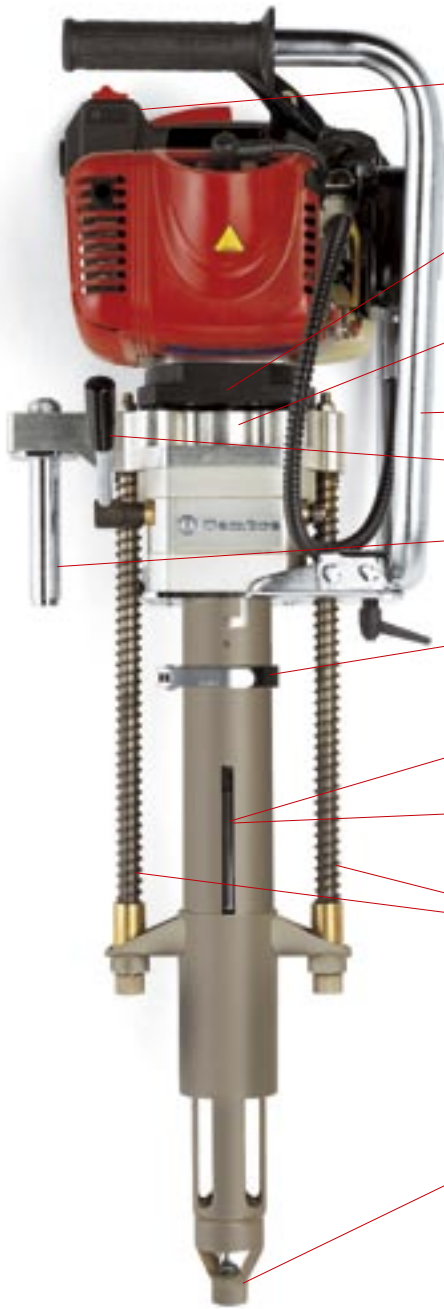


PORTABLE DRILLING MACHINES FOR WOODEN SLEEPERS

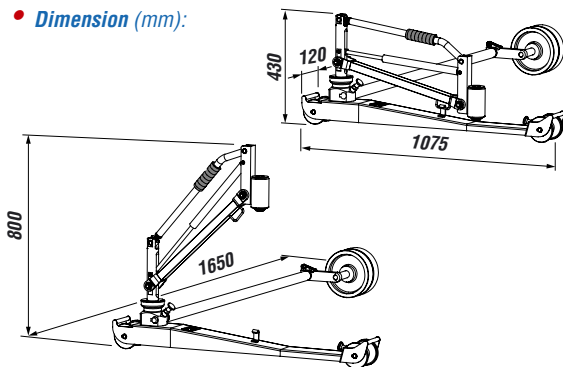
SD-9P



- Accelerator lever fitted with safety switch, to prevent accidental operation.
- Fitted with a centrifugal clutch; with the engine running at 'tick over' speed the drill bit is stationary. The accelerator controls the rotation of the drill bit.
- Shock absorbers fitted between the drive shaft and spindle, reduce the transmission of machine vibrations to the operator.
- Handle will rotate through 90° for operator comfort.
- Emergency lever for the immediate release of the drill bit.
- Carrying handle. Also used for locating the drilling machine into the CS-SD trolley.
- Depth Gauge; easy to operate, using the graduated scale, for adjusting the depth of drilled hole.
- MND spindle, for automatically securing drill bits, with a 14 mm diameter shank.
- MND1 interchangeable spindle: Available upon request. For automatically securing drill bits, with a 16 mm diameter shank.
- Safety guard: providing effective, total protection of the drill bit (325 mm). Spring loaded to guarantee the retraction of the drill bit from the sleeper, on completion of the drilling operation. Therefore minimising operator effort.
- Interchangeable, Guard Nozzle TPM200-26, for locating into chairs and base plates, as commonly used on existing tracks.

