OPERATING INSTRUCTIONS

PORTATROWEL™
FPT30

WARNING

To reduce the risk of injury, all operators and maintenance personnel must read and understand these instructions before operating, changing accessories, or performing maintenance on this power equipment. All possible situations cannot be covered in these instructions. However care must be exercised by everyone using, maintaining or working near this equipment.

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CONTENT

INTRODUCTION

General Safety Instructions for the Operation of Power Equipment

The goal of Flextool is to produce power equipment that helps the operator work safely and efficiently. The most important safety device for this or any tool is the operator. Care and good judgement are the best protection against injury. All possible hazards cannot be covered in this manual, but we have tried to highlight some of the important items. Operators should look for and obey Caution, Warning and Danger labels placed on the equipment. Operators should read and follow safety instructions packed with each product to learn how each machine works. Even if you have previously used similar equipment carefully check out each machine before you use it, get the "feel" for it and know its capabilities, limitations, potential hazards, how it operates, and how it stops.

APPLICATIONS

The PortaTrowel can be used for trowelling concrete from initial floating and breaking in of the concrete right through to finishing operations with is blade tilt / pitch capabilities and combination trowel blades.

The PortaTrowel can be used across a wide range of applications that include:

- Residential foundations
- Tilt and precast panels
- Driveways and footpaths

FUNCTION AND CONTROLS

PORTATROWEL

The PortaTrowel reproduces the action of hand trowelling while giving a higher quality dense finish with greater wear resistance. The angle or pitch of the blades is adjustable during operation from a floating position, with the blades completely flat, to a finishing position with the blades tilted. The following figure shows the location of the controls and main operating functions for the PortaTrowel.

1. **Guard Ring – NEVER** put hands or feet inside the guard ring while the engine is running, Never operate the PortaTrowel with a damaged guard ring or with the guard ring removed.
2. **Blade Pitch Control** – Turn the hand knob clockwise to increase blade pitch, and counter-clockwise to decrease blade pitch.
3. **Engine** – Honda GX35 (1.5hp) petrol engine.
4. **ON / OFF Switch** – On / off switch located on the handle for easy access
5. **Handle** – The PortaTrowel handle is made up of multiple 1800mm clip together handles joined together to achieve the required external reach of the PortaTrowel subject to each specific job – The maximum number of 1800mm handles that can be joined together is three – Extending the length beyond three handles will result in reduced control of the unit.
6. **Throttle Control Lever** – Controls the speed of engine. Push the lever downwards to increase engine speed, upwards to decrease engine speed.
7. **Gearbox** – Transfers power from engine to the spider assembly for blade rotation. Ensure concrete is not allowed to build up on the gearbox and that the gearbox is cleaned after each use. Build-up of concrete may cause the gearbox to overheat
8. **Spider Plate & Trowel Arm** – Provides blade rotation and pitch. Always clean and lubricate the spider plate and blades arms after each use, spider plates and blades arms that are not cleaned and maintained will result in uneven blade wear and machine wobble that may impact the final finish of the concrete surface
9. **Combination blades** – Allows for both floating and finishing of the concrete. Gloves should always be worn when replacing or handling blades as worn blades will have a sharp edge.

HAZARDS AND RISKS

- NEVER allow any person to operate equipment without adequate instruction.
- ENSURE all operators read, understand and follow the operating instructions.
- SERIOUS INJURY may result from improper or careless use of this machine

MECHANICAL HAZARDS

- DO NOT operate the machine unless all protective guards & covers are in place.
- KEEP hands and feet clear of rotating and moving parts as they will cause injury if contacted.
- DO NOT leave the equipment in operation while it is unattended.
- ENSURE that the motor operation switch is in the OFF position and the spark plug ignition lead is disconnected before removing the guards or making adjustments.
- DO NOT increase the governed no-load motor speed above 7000RPM. any increase may result in personal injury and damage to the machine.
- Take care not to come in contact with the muffler when the engine is hot, since it may result in severe burns.
- When starting the trowel do not exceed ¼ throttle setting. A higher setting could engage the centrifugal clutch causing the blades to immediately start turning prior to the operator having full control / grip of the handle.
- Be careful with the trowel around pipes sticking out of the floor or other obstacles. Should the trowel blades catch on these, serious damage to the machine or harm to the operator may result.
- ENSURE that repairs to machinery are carried out by QUALIFIED & LICENCED personnel.

