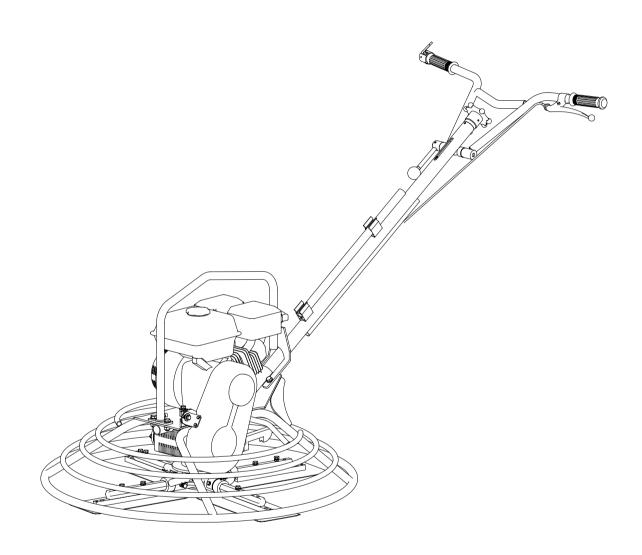








TOL Range



Operator's Manual

Power Trowel

EC DECLARATION OF CONFORMITY / DECLARATION CE DE CONFORMITE / DECLARACIÓN DE CONFORMIDAD CE / DECLARAÇÃO CE DE CONFORMIDADE

GB/US

We, Uni-corp Singapore, 20 Ang Mo Kio Industrial Park 2A, #03-02/03 AMK Techlink Singapore 567761, hereby certify that if the product described within this certificate is bought from an authorised Hoppt dealer within the EEA, it conforms to the following directives: Machinery Directive 2006/42/EC, Electromagnetic Compatibility Directive 2004/108/EC (as amended by 92/31/EEC & 93/68 EEC). The physical agent (vibration) conforms with the directive 2002/44/EC. The low voltage directive 2006/95/EC, BS EN ISO 12100-1/2 Safety of machinery and associated harmonised standards, where applicable. Noise emissions conform to directive 2005/88/EC Annex VI), for machines under article 12 the notified body is TÜV Rheinland Product Safety GmbH - Am Grauen Stein - D-51105 Köln, Germany.

F

Nous soussignons, Uni-corp Singapore, 20 Ang Mo Kio Industrial Park 2A, #03-02/03 AMK Techlink Singapore 567761, certifions que si le produit décrit dans ce certificat est acheté chez un distributeur de la marque déposée "Hoppt" au sein de la EEA, celui-ci est conforme aux norms CEE ci-après: Norme de la machine 2006/42/CE, Norme compatible pour l'électromagnétisme 2004/108/CE (modifie par 92/31/CEE et 93/68/CEE). Le nombre de vibrations est en accord avec la directive 2002/44/CE. Caractéristiques basse tension 2006/95/CEE, BS EN ISO 12100-1/2, Norme de sécurité des machines et des critères associés et configurés, si applicable. Les émissions debruit sont conformes à la directive 2005/88/CE Annexe VI pour machines, article 12. L'objet mentionné est TÜV Rheinland Product Safety GmbH - Am Grauen Stein - D-51105 Köln, Allemagne.

E

La Sociedad, Uni-corp Singapore, 20 Ang Mo Kio Industrial Park 2A, #03-02/03 AMK Techlink Singapore 567761, por el presente documento certifica que si el producto descrito en este certificado es comprado a un distribuidor autorizado de Hoppt en la EEA, este es conforme a las siguientes directivas: 2006/42/CE de la CEE, Directiva 2004/108/CEE sobre Compatibilidad Electromagnética (según enmiendas 92/31/CEE y 93/68 CEE). El numero de vibraciones esta de acuerdo con la Directiva 2002/44/CE. Directiva sobre Bajo Voltaje 2006/95/CEE, BS EN ISO 12100-1/2 de Seguridad de Maquinaria y Niveles armonizados estándares asociados donde sean aplicables. Emisión de Ruídos conforme a la Directiva 2005/88/CE Anexo VI para máquinas bajo articulo 12 la mencionada unidad está TÜV Rheinland Product Safety GmbH - Am Grauen Stein - D-51105 Köln, Germany.



