HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRESENTATION

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HYDRAULIC PILE DRIVER MACHINE

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GENERAL DESCRIPTION

The **MGI Tonker 830** is a pile driven machine designed and built to direct ramming of steel cross sections into the ground.
The fundamental elements that compose the Tonker 830 are the tracked undercarriage, which allows the machine to operate on different kinds of grounds, and the hydraulic percussion hammer which, adjustable to different power ranges, allows the driving of poles and steel profiles.
The machine operating is guaranteed from the hydraulic energy generated by an oleodynamic device and is activated by an endothermic engine and by an oleodynamic pump that powers the whole system.

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

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The production of the Tonker 830 is performed on a standard model but according to the requests of the client, customised solutions can be provided with columns of different heights (to support the percussion hammer) ranging from 4,500 to 5,500 mm.
Furthermore, thanks to the Clamp Extractor that can be supplied by the machine manufacturer upon specific requests from the buyer, it is possible to perform the extraction of the poles from the ground even after beating and without resorting to additional devices.
The Tonker 830 has been conceived to be used by a single specialized operator able to maneuver the machine in safe and efficient manner.

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 1

FOOTBOARD - This component is the positioning plan for the operator to drive the machine with good standards of comfort and safety.

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 2

COLUMN WITH HEADLIGHT - The column is used as a guide to place the hammer in the correct position in relation to the pile that will be rammed into the ground.

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 3

CROSS COLUMN - It **c**ontains the device for the transverse movement of the column

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

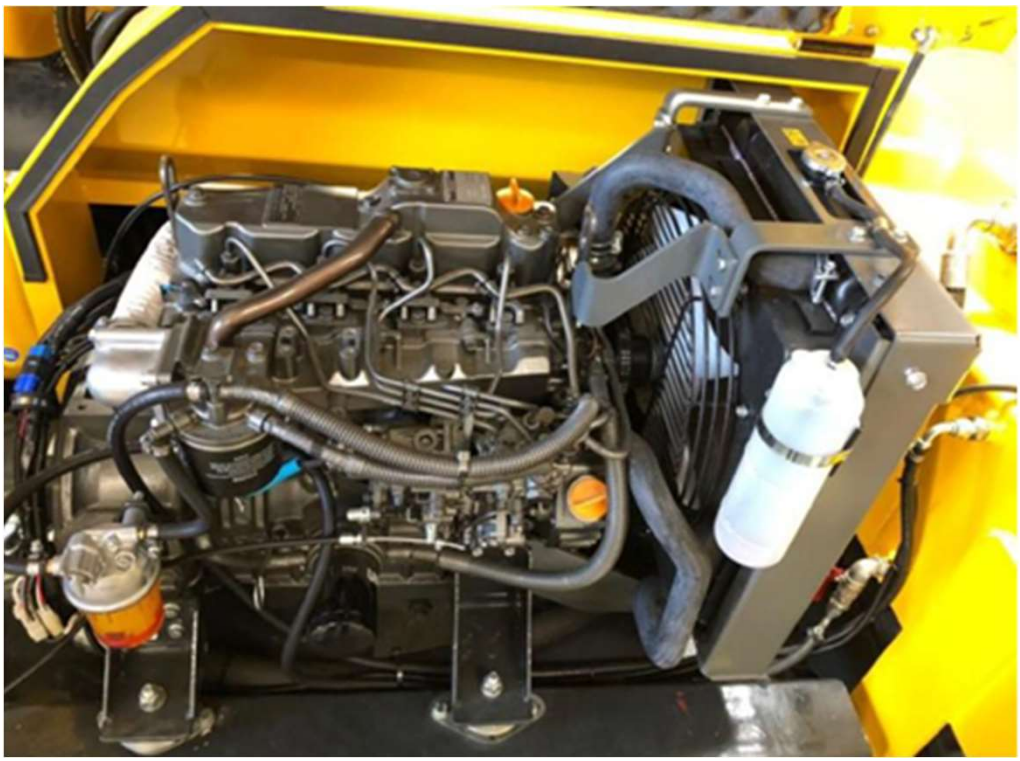
PRINCIPAL PARTS - 4

PERCUSSION HYDRAULIC HAMMER - It allows to insert the steel pole into the ground

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 5



INTERNAL COMBUSTION ENGINE - It supplies energy to the hydraulic components of the machine

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 6

HEAT EXCHANGE - It allows to dissipate the excessive heat of the hydraulic oil

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 7

CATERPILLAR GEAR MOTOR - It transmits the movement to the crawler car

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 8

FUEL & HYDRAULIC OIL TANKS – These supply the internal combustion engine and the hydraulic system of the machine

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 9

TOOL BOX

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 10

CLAMP EXTRACTOR – Through this device is possible to apply a force up to 6,000 kg in extraction tests. (Attachment available upon customer request, it is not included in the price of the machine).

