

OPERATING AND SAFETY INSTRUCTION MANUAL

HDBP35H BT Backpack Concrete Vibrator drive unit



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1. INTRODUCTION

General Safety Instructions for the Operation of Power Equipment

The goal of Beton Trowel NV 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.

2. APPLICATIONS

- Civil: roadways, kerbing, runways, pre-cast beams, bridge decks, piers and columns.
- Commercial building: strip and raft foundations, stairs, walls, wall panels and columns, floors, suspended slabs, tilt panels and retaining walls.
- Residential building: floor slumps, wall cavities, house slabs, wall footings, septic tanks, paving slabs. And driveways

3. FUNCTION AND CONTROLS

3.1. BACK PACK

This BackPack drive unit is designed to power flexshaft driven eccentric concrete vibrators. The motor is controlled by an ON/OFF push button which is mounted on the hinged operator control handle. The motor speed is controlled by throttle lever also mounted on the hinged operator control handle

3.2. VIBRATOR & FLEXSHAFT

This vibrator is designed for the compaction of concrete by immersion of the vibrator head into the concrete. Compaction improves the strength and finish of concrete by driving out entrapped air. High frequency vibration allows the efficient compaction of low slump concrete mixes. The vibrator head is driven by a rotating flexible drive shaft that transmits the drive from the BackPack drive unit. The vibrator head uses an eccentric mass to produce vibration. Bearings support the rotor at each end.

4. 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

4.1. MECHANICAL HAZARDS

- DO NOT operate the machine unless all protective guards are in place.
- 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.
- KEEP hands and feet clear of rotating and moving parts as they will cause injury if contacted.
- BE CAREFUL not to come in contact with the muffler during or immediately after operation as it will be extremely hot and can cause severe burns.
- DO NOT leave the equipment in operation while it is unattended.
- EXERCISE CARE when handling concrete vibrators. Exposure to vibration or repetitive work actions may be harmful to hands and arms.
- DO NOT hold the vibrator head in your hands while it is running. Hold the vibrator by the flexible shaft to isolate your hands from the vibration.
- NEVER stand on the vibrating head while it is operating.
- ENSURE that repairs to machinery are carried out by COMPETENT personnel.
- ENSURE that petrol is only stored in an approved storage container.

4.2. FIRE AND 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.

4.3. CHEMICAL HAZARDS

- DO NOT operate or refuel a petrol motor in a confined area without adequate ventilation.
- CARBON MONOXIDE exhaust gases from petrol engines can cause death in confined spaces.

4.4. 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.

4.5. PROTECTIVE CLOTHING

- ALWAYS wear protective clothing and footwear to prevent the skin coming into contact with wet concrete.
- PROTECTIVE FOOTWEAR 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.
- USE GLOVES when handling and inspecting the flexible shaft outer casing. Excessive wear of the rubber cover can expose the wire braided reinforcement, allowing it to project and cause injury.

4.6. ADDITIONAL HAZARDS

- To reduce the risk of injury from loss of balance and muscle strain do not start the engine whilst it is on the operators back. To start the engine place the unit on an elevated flat level surface, and only place on the operators back once the engine is idling.
- Exercise care when using the backpack unit. Ensure shoulder and waist straps are adjusted to suit the operator, ensure the weight of the unit is evenly distributed across both shoulders and hips to reduce back injuries. An incorrectly fitted and unbalanced BackPack may cause you to become unbalanced, particularly on uneven surfaces or elevated positions. Slip/Trip/Fall can be a major cause of serious injury.

5. OPERATION

- Do not engage the flexshaft drive coupling into an engine that is already running. Flexshafts must only be connected to the drive engine prior to it being started.
- Set your backpack unit on the ground and attach the flexshaft using the quick connect adaptor that is on the unit.
- Start the Engine - For information on correct engine starting procedures refer to the engine manufacturers operation manual.
- Once the backpack has been started place it on the operators back and adjust the straps to suit the operator.
- Do not use an immersion vibrator head as an external vibrator by applying it to the outside of formwork.
- Do not operate the vibrating head out of concrete for extended periods.
- Do not leave it running while you wait for fresh supplies of concrete to be placed. Vibrator heads are designed to be cooled by the concrete in which they are immersed.
- During periods when the vibrator head is not immersed in the concrete drop the engine speed back to idle