SUPPORT TROLLEY TYPE CS-SD:

- **Weight** : (without connecting rod) 17,5 kg
- **Connecting rod weight**: 12 kg
- **Dimension (mm)**:



- **Drilling range**: up to 20 mm diameter, with the Guard Nozzle supplied as standard. Drilling up to 25 mm diameter holes can be achieved by using the interchangeable Guard Nozzle TPM.... available upon request.
- **Max drilling thickness**: 200 mm
- **Weight**: 19 kg

Two stroke engine:

- **Displacement**: 48.6 cc
- **Power**: 1,4 kW
- **Fuel**: 2% mixture (1:50)
- **Starting**: rope pull with automatic rewinding.

PORTABLE DRILLING MACHINES FOR WOODEN SLEEPERS

SD-10E

Technical characteristics:

Engine: single phase electric motor

Supply voltage: 220/230 V / 50 Hz

Power rating: 1800 W

Bit diameter range: up to \varnothing 20 mm*

Drilling up to 25 mm diameter holes can be achieved by using the interchangeable Guard Nozzle TPM.... available upon request.

Max. drilling thickness: 200 mm

Weight: 18 Kg

*Depending on the type of the wood it is also possible to drill larger holes

The SD-10E drilling machine is suitable for use with the CS-SD support trolley.



ACCESSORIES AVAILABLE UPON REQUEST

MND1

For automatically securing 325 mm long drill bits, with a 16 mm diameter shank. Interchangeable with the standard MND spindle.



TPM...

Guard Nozzle for the moveable guard, interchangeable with the standard nozzle.

TPM 190-24: for centering on base plates with 24 mm diam. holes, (using a 19mm diameter max drill bit).

TPM 220-26: for centering on base plates with 26 mm diam. holes, (using a 22mm diameter max drill bit).

TPM 250-31: for holes with 25 mm diam. drill bits.



VAL P 6

Plastic case for storing the drill bits and the standard accessories supplied with the machine. This case can be stored inside the drilling machine case.



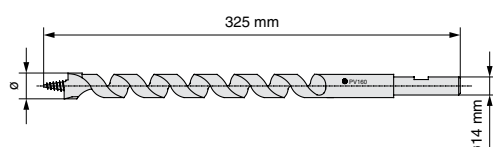
VAL SD

Robust steel case for storing the drilling machine and the VAL P6 accessory case.



Drill bits having a 14 mm diameter shank suitable for MND standard spindle:

Ref:	\varnothing mm
PV 140	14
PV 160	16
PV 170	17
PV 180	18
PV 190 (3/4")	19,05
PV 250	25



NOISE

Protection of workers against risks of exposure to noise during work.

The **Cembre** drills, models **SD-9P** and **SD-10E**, have been designed and constructed according to **EEC** directives **80/1107** and **86/188** relating to the protection of workers against risks arising from exposure to chemical, physical and biological agents during work, with particular regard to the risk of exposure to noise.

This has enabled the drilling machines to be manufactured for drilling wooden sleepers at reduced noise.

The exposure of the workers to noise produced from this equipments depends on the duration of the loading times and the intervals between exposures, and finally on the number of holes made within the space of one working day.

It is also indicated, by way of example, that for a worker who uses the **SD-9P** drill properly for making holes of \varnothing 18 mm with drill bit on a 16 cm thick wooden sleeper producing up to **141 holes/day**, the daily personal exposure to the noise, due solely to the use of the drill is less than **80 dB (A)**. Under these conditions, producing **300 holes/day** the daily exposure to noise happens to be **83 dB (A)**. Likely, producing **480 holes/day** the daily exposure to noise happens to be **85 dB (A)**.

In analogue situation, using the **SD-10E** drill, for a worker that is producing **450 holes/days** on a 15 cm thick wooden sleeper, the daily personal exposure to the noise, due solely to the use of the drill is less than **77.1 dB (A)**. Under these conditions, producing **900 holes/day** the daily exposure to noise happens to be **79.7 dB (A)**.

RISK DUE TO VIBRATION (EEC directive 06/14/1989 no B9/392, Section 2.2).

