

## CONSTRUCTION PTO Driven Heads



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## MAKE THE **DIFFERENCE**

At FAE, every machine, accessory and optional component is designed with utmost precision, the highest quality materials and the most advanced technology.

Each detail is designed to make the execution of the tasks as quick and efficient as possible and for the specific applications, conditions and environment where it will be carried out.

Every FAE machine and accessory was created to make a difference at work and, given the importance of many of the applications we work on, for the planet. This is why each member of our team, each partner and customer works daily.

## ABOUT FAE

With a range of over 90 products and 400 models, FAE can meet the most diverse demands for forestry, agricultural, road construction, building and demining applications. The FAE product range includes heads for tractors, excavators, skid steer loaders, special vehicles and tracked vehicles, with cabins or remote controlled. FAE was founded in 1989, and the company's main office is still located in Fondo, Italy. Production, sales, after-sales service and parts services are handled by our 4 production sites, the main office, 7 commercial branches and a network of authorized dealers all over the world.



### **GLOBAL QUALITY**

Our precision design and production processes use advanced technologies to ensure long-term performance and reliability.

#### **COMPLETE PRODUCT LINE**

We guarantee an extensive product range and a high degree of customization to make each process more efficient, more productive, and easier.

#### **CONSTANT** INNOVATION

We design unique and cutting-edge technologies based on customers' specific needs for solutions that pave the way to the future.

#### **TOTAL SUPPORT**

We make our vast range of machines, dedicated accessories and components, as well as our technical assistance available worldwide.

# CONSTRUCTION PTO DRIVEN HEADS

Our Construction line of machines brings the very latest technology to the industry.

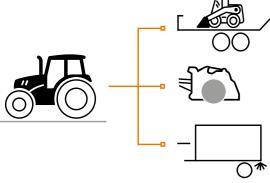
Making your road work easier, even in the most difficult conditions. Our cutting-edge engineering brings you a wide range of efficient attachments that are able to speed up and simplify the main jobs in the development of roads, highways and other infrastructure works.



## **ADVANTAGES**

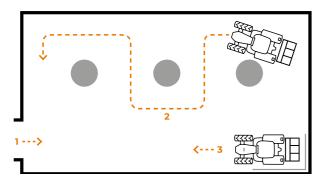
## OF FAE MACHINES

Our line of construction machines bring the very latest technology to road work, making your job easier, even in the most difficult conditions. Our cutting-edge engineering brings you a range both of versatile and functional machinery that is reliable and efficient. Each machine possesses the ability to speed up and simplify the main jobs in the construction and development of roads, highways and other infrastructure works.



#### **VERSATILE**

The tractor, which was just being used to operate other machinery, can be quickly equipped with a construction attachment.



#### **MANEUVERABLE**

- 1/ Use in areas with limited access
- 2/ Easy to use even in the presence of obstacles
- **3 /** Perfect performance around curves and hard-to-access areas



Thanks to the design of the chamber and a variety of teeth available, our FAE stabilizer is capable of producing both refined and mixed cement even when rocks are present.



#### STABI/FRS

The essence of stabilization.



#### STABI/H

Excellence in soil stabilization.



# THE IDEAL SOLUTIONS FOR ULTIMATE PRODUCTIVITY IN SOIL STABILIZATION.

MODEL	300 - 400 hp	400 - 500 hp
STABI/FRS	300 - 500 hp	
STABI/H	300 - 500 hp	

## STABI/FRS

#### The essential tool for stabilization.

The STABI/FRS for tractors from 300 to 500 hp is the definition of the perfect stabilizer. With a fixed-rotor system and high productivity, it is stable and strong, even on very hard ground with stones. The STABI/FRS can be used on small work sites as well as for major infrastructural work, such as on highways, parking lots and airports. The protruding rotor facilitates stabilization at depth with minimal power absorption. The crushing chamber makes it possible to work the ground to a depth of 50 cm, ensuring an excellent mixing quality. The solid frame and use of wear-resistant materials provide excellent reliability over time.

