



MX19070, MX22035 & MX22060 Pump Assemblies



SPECIFICATIONS

	MX19070	MX22060	MX22035
Ratio:	70:1	60:1	60:1
Maximum air inlet pressure:	7 bar [101.5 psi]	8 bar [116 psi]	5 bar [72.5 psi]
Maximum fluid pressure:	490 bar [7105 psi]	480 bar [6960 psi]	300 bar [4350 psi]
Displacement per cycle:	190 ml. [6.4 oz]	220 ml. [7.4 oz]	220 ml. [7.4 oz]
Theoretical Output @ 60 cycles/min:	11.4 l/m [3.0 US gpm]	13.2 l/m [3.5 US gpm]	13.2 l/m [3.5 US gpm]
Maximum recommended continuous cycle rate:	20 cycles/min [40 strokes/min]		
Maximum recommended intermittent cycle rate:	30 cycles/min [60 strokes/min]		
Maximum operating temperature:	71°C [160°F]		
Piston diameter:	260 mm [10.2 in]		
Nominal stroke length:	127 mm [5 in]		
Air inlet connection:	3/4" BSPP / NPS (f)		
Fluid inlet connection:	1-1/4" NPT (f)		
Fluid outlet connection:	3/4" NPT (f)		
Weight:	53.5 kg [118 lbs.]		

Replaces
Part Sheet
77-2960-E

**Part
Sheet**
77-2960R-E

In this part sheet, the words **WARNING**, **CAUTION** and **NOTE** are used to emphasize important safety information as follows:

⚠ WARNING
 Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

⚠ CAUTION
 Hazards or unsafe practices which could result in minor personal injury, product or property damage.

NOTE
 Important installation, operation or maintenance information.

⚠ WARNING

Read the following warnings before using this equipment.



READ THE MANUAL
 Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual.



WEAR SAFETY GLASSES
 Failure to wear safety glasses with side shields could result in serious eye injury or blindness.



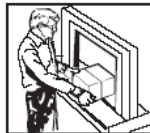
DE-ENERGIZE, DEPRESSURIZE, DISCONNECT AND LOCK OUT ALL POWER SOURCES DURING MAINTENANCE
 Failure to De-energize, disconnect and lock out all power supplies before performing equipment maintenance could cause serious injury or death.



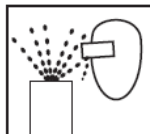
OPERATOR TRAINING
 All personnel must be trained before operating finishing equipment.



EQUIPMENT MISUSE HAZARD
 Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.



KEEP EQUIPMENT GUARDS IN PLACE
 Do not operate the equipment if the safety devices have been removed.



PROJECTILE HAZARD
 You may be injured by venting liquids or gases that are released under pressure, or flying debris.



PINCH POINT HAZARD
 Moving parts can crush and cut. Pinch points are basically any areas where there are moving parts.



PACEMAKER WARNING
 You are in the presence of magnetic fields which may interfere with the operation of certain pacemakers.



AUTOMATIC EQUIPMENT
 Automatic equipment may start suddenly without warning.



INSPECT THE EQUIPMENT DAILY
 Inspect the equipment for worn or broken parts on a daily basis. Do not operate the equipment if you are uncertain about its condition.



NEVER MODIFY THE EQUIPMENT
 Do not modify the equipment unless the manufacturer provides written approval.



KNOW WHERE AND HOW TO SHUT OFF THE EQUIPMENT IN CASE OF AN EMERGENCY



PRESSURE RELIEF PROCEDURE
 Always follow the pressure relief procedure in the equipment instruction manual.



NOISE LEVELS
 The A-Weighted sound level of pumping equipment and spray guns may exceed 85 dB (A) depending on the set-up being used. Details of actual noise levels are available on request. It is recommended that ear protection is worn at all times when spraying while pump is operating.



HIGH PRESSURE CONSIDERATION
 High pressure can cause serious injury. Relieve all pressure before servicing. Spray from the spray gun, hose leaks, or ruptured components can inject fluid into your body and cause extremely serious injury.



STATIC CHARGE
 Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock and other serious injury.



PROP 65 WARNING
 WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PROVIDE THIS INFORMATION TO THE OPERATOR OF THE EQUIPMENT.

FOR FURTHER SAFETY INFORMATION REGARDING BINKS AND DEVILBISS EQUIPMENT, SEE THE GENERAL EQUIPMENT SAFETY BOOKLET (77-5300).

⚠ WARNING



HIGH PRESSURE CAN CAUSE SERIOUS INJURY IF EQUIPMENT IS INSTALLED OR USED INCORRECTLY—READ, UNDERSTAND, AND OBSERVE ALL WARNINGS AND INSTRUCTIONS IN THIS MANUAL.

INSTALL, OPERATE OR SERVICE THIS EQUIPMENT ONLY AFTER ALL INSTRUCTIONS ARE CLEARLY UNDERSTOOD.

It is the responsibility of the employer to place this information into the hands of the operator.

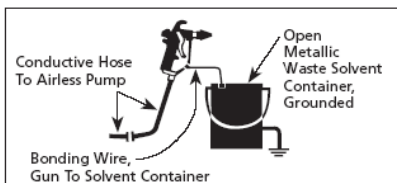
⚠ WARNING
 Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

⚠ CAUTION
 Hazards or unsafe practices which could result in minor personal injury, product or property damage.