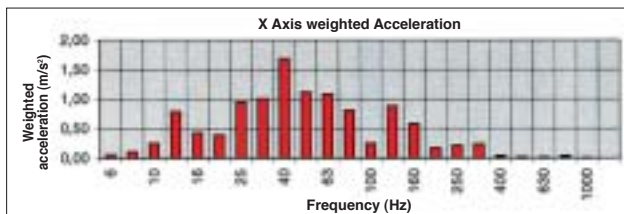
Tests carried out in compliance with the indications contained in **UNI ENV 25349** and **UNI EN 28662 part 1st Standards**, and under operating conditions much more severe than those normally found, certify that **the weighted root mean square in frequency of the acceleration the upper limbs are exposed to for each biodynamic reference axis is respectively:**

SD-9P

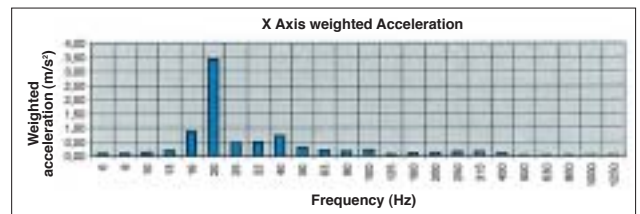
3,17 m/sec² on the X axis
3,70 m/sec² on the Y axis
3,12 m/sec² on the Z axis

SD-10E

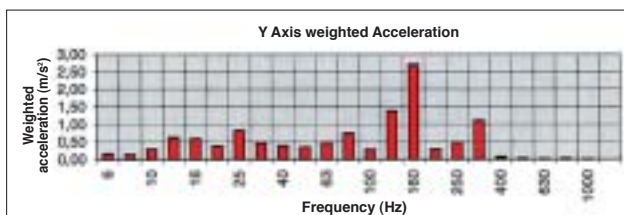
3,72 m/sec² on the X axis
2,35 m/sec² on the Y axis
1,84 m/sec² on the Z axis



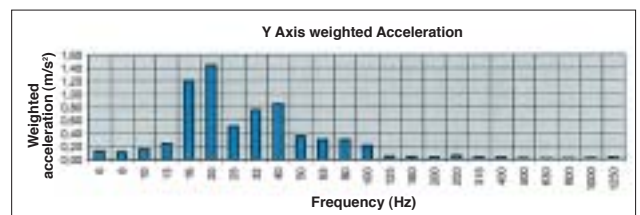
ACCELERATION (weighted root mean square value) X AXIS (m/s²) | 3,17



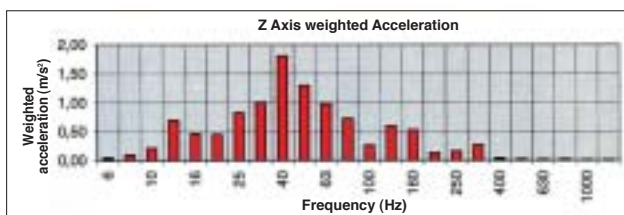
ACCELERATION (weighted root mean square value) X AXIS (m/s²) | 3,72



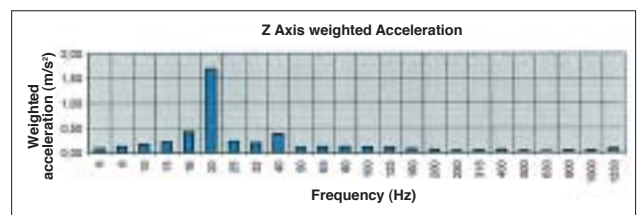
ACCELERATION (weighted root mean square value) Y AXIS (m/s²) | 3,70



ACCELERATION (weighted root mean square value) Y AXIS (m/s²) | 2,35



ACCELERATION (weighted root mean square value) Z AXIS (m/s²) | 3,12



ACCELERATION (weighted root mean square value) Z AXIS (m/s²) | 1,84