diaphragm pumps in aluminium

RAASM air-operated diaphragm pumps are ideal for a wide range of uses and are arranged for numerous applications.

For various fluids

RAASM diaphragm pumps are compatible with a wide variety of fluids:

- Mineral and synthetics oils
- Abrasive fluids or fluids with suspended solids
- Water
- Muds
- Waste oil
- Antifreeze
- Diesel fuel

flexibility and modularity

RAASM diaphragm pumps are designed according to a modular concept in order to reduce the number of components. This means:

- different combinations for adapting the pump to specific applications
- fast and economical scheduled maintenance operations
- easy management of spare parts

The air-operated diaphragm pumps are oscillating transfer pumps with 2 opposed pumping chambers. Each chamber is divided into 2 hermetic parts, one for the air and one for the fluid. The 2 membranes are united by a metal shaft that forces the membranes to carry out an alternating motion. The introduction of air into one part of the chamber creates suction of the fluid in the opposed part of the other chamber and vice versa.

COMPLETE CYCLE SEQUENCE

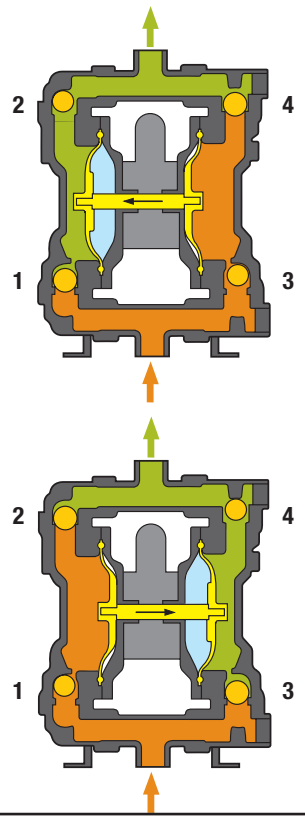
PHASE 1

The slide valve of the air distribution system sends air (blue) to the left chamber which, pushing the membrane outwards, compresses the previously sucked liquid (green). Through the effect of the pressure created, the **valve 1** closes and the **valve 2** opens, allowing the liquid to come out (green).
The right membrane, obliged to carry out the same movement as the left membrane joined by a shaft, creates a vacuum. Through the effect of the vacuum, the **valve 3** opens and the **valve 4** closes, enabling suction of the liquid (red).

AIR FEED **LIQUID IN SUCTION** **LIQUID IN DELIVERY**

PHASE 2

The slide valve of the air distribution system sends air (blue) to the right chamber which, pushing the membrane outwards, compresses the previously sucked liquid (green). Through the effect of the pressure created, the **valve 3** closes and the **valve 4** opens, allowing the liquid to come out (green).
The left membrane, obliged to carry out the same movement as the right membrane joined by a shaft, creates a vacuum. Through the effect of the vacuum, the **valve 1** opens and the **valve 2** closes, enabling suction of the liquid (red).

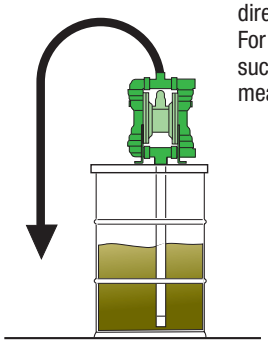


APPROXIMATE DISTANCES FOR CORRECT INSTALLATION OF A DIAPHRAGM PUMP

Suction	Delivery (depends on the following variables)
▪ vertically, not more than **20'**	▪ viscosity and temperature of fluid
▪ horizontally, not more than **66'**	▪ suspended solids
	▪ length/diameter of delivery hose and its constrictions
	▪ vertically, not more than **230'**
	▪ horizontally, not more than **650'**

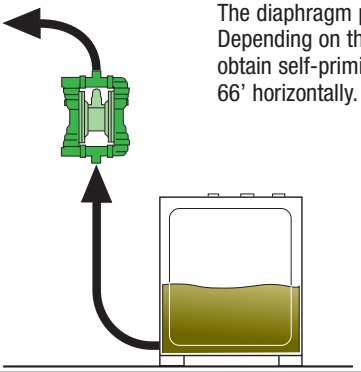
PUMP FOR DRUMS

The diaphragm pumps can be installed directly on a drum, tank or other container. For easy use of the pump, equipped with suction tube, it is fixed to the container by means of its adapter.



SELF-PRIMING PUMP

The diaphragm pumps are self-priming. Depending on the model, it is possible to obtain self-priming up to 20' vertically and 66' horizontally.

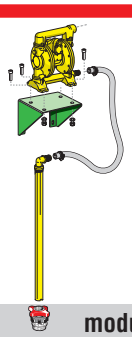


The transfer diaphragm pumps in die-cast aluminum, with high-quality components, ensure lasting and reliable operation even in extreme conditions.

