



Mini Exc. Midi Exc. Excav. Backhoe 2.5 - 75 TON

# DOUBLE-DRUM CUTTER HEADS

TF 200 | TF 450 | TF 650 | TF 850 | TF 1100 | TF 2100 | TF 2500 | TF 3100

### **WATCH THE VIDEO**

Scan the QR code using your smartphone







PARALLEL HYDRAULIC **ROTATION** for TF 450 and 650.



**TILTED HYDRAULIC ROTATION** 

for TF 850/1100/2100.

learn more on page 11



tooth geometries available for working on different materials.

> **REPLACEABLE ANTI-WEAR PLATES**



INCREASED PRODUCTIVITY AND MAXIMUM PRECISION: cutter head can be rotated 90° with respect to mounting bracket (thanks to square holes of coupling plate).

FILTER ON FEED LINE prevents impurities from entering the motor.

Hose hook-up on both cabin side (standard) and front.

MILLED MATERIAL IS DISCHARGED FROM THE TRENCH WITHOUT **GETTING STUCK IN THE FRAME** due to special shape.

HIGH TORQUE AND HIGH **PERFORMANCE** guaranteed by integrated high displacement hydraulic piston motor in direct drive with the drums. Shaft transmits motion only and bears no load thanks to double support bearings for each drum.



also when attachment is submerged into the ground, even in muddy conditions.

The Simex TF double drum cutter heads are ideal for trenching, profiling rock and cement walls, tunnelling, quarrying, demolition, dredging, finishing operations and underwater works. They are highly effective where conventional excavation systems are too weak and percussion ones have little effect.

## **AVAILABLE DRUMS:**



Allows deep penetration even into hard materials



**AVAILABLE TEETH:** 

For mixed materials



**GP (OPTIONAL)** Recommended for wall profiling and various types of jobs



For milling very hard materials



WP (OPTIONAL)
Special drum for finishing and profiling



For wood



Special drums for mixing



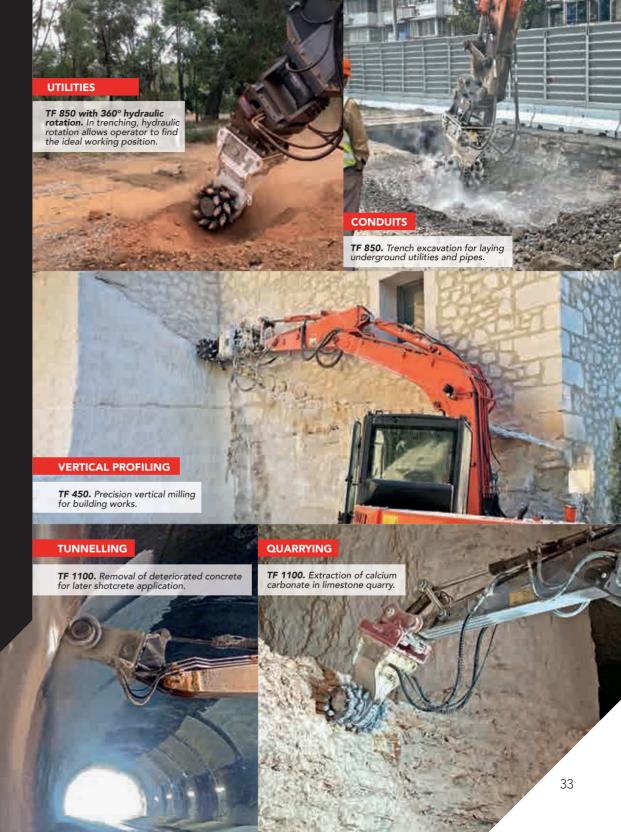
# For tilling



### **360° HYDRAULIC ROTATION**

Hydraulic rotation allows the operator to always find the ideal working position. Increased productivity. Maximum precision.

learn more on page 11

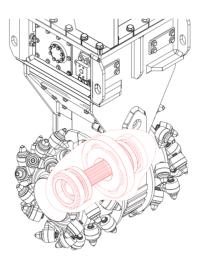




### **DIRECT DRIVE AND HIGH TORQUE**

The direct drive hydraulic piston motor directly delivers power to the drums without mechanical transmission components, thus guaranteeing high torque and high performance.