O signatário, Uni-corp Singapore, 20 Ang Mo Kio Industrial Park 2A, #03-02/03 AMK Techlink Singapore 567761, pelo presente, declara que se o produto descrito neste certificado foi adquirido a um distribuidor autorizado do Hoppt em qualquer pais da EEA, está em conformidade com o estabelecido nas seguintes directivas comunitárias: 2006/42/CE, Directiva de Compatibilidade Electromagnética 2002/108/CEE (conforme corrigido pelas 92/31/EEC & 93/68 EEC). O numero de vibrações está de acordo com a directiva 2002/44/CE LB. A directiva de baixa voltagem 2006/95/CEE, BS EN ISO 12100-1/2 Segurança da maquinaria e às normas harmonizadas afins se aplicáveis. As emissões de ruido respeitam e estão dentro das directivas para máquinas 2005/88/CE Anexo VI, artigo 12, sendo o organismo notificado TÜV Rheinland Product Safety GmbH - Am Grauen Stein – D-51105 Köln, Germany.

PRODUCT TYPE	TYPE DE PRODUIT	TIPO DE PRODUCTO	TIPO DE PRODUCTO
MODEL	MODELE	MODELO	MODELO
SERIAL No	N° DE SERIE	N° DE SERIE	Nº DE SÉRIE
DATE OF	DATE DE	FECHA DE	DATA DE
MANUFACTURE	FABRICATION	FABRICACIÓN	FABRIC
WEIGHT	POIDS	PESO	PESO





Signed by:

Quality Manager - On behalf of Uni-corp Singapore PTE Ltd

Anita Tan

Foreword

This manual has been written to help you operate your Power Trowel safely. It is intended primarily for dealers and operators of Hoppt Power Trowels. It is recommended that you keep this manual or a copy of it with the machine so that it is readily available for reference.

Before you operate or carry out any maintenance on this machine YOU MUST READ and UNDERSTAND this manual.

Should you have ANY QUESTIONS about the safe use or maintenance of this machine after reading this manual, ASK YOUR SUPERVISOR or CONTACT:

Uni-corp Singapore on +65 6756 7688

Hoppt reserves the right to change machine specification without prior notice or obligation.

Directions with regard notations

Text in this manual to which special attention must be paid are shown in the following way:



This CAUTION sign indicates a potential hazard, which if ignored, could result in injuries to the operator and/or those close by, as well as damaging the machine.



This WARNING sign indicates a potential hazard, which if ignored could result in the DEATH of the operator and/or those close by.

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Safety Information

For your own personal protection and for the safety of those around you, please read and ensure you fully understand the following safety information. It is the responsibility of the operator to ensure that he/she fully understands how to operate this equipment safely. If you are unsure about the safe and correct use of the Power Trowel, consult your supervisor or Hoppt.



Improper maintenance can be hazardous. Read and understand this section before you perform any maintenance, service or repairs.

General Safety

- The owner of this machine must observe, and also train the user of the machine to observe, the effective labour protection laws in the country of application.
- This machine is to be used for is intended application only.
- This machine must only be operated by well-trained personnel.
- Personal Protective Equipment (PPE) must be worn by the operator whenever the equipment is being used.
- Cordon off the work area and keep members of the public and unauthorised personnel at a safe distance.
- The round pan should be held through the hole of the pan by cord with the guard ring, when being in transport, in order to prevent personnel from being knocked.
- Make sure you know how to safely switch this machine OFF before you switch it ON in case you run into any difficulties.
- · Always switch OFF the engine before servicing it.
- During use, the engine becomes very hot. Always allow the engine to cool down before touching it.
- Never leave the engine running and unattended.
- Never remove or tamper with any fitted guards; they are there for your own protection. If they
 are damaged or missing, DO NOT USE THE MACHINE until the guard has been replaced or
 repaired.
- Always switch OFF the engine before transporting it, moving it around site or servicing it.
- Do not operate the machine when you are ill, feeling tired or when under the influence of alcohol or drugs.

