-K	3	YES
PCS-4	4	NO
PCS-4-K	4	YES

AIL Air Interlock

► The AIL series Air Interlocks are designed for installation on API Valves, Vapor Recovery Valves, Guardbar Systems. Play it safe with this valve that locks up the brakes on the trailer, preventing it from leaving the loading rack while connected to the loading arm.

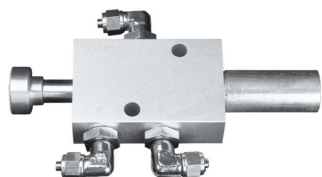
This three-way air valve can be used normally open or normally closed, has an adjustable stem, and comes with standardized TTMA and API mounting holes. The anodized aluminum valve is used on all API bottom loading valves and all Vapor Check Valves.

► Features & Benefits:

- ◆ Mount to API's, vapor valves and safety bars
- ◆ Heat-treated, anodized aluminum construction
- ◆ 1/4" NPT Connection Ports
- ◆ Choice of standard piston end or paddle end (AILE VRV-A Vapor Recovery Valves)
- ◆ Adjustable stroke to accommodate length variations
- ◆ Improved seal design for long term performance & heavy duty plunger tip(AIL-01)

► AILE[®] AIL Air Interlock

*Paddle end for use with AILE VRV-A Vapor Recovery valves only



AIL-01



AIL-02

ZHF-V Series Of Vapor Check Valve Adaptors

► AILE'S ZHF-V vapor check valve adaptors are used on the vapor recovery riser pipes on an underground storage tank. Dual point vapor recovery systems provide an easy and economical installation at new locations and faster drop times than coaxial systems due to a straight 4" drop across the top and vapors collected from 3" or 4" riser pipe.

The vapor check valve adaptor permits coupling to the vapor return line from the underground tank in dual point systems. The poppet design seals off the vapor path when not coupled.

► AILE[®] ZHF-V

► Package:

Net Weight: 1.95Kg/pc
Gross Weight: 1.96kg/pc
36.5x48.5x40cm³/ case of 36pc

► Ordering Specifications:

product#	Connection Threads	SIZE	MATERIAL
ZHF-V-801	NPT 4"Female	4"	Anodized aluminum
ZHF-V-802	BSPT 4"Female	4"	Anodized aluminum

► Features :

- ◆ Constructed of anodized aluminum body
- ◆ Eliminates digging---Slips into existing drop tubes
- ◆ Fits all 4" vapor recovery elbows



SF-API-B Sightglass Flange:

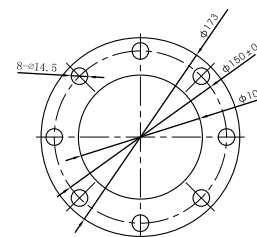
► SF-API-B Sightglass flanges bolt behind an outlet adaptor to show if product is present and its colour to confirm product identification.

The standard drilling is TTMA, so the unit will fit behind and API adaptor as well as an AILE HYF-O1 API Bottom Loading Valve. 4" is available.

► Ordering Specifications:

Product #	Thickness
SF-API-B-25	25mm
SF-API-B-30	30mm
SF-API-B-35	35mm
SF-API-B-40	40mm

► AILE[®] SF-API-B



MO-FV Mechanical Operator

► AILE MO-FV Compact Mechanical Operators function cable operated emergency valves from a central location on a cargo tank. Available from 1 up to 5 compartments in powder coated steel; each compartment is supplied with a fusible link designed to melt at not more than 2500F as well as non-slip cable connectors that allow cable to be cut to length after installation.

► AILE[®] MO-FV

► Ordering Specifications:

product#	No. of Compts	Weight(lb)	Wide(inch)
MO-FV-1	1	7.1	4.2
MO-FV-2	2	9.5	4.2
MO-FV-3	3	12.7	7.75
MO-FV-4	4	15.1	7.75
MO-FV-5	5	17.5	7.75

► Features :

- ◆ Compact Design
- ◆ Powder Coated Steel
- ◆ Lever arms provide 2-3/8" stroke and 5.6:1 mechanical advantage
- ◆ Two trip levers provided for flexibility in locating cable remote controller for attaching two remotes
- ◆ Solid Handles
- ◆ Non-Lubricated Stainless Shaft



SYWG-01 Delivery Elbow

► AILE 'S Dual Point Systems Liquid Delivery ELBOWS This durable product Elbow was designed for those deep tank burial applications and has a high flow rate to the unrestricted flow pattern.It fits all 4" top seal adaptors.It can also be ordered with a variety of different adaptors to meet any requirements.Its single four bolt flangedesign allows for easy replacement of adaptors over competitive threaded styles,and is designed for extremely easy on and off coupling due to brass alloy locking cams.