NOTE
 Important installation, operation or maintenance information.

AVOID STATIC SPARKING

1. Use Binks **NO-WIRE** conductive hose in all airless spraying operations. Be sure the gun and hose have continuity.
2. Make sure the pump is grounded. **NEVER** operate the unit when it is on a non-grounded platform.
3. When flushing or cleaning with a combustible solvent, always use an open metallic container for receiving the waste solvent. Ground the solvent receptacle.
4. **ALWAYS** remove spray tip when flushing the system. Operate the pump at the lowest possible pressure.



GENERAL WARNINGS

1. **NEVER** leave a pressurized sprayer unattended.
2. Periodically inspect all hoses for leaks and/or abrasions and tighten all connections before use. **DO NOT ATTEMPT TO REPAIR** a defective hose. **REPLACE** it with another conductive hose.
3. **ALWAYS** relieve pressure in the system by turning bypass valve to **BYPASS** or triggering spray gun before disassembly of any component parts.

CAUTION
 Never store de-ionized, distilled, reverse osmosis or any pure grade of water in the pump. These fluids may cause corrosion.


NOTE
 BINKS is not responsible for misapplication of pumps. Consult your BINKS representative for application assistance.

NOTE
 Be sure that all fluids, solvents and fillers to be used are chemically and physically compatible with wetted parts in the pump. Consult your BINKS representative for pump materials of constructions and compatibility information. Consult the fluid manufacture for information regarding the fluids to be used.

REPLACEMENT PARTS

The pump is designed to use authorized parts only. When using this pump with parts that do not comply with the minimum specifications and safety devices of Binks, the user assumes all risks and liabilities.

⚠ WARNING
EXCESSIVE AIR PRESSURE
 Can cause personal injury, pump damage or property damage. Do not exceed maximum inlet air pressure as stated on motor model plate.

HAZARD	CAUSE	SAFEGUARDS
<p>EXPLOSION</p> 	<p>STATIC ELECTRICITY Use of this equipment in a potentially explosive atmosphere. Vapors from flammable liquids can catch fire or explode from static electricity discharges.</p>	<ol style="list-style-type: none"> 1. If installing this equipment in a potentially explosive atmosphere, check the ATEX equipment category and temperature ratings meet the requirements for the zoned area. 2. Check electrical continuity of the air supply to earth — should be no greater than $10^6 \Omega$. 3. Electrically bond all metallic equipment to earth. Should be no greater than 1Ω.
<p>SPECIAL CONDITIONS FOR SAFE USE REQUIRED BY ATEX CERTIFICATION</p>	<p>Over pressurization of equipment can cause equipment failure or injury. Use lubricating medium resistant to carburisation. Improper operation or maintenance may create a hazard.</p>	<ol style="list-style-type: none"> 1. Do not exceed the stated maximum working pressures and motor speed as specified in this manual. 2. Only a suitably approved static dissipating or conductive air supply hoses shall be attached to the equipment and terminated to the air supply. 3. Air supplies (compressors, etc.) shall be sited in a non-hazardous area with a filter on the air intake system to prevent the ingress of dust or similar foreign material into the parts where compression takes place. 4. Use lubricating medium resistant to carburisation and has an auto ignition temperature of more than 185°C for T4 equipment. 5. User shall ensure all metallic parts of the equipment are suitably bonded to earth. Should be no greater than 1Ω.

Note: Read and follow all instructions and safety precautions before using this equipment.

Product Descriptions

MX3070 Pump Assemblies
MX3560 Pump Assemblies



This product is designed for use with Solvent based and Waterborne materials. Suitable for use in Zone 1 and 2, Protection Level: **II 2 G X**

Manufacturer: **Binks, Ringwood Road, Bournemouth, BH11 9RG, UK**

EU Declaration of Conformity

We: Binks declare that the above product conforms with the Provisions of Machinery Directive 2006/42/EC and the ATEX Directive 94/9/EC by complying with the following statutory documents and harmonized standards:

- Machinery Safety Standards EN ISO 12100, EN ISO 4413, EN ISO 4414 & EN12621
- Explosion Prevention Potentially Explosive Atmospheres EN 1127-1
- Non-electrical Equipment for Potentially Explosive Atmospheres BS EN 13463-1
- Constructional Safety for Potentially Explosive Atmospheres EN 13463-5

Providing all conditions of safe use stated within the product manuals have been complied with and that the final equipment into which this product is installed has been re-assessed as required, in accordance with essential health and safety requirements of the above standards, directives and statutory instruments and also installed in accordance with any applicable local codes of practice.



D Smith (General Manager)
15th February 2012

STARTUP AND OPERATION

GROUNDING THE BINKS PUMP

⚠ WARNING

To prevent static charging igniting the flammable spray material, the BINKS pump must be grounded before it is started up. A grounding cable is included with the pump.

1. Clamp the grounding cable to the terminal on the high pressure filter or the air motor.
2. Connect the other end of the grounding cable to a suitable grounding device (e.g. grounding bar).

PREPARING TO START UP THE BINKS PUMP

Proceed as follows:

1. Check that the solvent cup is full to the level shown. If necessary, add material to the solvent cup. (Order part no. 0114-009433 for solvent based paint, and part no. 0114-014871 for waterborne paint.)
2. Attach a suitable fluid hose to the outlet fitting.