• This machine is designed to eliminate the possible risks arising from the use of it. However, risks DO reside, and these residual risks are not clearly recognisable and may cause personal injury or property damage, and possibly death. If such unpredictable and unrecognisable risks become apparent, the machine must be stopped immediately, and operator or his supervisor must take appropriate measure to eliminate such risks. It is sometimes necessary that the manufacturer must be informed of such an event for future counter measuring.

Fuel Safety



Fuel is flammable. It may cause injury and property damage. Shut down the engine, extinguish all open flames and do not smoke while filling the fuel tank. Always wipe up any spilled fuel.

- Before re-fuelling, switch off the engine and allow it to cool.
- When re-fuelling, use a proper funnel, and avoid spilling over the engine.
- When re-fuelling, DO NOT smoke or allow naked flames in the area.
- Spilt fuel must be made safe immediately by using sand. If fuel is spilt on your clothes, change them.
- Store fuel in an approved, purpose made container away from heat and sources of ignition.

Health & Safety

Fuel

Do not ingest fuel or inhale fuel vapors and avoid contact with your skin. Wash fuel splashes immediately. If you get fuel in your eyes, irrigate with copious amounts of water and seek medical attention as soon as possible.

Exhaust Fumes



The exhaust fumes produced by this machine are highly toxic and can kill! Make sure the work area is adequately ventilated.

PPE (Personal Protective Equipment)

Suitable PPE must be worn when using this equipment i.e. safety goggles, gloves, ear defenders, dust mask and steel toe-capped footwear (with anti-slip soles for added protection). Wear clothing suitable for the work you are doing. Always protect skin from contact with concrete.

Environment

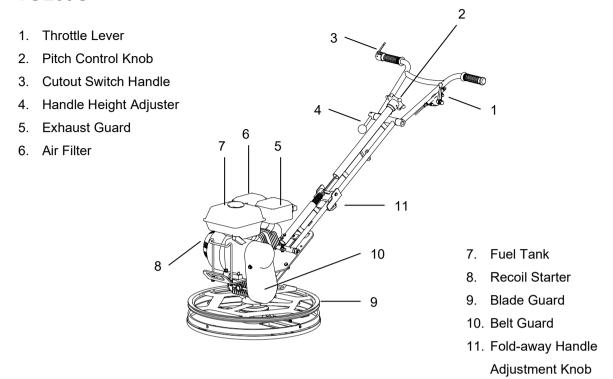
In order to protect the environment please recycle any discarded apparatus or accessories. The table beside provides you with a list of the machine's components and their respective materials. Take the discarded apparatus to the relevant recycling facilities.



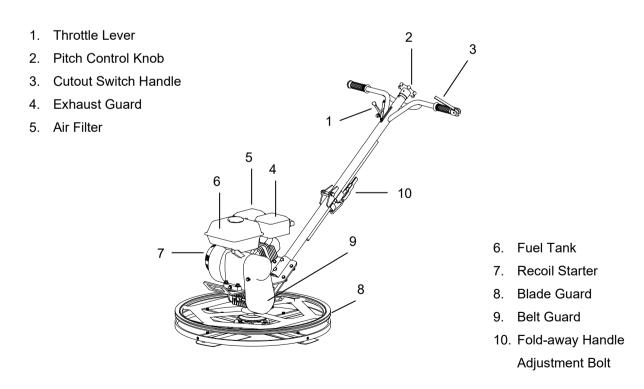
Component	Material
Operator Handle	Steel
Belt Guard	Glass Fibre
Blade Guard	Steel
Bedplate	Steel
Hand Grips	Rubber
Engine	Aluminium & Steel
Gearbox	Aluminium, Steel & Phosphor Bronze
Spider Assembly	Cast Iron, Steel & Phosphur Bronze
Various Parts	Steel &Aluminium