FIRE & EXPLOSION HAZARDS

- PETROL is extremely flammable and explosive under certain conditions.
- ENSURE that petrol is only stored in an approved storage container.
- DO NOT refuel the motor while it is in operation or hot.
- DO NOT refuel the motor in the vicinity of sparks, a naked flame or a person smoking.
- DO NOT over fill the fuel tank and avoid spilling petrol when refuelling. Spilled petrol or petrol vapour may ignite. If spillage occurs, ensure that the area is dry before starting the motor.
- Motor vibrations can cause an improperly tightened fuel cap to loosen or come off and can result in fuel spills. In order to reduce risk of fuel spillage and fire, ensure fuel tank caps are sufficiently tightened
- NEVER attempt to refuel a petrol engine until it has been stopped & completely removed from the operator.

CHEMICAL HAZARDS

- DO NOT operate or refuel a petrol motor in a confined space without adequate ventilation.
- CARBON MONOXIDE exhaust gases from internal combustion motor driven units can cause death in confined spaces.

NOISE HAZARDS

- EXCESSIVE NOISE can lead to temporary or permanent loss of hearing.

WEAR an approved hearing protection device to limit noise exposure as required by Occupational Health and Safety regulations. Noise levels in excess of 85dB(A) may be produced by engines and concrete vibrators.

PROTECTIVE CLOTHING

- ALWAYS wear protective clothing and footwear to prevent the skin coming into contact with wet concrete.
- PROTECTIVE FOOTWARE should be worn to reduce injuries from penetration through the sole, contact with cutting objects, slipping and contact with wet concrete.
- EYE PROTECTION must also be worn to prevent eye injuries.

ADDITIONAL HAZARDS

- Slip/Trip/Fall is a major cause of serious injury or death.
- Exercise caution and ensure that the perimeter of elevated formwork or platforms is protected.
- Exercise care when working in the vicinity of unprotected holes or excavations

OPERATION

BEFORE OPERATION

The following items should be checked on a daily basis before operating the trowel.

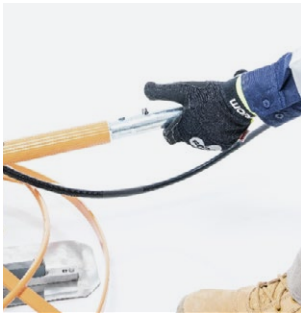
- Engine oil level
- Blade condition and pitch control operation
- Stop Switch operation

CONNECTING THE HANDLES

Only Flextool 1.8m Clip Together Handles can be used with the PortaTrowel (Telescopic handles do not fit)

1. Turn the locking knob to loosen the control block clamp from the PortaTrowel handle connection adaptor, slide the control block upwards and remove from the handle.

2. With the control block removed from the PortaTrowel slide the orange painted end of the clip together handle through the control block. Slide the control block so that is sitting approx half way along the handle (900mm from either end) – Tighten the control block into this position with the locking knob.



3. With the control block now locked halfway along the handle push the silver end of the handle with the push button locking pin into the PortaTrowel handle and secure into position.

STARTING THE ENGINE

1. Move the Throttle Control Lever to “MIN” position.
2. Move the Stop Switch to “ON” position.
3. Place the Choke Lever in the “CLOSED” position.
4. When starting cold or after prolonged use without prior operation press the fuel prime bulb three times.
5. Grasp the start grip and slowly pull the rope towards you. When hard resistance is felt, pull the starter grip briskly and smoothly to start the engine.
6. If the engine starts, return the Choke Lever to “OPEN” position; If the engine is not started, repeat step 5
7. Run the engine for a few minutes to make sure the machine is in normal working condition.
8. To start trowelling, push the Throttle Control Lever towards “MAX” position.