⚠ WARNING

The fluid hose supplied by BINKS is identified with the maximum permitted working pressure and the bursting pressure. The lesser value—the maximum permitted working pressure—must be greater than the maximum permitted working pressure of the pump.

3. Connect the gun—designed at least for the maximum permitted working pressure of the pump—to the fluid hose.
4. Make sure that the ball valve on the air control assembly is closed.
5. Connect the compressed air supply to the air inlet connection.
6. The pump is equipped with an air pressure regulator. Before putting the pressure line into operation, relieve the pressure regulator by fully unscrewing the control knob. Thereafter rotate the control knob clockwise until the pressure gauge on the regulator indicates the required pressure.

NOTE

The pump is equipped with an air pressure safety valve.

RINSING THE BINKS PUMP

⚠ WARNING

Wear eye protection.

Every BINKS pump is tested with water during final inspection and thoroughly rinsed with a non-gumming preservative oil. With this rinsing process, it is possible that the residual moisture of water emulsion will be left in the pump.

Before the unit is started up for the first time, a suitable solvent must be used to thoroughly rinse out the remains of the preservative fluid and the unavoidable impurities introduced during equipment assembly.

Proceed as follows:

1. Prepare the BINKS pump for start-up as shown above.
2. Close the high pressure ball valve on the fluid filter.
3. Immerse the siphon kit in the tank of solvent.
4. Insert the return flow hose into the tank of solvent. Open the high pressure ball valve on the fluid filter.
5. Open the ball valve and set the air regulator to approximately 1 bar (14.5 psi). The siphon kit now draws in the solvent. The solvent runs back to the solvent tank through the high pressure filter, the high pressure ball valve and the return flow hose.
6. Remove the spray tip from the gun and point the gun into the tank. Unlock the safety lever on the gun, operate the gun and close the high pressure ball valve. The solvent will now flow through the high pressure filter, the fluid hose and the gun, back into the tank. The time of rinsing depends on the length of the material lines and the solubility of the spray material. We recommend a short reflush with "fresh" solvent.
7. Release the gun trigger.
8. Slowly increase the pressure at the regulator to maximum working pressure while checking and testing

that all lines and screw and plug caps are tightly sealed. If there are any leaks in the system, shut down the BINKS pump immediately. Only re-start the BINKS pump once you have repaired the leak.

9. Reduce the air pressure at the air regulator again and close the ball valve.
10. Make sure that the return flow hose is still directed into the solvent tank. Carefully open the high pressure ball valve to reduce the pressure in the fluid hose and in the high pressure filter.
11. Point the gun into the tank of solvent and operate the trigger, to reduce any pressure which may still exist in the fluid hose and in the gun.

⚠ CAUTION

If working with waterborne material, the BINKS pump must again be thoroughly rinsed with water before it is started up.

FLUSH PUMP BEFORE OPERATION

The pump was factory tested with lightweight oil. Some residue is left in to protect the pump parts. If this could contaminate the fluid you are pumping, flush it thoroughly with a compatible solvent. To start the pump, follow the procedure in the following section, Start and Adjust Pump.

NOTE

Flush the pump with a solvent compatible with the material to be pumped. The pump was tested with oil at the factory.

START-UP

1. Prepare the BINKS pump for start-up as shown above and if necessary, rinse pump.
2. Close the high pressure ball valve on the fluid filter.
3. Immerse the siphon kit in the spray material to be used.
4. Place the return flow hose in the tank. Then open the high pressure ball valve.
5. Open the ball valve for the compressed air supply and use the pressure regulator to set the compressed air

(continued on next page)

STARTUP AND OPERATION

supply to 1 bar (14.5 psi). The pump will now draw in the spray material. The spray material flows back into the tank through the high pressure filter, the high pressure ball valve and the return pipe.

6. Remove the spray tip from the gun and point the gun into the tank. Unlock the safety lever on the gun. Operate the gun trigger and close the high pressure ball valve. The spray material will now flow through the high pressure filter, the fluid hose and the gun, back into the tank.
7. Release the gun trigger and set the working pressure at the regulator.

NOTE

Before carrying out any coating work, we recommend a test spray (e.g. on to paper or wood). Only if the test gives you the desired result should you start to coat the actual object.

WORK STOPPAGES

CAUTION

If working with 2-K spray material, you must note the given pot life and follow it precisely. Within this time, the unit must be carefully cleaned and rinsed with the recommended solvent. There must be no residue left in the pump, the high pressure filter or the gun.

CAUTION

When work is stopped, the safety lever of the gun must be locked.

For work stoppages of between 10 and 30 minutes, please proceed as follows:

WARNING

Wear eye protection.

1. Lock the safety lever on the gun.
2. Shut off the compressed air supply by closing the ball valve.
3. Briefly open the high pressure ball valve, taking care that the return flow hose is not pointed at other people or at yourself, until the pressure has reduced. Then close the high pressure ball valve again.
4. Clean the outside of the spray nozzle from spray material residue.

SHUT-DOWN

CAUTION

Once work is completed, the BINKS pump must be thoroughly cleaned. Under no circumstances must you allow paint residue to dry out in the unit. To clean the pump, use a solvent appropriate to the spray material.