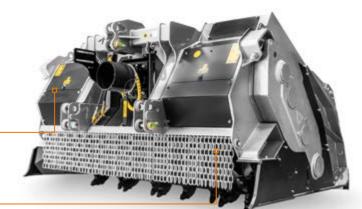


Solid rotor with new design for stabilization with low power absorption



Transmission with external side reduction gears for easy maintenance

Hydraulic rear hood with new anti-clogging system for high productivity and lower fuel consumption



Oil cooling system

for gearbox and side reduction gears (STABI/FRS/HP)

Interchangeable Hardox® internal and side guards

#### **MAIN OPTIONS**



W style self aligning device between PTO drive shaft/gearbox allows the mulcher to work in several angles without damaging the PTO



**Automatic FCS system** for optimal soil mixing and moisture management



Dozing blade with springs system to level and compact the crushed material, creating a uniform base





wheel
poling system (STABI/FRS/HP)
afts (in forged steel)

#### **OPTIONS**

Multiple tooth options	Dozing blades with spring system	
Hydraulic top link	Water spray system WSS High Flow	
W style self aligning device between PTO drive shaft/gearbox	FCS full control system	

MODEL	STABI/FRS-225	STABI/FRS-250	STABI/FRS/HP-225	STABI/FRS/HP-250
Tractor (hp)	300-400	300-400	400-500	400-500
PTO (rpm)	1000	1000	1000	1000
Working width (mm)	2320	2560	2320	2560
Total width (mm)	2750	2990	2750	2990
Weight (Kg)	6300	6500	6550	6750
Rotor diameter (mm)	1085	1085	1085	1085
Max working depth (mm)	500	500	500	500
<b>No. teeth</b> type A/3 + STC/FP + STC/3/FP + F/3/SS	64+4+4+4	68+4+4+4	64+4+4+4	68+4+4+4

Data refers to machine as standard. The technical data in this catalogue may be altered without prior notice.

#### **ROTOR TYPE A**



(standard)







(option)













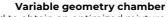


## STABI/H

#### Excellence in soil stabilization.

The STABI/H is FAE's soil stabilizer for the most demanding professionals. It operates up to 56 cm deep and works with 300-500 hp tractors. The STABI/H is designed to prepare ground for building roads, highways, railroads, parking lots, sports complexes, office parks, industrial plants, and other infrastructure. The exclusive variable geometry

chamber allows the rotor to penetrate the soil using the movable frame, which is hydraulically adjustable with extreme accuracy right from the tractor's cab. Compared to a traditional machine, there is less traction stress, which means a lower power demand and less fuel needed.



for precise earthworking and to obtain an optimized mixture



Solid mobile rotor for stabilization with low power absorption

> Cogged belt transmission with reduction gear assembly

Oil cooling system for gearbox (STABI/H/HP)



Interchangeable internal Hardox® protections

IIIIIIII



#### **MAIN OPTIONS**



Wide range of special teeth, screwed on with plates in wear-resistant Widia®, which are interchangeable and suitable for a variety of applications



FCS system for optimal soil mixing and moisture management



Dozing blade with springs system



Hydraulic top link

### STANDARD EQUIPMENT

Variable

displacement chamber

300-500 hp

Depth 56 cm max

Hydraulic rear Hood with anti-clogging system	Side gearbox with oil cooling system
Interchangeable inner antiwear plates in Hardox®	Gearbox with freewheel
Enclosed machine body	Gearbox with oil cooling system (STABI/H/HP)
Variable displacement chamber	PTO shaft
Inside lateral protection	Friction clutches
Bolted on protection chains	Bolted-on rotor shafts (in forged steel)
Poly-Chain® belts transmission	Adjustable skids
Transmission with side gearbox	Dozing blade

#### **OPTIONS**

Multiple tooth options	Water spray system WSS High Flow	
Hydraulic top link	FCS full control system	
Dozing blades with spring system	Anti clogging grid	

MODEL	STABI/H-225	STABI/H-250	STABI/H/HP-225	STABI/H/HP-250
Tractor (hp)	300-400	300-400	350-500	350-500
PTO (rpm)	1000	1000	1000	1000
Working width (mm)	2293	2533	2293	2533
Total width (mm)	2664	2904	2664	2904
Weight (Kg)	7300	7450	7350	7500
Rotor diameter (mm)	1235	1235	1235	1235
Working depth (mm)(Max. 1 - Max. 2)	165-560	165-560	165-560	165-560
No. teeth type A/3+STC/3+STC/3/SS	64+4+8	72+4+8	64+4+8	72+4+8

Data refers to machine as standard. The technical data in this catalogue may be altered without prior notice. Max. 1: with rotor only Max. 2: maximum depth (maximum working depth depending on ground conditions).