► **Package:**
Net Weight: 6Kg/pc
Gross Weight: 7.52kg/pc
54 x33 x24 cm³/ case of 1pc

► Ordering Specifications:

Product #	Connection Threads
SYWG-O1-801	4"male cam and groove
SYWG-O1-802	NPT4"Thread male
SYWG-O1-803	BSPT4"Thread male

► Features & Benefits:

- ◆ Light weight cast aluminum
- ◆ Two-piece modular construction: upper - half replaceable
- ◆ Fits all 4" top seal adaptors
- ◆ Protective base shield
- ◆ Unique cam locking handle for easy on/off coupling
- ◆ Exclusive Spring - Link design reduces coupling linkage damageand alerts operator when elbow isn't properly seated.

► AILE[®] SYWG-01



SYWG-E1 Series Of Delivery Elbows

► This Delivery Elbow was design for those Deep Tank Burial applications and a high flow rate due to the unrestricted flow pattern. It fits 4" top seal adaptors. It can also be ordered with a variety of different adaptors to meet any requirements. Its single four bolt flange design allows for easy replacement of adaptors over competitive threaded styles, and is designed for extremely easy on and off coupling due to aluminum bronze alloy locking cams.

► Technique Specifications:

Net Weight: 5.80kg/pc
Gross Weight: 6.50kg/pc
54x33x24 cm³/ case of 1pc

► Ordering Specifications:

Product #	Connection Threads
SYWG-E1-504	4"Male cam and groove
SYWG-E1-604	4" Male-NPT thread
SYWG-E1-704	4" Male-BSPT thread

► Features & Benefits:

- ◆ Light weight Cast Aluminum
- ◆ 4" Male NPT/BSP, Male cam and groove
- ◆ Fits all 4" top seal adaptors
- ◆ Protective base shield
- ◆ It includes sight glass which allow the operator to see whether or not product is flowing

► AILE[®] SYWG-E1



SYWG-V Dual Point Vapor Recovery Elbows

► This durable cast aluminum elbow ensures complete vapor recovery for dual point systems, and can be ordered with a variety of different adapters to meet any requirement. The simple four bolt flange design allows for easy replacement of adapters over competitive threaded styles. Its low profile design allows for convenient storage and the specially designed quick grip one hand operation handle allows for easy on and off attachment.

► **Package:**
Net Weight: 6Kg/pc
Gross Weight: 7.52kg/pc
54 x33 x24 cm³/ case of 1pc

► Ordering Specifications:

Product #	Connection Threads
SYWG-V-201	3" Male cam and groove
SYWG-V-202	4" Male cam and groove

► Features & Benefits:

- ◆ Cast aluminum
- ◆ Compact, low profile design
- ◆ Four bolt flange pattern
- ◆ Protective base shield

► AILE[®] SYWG-V



AILE SYG-T Composite Tank Truck Drop Hose

► AILE manufacture a full range of composite hoses by utilizing hoses by utilizing special materials, with steel (and/or stainless steel) wires on both sides of the hoses to add strength. Combining with our proprietary, state of the art manufacturing equipment, The materials that were selected all have excellent resistance to most corrosive chemicals and hydrocarbon. The operating range of our products are from minus 30-degree to 80-degree Celsius. Composite hoses are light, safe, strong, oil and chemical resistant, thus could replace tradition rubber and metal hoses.

