

Operating-Instruction

For Turbopower piston knocker (TPK)

REV:2/MAY 25

REFER TO THE PRODUCT CATALOG ALSO.



INITIAL WARNING: Make sure that the air pressure securely cutoff during installation and there is no kind of material handling in the close environment of the knocker.

DANGER OF INJURY! WEAR EAR PROTECTION!

GENERAL INFORMATION

1. The Turbopower Piston knockers produce a linear vibration with infinitely variable amplitude and frequency. The frequency is controlled by air pressure. In knockers the force is generated by hammering action of piston in hardened plate.
2. Can be used for screens / compacting tables / hopper evacuation.
3. The minimum air operating pressure is 2Bar, the maximum is 6 bars.
4. Self cooling, suitable for temperature upto 200deg.C.
5. The noise level is from



CAUTION: The maximum OPERATING PRESSURE must never exceed 6bar.

INSTALLATION AND START -UP

1. The mounting area must be clean and even. It is recommended to use a channel that is to stitch welded vertically to the side of the hopper or chutes to achieve best vibrating results.-the edge of the channel should be left without welds.
2. The width of channel should be to suit the base dimensions of the knocker and the length will also vary the hopper size, however a good rule to follow is that the channel be one-third the length of the slopping section of the hopper.
3. For outdoor applications make sure rain or any liquids do not enter the exhaust by using a piece of exhaust pipe with the end toward the ground.
4. To mount the knocker use Allen screws with a minimum quality 8.8 (No slotted screws)
5. Use tooth lock or Spring lock washers (but NOT: curved washers) to ensure loosening stop the screw during vibration.



DANGER: LOOSEN SCREWS can cause the knocker to fall down and HARM PEOPLE!

6. Use an air line filter (5µm) in front of the knocker. Dirt will slow down or stop the knocker. Make sure that the air pressure tube is securely fixed to the connecting sleeve. Please refer to the prescriptions of the air pipe manufacturers.



DANGER: LOOSEN AIR PRESSURE TUBES may HARM PEOPLE (EYE INJURIES)!

7. The line oiler (drip feed type) is strongly recommended to be used mounted close to the knocker that supplies for lubrication hydraulic oil with a viscosity of 5cSt/40°C (42SUsecor5cm²sec⁻¹) according to ISO VG 5.

Examples of oils:

-SHELL Tellus Oil C5
-BP Energol HP5
-For food industries
-ESSO Nuto H5
-Mobil Velocity Oil No.4
-Mobil Whiterex 304



NOTE: Oil with other Viscosity will reduce the frequency and piston will be blocked due to oil clog

8. Use a silencer at exhaust side



DANGER: Operation without SILENCER should be avoided to keep the noise level (and possibility of EAR DAMAGE) reduced best possible!

DANGER: The EXHAUST is under pressure and this may HARM PEOPLE (EYE INJURIES)



IMPORTANT: Make sure the oil container is always filled!

DRY OPERATION of the piston knocker for more than some minutes will cause very high ABRASION of the piston.

NOTE: If operated intermittent with short stop-time(less 3 seconds) make sure the control valve pipes knocker to atmosphere when switched to OFF position , otherwise the start-up will be affected.

9. Air consumption: Air consumption of this type knocker is less and not excessive (regardless of knocker size) when knocker operation is properly timed and the generated force output of the knocker is compared with power cost.

OPERATION AND MAINTENANCE



IMPORTANT: CHECK at least ONCE A MONTH the correct MOUNTING of the knocker and air supply including air-line filter and lubricator.

1. If the piston of knocker slows down or stops, disconnect the air supply, remove the silencer then pour 15 drops of kerosene (paraffin-oil) into the air inlet port. Reconnect the air supply, set the air pressure to 6Bar and run the knocker for a minute. Repeat if not successful. Also check the silencer for dirt contamination.



DANGER: Wear EAR PROTECTION during above procedure!

