



Original instruction manual

English



for the entire machine
RADIAL CRUSH TOOL



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Please keep for future use!





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Please read through this instruction manual carefully before putting the measurement device into operation.

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1. General remarks

Introductory annotations

Thank you for your confidence in us which you have shown by buying this measurement device.

This instruction manual contains information on the machine's installation, operating and service. Before bringing the measurement device into service, the operation personnel has to read carefully through all parts of the instruction manual and thoroughly acquaint themselves with all details. The content of this instruction has been compiled with great accuracy in order to facilitate the solution to your measuring task.

The given construction details are exclusively intended for the users and operators of the machine and may not be duplicated or made available to third parties.

This instruction manual shall function as guideline and help for an unproblematic and secure handling of our machines. The structuring in different chapters enables a rapid and well-directed access to all concerns needed for the handling of our machines.

Illustrations and texts can only be revised in certain intervals and refer to the standard versions. Discrepancies of your measurement devices eventuate in technical improvements or additional devices according to your order.

These discrepancies will be attached separately to the manual!

We recommend keeping a log on "service verification" in which all adjustments concerning the machine, as for example in consequence of repair, renewal or exchange of machine parts, can be registered.

All adjustments concerning the machine whatsoever have to be verified and released by GIM mbH company. If this is not performed, in case of a significant adjustment concerning the machine, the declaration of conformity loses its validity.



The instruction manual at hand has to be read through carefully pre-commissioning in order to guarantee a secure and economic use of the machine.

The instruction manual contains all necessary information as regards

Transport
Assemblage / Installation
Operating
Technical service, cleaning, maintenance
Deinstallation
Disposal

All safety conditions have to be complied with in all phases of life.

Several further instruction as regards supply components belong to this manual. They are components of this manual and can be found in a separate folder attached to this manual. The acquaintance with this manual is necessary for safety and operating of the machine.

The instruction manual has to be stored permanently and readily accessible next to the measurement device.

The respective operations at the measurement device may only be carried out by personnel commissioned in writing and trained.

Technical adjustments which become necessary for an improvement of safety and the operating of the measurement device are subject to the description in this manual, as long as these actions do not involve significant alterations of the entire machine. The respective alterations are described in the corresponding attachment.

Danger warnings and information on operating are highlighted in the manual with corresponding symbols (Chapter 1.2).

All contents are subject to the copyright law. Passing on information to third parties is prohibited.



1.1 Liability and warranty

Each person concerned with operating, technical service, assemblage, repair as well as deinstallation of the measurement device in service is obliged to have read and understood the technical documentation at hand as well as the attached CD (optional) in English. Only technically qualified personnel may work at the machine.

Additionally to the technical documentation at hand, the instruction manual, the legitimately binding regulations for accident prevention which apply for the deployment location and the acknowledged specific technical rules for safe and technically correct operations have to be observed.

The entire machine corresponds to the latest state of technology and is built according to the acknowledged safety-related standards (see declaration of conformity). In case of inappropriate operation or when it is not in accordance with regulations, dangers to human health of the personnel employed at the measurement device or interference with the machine or other damages can emerge.

The entire machine is to be deployed exclusively according to regulations (Chapter 2.0) and in technically impeccable condition and correct performance of safety devices.

The operation personnel have to have read and understood the manual and especially the safety instructions before starting their work.

For personal and material damages which result from

- usage which is not in accordance with regulations or different use,
- technical service which is not in technically impeccable condition,
- non-compliance with the manual and the contained safety instructions,
- unauthorized alterations to the machine, especially the safety devices,
- non-compliance with the mandatory regulations for safe and technically correct operations which apply for the installation site as well as the instructions for inspection and technical service,
- usage of replacement parts which are not approved by the manufacturers or non-original parts
- removal or camouflage of safety and danger instructions from the machine,

exclusively the operator is held responsible for the liability.

If there were any personal or material damages due to non-compliance with regulations and directions, it releases the GIMM mbH company from any exemplary damages as well as compensation of consequential damages such as personal injuries, damages to goods which are not subject matter of the contract, loss of profit and loss of production which are communicated to the GIMM mbH company, referred to as product liability.



1.2

Warning and indication symbols in the manual



Generic warning



Indication of wearing personal protective equipment



Important advice!



1.3 Basic safety instructions

Please read through this manual carefully before installing the machine and bringing it into service.

It is obligatory to mind and observe the briefing and safety instructions of this manual. When disregarding the instructions, danger threatens for the machine operator and other persons or material assets.



Reposit this instruction manual carefully.

The machine may only be used according to regulations, in technically impeccable condition with due regard to safety instructions. The operating safety of the machine has to be examined on a daily basis. This involves the safety devices, the condition of the supply lines and the general condition of the machine.