WARNING

Wear eye protection.

1. Close the ball valve for the compressed air supply.
2. Make sure that the flow hose is still directed into the spray material tank. Carefully open the high pressure ball valve to reduce the pressure in the pump and in the high pressure filter.
3. Remove the spray tip from the gun.
4. Point the gun into the tank of spray material and operate the trigger to reduce any pressure which may still exist in the fluid hose and in the gun.
5. Lock the safety lever on the gun.
6. Remove the siphon kit from the spray material.

CLEANING YOUR BINKS PUMP

CAUTION

Do not allow spray material or solvent to soak into the ground.

WARNING

Wear eye protection.

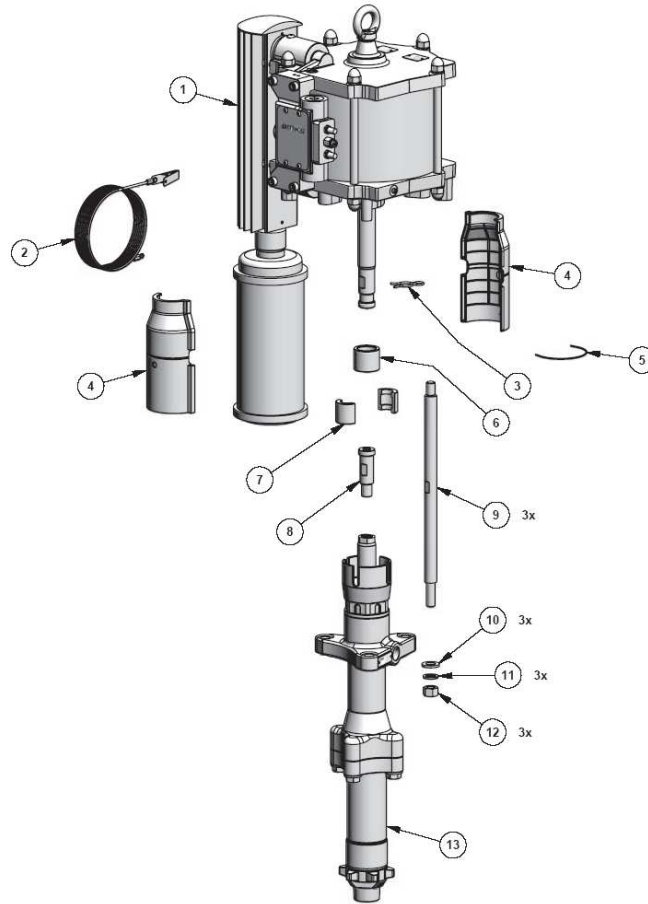
1. Clean the pump and the siphon kit from the outside. Immerse the suction system in the tank of solvent.
2. Clean the fluid tip/tip system as described in the service bulletin of the spray gun. We recommend to soak the fluid tip in solvent.
3. Unlock the safety lever of the gun without fluid tip. Operate the gun. Close the high pressure ball valve. Set the air inlet pressure to 1 bar (14.5 psi) and slowly open the ball valve. Let the solvent run through the system so that the spraying material can rinse out.

4. Let the solvent run through the system for a couple of minutes until the solvent runs clear through the gun. Close the ball valve and lock the safety lever of the gun.
5. Clean the gun from the outside and check the filter on the handle (if mounted).
6. Clean the filter element of the high pressure filter.
7. Clean the filter of the siphon kit.
8. We recommend keeping the pump filled with liquid.