2. Fault possibilities: (- after installation -during operation)

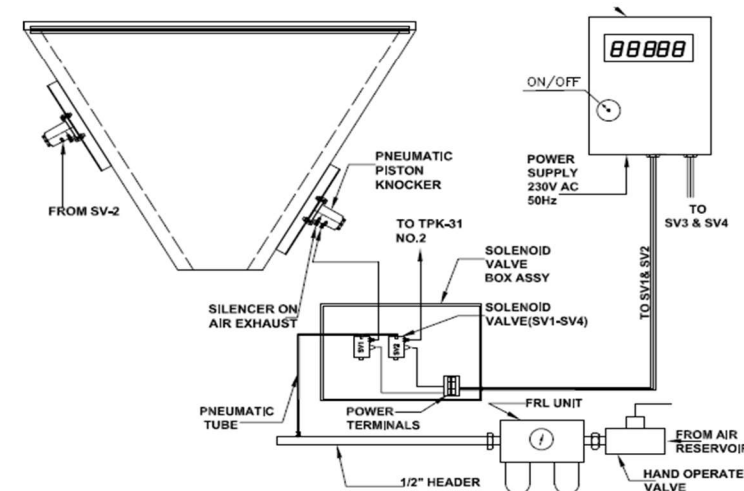
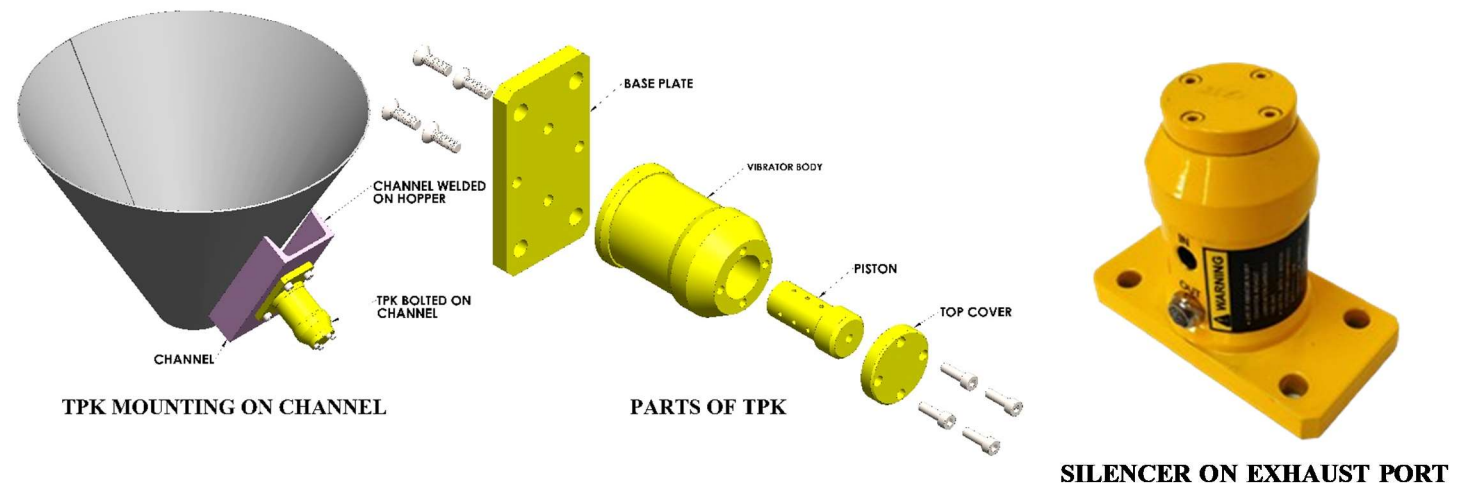
-air pressure connected to exhaust
-air pipe too small diameter or too long
-Silencer clogs wash with petroleum or replace
-air tube buckling
-leakage, check air supply pipes
-filter clogs wash or replace

For any service support- please quote the Model and serial number of the knocker- this is engraved on the body of the product.

3. To change spare parts, follow the instructions supplied with the new parts. For spares designations use the model no. (Ex: Top cover for TPK-20)

DIMENSION AND PERFORMANCE DATA- See behind for sketch reference.

MODEL	A	B	C	D	E	F dia	G	H BSP	IMPACT FORCE (NEWTON)	FREQUENCY (VPM)	(LPM)
TPK-20	115	60	85	40	12	10	100	1/8"	3540	5000	85
TPK-31	150	85	123	60	16	13	149	1/4"	13150	3700	170

