rapid® GERMAN TECHNOLOGY

OP 50 KIII/2 # 55 004
OP 90 KIII/1 # 55 006

OP 50KIII/2

OPERATION MANUAL

1.

1. Safety instructios

Please observe: This operation manual contains all necessary information. Please read carefully to avoid damages and faults. All Rapid pieces of equipment are checked carefully before delivery for their perfect composition and function. In case of improper use all rights to claim under guarantee are void.

Make sure that only skilled staff is working with this device in order to prevent damages and accidents caused by improper use.

Environmental conditions i.e. humidity, low temperatures, sunlight and contamination may damage device.

Before using the device make sure that it is not contaminated to prevent any injury. Avoid any contamination of device as well as of environment. In case of any contamination during operation of device take care that it is immediately and professionally removed.

Always wear safety cloths respecting the applicable regulations for accident prevention

Only use this device conforming to its purpose and function. Improper use can cause severe injuries.

Caution – moving parts, sharp edges, hot machine parts or exhausting steam can cause severe injuries.

Before use always check the device for damages and leaks. In case of any damage or leak make sure that it is repaired professionally before use. Operation of defect device may cause severe injuries.

In case of any sign of damage or malfunction during operation of device stop device immediately to prevent injuries. Before next use make sure that the device professionally repaired.

Take care that in case of an accident all emergency measures are on hand

2. General advice

WARNING! EXCESSIVE AIR PRESSURE. Can cause personal injury, pump damage or property damage.

Do not exceed the maximum inlet air pressure as stated on the pump model plate.

Be sure material hoses and other components are able to withstand fluid pressures developed by this pump. Check all hoses for damage or wear. Be certain dispensing device is clean and in proper working condition.

WARNING! STATIC SPARK. Can cause explosion resulting in severe injury or death. Ground pump and pumping system.

Spark can ignite flammable material and vapors.

The pumping system and object being sprayed must be grounded when it is pumping, flushing, recirculating or spraying flammable materials such as paints, solvents, lacquers etc. or used in a location where surrounding atmosphere is conducive to spontaneous combustion. Ground the dispensing valve or device, containers, hoses and any object to which material is being pumped.

Use the pump grounding screw terminal provided. Connect a suitable ground wire to a good earth ground source.

Secure pump, connections an all contact points to avoid vibration and generation of contact or static spark.

Consult local building codes and electrical codes for specific grounding requirements.

After grounding, periodically verify continuity of electrical path to ground. Test with an ohmmeter from each component (e.g., hoses, pump, clamps, container, spray gun, etc.) to ground to insure continuity. Ohmmeter should show 100 ohms or less.

Use proper ventilation.

Keep inflammables away from heat, open flames and sparks.

Keep containers closed when not in use.

WARNING! Pump exhaust may contain contaminants. Can cause severe injury. Pipe exhaust away from work area and personnel.

In the event of a diaphragm rupture material can be forced out of the air exhaust muffler.

Pipe the exhaust to a safe remote location when pumping hazardous or inflammable material.

WARNING! HAZARDOUS PRESSURE. Can result in serious injury or property damage. Do not service or clean pump, hoses or dispensing valve while the system is pressurized.

WARNING! EXPLOSION HAZARD. Models containing aluminium wetted parts cannot be used with III.-Tricholorethane, Methylene Chloride or other Halogenated Hydrocarbon solvents which may react and explode.

CAUTION! Verify the chemical compatibility of the pump wetted parts and the substance being pumped, flushed or recirculated.

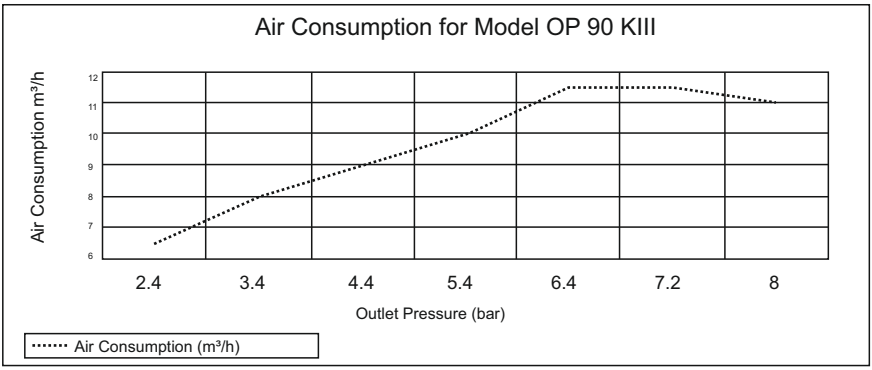
CAUTION! Do not use the pump for the structural support of the piping system. Be certain the system components are properly supported to prevent stress on the pump parts.