#### **ROTOR TYPE A**



(standard)

















# CAST IRON HELICAL GEAR BOXES

Designed to create the least possible obstruction to penetration into the soil, the gear box is easily removeable.

It is secured by an oscillating system and independently supported by frame and rotor, thus it does not undergo stress from the frame and therefore, possible deformation.

#### **DUAL LATERAL GEARBOX TRANSMISSION**

The dual lateral gearbox transmission perfectly transforms engine power into grinding power. Compared to a belt driven transmission, the gearbox transmission offers important advantages such as: 1) greater transmission torque, 2) less tool wear because of lower rotor rotation speeds, 3) more effective ground penetration due to smaller size.



#### **GEAR REDUCTION SYSTEM**

The single and dual gear reduction system, depending on the model, requires no forced hydraulic fluid cooling under most working conditions. This component's high heat tolerance is a significant feature as it avoids the need for high maintenance parts such as oil coolers and pumps.



## **GEARBOX WITH DUAL LATERAL TRANSMISSION**



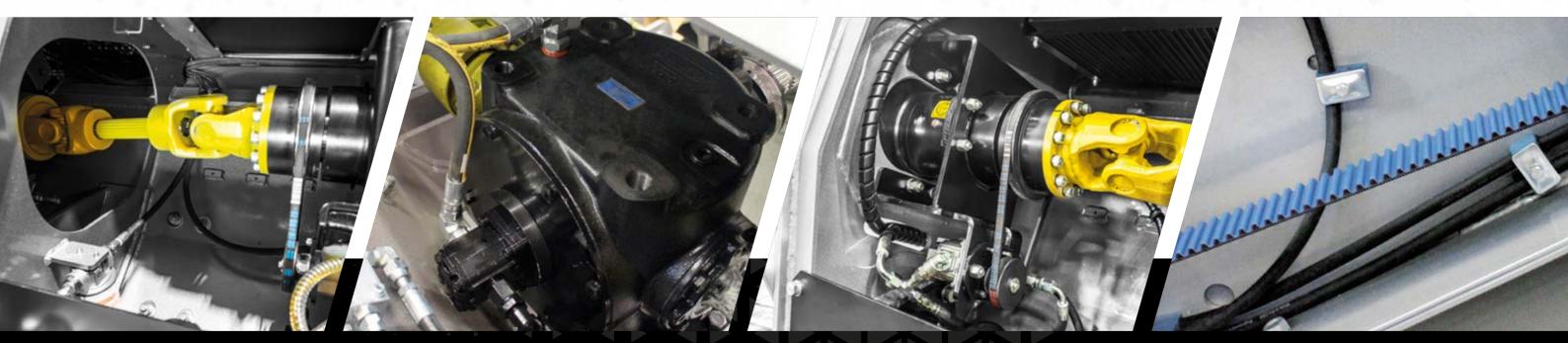
The dual lateral gearbox transmission with Poly-Chain® belt, together with a rotor-integrated transmission (available only for STABI/H model) excellently transforms the tractor power into cutting power.

#### **MECHANICAL TRANSMISSION WITH POLY-CHAIN® BELTS**

The dual transmission transforms the power of the engine into high-performance grinding and mixing capability. Since the rotor is independent, the side transmission housings stay above ground during operations.



This dual transmission transforms tractor power into cutting power for productivity at maximum levels with minimal maintenance.