When noticing damages or defects, especially those concerning the safety devices, the machine may not be put into operation and has to be secured against start-up. If a maloperation occurs during operation, the entire machine has to be depressurized. **Inform your direct supervisor!**

Safety appliances (guard doors, cover panels, door lock) may not be removed or rendered useless in another way.



You may never bring the machine into service without safety devices respectively remove safety devices!

It is forbidden to remove warning and indication signs from the measurement device or to make them unrecognisable.

Missing or damaged warning and indication signs have to be replaced immediately.



The operator of the measurement device has to guarantee that only skilled personnel works at the machine, that the instruction manual and the contained safety instructions have been read and understood and that the compliance with the operating manual is instructed (procedure of furnishing proof). Furthermore, the operating personnel have to be in an appropriate mental and physical condition for their work at the device.



Only qualified personnel instructed and commissioned in written form may be appointed for the respective work at the machine.

Overhauls and maintenance work may only be executed by authorised maintenance personnel. The operator therefore compiles appropriate plans on a basis of recommendations by the manufacturer and appoints the authorized personnel.



Only employ authorised skilled personnel for repair work, overhauls and maintenance work! e.g.: service engineers of the manufacturer.

The operating personnel have to be informed about the work prior to the commencement of the overhauls and maintenance work.



Secure against accidental restart of the machine during repair work, overhauls and maintenance work! If necessary, the measuring device has to be separated from the attached media.

After maintenance or repair work is finished, a function test of the machine has to be carried out. Safety instructions concerning installation, repair and maintenance of components should be learned from the operating instructions of the component manufacturers.

Basically, the universally valid legal regulations for prevention of accidents are to be observed.



1.4 Personal protective equipment

During assemblage, deinstallation, cleaning, maintenance and disposal, the personal protective equipment has to be worn.



Use personal protective equipment!

2.0 Designated use

The entire machine was designed and manufactured for commercial industrial inspection, respective measuring tasks. The correct use of the machine according to the regulations is the measurement of radial pressures of cylindrical objects. The incorporated pneumatic hydraulic pressure intensifier of the production series PTJ is designed for the transportation of liquidities with pressures up to 1092 bar at a pneumatic pressure of 7 bar. The maximum operating pressure for measurement is 60 bar.



The operator is responsible for any use which is not in accordance with the regulations or for implementation of alterations!

2.1 Inappropriate use

An implementation which differs from the definition of an appropriate use is considered other than the intended purpose.

A violation of safety instructions of the manufacturer is not in accordance with regulations.

Evading and / or the invalidation or manipulation of safety devices is a use which is not in accordance with regulations as well.

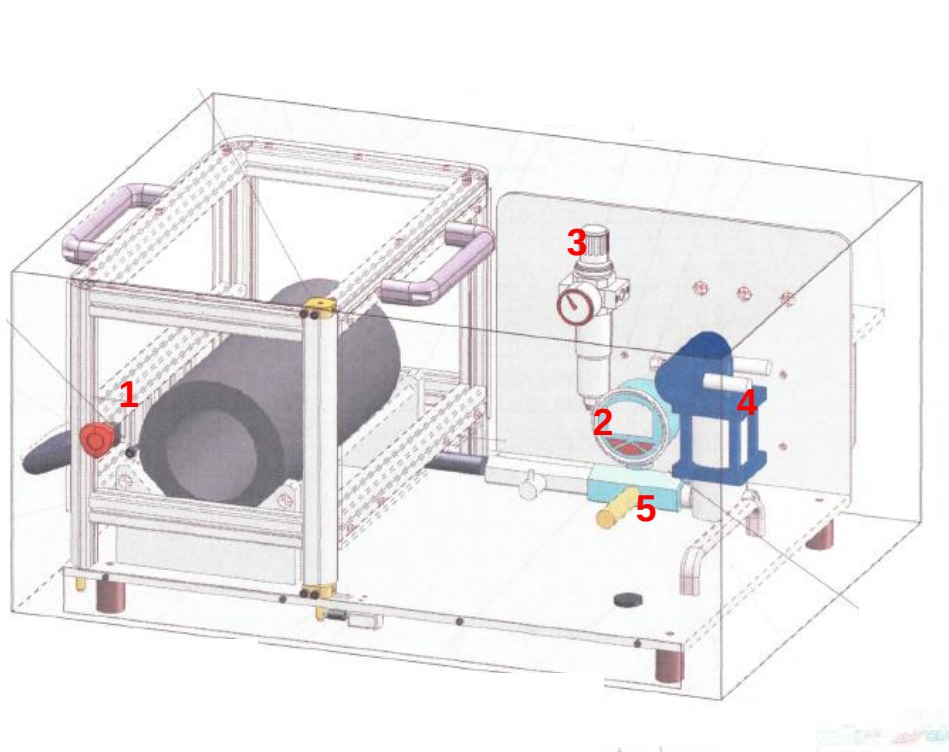
Technical service, maintenance work, installations, cleaning, assemblage and deinstallation works may only be implemented at a depressurized measurement device.