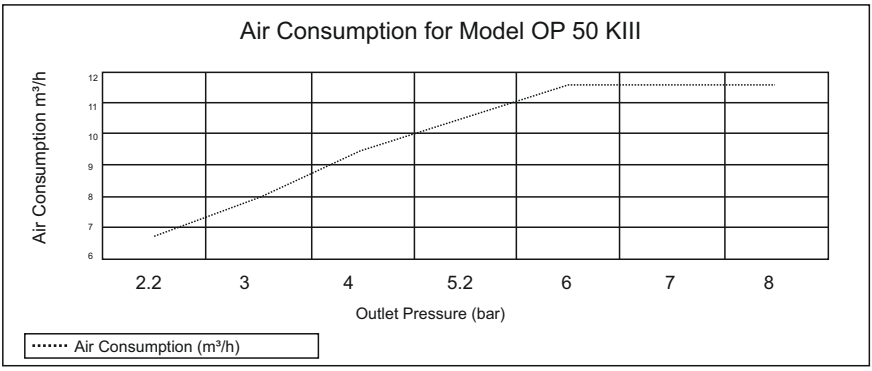
CAUTION! Prevent unnecessary damage to the pump. Do not allow pump to operate when out of material for long periods of time.
Disconnect air line from pump when system sits idle for long periods of time.

WARNING! EXCESSIVE AIR PRESSURE. Can cause pump damage, personal injury or property damage.

3. Technical data

Modell / Spec.	OP 50 KIII/2	OP 90 KIII/1
Art. No.	55 004	55 006
Inlet / Outlet	3/4"	1"
Air inlet	1/4"	1/4"
Flow rate	90 L/min	60 L/min
Air inlet pressure max.	8bar	8bar
Outlet pressure	8bar	8bar
Max. diameter	1/8"	1/8"
Membrane	Nitrile, Flourin Rubber	


Air Consumption for Model OP 90 KIII
Air Consumption m³/h
12
11
10
9
8
7
6
2.4
3.4
4.4
5.4
6.4
7.2
8
Outlet Pressure (bar)
Air Consumption (m³/h)


Air Consumption for Model OP 50 KIII
Air Consumption m³/h
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4
5.2
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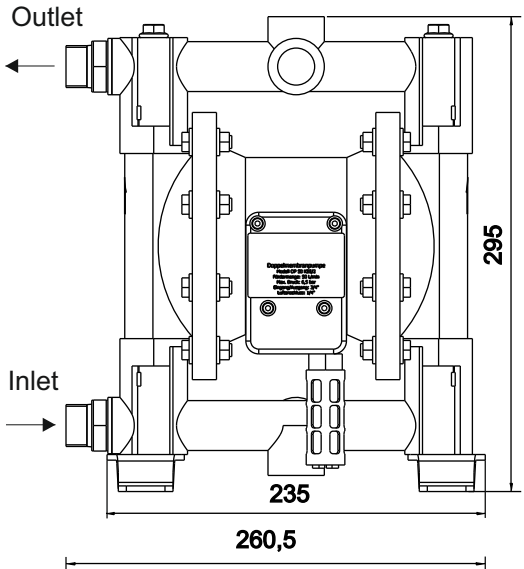
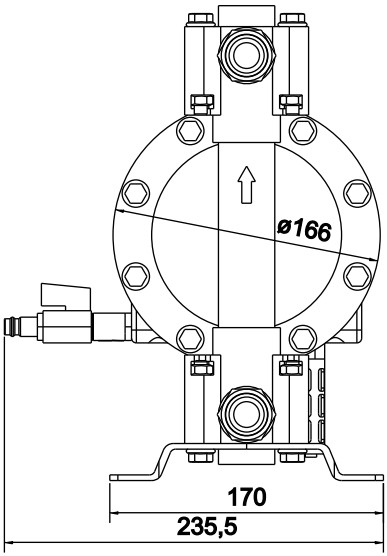
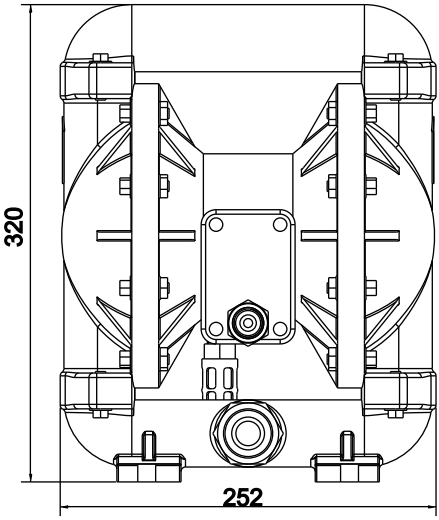
7
8
Outlet Pressure (bar)
Air Consumption (m³/h)