**FRICTION CLUTCH** 

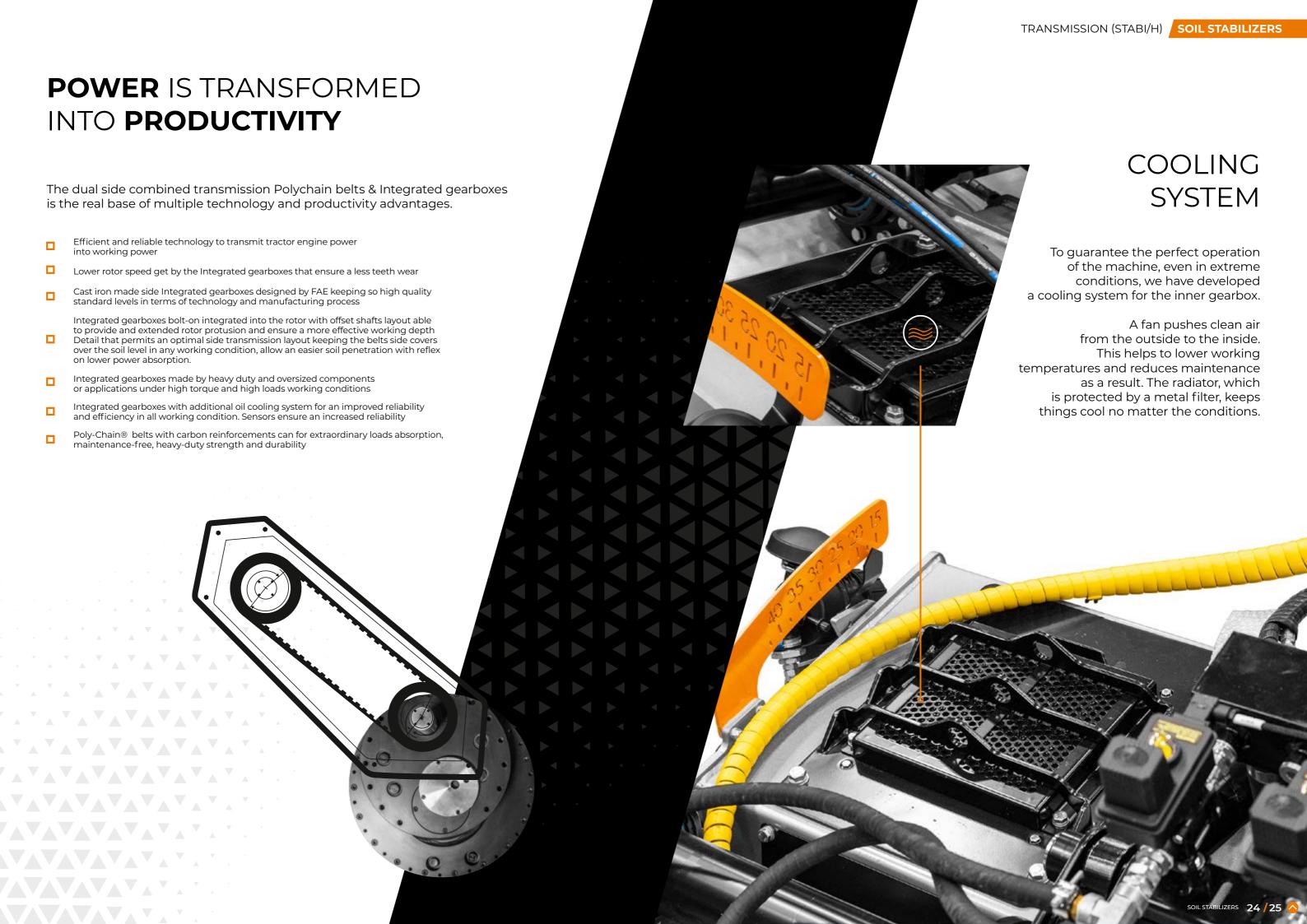
LIQUID COOLED CENTRAL GEARBOX Only for 500 HP versions.

#### **EXTENSION SHAFT**

Designed to transfer the PTO power

#### **POLY-CHAIN® BELTS**

There is a polychain belt transmission with carbon reinforcements on each side of the rotor.



### **VARIABLE GEOMETRY**

## MIXING CHAMBER

The variable geometry chamber enables ground penetration with just the rotor, which may be adjusted from the tractor cab. The volume of the mixing chamber, where the material is blended, is variable for the deeper the work, the larger the volume of the chamber. Compared with machines that sink into the ground with their entire frame, the variable geometry mixing chamber reduces traction forces, lowers fuel consumption, speeds operations and saves time.

#### **LOWER SIDE PROTECTION GUARANTEES RELIABILITY EVEN** AT MAXIMUM WORKING DEPTH

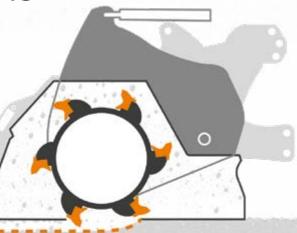




- Guaranteed mixing quality of the material in any situation
- Increased operating speeds and greater time savings
- Reduced traction forces and fuel consumption
- Depth gauge to monitor and achieve proper depth
- Easily visible from the cab, for precise, efficient depth adjustmen
- Newly engineered rotor depth control system