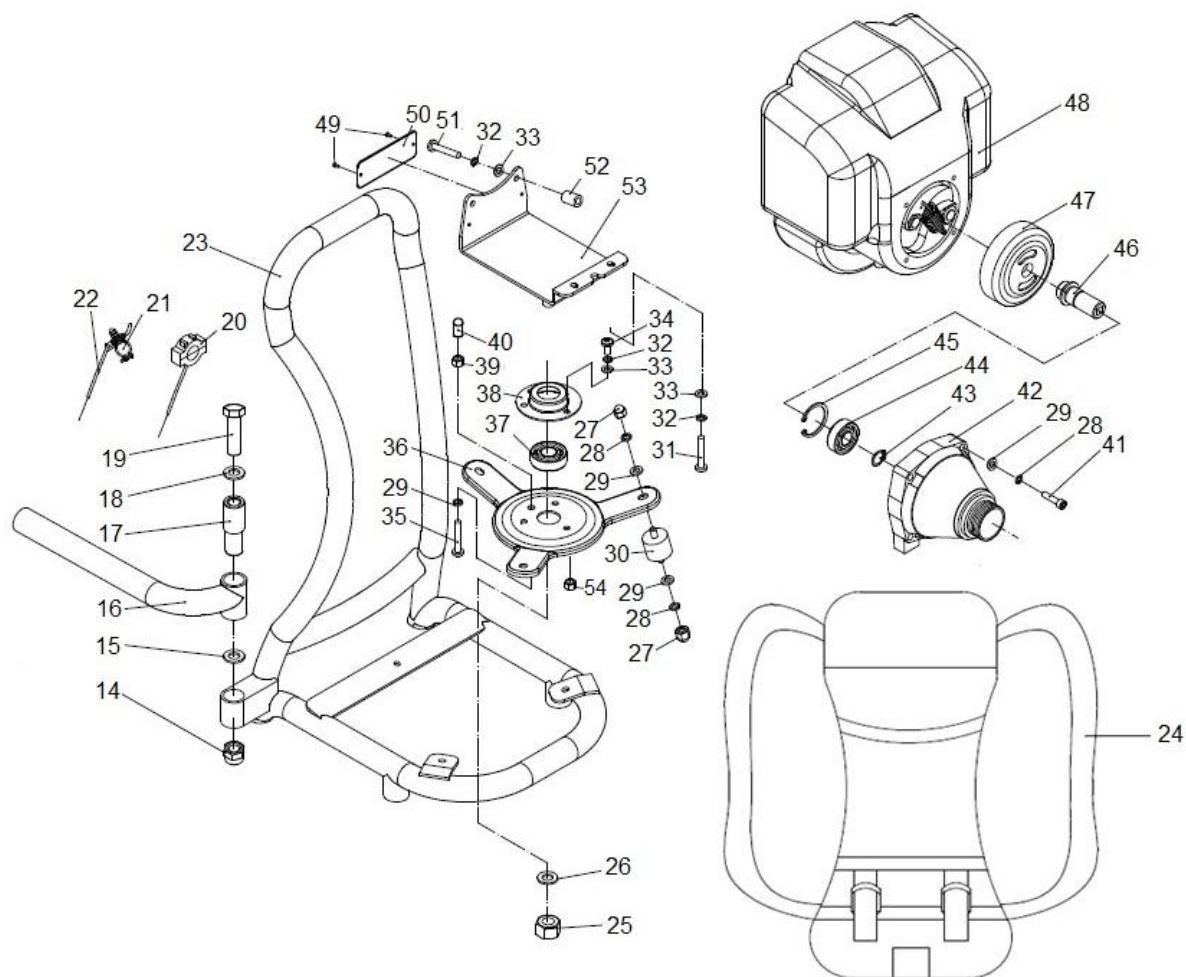
6. CARE AND PREVENTATIVE MAINTENANCE

- Keep the BackPack drive unit clean and free of concrete residue and build up.
- Concrete vibrators must be handled with care and be properly maintained in order to avoid unnecessary breakdowns. Check regularly for signs of wear and rectify any faults immediately.
- The exterior of the flexshaft and the vibrator head are subject to abrasion and wear. If the vibrator is operated unchecked, concrete will eventually enter the vibrator head or the flexshaft. Naturally, the cost of repairing a vibrator which has been allowed to deteriorate in this way will be greater.
- Regular inspection of the vibrator and the flexible shaft will avoid these problems.
- Check the flexible shaft for kinks and external damage by laying it out straight on a workbench or the floor. Although it still operates a badly kinked flexible shaft may result in a broken inner core.

7. CLEANING AND STORAGE

It is advisable to wash the vibrator head and flexshaft with clean water after each use and before storing. This will ensure that concrete does not accumulate on the exterior of the unit that can cause overheating and premature failure of the unit.

