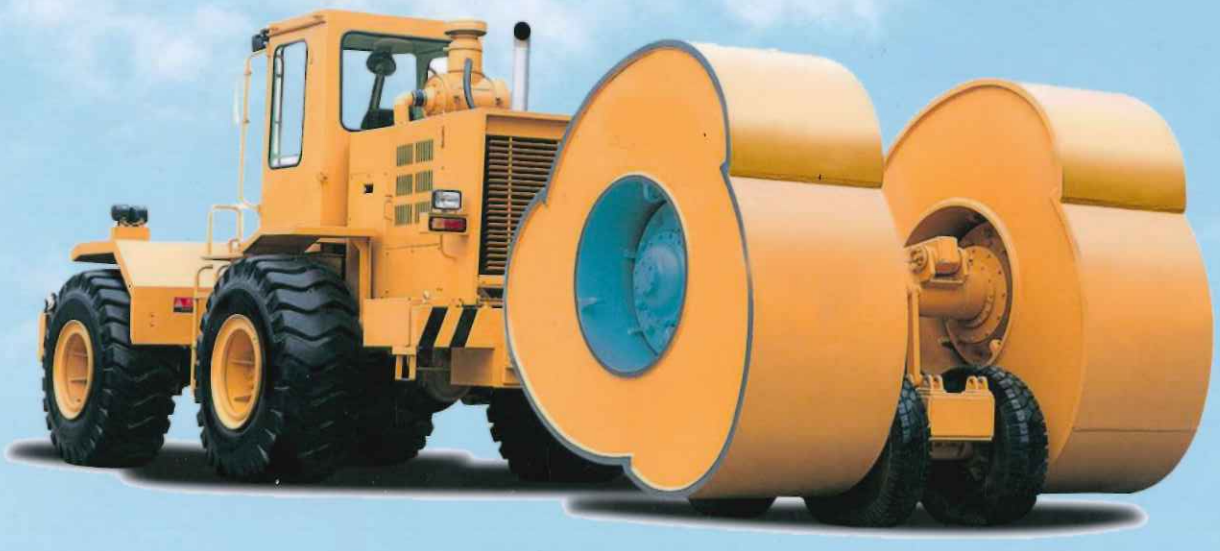
IMPACT ROLLER OPERATING MANUAL



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1. Overview

The 6832/6830/6825/6825A Impact Compactor is an efficient compaction machine and is mainly used in highways, railways, airports, ports,

The construction of large-scale foundation projects, such as embankments, has compacting effects and economic benefits that are difficult to achieve with traditional compaction machinery. It is a modern highway and other

Indispensable construction machinery for infrastructure construction.

Wide range of applications

- Foundation compaction of roads, railways, dams, airports, buildings, factories, and residences.
- Compaction of bulk materials such as waste, ash and coal in cement plants.
- Earthwork compaction with relatively wide water content.
- Compaction of rocks, clays, expansive soils.
- Open-pit coal fire-retardant compaction.

High productivity

- The basis for compaction per hour can be up to 20000 m 2 .
- The average working speed is 10~15km/h.
- The depth of compaction can be up to 5m.
- Each filling thickness is 400~1200mm.
- The engineering benefit is 10 times that of traditional equipment.

Typical application examples

- According to the general construction technology, if the original foundation soil is not good, the bad soil must be excavated and then filled with compaction; and the 6832, 6830, 6825, 6825A impact compactor can achieve compaction requirements directly through compaction, and the depth of compaction can be reached. 5m, eliminating the need for excavation, filling and other processes, saving manpower and material resources.
- It is widely used for the filling and lamination of foundations. Each time the filling thickness can reach 800~1200mm (conventional equipment is only 300mm), the working speed can be as high as 10~15km/h (conventional equipment is only 5km/h).
- The requirement for water content is very wide, which greatly reduces the requirement for water content in compacted soil layer, and can press out the moisture in the wet foundation to facilitate the extrusion of the subgrade.
- As a result of high-pressure impact forces acting on the ground surface, it is easy to find areas that have not yet been compacted, so that immediate measures can be taken and remediation can be strengthened.
- Used for fire and compaction in coal yards to avoid spontaneous combustion of coal and reduce environmental pollution

2. Features

6832, 6830, 6825, 6825A impact roller working device - impact wheel is a non-cylindrical rolling body structure, in the rolling process,

The potential energy and momentary kinetic energy of the reserve are farthest from the center of the wheel axis and converted into the kinetic energy impacting the ground at the closest position to the center of the wheel center.

The instantaneous release of the hydraulic energy of the accumulator, together with the ground, achieves the purpose of compacting the ground.

While the powerful impact energy acts on the ground, the reaction force of the ground is transmitted to the axle, the frame and the tow vehicle. Set up multiple buffers

The structure becomes necessary: a buffer spring is used at the traction axis, a buffer rubber block is used at the limit of the rocker arm, and a buffer cylinder and a reservoir are used at the other end of the rocker arm.