NOTE

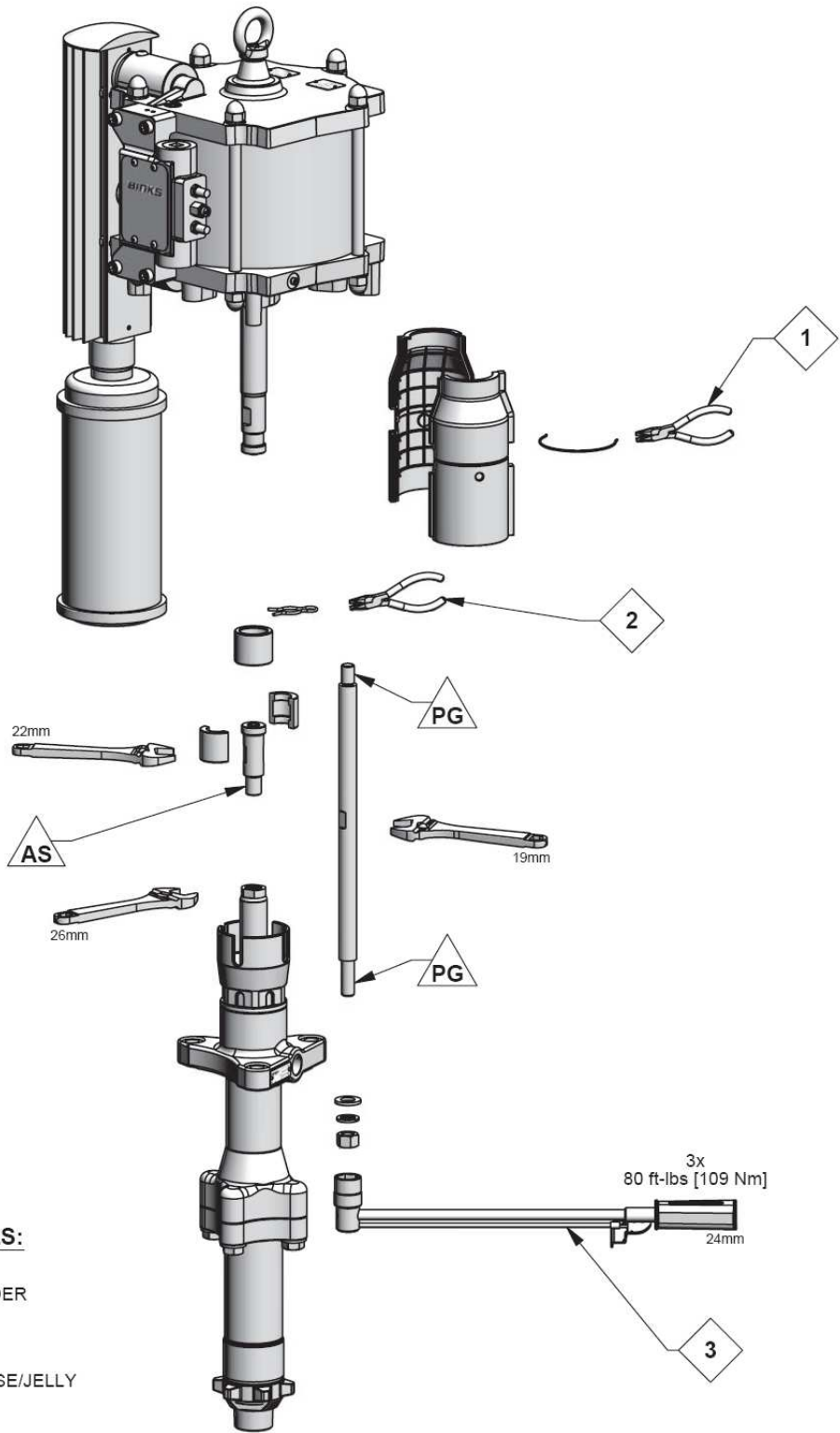
If the pump is not to be used for longer periods of time, we recommend flushing the system with a light, silicone-free oil.

MX19070, MX22035, MX22060 BARE PUMP ASSEMBLY



ITEM NO.	PART NUMBER	DESCRIPTION	MX19070 QTY	MX22035 QTY	MX22060 QTY
1	AX260L-5	AX260L AIR MOTOR (5 BAR)	-	1	-
	AX260L-7	AX260L AIR MOTOR (7 BAR)	1	-	-
	AX260L-8	AX260L AIR MOTOR (8 BAR)	-	-	1
2	0114-016243	GROUNDING WIRE KIT		1	
3	0115-010450	CLIP		1	
4	193546	GUARD		2	
5	193543	GUARD CLIP		1	
6	0115-010448	SPLIT COLLAR RETAINER		1	
7	0115-010445	SPLIT COLLAR		1	
8	0115-010447	QD ADAPTER		1	
9	0115-010444	TIE ROD		3	
10	165097	PLAIN WASHER		3	
11	20-6832	SPRING WASHER		3	
12	20-6834	NUT		3	
	FX190XX-XXH	FX190 FLUID SECTION	1	-	
	FX220XX-XXH	FX220 FLUID SECTION	-	1	
13	<div style="text-align: center; font-weight: bold; font-size: 1.2em;">FX190 PL - C A H</div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center; width: 20%;"> <p>FX190 - 190 ml/CYCLE FX220 - 220 ml/CYCLE</p> </div> <div style="text-align: center; width: 20%;"> <p>PL - PTFE/LEATHER PP - PTFE PU - PTFE/UHMW UU - UHMW</p> </div> <div style="text-align: center; width: 20%;"> <p>C - CARBON STEEL S - STAINLESS STEEL</p> </div> <div style="text-align: center; width: 20%;"> <p>A - AUTO PACKING ADJUSTMENT M - MANUAL PACKING ADJUSTMENT</p> </div> </div>				

MX19070, MX22035, MX22060 BARE PUMP ASSEMBLIES - MAINTENANCE



MAINTENANCE SYMBOLS:

= MAINTENANCE ORDER
Reverse for assembly

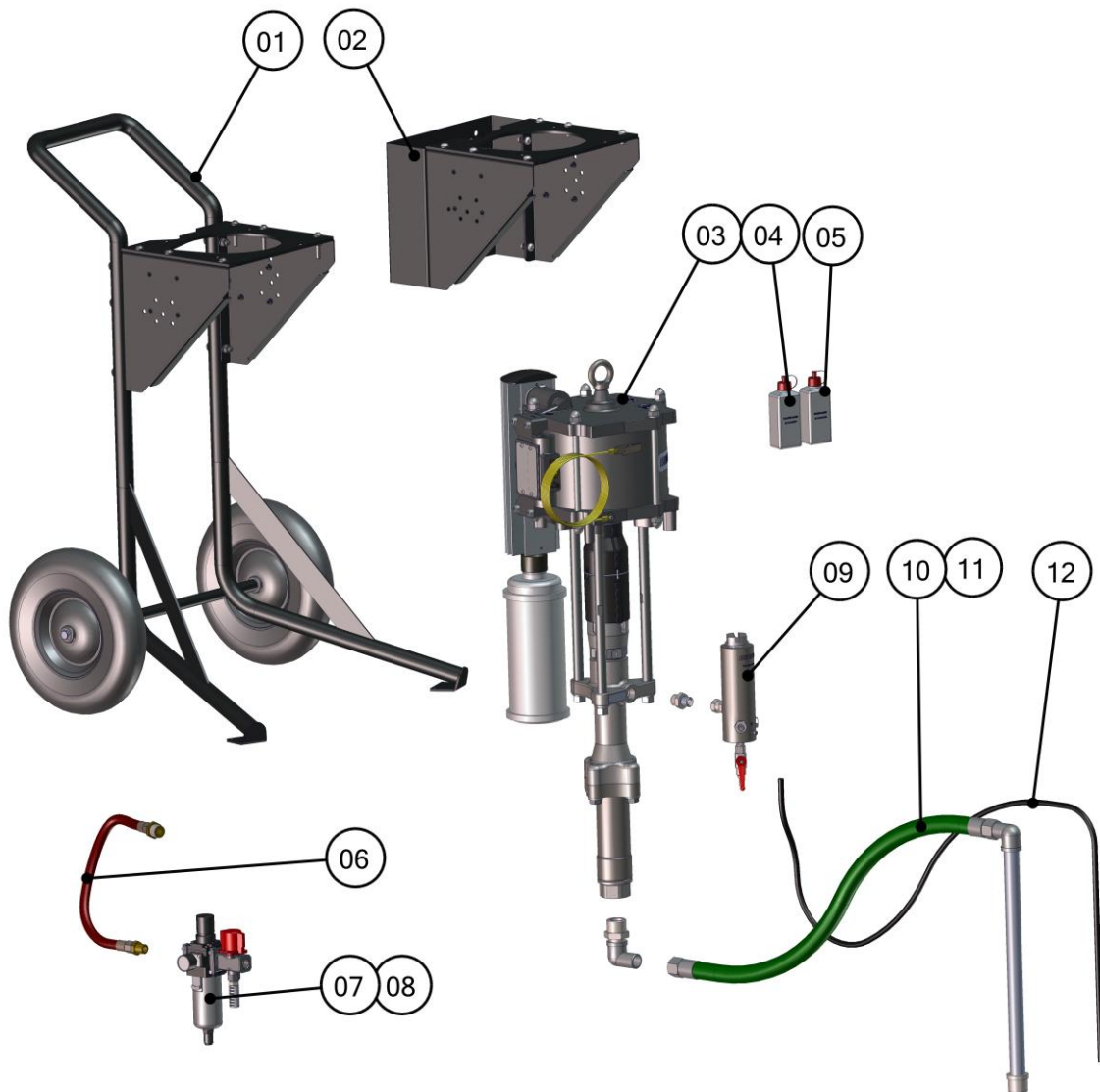
PG = PETROLEUM GREASE/JELLY

AS = ANTI SEIZE

MX19070, MX22035, MX22060 BARE PUMP ASSEMBLIES – TROUBLESHOOTING

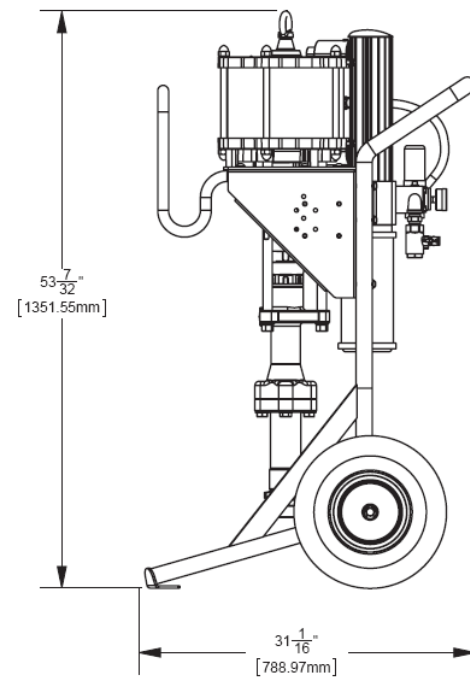
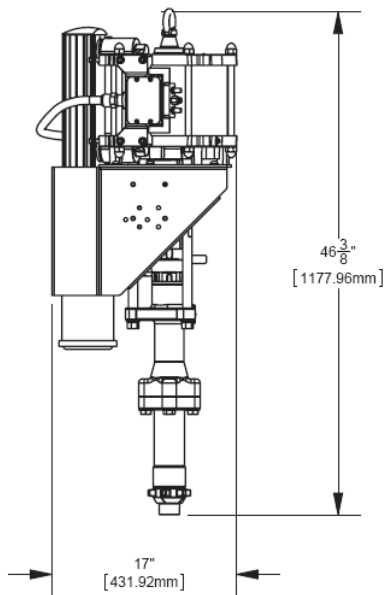
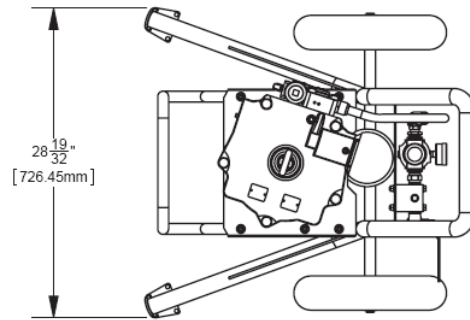
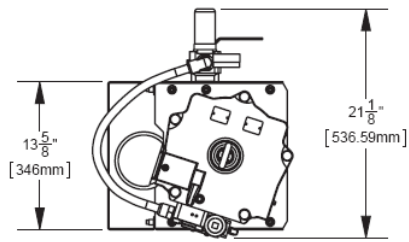
PROBLEM	CAUSE	SOLUTION
Pump will not start	No compressed air. Spray tip is blocked.	Check compressed air supply. Clean or replace the spray tip.
Erratic operation of air motor, air motor stops	Worn poppet assemblies. Worn or dirty spool and sleeve assembly.	Replace the poppet assemblies. Clean or replace the spool and sleeve assembly, as necessary.
Continuous air leak from the exhaust	Worn poppet assemblies. Worn piston seal. Worn diaphragm.	Replace poppet assemblies. Replace piston seal. Replace diaphragm.
Material in solvent cup	Worn or dirty upper packings.	Replace or clean upper packings as necessary.
Pump does not stop on the down stroke	Worn or dirty lower ball check.	Replace or clean the parts as necessary.
Pump does not stop on the up stroke	Worn or dirty upper ball check. Worn or dirty lower packings.	Replace or clean the parts as necessary.
Pump runs erratically	Blocked siphon kit. Blocked inlet filter or strainer. Low material level.	Replace or clean the siphon kit. Replace or clean the inlet filter or strainer. Replace or refill material container.
Pump runs, with no output	Loose connection in between pump and siphon kit. Stuck lower ball.	Check that all connections are tight. Replace or clean the parts as necessary.