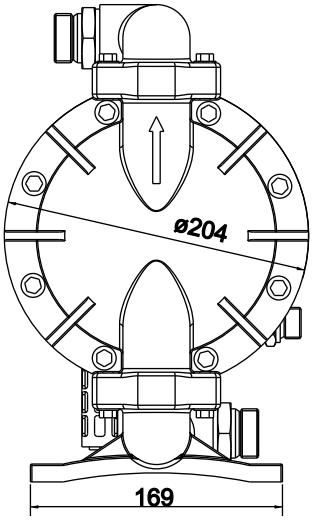
OP 50 KIII/2 # 55 004

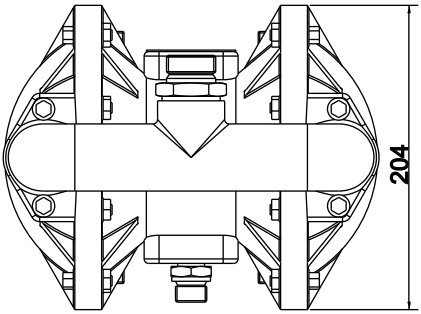


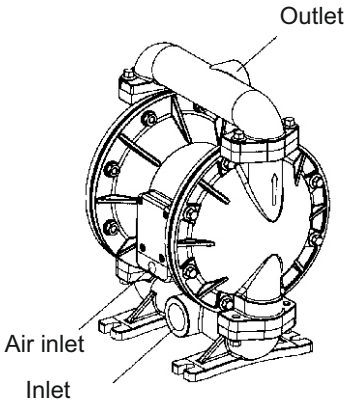


OP 90 KIII/1 # 55 006









4. Description

The diaphragm pump offer high volume delivery even at low air pressure.

Air-operated double diaphragm pumps utilize a pressure differential in the air chambers to alternately create suction and positive fluid pressure in the fluid chambers, ball check insure a positive flow of fluid.

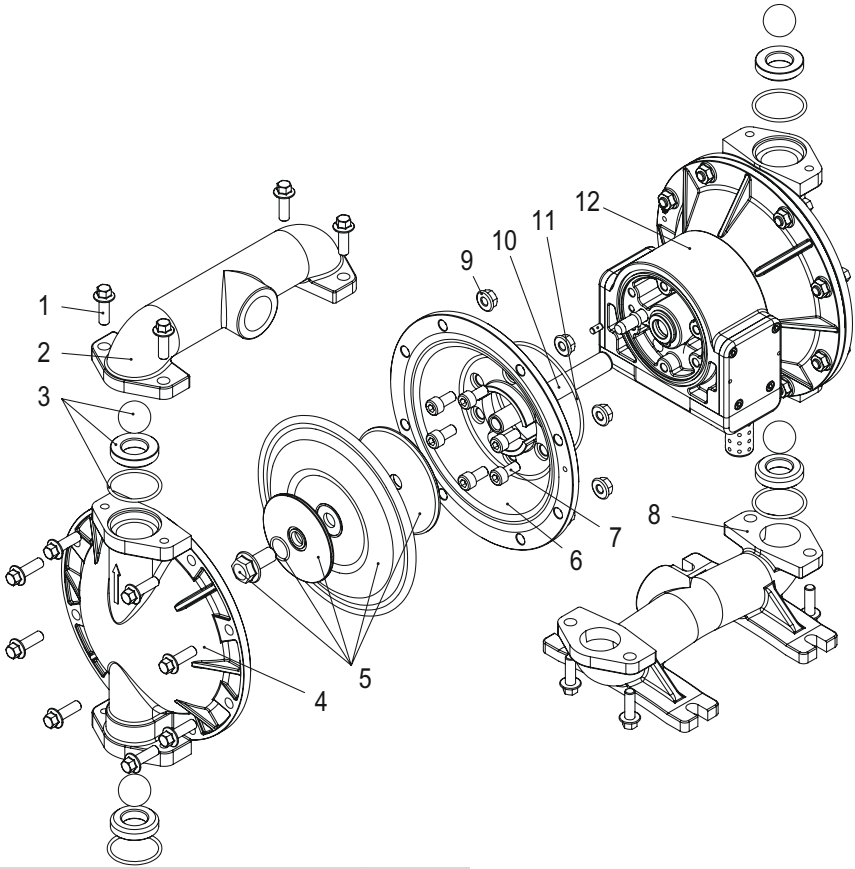
Pump cycling will begin as air pressure is applied and it will continue to pump and keep up with the demand. It will build and maintain line pressure and will stop cycling once maximum line pressure is reached (dispensing device closed) and will resume pumping as needed.