► Materials:

Inner Tube: Polypropylene Films
Cover: Blue, PVC Coated Fabric
Reinforcement: Steel Helix
Inside: Galvanized Steel
Outside: Galvanized Steel

► Ordering Specifications:

Diameter I.D (mm)	O.D (mm)	Working Pressure bar	Bursting Pressure bar	Bending Radius mm	Max Length meter	Weight kg/m
25	37	10	40	65	30	0.76
32	43.5	10	40	70	30	0.92
38	51.7	10	40	100	30	1.29
50	62.5	10	40	180	30	1.78
65	78.5	10	40	220	30	2.82
76	90	10	40	280	30	3.13
100	121	10	40	340	30	5.94

Hose couplings: According to customers' need

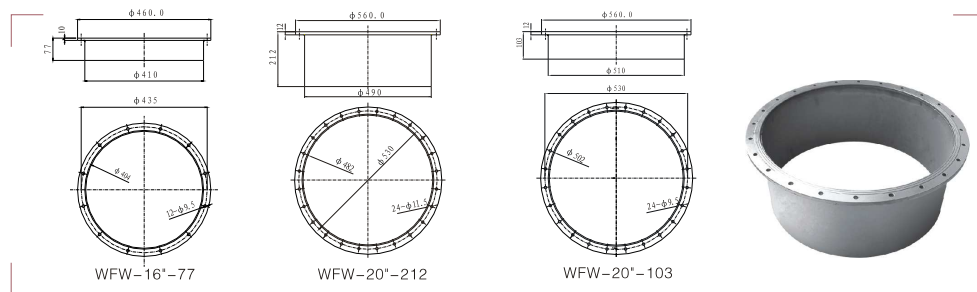
► AILE[®] SYG-T



Manhole Mounting Flanges and Weld-skirt

- Supplied by AILE in aluminium or steel, Manhole Mounting Flange and Weld-skirt is used for rounded AILE 20" Manhole, which will be welded with a 12mm thickness of Flanges and a height of 200mm skirt.

AILE[®] Manhole Mounting Flanges and Weld-skirts

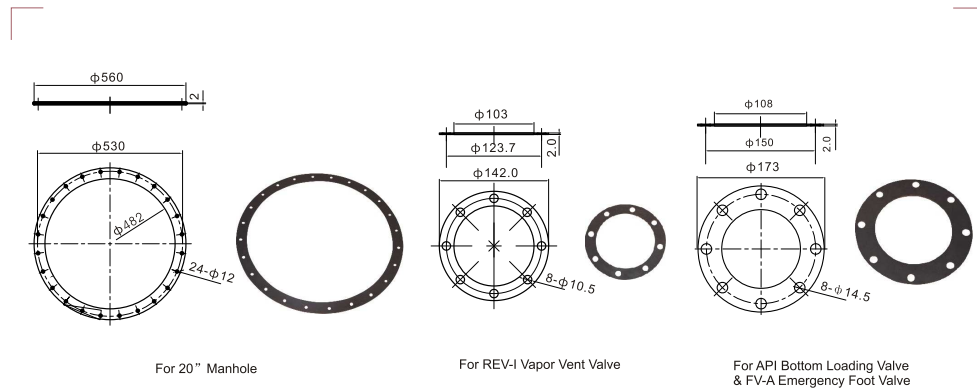


Cork Sealing Gaskets

- 1) FV-A Cork Sealing Gasket: Made of Cork and used for FV-A Emergency Valve.
- 2) Manhole Cork Sealing Gasket: Made of Cork and used for 20" Manhole.
- 3) Bottom Loading Adaptor Cork Sealing Gasket: Made of Cork and used for API Bottom Loading Valve.
- 4) REV-I Cork Sealing Gasket: Made of Cork and used for REV-I Vapor Vent Valve.



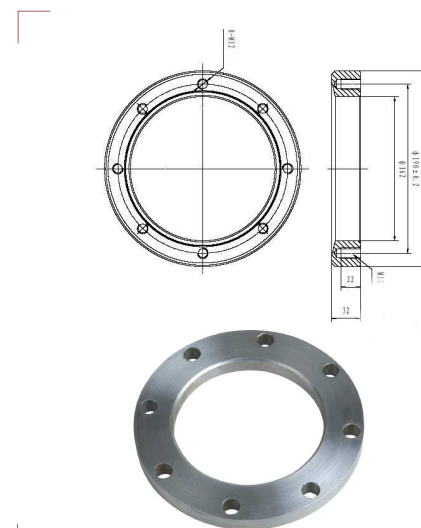
AILE[®] Cork Sealing Gaskets



The Flange For Valves

- Flange used to conjoin the tank of the tank truck and bottom loading valve.

AILE[®] The Flange For FV-A Emergency Foot Valve



Aile SQG Vapour Hose

- Aile SQG Vapour hose for use between the vapour vent and the pipe.