MX19070, MX22035, MX22060 PACKAGE PARTS

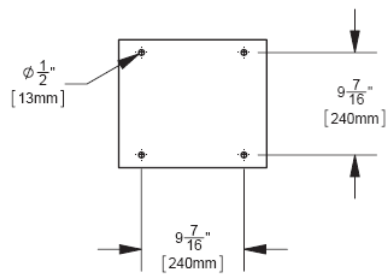


ITEM	PART NO.	DESCRIPTION
01	104084	CART & BRACKET
02	104095	WALL BRACKET
03	MX _____	MX190/220 PUMP
04	0114-016099	LUBRICATION-WATER BASED
05	0114-016100	LUBRICATION-SOLVENT BASED
06	193669	AIR HOSE
07	MXA-C13ALM5	AIR FILTER 5µm + 1 REGULATOR
08	MXA-C13ACM5	AIR FILTER 5µm + 2 REGULATOR
09	MXA-F13ME100	FILTER
10	MXA-S25ME30	SUCTION ASSEMBLY 25 LITRE - 30 MESH
11	MXA-S210ME30	SUCTION ASSEMBLY 210 LITRE - 30 MESH
12	0110-009103	DUMP HOSE

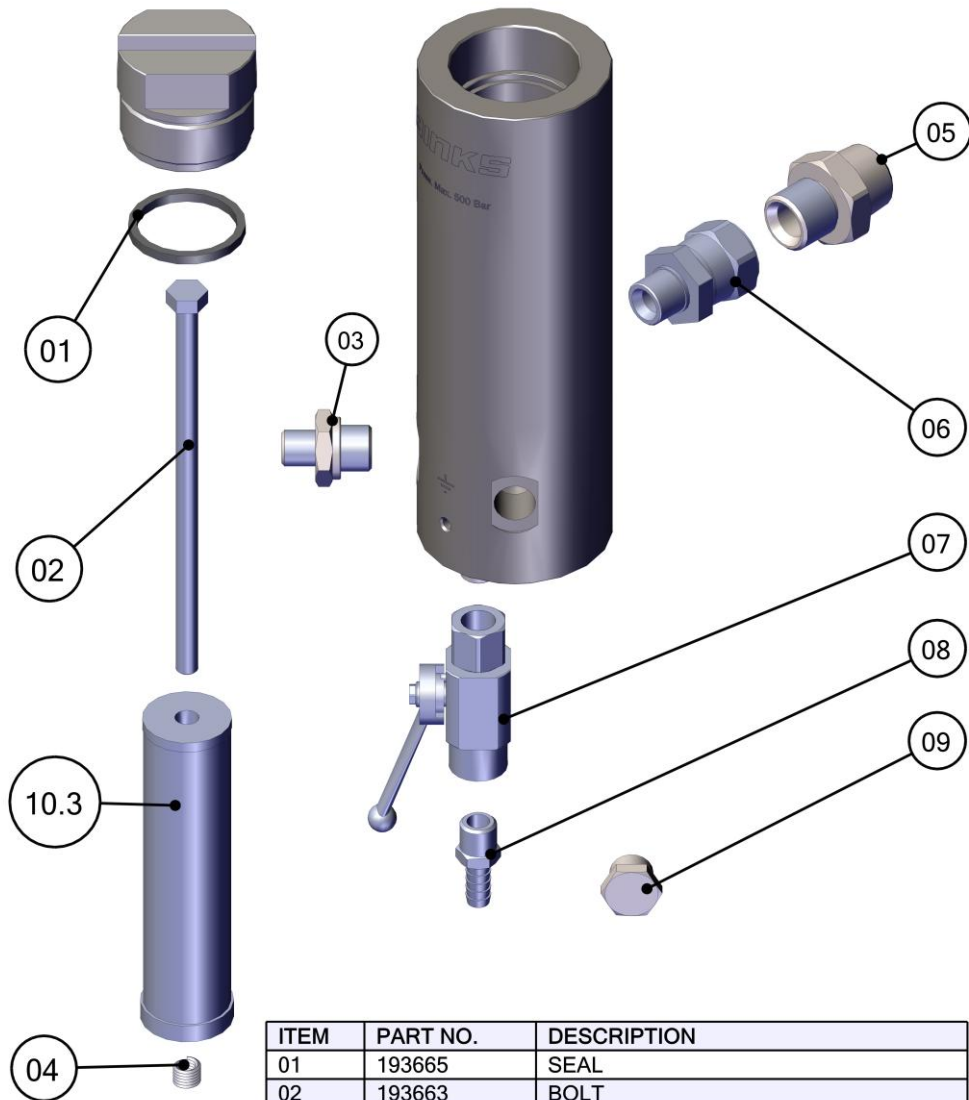
PUMP DIMENSIONS



Wall mounting pattern

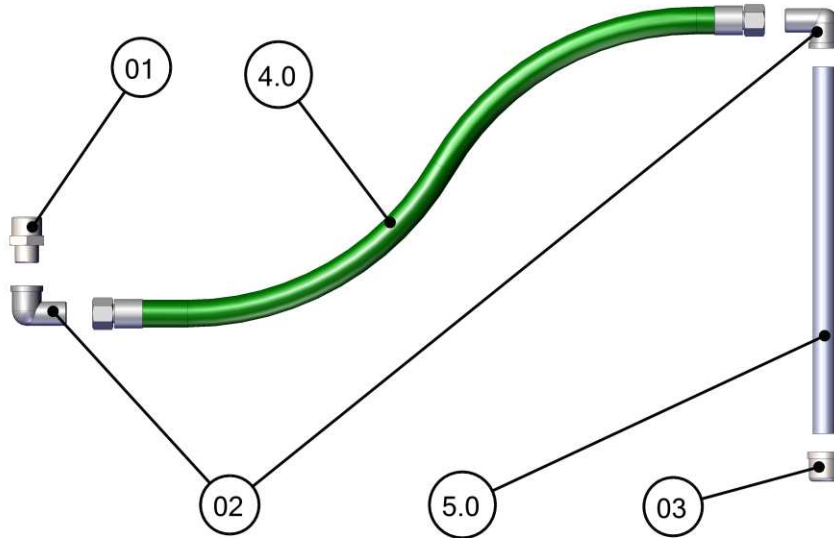


FILTER MXA-F13ME100



ITEM	PART NO.	DESCRIPTION
01	193665	SEAL
02	193663	BOLT
03	0114-013855	NIPPLE 3/8"-1/4"
04	193664	RETAINER
05	163666	NIPPLE 3/4" NPT-M22X1.5
06	0114-013638	SWIVEL M-F 1/2"BSPT-M22X1.5
07	0114-019091	BALL VALVE 1/4" BSP
08	0114-019985	BARBED FITTING 1/4"BSPT-Ø9
09	192022	PLUG 3/8" BSP
10.0	0114-014917	FILTER 30 MESH (Blue)
10.1	0114-014886	FILTER 50 MESH (Orange)
10.2	0114-014884	FILTER 70 MESH (Yellow)
10.3	0114-014883	FILTER 100 MESH (Black) STANDARD
10.4	0114-014882	FILTER 150 MESH (Red)
10.5	0114-014881	FILTER 200 MESH (Natural)