5. Assembling / Installation

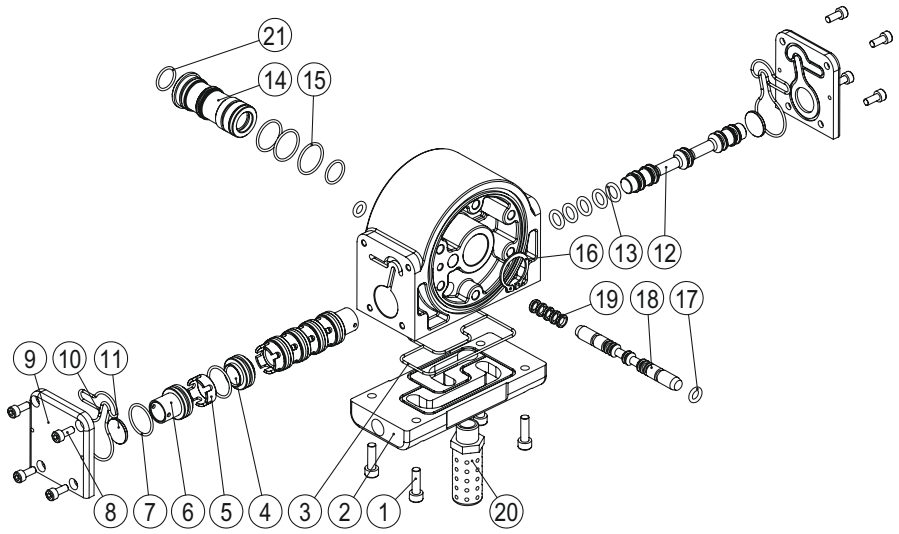
Pumpe is delivered assembled

It is indespensible to pay attention that there are noch leaks when connecting all feeding pieces - medium /air - to avoid accidents and impurities.