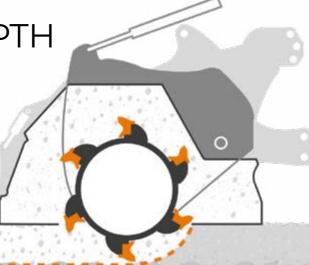
**DEPTH IS ADJUSTED USING 2 CYLINDERS** 

**STABI/H:** 165 mm\* \*with rotor type A/3



SPECIALLY DESIGNED TO ACHIEVE A CONSISTENT DEPTH

**STABI/H:** 405 mm\* \*with rotor type A/3



A/3 ROTOR (STABI/H)

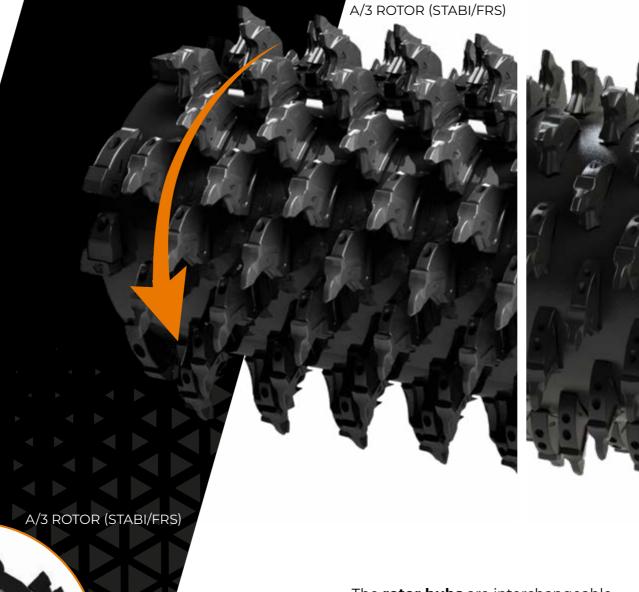
## **EVEN MATERIAL DISTRIBUTION** AND MIXING,

EVEN FOR THE MOST DIFFICULT SOIL TYPES

#### THE ROTOR

The core of FAE technology is the rotor, which mixes the ground and evenly mixes lime or cement spread over the area to be stabilized. The special set up of the tools ensures even distribution of the forces over it's the rotor's entire width, limits stress to the structure, reduces power absorption, and enables uniform distribution of the output materials. The rotor is equipped with different types of tools depending on the application.

A/3 ROTOR (STABI/H)





The **rotor hubs** are interchangeable and made of forged steel for excellent resistance to mechanical stress.

**Guards** with easily replaceable parts.

The ends of the rotor as well as the outside tooth holders have been equipped with wear plates to protect them from excessive wear and tear.

A labyrinth ring system prevents dust from contaminating the transmission.



A/3 ROTOR (STABI/H)

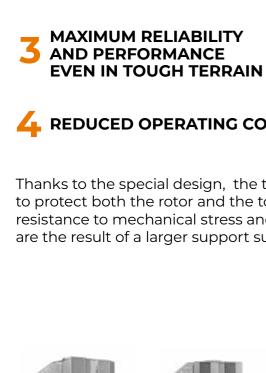
## **YOU CAN BE CONFIDENT** OF DURABILITY

Our teeth and tooth holders are the result of intensive research and development. The tooth holders are all made of forged steel, and welded to the rotor automatically. Tungsten carbide (Widia®) inserts offer hardness with limited wear and tear.

The special design of FAE teeth guarantees the following advantages:

- **MAXIMUM RESISTANCE** TO MECHANICAL STRESS
- **TOOLS LAST LONGER**
- **MAXIMUM RELIABILITY** AND PERFORMANCE
- **REDUCED OPERATING COSTS**

Thanks to the special design, the teeth use its shape to protect both the rotor and the tooth holder. Improved resistance to mechanical stress and maximum durability are the result of a larger support surface on the rotor.