Machine Description

TOL60G

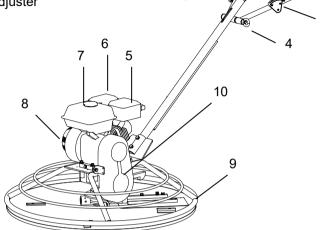


TOL75G



TOL100GB

- 1. Throttle Lever
- 2. Pitch Control Knob
- 3. Cutout Switch Handle
- 4. Handle Height Adjuster
- 5. Exhaust Guard



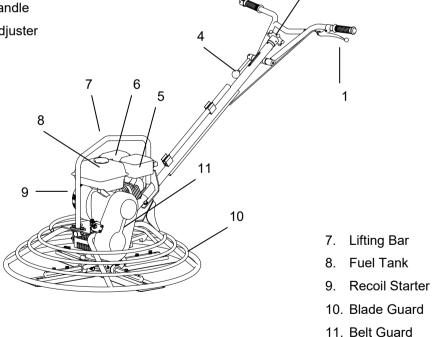
6. Air Filter

2

- 7. Fuel Tank
- 8. Recoil Starter
- 9. Blade Guard
- 10. Belt Guard

TOL90GB/TOL120GB

- 1. Centrifugal Clutch
- 2. Pitch Control Knob
- 3. Cutout Switch Handle
- 4. Handle Height Adjuster
- 5. Exhaust Guard
- 6. Air Filter



Pre-Start Checks

The following pre-start inspection must be performed before the start of each work session or after every four hours of use, whichever is first. Please refer to the service & maintenance section for detailed guidance. If any fault is discovered, the Power Trowel must not be used until the fault is rectified.

- 1. Thoroughly inspect the machine for signs of damage. Make sure all guards are in placed and secured.
- 2. Check hoses, filler openings, drain plugs and any other areas for signs of leakage. Fix any leaks before operating.
- 3. Check the engine oil level and top up as necessary. Use proper engine oil with the proper viscosity (SAE 10W-30 recommended).
- 4. Check the engine fuel level and top up as necessary. Use clean fuel. Use of contaminated fuel may damage the fuel system.
- 5. Check the air filter is clean. Excessive dirt/dust accumulation within the filter element will cause erratic engine operation. Clean the air filter element when it is contaminated. (See Service & Maintenance Section)
- 6. Check for fuel and oil leaks.

Start and Stop Procedure



Improper operation can be hazardous. Read and understand this section before you start the machine.

Before starting the engine, make sure that the Safety Switch is in the ON position and the Throttle Lever is set to the idle position.

- 1. Verify the correct blades for the job have been chosen and that they are properly installed. Inspect the blades carefully for damage. Never use any questionable blades.
- 2. Check to be sure the blades are free of obstructions and the area is clear for operation.
- 3. Visually inspect the Power Trowel. Check that all fasteners are secured and mechanical parts are in proper working order.

Before Starting Gasoline Engine

- Check the oil in the engine crankcase. Be sure to maintain the proper level per the engine manufacturer specifications. If the oil is dirty and in need of changing, follow the Engine User Manual instructions.
- 2. Check the fuel supply. Refer to Engine User Manual.

Operation

Before Starting the Engine

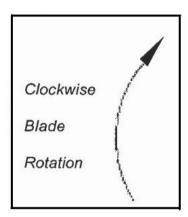
- 1. Visually check to be sure that the blades are free of obstructions and the area is clear for operation.
- 2. Grip the cutout switch handle, then pull the recoil starter knob in order to start the engine.

Note: Before starting the engine, you should grip the cutout switch handle always. The engine will stop as soon as you loose the handle.(Figure 1 / Figure 2)

3. The operator of smoothing machines shall take care that nobody stays or gets into danger area during operation.

Moving the Power Trowel

Get into operator's position behind the centre of handle with good footing and apply the throttle slowly until desired speed is obtained. The blades of the Power Trowel spin in a clockwise direction. All HOPPT Power Trowels are directed left or right by applying a slight upward (lifting) or downward (lowering) pressure on the handle (respectively).