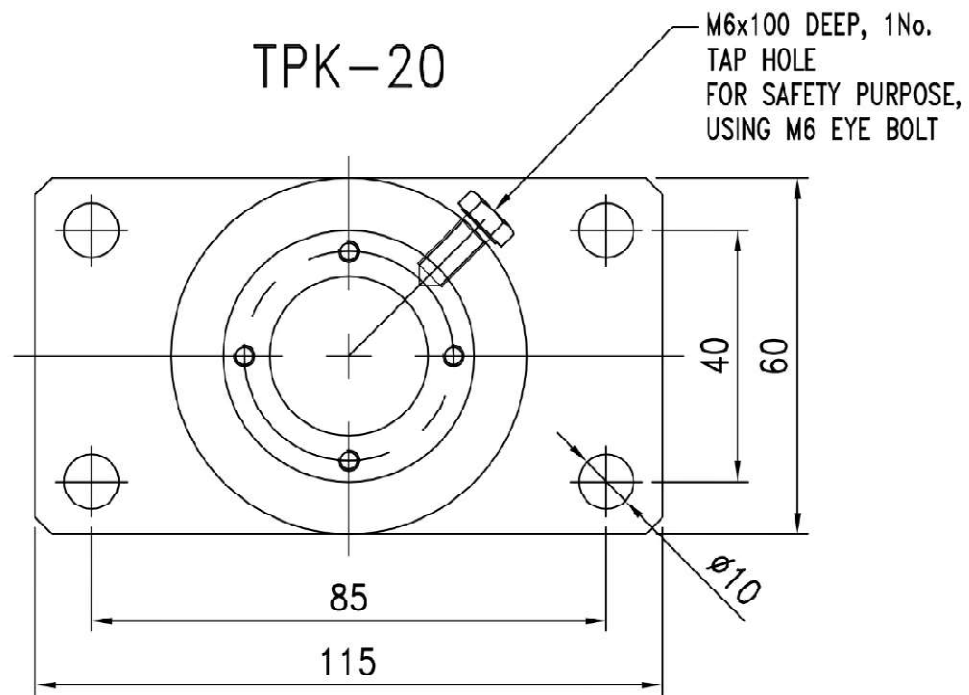


INTER CONNECTION SCHEME FOR AIR SUPPLY, FILTER & LUBRICATION

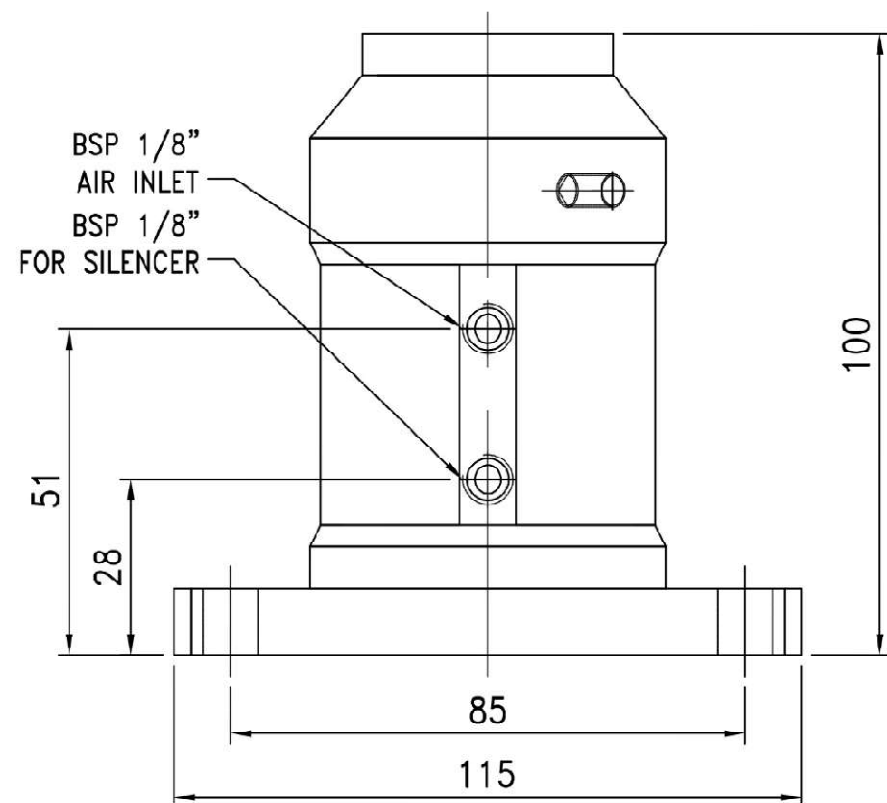
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DIMENSIONS OF TURBOPOWER KNOCKER