Suction MXA-S25ME30
Suction MXA-S210ME30



ITEM	PART NO.	DESCRIPTION
01	193672	NIPPLE 1-1/4"NPT-1"BSP
02	193679	ELBOW 1"
03	193671	FILTER 30 MESH
4.0	193673	HOSE 1" BSP x 1m LG (25 L)
4.1	193674	HOSE 1"BSP x 2m LG (210L)
5.0	0114-013767	1" TUBE x 0.5m LG (25 L)
5.1	193675	1" TUBE x 1m LG (210L)

WARRANTY

This product is covered by Binks' 5 Year Limited Warranty.

Binks European Sales and Service Listing: www.finishingbrands.eu

Binks

Binks has authorized distributors throughout the world. For technical assistance or the distributor nearest you, see listing below.

Finishing Brands UK

Ringwood Road, Bournemouth
Dorset BH11 9LH, UK
Tel: +44 (0)1202 571 111
Fax: +44 (0)1202 573 488
Email: marketing-uk@finishingbrands.eu

Registered office: 400 Capability Green, Luton
LU1 3AE. Registered in England: No 7656273

Correspondence address:

Finishing Brands France

163-171 Av. des Auréats
26014 Valence cedex, France
Téléphone: +33 4 75 75 27 00
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Correspondence address:

Finishing Brands Germany

Justus-von-Liebig-Straße 31
D-63128 Dietzenbach, Germany
Tel: +49 (0) 6074 403 1
Fax: +49 (0) 607 403 300
Email: marketing-de@finishingbrands.eu