- Push handle down and machine will move to the right.
- Lift handle up and machine will move to the left.
- Slightly twist to the right and the machine will move forward.
- Slightly twist to the left and the machine will move backward.
- Holding the handle in neutral position, the machine will remain stationary.

Preparation of Concrete Surface

Use of a mechanical or air vibrating screeding machine to strike the concrete surface to level will provide good compaction to the slab and produce an ideal surface for finishing. It should be remembered floating/finishing machines will not repair or correct a poorly screeded slab.

Floating Operation

Before starting the floating operation, be sure that the Round Pan is correctly mounted on the finishing blades. Be aware that with the blades arm turning clockwise, the floats should be positioned the same way. The slab will be ready to work for the first floating operation when the heel of your shoes leave a print of 2~3mm on the surface of the slab. On all other floating operations, the blades should be almost flat. After the floated slab has set and your footprint is

slightly visible, it is ready to start the finishing operation. The timing of all these operations is dependent on weather conditions. After each operation, the engine should be stopped.

Never park the machine with the engine running, especially during the floating operation when the concrete is relatively soft. Considering the machine is heavy, should it be left running on the soft concrete in the same spot, this will cause damage to the finished floor tolerances.

Finishing Operation

After the floating operation, the first thing to do is to remove the Round Pan from the finishing blades and clean the blades, spider plate and protection ring of cement/concrete paste collected during the floating operation. Increase the blade pitch up to 10mm for the first finishing operation and then continue to increase the pitch on the following finishing operations.

Continue the finishing passes until you obtained the desired finished floor surface. The time required between each finishing pass is dependent on the weather conditions, cement and water content of the concrete. If some areas of the concrete set harden too fast, you may apply a small amount of water with a brush to help achieve a finish. Be careful when running the Power Trowel on areas where water has been applied because the machine will tend to skate away. Be sure to maintain control of the Power Trowel at all times.

Pitch Adjustment

The pitch control knob is in easy reach of the operator. The pitch adjustment has a limited pitch variation. Rotate the pitch control knob clockwise to tilt the blades and counterclockwise to flatten the angle of the blades. Adjustment is based on the desired performance for the specific job application.

Spider Plate

By experience, we know the major problem on the Power Trowel arm is lack of lubrication. During mounting, we undertake the greasing and sealing the Power Trowel arms on the spider plate. Greasing to be carried out on a weekly basis using the grease nipple provided. If an arm becomes jammed, this is probably due to the arm being bent and will require replacement.

Service and Maintenance



Before carrying out any maintenance on this machine ensure the engine has been switched off. The engine should also be allowed to cool as parts of the engine become hot during use.

Maintenance

The Hoppt Power Trowel is designed to give many years of trouble free operation. It is, however, important that the simple regular maintenance listed in this section is carried out. It is recommended that an approved Hoppt dealer carry out all major maintenance and repairs. Always use genuine Hoppt replacement parts, the use of spurious parts may void your warranty. Before any maintenance is carried out on the machine, switch off the engine and disconnect the HT lead from the spark plug. Always set the machine on level ground to ensure any fluid levels will be correctly read. Only use recommended oils.

Running In Period

When the trowel is first used from new, the engine oil must be changed after the initial running in period. (See engine manual for full details).

Machine Cleaning

Clean the machine after it has been used to prevent the collection of hardened cement. The blades can usually be cleaned with a high-pressure hose and water while the concrete is still wet. Hard cement/concrete is very difficult to remove. Immediately replace any labels/stickers should you notice that they are worn, missing, or damaged.

Changing Blades

Be sure spark plug is disconnected before changing the blades. Make sure the machine is on a flat surface; adjust the pitch control so that the blades are flat on the surface.