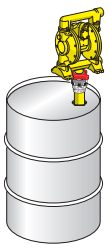
Membrane NBR High Nitrile

	P/N 32/2011NHH2-55	P/N 33500-55	P/N 33505-55
Pump material	aluminum	aluminum	aluminum
Membrane material	NBR High Nitrile	NBR High Nitrile	NBR High Nitrile
Ball valve material	Hytrel	Hytrel	Hytrel
Compatible fluids	water, mineral-vegetable oils, diesel oil	water, mineral-vegetable oils, diesel oil	water, mineral-vegetable oils, diesel oil
Air inlet connection	3/8” NPT (f)	3/8” NPT (f)	3/8” NPT (f)
Fluid inlet-outlet connection	3/4” NPT (f/f)	Suction tube ø 1.34” - 3/4” NPT (f)	Suction tube ø 1.34” - 3/4” NPT (f)
Air working pressure	29 - 90 psi	29 - 90 psi	29 - 90 psi
Air max. pressure	120 psi	120 psi	120 psi
Max. air consumption 120 psi	28 cfm	28 cfm	28 cfm
Noise level	75 dB	75 dB	75 dB
Deliverable oil temperature	14 - 122 °F	14 - 122 °F	14 - 122 °F
Bung adaptor P/N 33434-55	-	standard	standard
Suction tube length	-	37”	48.8”
Max. solids diameter	ø 0.06”	ø 0.06”	ø 0.06”
Suitable for drums or tanks	modular	with drum 400 lb	tank
	No.1 packing 0.71 ft³ 15 lb	*No.1 packing 1.41 ft³ 22 lb*	*No.1 packing 1.41 ft³ 24 lb*

TYPE OF INSTALLATIONS

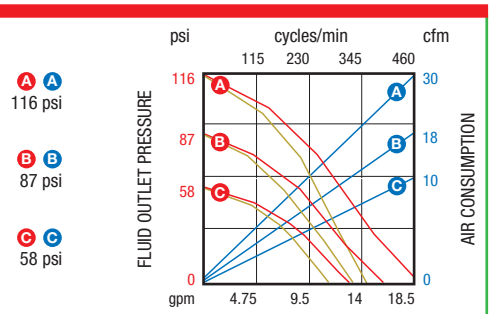


modular



drum or tank

PUMP PERFORMANCE



The transfer diaphragm pumps in die-cast aluminum, with high-quality components, ensure lasting and reliable operation even in extreme conditions. Ideal for transferring fluids even in the presence of suspended solids.

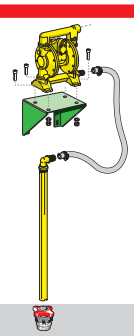
Membrane NBR High Nitrile

P/N 32/3011NHH2-55

Pump material	aluminum
Membrane material	NBR High Nitrile
Ball valve material	Hytrel
Compatible fluids	water, mineral-vegetable oils, diesel oil
Air inlet connection	3/4" NPT (f)
Fluid inlet-outlet connection	1 1/4" NPT (f)
Air working pressure	29 - 90 psi
Air max. pressure	120 psi
Max. air consumption 120 psi	70 cfm
Noise level	75 dB
Deliverable oil temperature	14 - 122 °F
Max. solids diameter	ø 0.08"