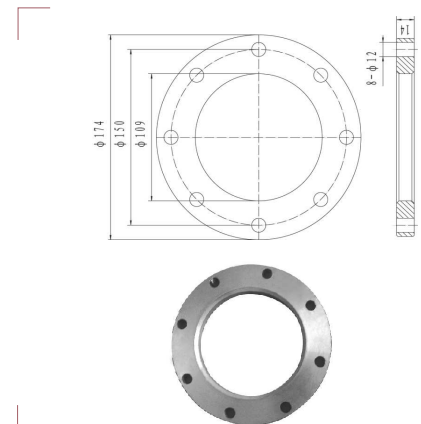
AILE[®] SQG Vapour Hose



Blockage cover for manholes

AILE[®] Blockage cover for manholes

AILE[®] Flange for Bottom Loading Valve



AILE®

SHANGHAI
AILE PETROLEUM
EQUIPMENT
MFG.CO.,LTD.

Vapor Recovery System Products



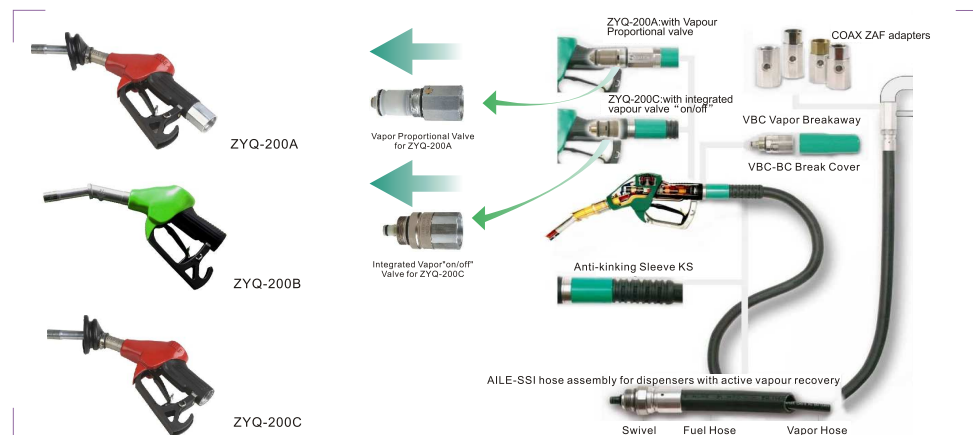
AILE® SHANGHAI AILE PETROLEUM EQUIPMENT MFG.CO.,LTD.

ZYQ-200 Series Of Vapour Recovery Nozzles

- ▶ **AILE ZYQ-200 series** of vapour recovery nozzles are suitable for full electronic vapour/volume control dispensers. The fuel-dispensing nozzle with an automatic safety shut off for wet-hose use with electrical operated petrol dispensing pumps for the 'active' vapour recovery. Each nozzle has been subject to stringent tests before leaving the factory and validated by the applied markings and date code. AILE ZYQ-200 is supplied for connecting to the AILE-SSI hose.
- ▶ **Materials:**
Body: aluminium alloy
Seals: viton
SPOUT: brass with nickel coated
GUARD: aluminium of PA66
Lever: electrophoresis coated
Covers: Soff PVC
- ▶ **Package:**
Net Weight: 1.8 kg/pc
Gross Weight: 2 kg/pc
55x34x32.2cm³/Case of 10pc
- ▶ **Ordering Specifications:**
- ▶ **Features & Benefits:**
 - ◆ APPLICATION: For all normal gasoline fuels - leaded or unleaded. Not suitable for water and hydrous liquids, alcohols, solvents, viscous oils and diesel fuels.
 - ◆ EQUIPMENT: TRISTOP=venture controlled automatic shut-off +safety (protection when tilting and falling) + optionally with pressure controlled safety shut-off.
 - ◆ SPECIFICATION: Automatic nozzle ZYQ-200 series for motor car refueling up to 45L/min, with Vapour recovery for working pressure from 0.5bar up to 3.5bar, at ambient temperatures from -20°C up to +55°C.
 - ◆ AVAILABLE COLORS: Red, Yellow, Blue, Green, Black.
 - ◆ THREE POSITION HOLD-OPEN DEVICE: control of hold-open mechanism means easy setting of flow rate
- ▶ **Warning:**
Using foreign objects to hold open automatic nozzles could result in failure to shut-off and personal injury.