MANOEUVRING THE TROWEL

1. To move the trowel back and forth push the handle outwards and then drag back toward you in the same way you would operate a bullfloat.
2. To move the trowel from left to right, gently twist the handle from left to right using a slow and gentle motion, the tilt steer function operates in the same way as a bullfloat transferring weight from the back to the front of the trowel.

PITCHING THE BLADES

1. To pitch the blades upward, turn the Pitch Control Knob clockwise;
2. To lay the blades flat, turn the knob counter-clockwise.
3. The pitch adjustment feature of the PortaTrowel permits quick and accurate pitch changes of the trowel blades without needing the change blade types mid job to suit varying conditions over the slab surface, this allows the operator to do the work faster and achieve a better slab finish.

FLOATING OPERATION

It is recommended that during floating, blades be kept in a flat position with the trowel working at ½ to ¾ of the full speed, and each pass should overlap the previous by half the width of the trowel. A second trowel pass may be required for the desired finish. Crossover floating is recommended for this pass with blade pitch at a slightly higher level and trowel at about ¾ of the full speed. After the floated slab has set sufficiently it is ready for the finishing operation.

CAUTION: Do not let the machine stand in one spot on the soft concrete. Lift the trowel from the slab when the floating operation is completed.

FINISHING OPERATION

Subject the desired concrete surface finish, the operator should adjust the blade pitch based on the hardness or plasticity of the concrete surface. When the concrete is wet or plastic, begin with the blades lying flat or at a small angle on the surface. When the concrete has sufficiently hardened, increase the blade pitch and keep it at a level corresponding to the concrete hardness and the desired finish. Check the obtained finish and adjust blade pitch as necessary. As a rule, the greater the blade pitch, the smoother the finish. However, excessive blade pitch will cause the blades to wear rapidly.

To fill a hole or cut down a hump, move the unit back and forth over the hole or hump. More passes may be needed for the desired surface finish.

CARE AND PREVENTATIVE MAINTENANCE

- ENSURE repairs and maintenance of the trowelling machine is performed by qualified personnel.
- CAUTION: Make sure the engine is shut down and cool enough before performing repairs and maintenance.
- For preventive maintenance of the engine, please refer to the Owner’s Manual of the Honda engine.

The following schedule should be followed when performing regular maintenance of the trowel:

DAILY (8 – 10 HOURS)

Check the oil level in the engine crankcase before each use, refill as necessary.

Keep the trowel clean and free of concrete residue after each use.

WEEKLY (50 – 60 HOURS)

Check and clean or replace engine air filter as necessary.

Check blades for their condition and adjust or replace if necessary.

Relubricate trowel arms, thrust collars and pitch mechanism.

MONTHLY (200 – 300 HOURS)

Remove, clean, reinstall and relubricate the trowel arms and thrust collars.

Check and adjust the trowel arms for alignment

CLEANING AND STORAGE

Keep the unit free from concrete build up.

FLEXTOOL® PORTATROWEL™

Model	Trowel diameter (mm) (in)	Operating weight (kg)	Number of blades	Speed range (RPM)	Blade pitch max (deg)	Engine make	Engine model	Max rated power (Hp)	Fuel type	Shipping dimensions (LxWxH) (mm)	Shipping weight (Kg)	Product code
FPT30	750 30"	20	4	40-70	25	Honda	GX35	1.5Hp	Petrol	775 x 775 x 480	25	FT201898-UNIT

FLEXTOOL® PORTATROWEL™ REPLACEMENT BLADES FOUR PACK

Rotor diameter	Suits machine model	No. blades per rotor	Size (mm)	Shipping dimensions (LxWxH) (mm)	Weight (kg)	Blades per pack	Product code
30"	PortaTrowel FPT30	4	150 x 265	150 x 265 x 20	1.9kg	4	FT201533-UNIT

FLEXTOOL® CLIP TOGETHER HANDLE

Product code	Description	Maximum number of handles
FT401806-UNIT	Flextool Clip Together Handle 180 mm	Max 3 handles to be used at one time. Additional handles will result in reduced control of the PortaTrowel

Note: Only Clip Together handles can be used with the PortaTrowel FPT30 (Telescopic Handle does not fit)

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