Energy absorbers, rubber sleeves are used between the impact wheel and the trailer, shock absorbers are used between the impact wheel and the hub. Many buffer mechanisms have been greatly reduced

The impact of the impact on the frame itself and the tractor.

The hydraulic oil in the hydraulic system of the compactor comes from the hydraulic circuit of the tractor, and is connected through the quick-change joints. It is safe to use and easy to disconnect and connect and fast.

Manipulating the lift cylinder, the impact wheel is lifted off the ground, the entire weight is supported on the frame where the rubber tire lands, and is dragged by the tractor

The compactor can make short-duration transfers without damaging the road.

Note: During the work, choose a grader or bulldozer. The sprinkler will cooperate to facilitate more effective compaction.

3. The main parameters

Item	Technical parameters
Impact energy of 6832 Impact Compactor Roller (kJ)	32
Best working speed of 6830 Impact Compactor Roller (Km/h)	10~15
Compacting width of 6830 Impact Compactor Roller (mm)	900
Accumulator inflating pressure (MPa)	3.0~ 4.5
Tire pressure of 6830 Impact Compactor Roller (MPa)	Solid tire
Maximum gradability	25°
Operating mass of 6830 Impact Compactor Roller (t)	14.4~18
Shape of impact wheel	Trilateral
Appearance dimension (length x width x height) (mm)	3880×2980×2480

Recommended tractor:

GQ320 engineering tractor

GQ380 engineering tractor

4. Operation and use

The 6832，6830, 6825, and 6825A impact compactors themselves do not have power and need to be towed and moved by tractors.

The hydraulic system of the machine consists of accumulator, buffer cylinder, lift cylinder and piping. The accumulator is a gas-liquid type and the upper chamber is full of nitrogen

gas. The nitrogen pressure has been calibrated before leaving the factory.

The tire is the support of the entire equipment when the machine transits short distances. If pneumatic tires are used, the tire pressure is 0.75 to 0.80 MPa and the air pressure is not found

When it is enough, it should be added immediately.

The specific operation of the 6832,6830, 6825, and 6825A impactor compactors is performed according to the following steps:

4.1 Mounting a tractor

- Adjust the height of the legs so that the traction axis is the same as the traction seat of the tractor.
- Pull out the pull pin shaft inside the tractor seat and reverse the car so that the pin hole of the pull shaft aligns with the pin hole of the tractor seat, insert the pin shaft, and lower the lock block.
- Pull out the front end pin that connects the leg to the rack, pull up the leg, and fix it in the other ear seat hole under the rack.
- The quick-change joints of the two tubings from the front of the compactor are respectively connected with the quick-change joints from the rear of the tractor.

4.2 Support impact wheel

In the cab of the tractor, maneuver the manual reversing valve, move the joystick forward, raise the lift cylinder to lift the impact wheel assembly and raise it to an appropriate height.

Two support rods at the rear of the rack are respectively pinned in the ear seat holes of the impact wheel shaft, and the latches are locked; the lever is moved back to lift the rod portion of the lift cylinder

Retract; release the joystick back to neutral. At this point, the impact wheel is off the ground and the tire is attached to the ground and can be pulled to the working road section.

4.3 Put down the impact wheel

After the compactor is dragged to the working section, the manual reversing valve is operated, and the support rod fixed on the shaft of the impact wheel is placed on the frame and the pin is used.

Lock the shaft; move the joystick back so that the impact wheel lands smoothly on the ground and the joystick is centered. At this point, the weight of the entire impact wheel acts on the ground

On the surface, the tires remove all the heavy loads of the impact wheel.

Note: Before working, you must ensure that the lift cylinder stem is retracted to the shortest position.

4.4 Inspection and Filling Fluid

Unscrew the pressure valve switch and observe the pressure gauge. If the indication is in the range of 4-6 MPa, the pressure of the hydraulic system is normal. Tighten the switch

Take the next step. Otherwise, follow the steps below to supplement the fluid:

First unscrew the pressure valve switch, make the pressure gauge communicate with the hydraulic circuit, slowly move forward the manual change valve lever, while gradually open

The ball valve, while observing the pressure gauge, closes the ball valve and the manual reversing valve, and finally closes the pressure valve when instructed to the pressure request range.

During the filling process, the impact wheel is lifted by the lift cylinder as the oil flows in the system. After the oil replenishment work is completed,

Correctly manipulate the manual reversing valve and reposition the impact wheel to the ground.

Measuring the pressure of the system or replenishing the fluid is preferably carried out before the impact wheel is put down, and the operation of raising and lowering the cylinder can be omitted once.

4.5 Checking Accumulator Pressure and Inflating

The accumulator is a gas-liquid type and the upper chamber is filled with nitrogen. Under normal circumstances, do not change the pressure by turning the upper needle valve. Should be used regularly

The pressure measuring device detects whether the accumulator pressure is between 3.5 and 4.0 MPa. If it is confirmed that there is nitrogen leakage from the accumulator and the pressure is reduced, then

The accumulator is inflated. When inflating, connect the pressure measuring device at the interface of the accumulator pressure gauge, tighten the air release plug, and connect the inflation port to the nitrogen bottle through the pipeline.