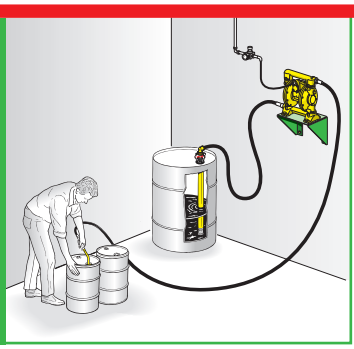
No.1 packing 1.6 ft³ *31 lb*

TYPE OF INSTALLATIONS



modular

USES

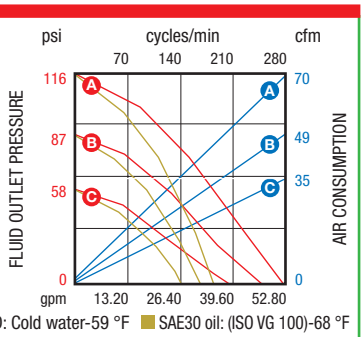


PUMP PERFORMANCE

A A 116 psi

B B 87 psi

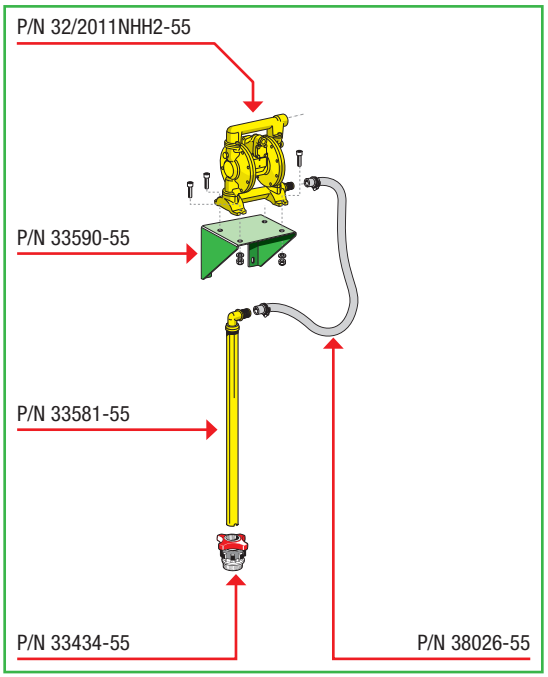
C C 58 psi

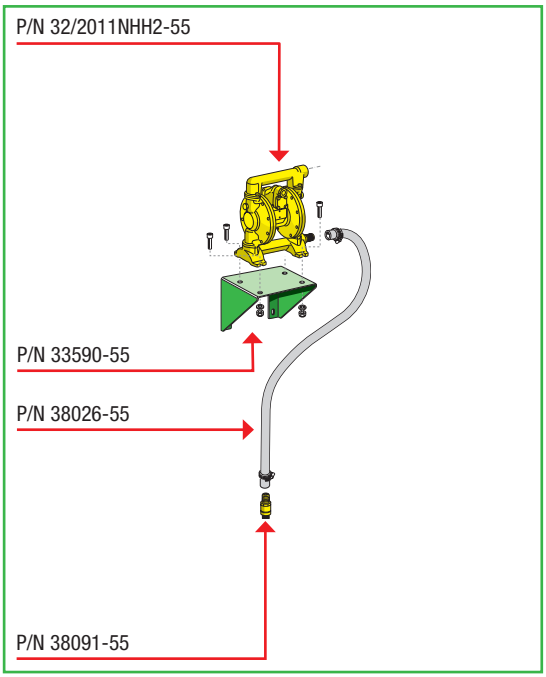


KIND OF FLUID: Cold water-59 °F SAE30 oil: (ISO VG 100)-68 °F

Modular wall-mounted kit for transfer from drums or tanks. Ideal for transferring low/medium-viscosity fluids such as: oil, antifreeze liquid, diesel oil, etc. Wall-mounting, with connection to a fixed system enables liquids to be transferred from the place of storage to the dispensing station. The rigid suction tube (P/N 33581-55) can be lengthened by means of modular elements (see page 90) for adapting to the height of the tanks.

	P/N 33510-55	P/N 33530-55
	Modular wall-mounted kit, for transfer from drums 400 lb	**Modular wall-mounted kit** for transfer from tanks with connection to the tank's discharge
Pump 1:1 - 18.5 gpm	32/2011NHH2-55 - seals NBR	32/2011NHH2-55 - seals NBR
Bung adaptor	33434-55	-
Check valve	-	38091-55
Flexible suction tube ø 1 1/4"	38026-55	38026-55
Rigid suction tube	33581-55	-
Pump support bracket	33590-55	33590-55
	No.2 packing 1.4 ft³ *33 lb*	*No.1 packing 1.1 ft³* *33 lb*





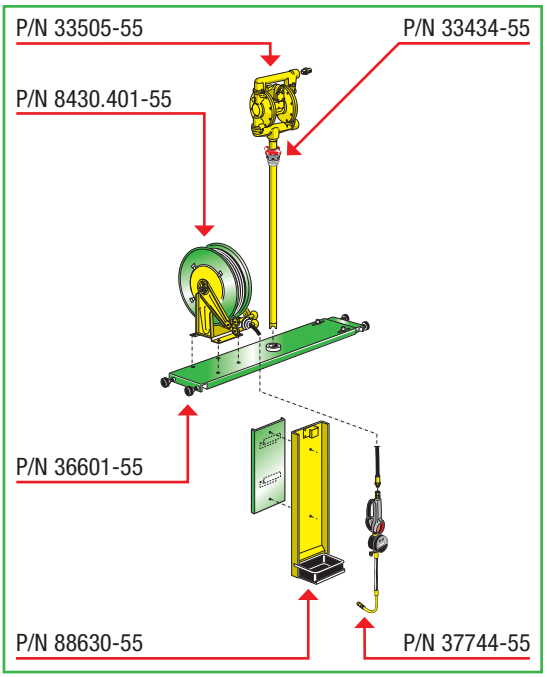
Kit for dispensing from tank. A complete solution for dispensing oil and other fluids. The dispensing pump and the hose reel are fixed directly to the tank by means of sturdy brackets.

P/N 33540-55

Dispensing kit for oil with pump inserted centrally and open hose reel

Pump 1:1 - 18.5 gpm	33505-55 - seals NBR
Bung adaptor	33434-55
Hose reel 1/2" - 35'	8430.401-55
Control valve with digital meter	37744-55
Drip tray	88630-55
Pump support bracket	36601-55

No.5 packing 6.9 ft³ *115 lb*



USES