TPK-20



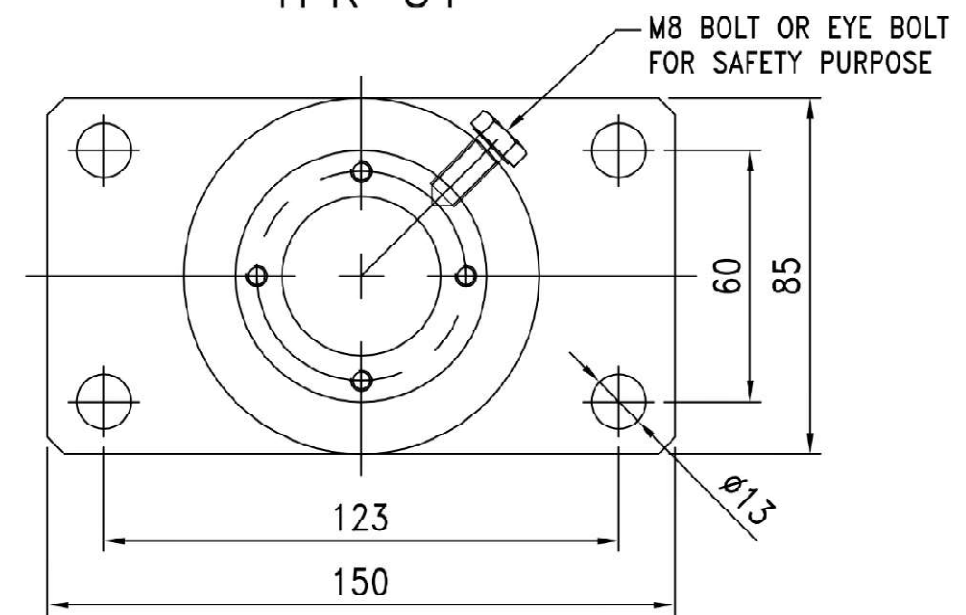
TOP VIEW



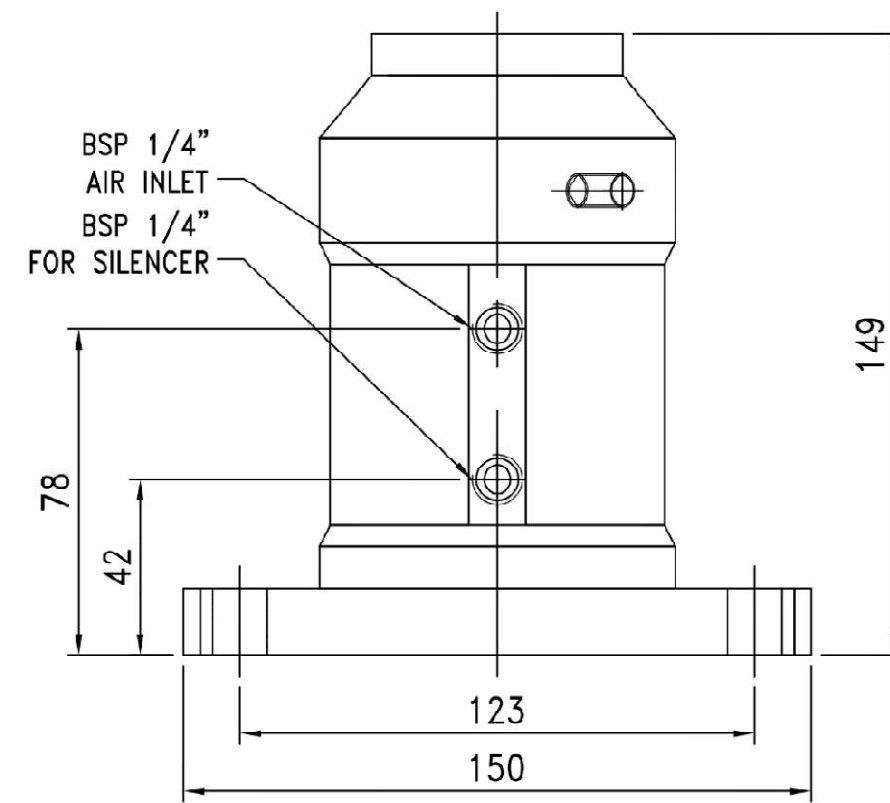
FRONT VIEW

SELF WEIGHT: 2.1 Kgs

TPK-31



TOP VIEW



FRONT VIEW

SELF WEIGHT: 6.0 Kgs