Be careful when changing old blades for new. Due to the way the blades wear, the old blades become very sharp and can cut easily. Wear heavy duty gloves to avoid injury. **BLADES MUST BE REPLACED AS A SET!!!**

Remove bolts and lock washers on each Power Trowel arm and remove the blades. Before fitting new blades, clean all cement/concrete from bottom and side of Power Trowel. Be sure troweling edge of the blade is behind Power Trowel arm. Install bolts and lock washers on each Power Trowel arm and fasten them

Drive Belt

Remove the belt guard then check the belt tension by placing light finger pressure on the top of the belt, as near central between the engine drive and gearbox pulley. The belt should deflect by between 10mm ~ 15mm. If the belt tension requires adjustment, loosen the four engine mount bolts enough to allow the engine to be moved. Adjust the engine's position by turning the tension bolt clockwise to increase belt tension, anti-clockwise to decrease. Once set, retighten the engine mount bolts and check the belt tension a second time. Finally, replace the belt guard ensuring it is correctly and securely fitted.

Rountine maintenance		Daily	After first 4 hrs / weekly	First month / 20 hours	Every 3 months / 50 hrs	Every 6 months / 100 hrs
Air Filter	Check condition			•		•
All I litel	Clean/Replace				•	
Engine Oil	Check level		•			
	Change			•	•	
Cutout Switch	Check	•				
Belt Tension	Check		•			
Spark Plug	Check/Clean					•

Oil/Fuel Type & Quantity—Spark Plug Type						
	Oil Type	Quantity (litres)	Fuel Type	Capacity (litres)	Spark plug Type	Electrode Gap
GX100		0.4	Unleaded	0.77	NGK (CR5HSB)	
EX13	SAE	0.6	Petrol /	2.7	NOK	0.6-0.7mm
GX160	10W-30	0.6 Gasoli	Gasoline	2.5	NGK	
EX17		1.1		3.6	BR-6HS	
Gearbox	EP90	Small (0.35) Large (0.6)		N	/A	

Note:

- Check the gearbox oil at regular intervals and top-up when necessary. Make sure the oil is at the centre of the sight glass.
- Grease Spider Arm Assembly prior to storage and at regular intervals.

Trouble Shooting

Problems	Possible Causes	Countermeasures	
Engine stops suddenly or does not run.	a. No fuel.b. Engine switched off.c. Spark plug fouled.d. Engine cold.e. Engine flooded.	 a. Open fuel cap, fill fuel tank. b. Switch engine on. c. Clean & reset plug gap. d. Close choke. e. Open choke, fully open throttle, pull recoil starter until engine fires. 	
Cutout safety switch wire disconnected		Reconnect wire.	
Trowel is powerless or unstable	 a. Insufficient oil in gearbox. b. Rotation speed of engine is too slow. c. Speed output of engine is too slow. d. Too much cement/concrete accumulated on Trowel. e. V-belt is loose. 	 a. Add oil to the recommended level. b. Keep speed high. c. Clean air filter. d. Remove cement/concrete on Trowel. e. Retighten V-belt. 	
Machine *Engine runs but machine does not.	a. Presence of water in the clutch.b. Speed output of engine is slow.c. Engine overloaded.	 a. Dismantle and dry clutch. b. Clean air filter. (Refer to Engine User Manual) c. Check all parts like gears and springs. 	
	Main shaft	When the machine has a rolling motion, check the main shaft of the gearbox.	
Leaving swirls in concrete, rolling concrete, bouncing.	Spider plate	Check spider plate for bent trowel arms. If one is bent, replace it.	
	Blades	 a. Check the adjustment on trowel arms at adjustment lever, and ensure all trowel arms are adjusted equally. b. Blades should be of the same measurement/dimension and designed to fit the machine. c. Excessively worn blades should not be used. 	

Technical Data

MODEL	TOL90GB	TOL120GB	
DIMENSION (LxWxH) – mm (in)	1,900 x 1,000 x1,100 (74.8 x 39.4 x 43.3)	2,100 x1,200x 1,100 (82.7 x 47.2 x 43.3)	
GUARD RING DIAMETER - mm (in)	1,000 (39.4)	1,200 (47.2)	
OPERATING WEIGHT - kg (lb)	77 (170)	95 (209)	
HANDLE TYPE	STRA	IGHT	
GEARBOX	HEAVY-DUTY		
FINISHING BLADE SIZE (LxW) - mm (in)	356 x 151 (14 x 6)	458 x 152 (18 x 6)	
MAX. BLADE PITCH ANGLE - °	15		
NO. OF BLADES	4		
BLADE OPERATING SPEED - rpm	50 – 150		
ENGINE	HONDA GX160	HONDA GX270	
ENGINE TYPE	4-STROKE GASOLINE		
MAX. POWER OUTPUT - hp (kW)	GX160 @ 5.5 (4)	GX270 @ 9 (6.6)	
MAX. ENGINE SPEED - rpm	3,600	3,600	