The operator only is reliable for damages which result from inappropriate use not according to regulations.



3.0 Construction, setup and operating of the measurement device

3.1 Construction



1. Quick-lock coupling
2. Digital test pressure manometer
3. Maintenance unit with pressure reduce and air connection
4. Pump
5. Pressure limitation valve



3.2 Setup and operating of the measurement device

The following aspects always have to be considered when installing the Radial Crush Tool: Only personnel, trained according to the manufacturer's instructions, may set their hand to the device – in case of operations without training according to the manufacturer's instructions, any guarantee and warranty expires.

The pressure shells (rubber / bladder) have to be filled in order that they are entirely filled without air pockets – air pockets are a serious danger for tools and the operator/s (storage effect).

As a matter of course, the pressure hose as well as all other leads have to be clear of air pockets, too.

No oil of any kind may be used. This leads to irreparable damages and is not a case of warranty.

If it might be necessary for any reasons, only admixtures which are approved by the manufacturer may be used.

All connections have to be checked for tightness.

The operating of spanners at the pressure shells (rubber / bladder) may only be made after training in order to prevent capillary damages with a long-term effect.

You have to ensure, that the pressure limitation valve is functioning and not manipulated.

Only use genuine parts and original replacement parts.

Mind the respective accordance of the measurements of the pressure shells (rubber / bladder) with the bushings that are to be checked!

Please take care of the following:

In case you finish or interrupt the work for a period of time longer than 15 minutes, please close the release valve.

In case the work will not be continued that day, please disconnect the bladder from the pressure hose.

If a stop of duration of a few days is expected (e.g. weekend), please empty the water tank. Refill it when you want to continue to measure and take out all included air from the hose (see above). A connector clutch is available from the company.

Ensure that the pressure is released as soon as the core collapsed – otherwise damages of the bladder are probable. Never leave the system under pressure for a longer period of time.



3.3 Examination process



The examination process unconditionally has to be accomplished according to the chronological order stated below! Otherwise damages to the measurement device are imminent!

Examination process:

- Connect pressure cover
- Insert bushing which has to be checked (possibly use talcum) – pay attention to matching size by all means
- Position protective cover and close it
- Check if depressurization / release valve is closed
- Check if the saved maximum value at the manometer has been set back
- Push start button and hold down
- If the pressure value collapses, usually the bushing has been collapsed
- Immediately open depressurization valve (otherwise damages to the pressure cover are imminent)
- Remove protective cover
- Remove bushing
- Read off the maximum pressure at the manometer

After finishing the inspections, the depressurization / release valve should principally be closed in order to prevent penetration of air.



4.0 Technical information

Depth	ca. 600 mm
Width	ca. 1000 mm
Height	ca. 400 mm
Deadweight	ca. 35 kg
Added materials	compressed air up to 5 bar at the maximum
Operating pressure	water up to 60 bar at the maximum
Pressure material	water without any additives

5.0 Installation of the machine

The installation location of the measurement device has to be frost-free in order to prevent the system from freezing. The installation location has to correspond to the weight and the dimensions of the machine.

There are no further guidelines to be considered referring to the placement of the machine.

6.0 Technical service and maintenance

6.1 Technical service

The manufacturer's standards for maintenance of the purchased parts have to be observed (see attachment: instruction purchased parts).

Generally the test device is maintenance-free. Nevertheless, the following aspects should implicitly be heeded.

To a large part, the pressure shells (rubber / bladder) consist of a natural product. This is subject to a natural aging process so that a periodic replacement of pressure shells (rubber / bladder) is necessary for a repeatable result.

As the natural product is not resistant against oils, acids and dilutions etc, the pressure shells (rubber / bladder) may by no means be combined with one of these substances.

Unused pressure shells (rubber / bladder) have to be kept away from direct sun and kept frost-free, preferentially at room temperature.

Safety instructions for the technical service

Technical services postulate that their processes are familiar. Technical services may only be completed when the machine is switched off. All energy systems have to be switched off. You always have to pay attention to a good condition and an appropriate installation of all parts. Damages have to be remedied immediately. Worn out or defective parts have to be replaced.



Only use genuine parts!

6.2 Maintenance



The machine has to be switched depressurized during the entire maintenance work.

Please learn the maintenance arrangements for the components from the manufacturer's documentation of the components attached to this instruction manual.

7.0 Deinstallation / disposal

The prescribed tools and hoists / load handling devices have to be used for the deinstallation and transport works.

Only personnel who are instructed in written form, with the required technical knowledge, may be appointed for the accomplishment of the deinstallation.



It is unconditionally necessary to wear personal protective equipment!

When disposing of the machine, the operator has to observe the legal requirements and advice concerning the waste disposal.



Noting the legal requirements concerning the waste disposal!