Product #	Inlet thread	Outlet diameter	Material Of Lever-guard	Type of vapour valve
ZYQ-200A-801	NPT M34X1.5 female	13/16"	Pa66	with vapour proportional valve
ZYQ-200A-802	NPT M34X1.5 female	13/16"	Aluminum	with vapour proportional valve
ZYQ-200B-803	NPT M34X1.5 female	13/16"	Pa66	N/A
ZYQ-200B-804	NPT M34X1.5 female	13/16"	Aluminum	N/A
ZYQ-200C-805	NPT M34X1.5 female	13/16"	Pa66	with vapour "on/off" valve
ZYQ-200C-806	NPT M34X1.5 female	13/16"	Pa66	with vapour "on/off" valve

▶ AILE® ZYQ-200 Series



VRP-76L Dispenser Mounted Vacuum Pump For Stage II Vapor Recovery

- **Benefits:**

- ◆ Easy mount in all type of dispenser
- ◆ Driven by suction type dispenser motor
- ◆ No electronic parts
- ◆ Durable & high efficiency
- ◆ Less maintenance cost
- ◆ Able to handle 2 nozzles in simultaneous
- ◆ Compatible to all vapor recovery system
- ◆ Full service parts support
- ◆ Designed for UL and ATEX standard

► **Specifications:**

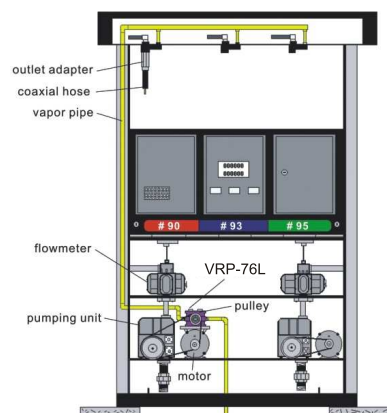
Efficiency: 1/8 HP
RPM: 1800 rpm
Capacity: 80 LPM
Inlet/ outlet dia: 1/2 ϕ
Temperature Range: -35°C to 65°C

► **Installation Instruction:**

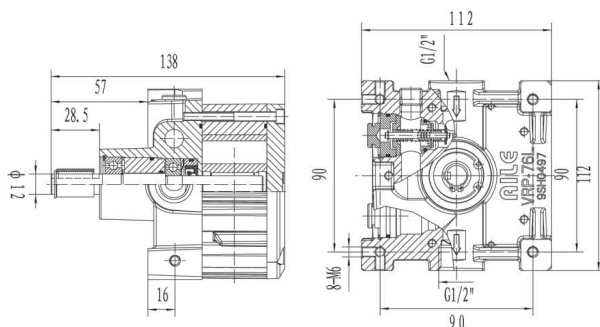
One pulpm is required to mount on a bracket and attached on the frame of the dispenser. Calculation is required to work out the dimension of pulley for VRP-76L pump. It is then driven by a belt extended form dispenser motor and fuel pumping unit. Diameter of vapor pump pulley related to speed and pulley size of dispenser motor. VRP-76L pump will give you optimum performance of vacuum 90" W.C. At 1800 rpm. Therefore to work out diameter of VRP-76L pulley will be 1800 rpm divided by rpm of motor and multiply the diameter of motor pulley.

Features:

- ◆ High durability as it has cast iron casing and able to work under extreme tough condition in various temperature and climate; mishandling, last long running without lubricant.
- ◆ Simple and easy installation driven by pulley & belt and powered by motor form dispenser.
- ◆ One pump one dispenser to give you maximum capacity and efficiency.
- ◆ Easy for maintenance and big saving for long term.
- ◆ No electrical and electronic parts.
- ◆ Simple mechanism using only vane and rotor to pull vacuum and minimize cost of spare parts.



► **AILE® VRP-76L**



DR-030 Dispenser Mounted Vacuum Pump For Stage II Vapor Recovery

- **Benefits:**

- ◆ Easy munt in all type of dispenser
- ◆ Driven by AC electric motor in single phase and three phase power supply
- ◆ No electronic board or control device require
- ◆ Full aluminum die casting construction
- ◆ Durable & high efficiency
- ◆ Less maintenance cost
- ◆ Able to handle 3 nozzles in simultaneous
- ◆ Compatible to all vapor recovery system
- ◆ Full service parts support
- ◆ Designed for UL and ATEX standard