6. Spare parts and accessories

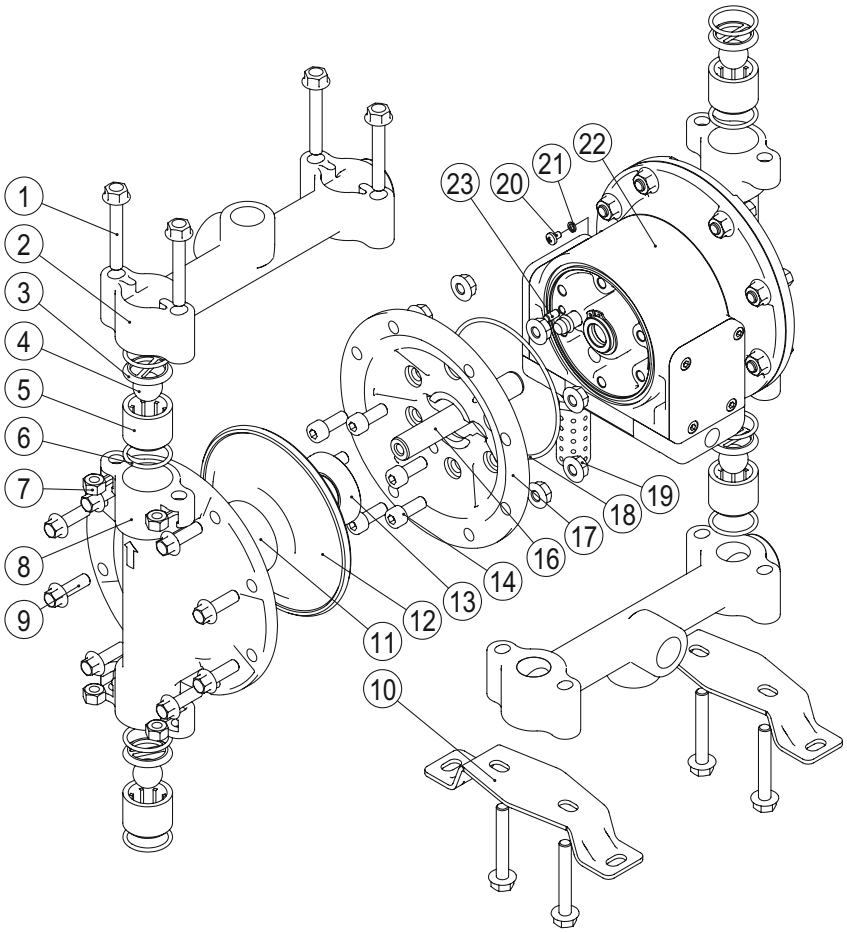


OP 90 KIII/1		
Nr.	Description	Qty
1	Hexagon bolt	24
2	Discharge manifold	1
3	seal set valve seat	1
4	Liquid chamber	2
5	Seal seat diaphragm	1
6	Air chamber	2
7	screw	12
8	Inlet manifold	1
9	Nut M8	16
10	Connection shaft	1
11	O-ring	2
12	Air motor assembly	1



air motor section

Pos.	Description	Qty	Pos.	Description	Qty.
1	Hexagon bolt	4	11	Washer	2
2	Press board	1	12	Major Valve	1
3	Seal for press board	1	13	O-ring	5
4	Spacer	4	14	Sleeve	1
5	Spacer	5	15	O-ring	3
6	Spacer	2	16	Retaining ring 25	1
7	O-ring	6	17	O-ring	2
8	Hexagon bolt	8	18	Pilot valve	1
9	Gasket	2	19	O-ring	5
10	Seal for gasket	2	20	Muffler	1



OP 50 KIII/2

Pos.	Description	Qty.	Pos.	Description	Qty.
1	Hexagon bolt	8	9	Screw	12
2	Discharge manifold	2	10	Connecting shaft	1
3	Seal set valve seat	1	11	Air chamber	2
4	Liquid chamber	2	12	Nut	1
5	Hexagon bolt	16	13	Screw	1
6	Nut M8	24	14	O-Ring	2
7	Seal set diaphragm	1	15	Air motor assembly	1
8	Bracket	2			

7. Operation

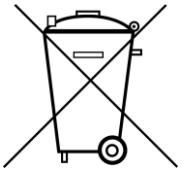
Prüfen Sie vor jeder Inbetriebnahme Leitungen auf Dichtigkeit und beheben eventuelle Mängel.
Reinigen Sie sowohl Pumpe als auch Umgebung, um Unfälle zu vermeiden.

Schließen Sie die Luftversorgungsleitungen an. Die Pumpe startet.

8. Maintenance and trouble shooting

Problem	Cause	Solution
Product dicharge from exhaust outlet	diaphragm rupture, loss of tightness	check diaphragm and change if needed
Air bubbles in productdischarge	pipes are leaky	tighten pipes
	pipes inside pumpe leaky	check o-rings, and replace if needed
	loss of tightness of diaphragm nut	Mutter wieder anziehen
Low output, erratic flow, or no flow	pipes wear or snapped off	check pipes for leak and repair if needed (pipes need to be air tight !)
	solid objects logged in the diaphragm chamber or seat area	clean pump and replace broken parts

9. Disposal



9.1 Completely empty all parts of the equipment (hoses, pumps , tanks , etc) and given case blown out with air .
9.2 Dangerous parts of the appliance must be made unusable f.e. perforate pressure vessel , deform hose reels , etc.
9.3 rubber , metals, glass ect. must be separated .
Dispose material fractions according to the local laws and regulations .

YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

The pertinent regulations for the registration, setting up and operation of equipment for dealing with materials hazardous to water must always be complied with by the user.

10. Warranty
10.1 In case of insufficient maintenance, faults on operation, use of not adequate spare parts or attachments all liabilities and rights of claim under guarantee are void.
10.2 The manufacturer is not liable for improper use of the container or ignoring the safety instructions.
10.3 Technical modifications are subject to change without announcement.

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