MODEL		TOL60G		
DIMENSION	FOLDED	660 x 666 x 737 (26 x 26.2 x 29)		
(LxWxH) – mm (in)	UNFOLDED	1,525 x 666 x 1,058 (60 x 26.2 x 41.7)		
GUARD RING DIA	METER - mm (in)	606 (23.9)		
OPERATING W	EIGHT - kg (lb)	60 (132)		
HANDLE	ETYPE	FOLDABLE		
GEAR	RBOX	SMALL		
FINISHING BLADE S	SIZE (LxW) - mm (in)	230 x 120 (9 x 4.7)		
MAX. BLADE PI	TCH ANGLE - °	14		
NO. OF BLADES		4		
BLADE OPERATING SPEED - rpm		85 - 138		
ENGINE		HONDA GX160/ROBIN EY15		
ENGINE	TYPE	4-STROKE GASOLINE		
MAX. POWER OUTPUT - hp (kW)		5.5 (4)		
MAX. ENGINE SPEED - rpm		HONDA@3600 / ROBIN@4000		
SOUND POWER LEVEL - dB		97		
SOUND PRESSURE LEVEL - dB		83		
VIBRATION – m/s ²		RIGHT 9.198 / LEFT 6.432		

Transportation and Storage



Extreme Care must be taken when transporting, loading or undloading this machine.

- For long-term storage, empty the fuel in the carburetor by running the engine with the fuel tap closed.
- The chemical composition of the fuel will deteriorate after prolonged storage. When the machine
 needs to be stored for a long time, remove all the fuel from the fuel tank and the water from the
 water tank. Also remove the fuel from the float chamber of the carburetor by draining the fuel out
 from the drain plug.
- Wash away asphalt/concrete accumulated on the Power Trowel. Clean the engine mounting plate. Apply a light coat of oil on arbor shaft, blade retaining cap and backing plate to prevent rust formation. Cover the machine and store it in a dry place.
- Where applicable, always use the lifting hook for hoisting purposes. Use proper hoisting equipment and techniques.
- Be certain the area surrounding the machine is clear of personnel before hoisting.
- The Operation Handle can be disengaged for easy storage. Loosen the bolts on the connecting point on the base plate and release the Operation Handle from the slot.

Warranty

Your new Hoppt Power Trowel is warranted to the original purchaser for a period of one-year (12 months) from the original date of purchase.

The Hoppt warranty covers defects in design, materials and workmanship.

The following are not covered under the Hoppt warranty:

- 1. Damage caused by abuse, misuse, dropping or other similar damage caused by or as a result of failure to follow assembly, operation or user maintenance instructions.
- 2. Alterations, additions or repairs carried out by persons other than Hoppt or their recognised agents.
- 3. Transportation or shipment costs to and from Hoppt or their recognised agents, for repair or assessment against a warranty claim, on any machine.
- 4. Materials and/or labour costs to renew, repair or replace components due to fair wear and tear.
- 5. The engine, air filter and the engine spark plug.

Hoppt and/or their recognised agents, directors, employees or insurers will not be held liable for consequential or other damages, losses or expenses in connection with or by reason of or the inability to use the machine for any purpose.

Warranty Claims

All warranty claims should firstly be directed to the local dealer, either by telephone, by fax, by email, or in writing.

Liability

HOPPT declines any liability for possible damages to persons and/or things, which might arise from improper or wrong use of the machine or non-observance of the operating instructions in this manual.

USE ONLY GENUINE HOPPT PARTS AND ACCESSORIES!

For your own safety, the safety of others and the life of the machine.

Notes

Notes







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