8. PARTS LIST

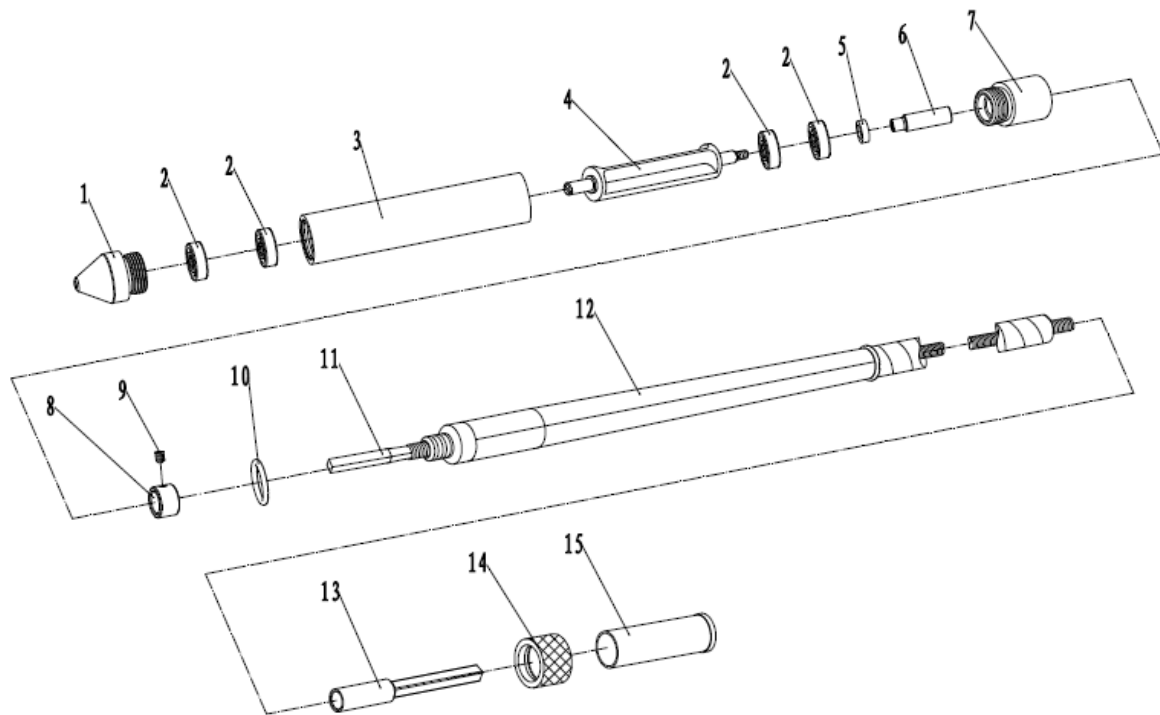


Backpack Concrete Vibrator

Item No.	Product Code	Description	Qty	Remarks
14	NPS01794-UNIT	FLX NUT NYLOCK M12 (610421)	1	
15	NPS01797-UNIT	FLX SPRING D26 (650714)	1	
16	NPS01811-UNIT	FLX HANDLE CONTROL ARM (086048)	1	
17	NPS01805-UNIT	FLX SPIN ADAPTOR (086049)	1	
18	NPS01790-UNIT	FLX FLAT WASHER 12MM (650305)	2	
19	NPS01800-UNIT	FLX BOLT M12X80 (590397)	1	
20	NPS01812-UNIT	FLX SWITCH ON/OFF (086057)	1	
21	NPS01817-UNIT	FLX THROTTLE CONTROL LEVER FVE-BP (570103)	1	
22	NPS01806-UNIT	FLX THROTTLE CABLE FVE-BP (086058)	1	
23	NPS01821-UNIT	FLX BACKPACK MAIN FRAME (086059)	1	
24	NPS01820-UNIT	FLX BACKPACK HARNESS (086075)	1	
25	NPS01791-UNIT	FLX NUT M10 (610104)	1	
26	NPS01792-UNIT	FLX WASHER 10MM (650304)	1	
27	NPS01795-UNIT	FLX DOME NUT (610602)	6	
28	NPS01785-UNIT	FLX SPRING WASHER 6MM (650502)	10	
29	NPS01786-UNIT	FLX FLAT WASHER 6MM (650302)	12	
30	NPS01807-UNIT	FLX RUBBER MOUNT (086060)	3	
31	NPS01801-UNIT	FLX BOLT M5X16 (630402)	2	
32	NPS01787-UNIT	FLX SPRING WASHER 5MM (650501)	12	
33	NPS01788-UNIT	FLX FLAT WASHER 5MM (650301)	12	
34	See Remarks	FLX BOLT M5X16 (630713)	3	Use AS-8
35	See Remarks	FLX BOLT M6X25 (590303)	1	Use AS-8
36	See Remarks	FLX TRI SWIVEL SUPPORT BASE (086061)	1	Use AS-8
37	See Remarks	FLX BEARING 6202-2Z (550507)	1	Use AS-8
38	See Remarks	FLX BEARING COVER (086062)	1	Use AS-8
39	See Remarks	FLX NYLOCK NUT M6 (610102)	1	Use AS-8
40	See Remarks	FLX RUBBER CAP (086067)	1	Use AS-8
41	See Remarks	FLX BOLT M6X30 (590371)	4	Use AS-7
42	See Remarks	FLX CLUTCH HOUSING COUPLER (086063)	1	Use AS-7
43	See Remarks	FLX CIRCLIP 17MM (670216)	1	Use AS-7
44	See Remarks	FLX BEARING 6203-2RZ (550102)	1	Use AS-7
45	See Remarks	FLX CIRCLIP 40MM (670105)	1	Use AS-7
46	See Remarks	FLX SHAFT COUPLER (086064)	1	Use AS-7
47	See Remarks	FLX CLUTCH DRUM (086065)	1	Use AS-7
48	NPS03318-UNIT	HON ENGINE GX35 (TSUT) PORTAVIBE (570614/5)	1	
49	NPS01789-UNIT	FLX RIVET 3.3X8 (632213)	2	
50	NPS01809-UNIT	FLX SERIAL NUMBER PLATE (710239)	1	
51	NPS01803-UNIT	FLX BOLT M5X35 (8.8) (630453)	2	
52	NPS01804-UNIT	FLX SLEEVE (086068)	2	
53	NPS01814-UNIT	FLX ENGINE SUPPORT BASE (086066)	1	
54	See Remarks	FLX NYLOCK NUT M5 (610422)	3	Use AS-8