TOOTH STC/FP (side scraper) Standard STABI/FRS



**TOOTH STC/3/FP** (side scraper) Standard for STABI/FRS



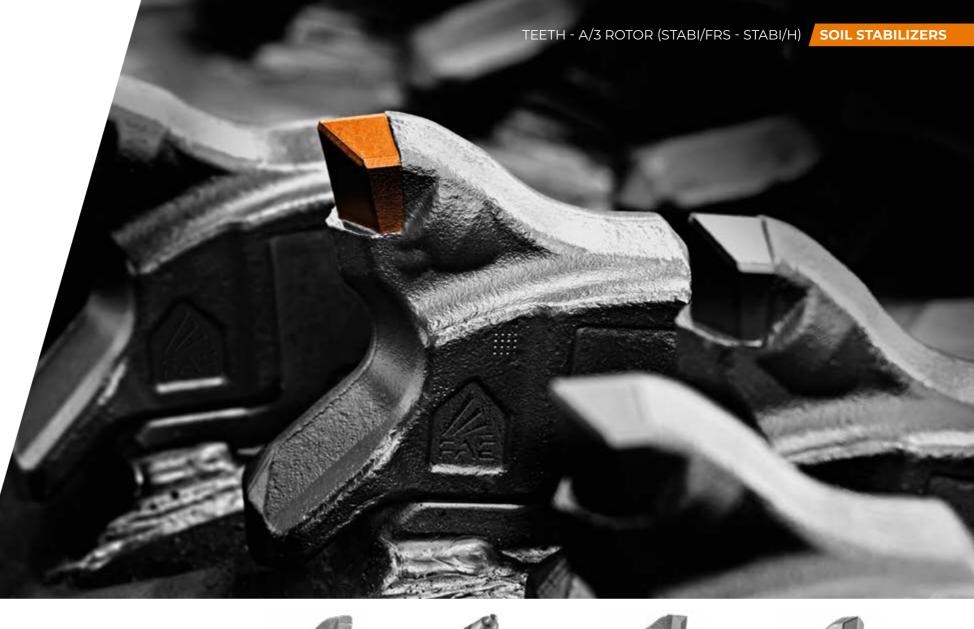
TOOTH F/3/SS (side scraper) Standard for STABI/FRS



TOOTH STC/3/SS (side scraper) Standard for STABI/H



TOOTH STC/3 (side scraper) Standard for STABI/H

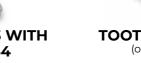




TOOTH A/3 (standard)



**ADAPTOR F/3 WITH** PICK R/44





TOOTH A/3/HD (optional)



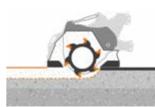
TOOTH F/3 (optional)

#### **GROUND STABILIZING**

Recommended for stabilization ground free of rocks, and other extreme, or abrasive materials. TOOTH A/3

Recommended for penetration of thin asphalt and stabilizing ground free of rocks, and other, extreme, or abrasive materials. Includes tooth adaptor as well as asphalt bit.

ADAPTOR F/3 WITH PICK R/44



#### **STABILIZE ESPECIALLY ROUGH SOIL**

Recommended for penetration of thin asphalt and stabilizing ground free of rocks, and other, extreme, or abrasive materials. Includes tooth adaptor as well as asphalt bit. TOOTH A/3/HD

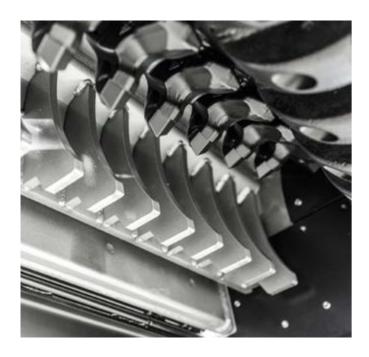


#### **ASPHALT GRINDING**

Recommended for penetration of thin asphalt and stabilizing ground free of rocks, and other, extreme, or abrasive materials. Includes tooth adaptor as well as asphalt bit. TOOTH F/3



## **ENDURING** THROUGH TIME, **DESIGNED FOR EVERY NEED**



#### **REAR GRID (STABI/FRS)**

The grid on the rear door helps define the size of the output material. Its use is advantageous in wet working conditions and with clay-based soil. The grid enables the rear door to remain more open so that the soil can flow out without losing the mixing quality.



#### HARDOX® SECTIONAL **WEAR PLATES**

Internal Hardox® guards against wear and tear. The sectional plates are easy to replace without having to remove the rotor.

#### **REAR HYDRAULIC DOOR**



The wide opening is designed specifically to work at extensive depths. The protection chains reduce stone projectiles and dust a simple and effective solution.



The special design of the hatches ensures easy maintenance operations. The key closure, specially designed with an incorporated dust screen, allows the quick opening of both hatches in any situation.



#### **SPRING LOADED LEVELING BLADE**

The spring loaded leveling blade produces an even final product as a result of its engineering and design.

#### STRUCTURAL PLATES WELDOX®

To ensure high strength and easy handling.