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 11

SWINGING HEAD – Which, thanks to its stability and practicality, allows the rapid insertion of the profiles, wood or steel made, having different cross-sections up to a size of 300 mm. The design (choice of material and shaping) of each head can be made according to the customer's requests

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 12

CRAWLER CART – The crawler cart dimensions are relevant, having a length of 2000 mm, width 1980 mm and height 480 mm. These specifications allow a fast and manageable use of the machine even on uneven grounds.

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

PRINCIPAL PARTS - 13

HAMMER – Tonker 830 is equipped with an Indeco SpA hammer, easy to assemble. Thanks to its power of 950 Joule and a range of 650÷1500 strokes/min, provide outstanding performances in the ramming step phase.

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

MACHINE USE

INTENDED USE
The machine has been designed and built to insert or drive metal poles for road or streets (guard rails), as well as to insert metal poles for photovoltaic panels.
With specific accessories supplied by the manufacturer, it is possible to extract the poles.
Any other use will invalidate any warranty.

UNAPPROVED USE
The machine must be used without making modifications.
Must not use the machine in a potentially explosive environment.
Must not use the machine with equipment not approved by the manufacturer.
Must not use the machine to transport people.
Must not use the machine to lift people to different heights using the hammer.
Must not use the machine with the column inclined to insert or remove poles.
Movement in public streets is forbidden since the machine is not approved to be driven in streets.
While working on public streets make sure to use proper signage around the work area.

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

TECHNICAL FEATURES - 1

MACHINE MODEL	TONKER 830
INTERNAL COMBUSTION ENGINE	YANMAR - TIER 3
MODEL	4TNV88-BDYED
POWER (kW)	MIN 18 – MAX 35,4
SPEED (RPM)	3.000
HYDRAULIC PUMP (MODEL)	PUMP TUROLLA GRUPPO 3 IN CAST IRON
ENGINE CAPACITY OF HYDRAULIC PUMP (cc)	34
HYDRAULIC OIL TANK CAPACITY (lt)	180
ENGINE OIL TANK CAPACITY (lt)	5
FUEL TANK CAPACITY (lt)	55
ELECTRICAL SYSTEM VOLTAGE (V dc)	12
LONGITUDINAL SLOPE MAX (%)	23 (13°)
TRANSVERSE SLOPE MAX (%)	17 (10°)
MAXIMUM STEP HEIGHT (mm)	510
FULL SPEED (km/h)	4,5
MACHINE WEIGHT (kg)	4.000

HYDRAULIC PILE DRIVER MACHINE

TONKER 830

TECHNICAL FEATURES - 2

PERCUSSION HYDRAULIC HAMMER (950 e 1200 JOULE)		
MANUFACTURER	INDECO SPA	INDECO SPA
WEIGHT (kg)	185 (IN WORKING CONDITIONS 350 KG)	550 IN WORKING CONDITIONS
POWER AT IMPACT (joules)	950	1200
HITS PER MINUTE (hits/min)	620-1500	580-1180
WORK PRESSURE bar)	180	180
OIL FLOW (HAMMER) (l/min)	60/90	60/90

ROTARY HEAD (small and big version)		
TORQUE OUTPUT	500	2500
MEDIUM SPEED (RPM)	60	30
OIL FLOW MAX (l/min)	40	75
HYDRAULIC MOTOR (cc)	500	315
WORK PRESSURE MAX (bar)	200	200
CONNECTION TO THE ROTARY HEAD	FEMALE 3 ½ '' API REGULAR	MALE 2 3/8 '' API REGULAR
MAXIMUM DIAMETER OF THE DOWNHOLE DRILLING HAMMER	4'' (101,6 mm)	6'' (152,4 mm)
MAXIMUM DIAMETER OF THE BIT (mm)	152	219

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