Then open the upper needle valve of the accumulator. When inflating, open the valve on the nitrogen bottle as slowly as possible, observe the pressure gauge reading, and finally fill with nitrogen.

Between 3.5 and 4.0 MPa.

4.6 Compaction

After confirming that the tractor is properly connected and the hydraulic system is normal, the compactor can start working on the working surface.

During the operation, the following points should be noted:

- The speed of the tractor should be controlled within the required speed range, either high or low will affect the compaction effect.
- The work procedure is to be carried out according to the construction process, but it should be considered that the turning radius of the vehicle should not be too small and the number of clockwise and counterclockwise turns should be equal.
- During compaction, it is not allowed to reverse the car so as not to damage the components such as the traction shaft.
- After compaction several times, the work surface appears uneven, affecting the working speed. At this time, you should use a grader or bulldozer to scrape it and continue working.
- During the compaction process, once the dust appears, the sprinkler should be sprayed with water immediately to prevent dust from contaminating the engine's suction system and the environment and to facilitate the compaction work.

- Work clearance, check the fastening of fasteners such as the coupling nut of the impact wheel and the hub, the length of the swing frame, and the fastening bolts at both ends of the short shaft so that they are always locked.

- Lubricate regularly according to the position and interval specified in the lubrication diagram. If necessary, the number of lubrication can be increased as the case may be.

4.7 Transitions

After the compaction of a work surface is completed, it needs to be transferred to another work surface. In order not to crush the road surface, it is necessary to lift the impact wheel off the ground to attach the tire to the road surface, pull it to the designated working surface, and put down the impact wheel so that the work can continue. The procedure for lifting and lowering the impact wheel is described in sections 4.2 and 4.3.

Note: The transition here refers to the short-distance (recommended value ≤ 10km) vehicle transfer. The speed of the tractor must not exceed 10km/h. If Yutong Heavy Industry tractors are used, one-stop traction must be used when switching to the field. During the transfer process, if the tire is found to be hot, it should be stopped immediately and cooled before it can be transferred. If the distance is relatively long (>10km), it must be transported by a transport vehicle such as a flatbed truck to a next work site.

4.8 Storage

After the compaction work is completed or the task is completed on the day, the lifting cylinder is operated, the impact wheel is lifted, and it is lifted off the ground, and the support rod is installed to make the impact.

The entire weight of the wheel is placed on the frame that the tire supports. Please refer to section 4.2 for the specific operation steps. Traction compactor to a parking lot or other safe place.

Operate the manual reversing valve, remove the support rod, and place the impact wheel smoothly on the ground to release the tire load. For details, see section 4.3.

If you need to disconnect the tractor from the compactor, follow these steps:

- The engine stalls, pushes and pulls the lever of the reversing valve to relieve the pressure oil in the hydraulic system.

- Disconnect the quick-change joints of the two tubings connected to the tractor and fasten the quick-change joints on both ends of the compactor's own tubing to prevent dust from entering.

- Lower the leg and secure it to the rack with the pin.

- Adjust the leg so that it touches the ground. Rotate the screw rod with the booster rod and adjust the frame to a suitable height so that the pull pin shaft is free in the seat hole.

- Pull the locking block, pull out the traction pins, and the tractor can be detached from the compactor. Put the traction pin in the seat hole, put down the lock block, and work offline.

5 Regular maintenance

Maintenance takes place regularly as follows:

5.1 10h or turn

- Check the pressure in the hydraulic system and maintain the normal value as required.

- Check the tire deformation visually. When the deformation is too large, the tire must be inflated to 0.75 to 0.80 MPa. When inflated, the compactor is placed in the impact wheel.

- Check whether the coupling nut of the rim and the hub, the coupling nut of the impact wheel and the hub is loose, and the loose part is tightened.

- Check if the set screws and coupling bolts are loose at the long axis and short axis, and tighten at loose places.
- Check whether the split pin or elastic pin in the joint such as the support leg and the pin shaft is inserted properly so as to prevent the pin shaft from falling out and causing an accident during driving or work.
- Grease the oil cup at the traction shaft seat of the rack.

5.2 50h or weekly

- Check the tightness of the fasteners at the joints and tighten them at the loose parts.
- Lubricate the lube cups with grease according to the lubrication diagram.
- Inspect the connections between hydraulic hoses to eliminate loosening.
- Check the working conditions of the buffer rubber bushings, rubber pads, rubber blocks, buffer springs, shock absorbers and bearing bushings at various locations. Replace them if they are damaged or worn.

5.3 100h

Observe the working conditions of the buffer cylinder and the lift cylinder. If any abnormality occurs, check the leak tightness.

5.4 250h

Check the nitrogen pressure of the accumulator. If the pressure is insufficient, add it as required.