Assembly / Service Kits

Item No.	Product Code	Description	Qty	Remarks
AS-7	NPS01822-UNIT	FLX COUPLING ASSY ENGINE (086068)	1	Inc Items: 41-47
AS-8	NPS00144-UNIT	FLX TRI SWIVEL BASE ASSY (086079)	1	Inc Items: 31-40 & 54



NO.	DESCRIPTION	QTY.	38MM	
			CODE	KG
1	CONE	1	183310	0.28
2	BEARING	4	550604	0.28
3	CASING	1	183350	0.81
4	ECCENTRICAL SHAFT	1	183360	0.50
5	OIL SEAL	1	530205	0.01
6	SQUARE ADAPTOR	1	183256	0.05
7	CASING ADAPTOR	1	183260	0.27
8	POSITION RING	1	183266	0.09
9	SCREW	1	630660	0.01
8+9	P-RING WITH SCREW	1	187231	0.10
10	O-RING	1	183113	0.01
11	FLEXIBLE SHAFT RZ10×3M	1	187213	1.41
12	FLEXIBLE PIPE COMP. RG28×3M	1	183258	4.25
13	SQUARE PLUG	1	183257	0.04
14	KNURLED NUT	1	187120	0.12
15	HOSE CONNECTOR	1	187161	0.21
*	HEAD ASSEMBLY: 1-7	1	183513H	3.04
**	FLEXIBLE SHAFT ASSEMBLY-3M: 8+9+11+13	1	183513Z	1.55
***	FLEXIBLE PIPE ASSEMBLY-3M: 10+12+14+15	1	183513G	4.59
****	FLEXIBLE PIPE & SHAFT ASSEMBLY-3M: 8-15	1	183513GZ	6.14

9. DECLARATION OF CONFORMITY

Declaration of Conformity / Certificat de conforme / Gelijkvormigheidscertificaat / Declaracion de Conformidad / Declaracao de Concormidade / Dichiarazione Di Conformita

Model : HDBP35H

We Beton Trowel BV

Declare under our sole responsibility that the product to which this declaration relates is in conformity with the following standard(s) or other normative documents.

Déclarons sous notre responsabilité que le produit cette déclaration est conforme aux normes suivantes ou d'autres documents habituels.

Verklaren onder onze verantwoordelijkheid dat het product naar welke de verklaring verwijst conform de volgende standards of anders gebruikelijke documenten is.

Declaramos bajo nuestra única responsabilidad que el producto en lo que esta declaración concierne, es conforme con la siguiente normativa u otros documentos.

Declara sob sua responsabilidade que o produto a quem esta declaração interessar, está em conformidade com os seguintes documentos legais ou normas directivas.

Dichiariamo sotto la ns. unica responsabilità che il prodotto al quale questa dichiarazione si riferisce, è fabbricato in conformità ai seguenti standard e documenti di normative.

EN 349.1993 - EN ISO 4872.1978 - EN 12100-1.2003 - EN ISO 5349-2.2001 - EN 12100-2.2003 - EN 418.1993 - EN ISO 5349-1.2001

Following the provisions of Directives / Suivant les directives determines / Volgens de vastgestelde richtlijnen / Siguiendo las directivas / No sequimento das clausulas da Directivas / Seguendo quanto indicato dalla Direttivas:

98/37/EC Machinery Directive

2000/14/EC Noise Directive

2001/95/EC General Product Safety Directive

2002/95/EC Reduction of Hazardous Waste Directive

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Managing Director
August 14th 2020**