

Installation- and Operating-Instructions for pneumatic Turbine Vibrators Series "GT"



INITIAL WARNING : Make sure the air pressure is securely cut off during installation and any kind of handling in the close environment of the vibrator.
DANGER OF EAR AND / OR EYE INJURIES !

PLEASE ALSO REFER TO THE SKETCHES ATTACHED GENERAL INFORMATION



- The GT-series turbine vibrator produces a rotative vibration with infinitely variable amplitude and frequency. The frequency is controlled by air pressure.
The vibrator is designed to perform the following activities : Moving, feeding, compacting and/or separating of all kind of materials such as chemical powders, corn, sand, gravel, cement etc. It is designed for indoor and outdoor applications but not to be submerged in any kind of liquids.
The minimum air operating pressure is 2 bar (30PSI), the maximum is 6 bar (90PSI). Noise level 60 to 75 dBA. As power medium instead of air also nitrogen can be used.

CAUTION: The maximum OPERATING PRESSURE must never exceed 6 bar (90 PSI).

- The ambient operating temperature shall not exceed 120°C (250°F).

INSTALLATION AND START-UP

- The mounting area must be clean and even. It is recommended to use a stiffener iron (U-profile) that is stitch welded to achieve best vibrating results. For outdoor applications make sure rain or any other liquids may not enter the exhaust by using a exhaust piece of pipe with the end versus the ground.
- To mount the vibrator use Allen Screws with a minimum quality 8.8. (No slotted screws !). The tightening torque must not exceed the following values:

modes (incl. -S)	thread	min.	max.
GT-8/ -10	M6 --->	6 Nm	10 Nm
GT-13/ -16/ -20/ -25	M8 --->	15 Nm	21 Nm
GT-30/ -36	M10 --->	30 Nm	42 Nm
GT-40/ -48	M16 --->	150 Nm	174 Nm

- Use Tooth Lock or Spring Lock Washers or Spring-Action Lock Nut (but NOT : Curved Washers) to ensure loosening stop of the screw during vibration. The use of adhesive sealant (e.g. LOCTITE 270) is suggested. Follow the suppliers instructions.

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

- The AIR pressure supply shall be CLEAN (use a FILTRE with less than 50µm width). The air inlet is the port with the smaller hole and marked with the respective arrow sign in front. Make sure 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) !

NOTE : An interchange of inlet and exhaust port will result in a massive power decrease.

- A line oiler is not necessary since the ball bearings are sealed and lubricated for life. Oiled air however will not harm the operation of the GT-vibrator.

- Use a silencer at the exhaust port.

DANGER : No operation without SILENCER (extreme dB-levels / EAR INJURIES) !
DANGER : The EXHAUST is under pressure and this may HARM PEOPLE (EYE INJURIES) !



- Air consumption. Make sure the air quantity according to the table is available even in worst case (all units at tone pressure supply line in operation). Otherwise the vibrator will not perform its correct function according to the technical data given.

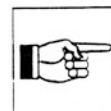
Type	2 bar Ltr.	29 PSI CF	4 bar Ltr.	58 PSI CF	6 bar Ltr.	87 PSI CF
GT-8/-10/-10-S	46	1.6	80	2.8	112	3.9
GT-13/-16/-16-S	120	4.2	200	7.0	290	10.2
GT-20/-25/-25-S	185	6.5	325	11.4	455	15.9
GT-30/-36/-36-S	330	11.5	530	18.5	745	26.0
GT-40/-48/-48-S	425	15.0	700	24.6	970	34.2

- When starting-up first time check the working frequency with full load and without (if operated ever without). The frequency in 1000 rounds per minute (1000 r.p.m.) shall not exceed the following figures at the respective operating pressure :

Type	2 bar	6 bar	Type	2 bar	6 bar
GT-8	20	24	GT-25-S	7	9
GT-10	18	20	GT-30	9	10
GT-10-S	12	14	GT-36	6	7
GT-13	16	20	GT-36-S	5	6
GT-16	14	16	GT-40	6	7
GT-16-S	10	12	GT-48	5	6
GT-20	13	17	GT-48-S	4	5
GT-25	10	12			

If the vibrator runs too fast then the vibration energy is too small and the abrasion of the ball bearings is very high. In that case change to the next bigger type.
Also avoid transverse vibration (as it may occur e.g. by using a weak single rib stiffener).

OPERATION AND MAINTENANCE



- IMPORTANT :** CHECK one hour after first operation and at least ONCE A MONTH the correct MOUNTING of the vibrator incl. silencer and the air supply (including air-line filter).

- If the vibrator slows down or stops, remove the silencer. If the vibrator operates now, replace the silencer or wash it out with petroleum. Check air-filters in the same way.

DANGER : Wear EAR PROTECTION during above procedure !

- Fault possibilities : (• after installation - during operation)

- air pipe too small in diameter or too long - leakage, check air supply pipes
- silencer clogs, wash with petroleum - filter clogs, wash or replace
- or replace - air tube/hose bucklings
- Ball bearings worn out, replace

- To change spare parts, follow the instructions supplied with the new parts. For spares designation use the model number (e.g. rotor for GT-25)

- The parts of used vibrators can be recycled :
 - Ball Bearings ---> steel
 - Body (powder painted), Threaded Caps and Rotor (both anodized) ---> aluminum
 - Unbalance Weights ---> brass or GT-S-types only ---> heavy metal

This Operation Instruction shall be kept for future use.

GTE.FN

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! max. !

**6 bar / 90 PSI
120°C / 250°F**