► **Specifications:**

Horsepower: 1/5 HP
Voltage: 220V single phase / 380V three phase
Hertz: 50/60Hz
RPM: 1450 RPM
Maximum Capacity: 120 LPM
Inlet/Outlet diameter : 3/4 φ
Ambient Temperature: -35°C to 65°C

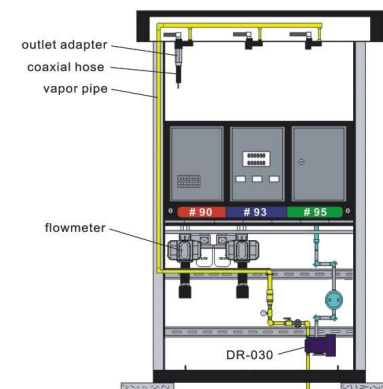
► **Installation Instruction:**

One pump is required to mount on a bracket and attached on the frame of the dispenser. Wiring direct connect to power supply in conjunction with nozzle hook signal to turn on the motor. A simple circuit board with relay control to handle the nozzle hook up signal is required.

DR-030 pump will work at optimum Vacuum level 90" W.C. and will produce max capacity of vapor return in 120 lpm when dispenser operating 3 nozzles in simultaneous.

► **Features:**

- ◆ High durability as it is a full aluminum die cast construction and able to work under extreme tough conditions in various temperature and climate; mishandling, last long running without lubricant.
- ◆ Simple and easy installation driven by A/C power in 1phase 220V or phase 380V. One pump one dispenser to give you maximum capacity and efficiency.
- ◆ Easy for maintenance and big saving for long term.
- ◆ No external electrical and electronic parts.
- ◆ Simple mechanism using only vane and rotor to pull vacuum and minimize cost of spare parts.



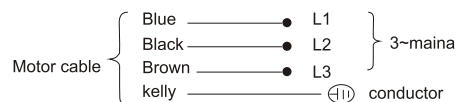
► **AILE® DR-030**



VRVP Vapor Recovery Vacuum Pump

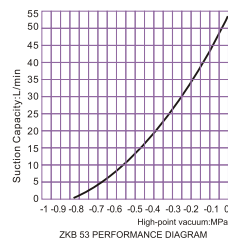
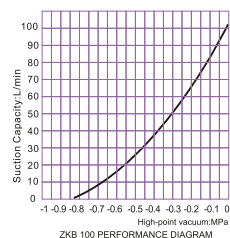
► AILE brand VRVP Series gasoline vapor recovery vacuum pump is a relatively consummate pump for gasoline vapor recovery system, it can work between the temperature of minus 40 degrees and 60 degrees, and can be used alone or as a part of the system in gas stations. In the Gasoline vapor recovery system, the pump is mainly used for collecting gasoline vapor so to lower the pollution and save resources. As the environment pollution goes from bad to worse and the requirement for efficient use of resources increases persistently, gasoline vapor recovery vacuum pump will be used extensively in this area.

► Electrical connection of appliance with 3~electrical motor



Note: There are 4 wires in 4 colors in ZKB-100 and ZKB-53

- 1) The Blue, Black, Brown wires connect for 380 Voltage power.
- 2) The Kelly one connects the ground.



► AILE[®] VRVP



► Features:

- ◆ The characteristics of VRVP Series gasoline vapor recovery vacuum pump as follows:
- ◆ There fixed a pump shaft that is driven by the electromotor and is connected by a brace to a pole that link to a piston which can move up and down freely in a bush inside the pump.
- ◆ Above the piston, there is a seat assembly which includes a non return inlet valve and outlet valve for the gasoline vapor, and the above mentioned valves are linked to the pump inlet and outlet chamber respectively. What we need to do is to connect the pump inlet chamber with a pipe to the vapor recovery adapter, and connect the adapter to the refueling nozzle with a soft, double wall tube.

► Ordering Specifications:

Model	VRVP-100	VRVP-53
Power (w)	370	370
Suction Capacity (L/m)	100	53
Vacuum Pressure (Mpa)	-0.09	-0.09
Rotation Speed (RPM)	2800	2800
Voltage (V)	380 ±10%	380 ±10%
Weight (KG)	18	15
Dimension (mm)	450x163x205	310x163x205
Ex Marking	Ex dIIAT3	Ex dIIAT3
Ex Certificate Number	GYB081008	GYB081008

**Our Sincerely and innovated service,
Throughout the word.**



Let AILE march to the world and be known by the same.