Shaft transmits motion only and bears no load thanks to double support bearings for each drum.



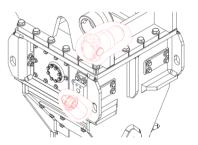
### **DESIGN AND HIGH PERFORMANCE**

The frame's particular shape allows reducing the distance between the drums improving the total working width. Furthermore, milled material is discharged from the trench without getting stuck in the structure due to perfect symmetry of the frame, which also allows hoses to be hooked up at sides and front (except for TF 200 and TF 450 models). Replaceable anti-wear plates. In addition, the mechanical gaskets fitted on the drums ensure maximum resistance to dust and any external agents, allowing the equipment to work completely submerged into the ground or water up to a maximum depth of 30 metres.



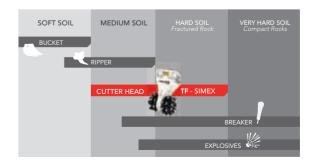
# MAXIMUM PROTECTION AND ZERO ROUTINE MAINTENANCE

Filter on feed line and filter on drainage line, both integrated, protect the hydraulic system from any external impurities, which can damage or reduce the performance of both the excavator and the equipment. (In TF 200 and TF 450 models the filter is only on the feed line). Additional protection from pressure peaks is ensured on drainage line by an accumulator and a fuse, an on feed line by a flow limiting valve. The latter also allows easy coupling with various excavator models and sizes, facilitating installation and calibration operations. The direct drive motor does not require lubrication or other types of routine maintenance.



# A TRUE ALTERNATIVE TO TRADITIONAL SYSTEMS

The TF cutter heads are especially useful where conventional excavation systems are too weak and percussion systems have little effect. The low vibrations and seamless milling make the TF cutter head particularly suitable in applications requiring selective breaking of the rock mass, while at the same time producing crushed material of a particle size suitable for on-site reuse or transport elsewhere.

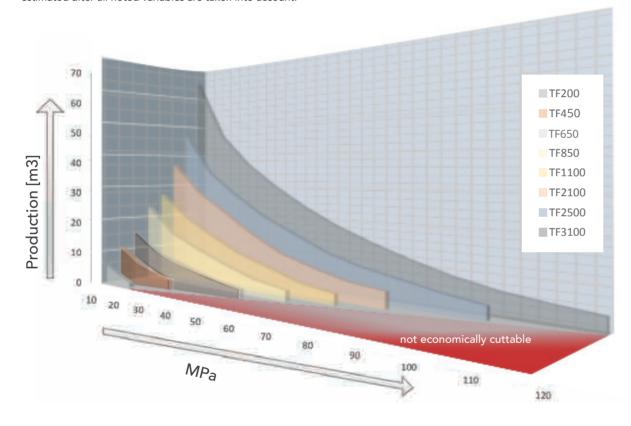


### **PRODUCTIVITY ESTIMATE**

### RATIO BETWEEN CUTTING EFFICIENCY AND COMPRESSIVE STRENGTH

The graph below gives an approximate indication of the ratio between cutting efficiency of each cutter head model in optimal conditions and the unconfined compressive strength of the rock.

Since many variables exist regarding the material (fracturing, weathering, ductility, etc.), the prime mover and the operability, the ratio should be understood as only an approximation of cutting efficiency. The actual production may be estimated after all noted variables are taken into account.





### CALCULATION OF HOURLY PRODUCTION

Our team of experts has created a tool to help you calculate the theoretical hourly production, guiding you in choosing the most appropriate drum cutter for the type of material to be worked. Scan the QR code on the side with your smartphone to access the calculator for hourly production.





# PRODUCTIVITY: A FEW APPLICATION EXAMPLES

# TRENCH EXCAVATION FOR LAYING UNDERGROUND UTILITIES

**Job:** Trench excavation with TF 850 for later connection to sewers

Material: metamorphic rock with schist texture

Forward speed: 10 linear metres per hour, depth: 80 cm.





# PROFILING NATURAL WALL IN CONSTRUCTION FIELD

**Job:** profiling natural wall in a construction site with TF 2100 and TF 3100  $\,$ 

**Material:** hard and compact sedimentary conglomerate, 80-90 MPa

Production: 10-15 m3/h





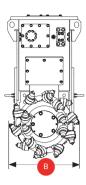
# **DEMOLITION OF INDUSTRIAL FLOORS**

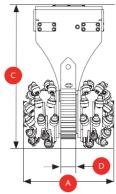
**Job:** Dismantling of industrial concrete flooring, 25 MPa with TF 2100

Material: Reinforced concrete **Production:** 40-45 m2/h













TECHNICAL DATA		TF 200	TF 450	TF 650	TF 850	TF 1100	TF 2100	TF 2500	TF 3100
Recommended excavator weight	ton Ibs	<b>2.5 - 7</b> 5500 - 15500	<b>6 - 12</b> 13000 - 26500	<b>9 - 16</b> 19800 - 35200	<b>14 - 22</b> 30800 - 48500	<b>20 - 34</b> 44000 - 75000	<b>28 - 45</b> 61700 - 99000	<b>40 - 55</b> 88000 - 121000	<b>50 - 75</b> 110000 - 165400
Weight without mounting bracket (1)	<b>kg</b> Ibs	<b>300</b> 660	<b>470</b> 1050	<b>650</b> 1430	<b>1100</b> 2420	<b>1340</b> 2950	<b>2380</b> 5240	<b>2700</b> 5950	<b>2940</b> 6470
Nominal power	hp (kW)	40 (30)	55 (40)	68 (50)	95 (70)	122 (90)	163 (120)	205 (150)	250 (185)
Rotation torque	kNm lbf.ft	<b>2.8</b> 2080	<b>5.1</b> 3760	<b>7.4</b> 5450	<b>12.1</b> 8920	<b>20</b> 14750	<b>26.7</b> 19700	<b>36.1</b> 27600	<b>48</b> 35400
Cutting force	kN Ibf	<b>15.1</b> 3400	<b>22.5</b> 5100	<b>30.5</b> 6850	<b>40.2</b> 9000	<b>61</b> 13700	<b>71</b> 16000	<b>96.4</b> 21600	<b>128</b> 28700
Maximum pressure (2)	BAR psi	<b>350</b> 5100	<b>350</b> 5100	<b>350</b> 5100	<b>400</b> 5800	<b>400</b> 5800	<b>400</b> 5800	<b>400</b> 5800	<b>400</b> 5800
Required oil flow	l/m gpm	<b>45 - 80</b> 12 - 21	<b>65 - 120</b> 17 - 32	<b>90 - 150</b> 24 - 40	<b>140 - 190</b> 37 - 50	<b>170 - 250</b> 45 - 66	<b>240 - 340</b> 63 - 90	<b>280 - 400</b> 74 - 105	<b>350 - 500</b> 92 - 132
360° Hydraulic rotation optional		-	yes	yes	yes	yes	yes	-	-
Drum width (HP) standard	mm inch	565 22	<b>625</b> 25	700 28	800 32	865 34	965 38	<b>1000</b> 40	1270 50
Drum width (GP) optional	mm inch	-	-	-	890 36	1000 40	1100 43	<b>1150</b> 45	1350 53
Drum width (WP) optional	mm inch	650 26	750 30	850 34	920 36	1200 47	-	-	-
Drum diameter HP	mm inch	380 15	450 18	500 20	595 24	660 26	<b>750</b> 30	<b>750</b> 30	<b>750</b> 30
Height without mounting bracket	mm inch	840 33	970 38	1005 40	1270 50	1335 53	1570 62	<b>1675</b> 66	18 <b>2</b> 5 72
Drum distance D	mm inch	110 4	130 5	135 5.3	180 7	190 7.5	250 10	<b>250</b> 10	330 13
Tooth holder diameter	mm inch	20 0.8	22 0.9	22 0.9	38/30 1.5/1.2	38/30 1.5/1.2	38/30 1.5/1.2	38/30 1.5/1.2	38/30 1.5/1.2

<sup>(1)</sup> The installer is responsible for ensuring that the equipment meets the excavator's specifications and weight requirement.
(2) Torque and cutting force decrease with lowered operating pressure.

Simex does not accept responsibility or liability for the information provided. Technical modifications may vary without prior notice.