#### **TEFLON INSERTS**

(only for STABI/H) Easily replaceable, they ensure that the two frames slide easily.

## FOR TOP LEVEL PERFORMANCE THE DIFFERENCE IS IN THE DETAILS





#### 1. ADJUSTABLE, INTERCHANGEABLE SKIDS WITH WEAR-RESISTANT SKIDS PLATES + PENETRATION SKIDS (STABI/H)

#### 2. SKIDS + LONG-WEARING, INTERCHANGEABLE SKIDS PLATES (STABI/FRS)

This option provides maximum operating stability, allowing the machine to "float" on the ground. The adjustable model lets you adjust the blade height to meet the specific needs of the application. Easily removable, they have wear-resistant Hardox blades made for working at depth. If only used without the skids, the penetration blades welded to protect the frame from wear and tear make it easier for the machine to penetrate the ground and can reach up to 56 cm deep.



The skid can be easily detached and protects the frame against wear and tear.



The penetration skid extends the working depth and also protects the frame.

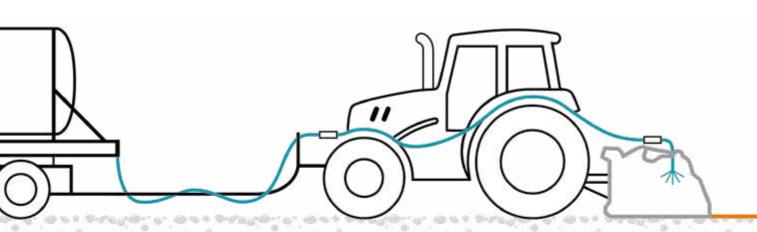
## **ALL MACHINES** CAN BE EQUIPPED WITH A WATER INJECTION SYSTEM

(EVEN AT A LATER DATE)

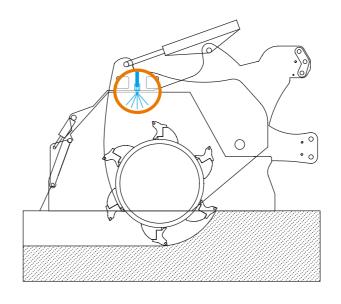
#### WATER SPRAY SYSTEM HIGH FLOW

(WSS FOR STABI/FRS - STABI/H)

Thanks to the control panel and display showing the water flow rate, it is possible to easily monitor and adjust, from the tractor cab and in complete safety, the instantaneous value of the liters of water delivered and the overall value from the beginning of the operations.



STABI/FRS - STABI/H	CAPACITY FROM SINGLE NOZZLE AT 3 BAR	CAPACITY FROM SYSTEM	
<b>Optional nozzle "1"</b> (80° - 20 l/min)	7.9 l/min	65-110 l/min	
<b>Optional nozzle "2"</b> (80° - 40 l/min)	15.8 l/min	115-235 l/min	
<b>Optional nozzle "3"</b> (80° - 60 l/min)	24 l/min	150-330 l/min	
Standard nozzle (80° - 100 l/min)	39 l/min	210-500 l/min	
<b>Optional nozzle "4"</b> (80° - 150 l/min)	59 l/min	240-580 I/min	
<b>Optional nozzle "5</b> " (80° - 200 l/min)	79 l/min	260-640 l/min	



#### MIXING FUNCTION

(only for stabilize machines or multitask machines)

This function increases the moisture level in the soil, improves mixing with the stabilising agent during stabilisation operations and optimises the results of the consolidation work. It also helps to ensure proper compaction. This is the ideal solution even for liquid binders mixed directly in the mixing chamber.

Water dispensing ON (nozzle up) or OFF (nozzle down)

Panel display ON/OFF

Check Panel functions

Water capacity adjustment (I/min)



#### **HIGH FLOW WATER SPRAY SYSTEM -HIGH FLOW WSS**

Each nozzle has an on/off valve allowing you to manage individual elements separately.

A vast choice of nozzle type, easily exchangeable according to the amount of water.



0.7 [Km/h]

## **HELPING YOU MAKE THE RIGHT CHOICES**

#### **FCS FULL CONTROL SYSTEM**

(FCS for STABI/FRS - STABI/H)

The FAE automatic injection system, FCS, is a cutting-edge system built for excellent supply and distribution of water and/or to stabilize the fluid binding agent. Using this intuitive system, the operator is able to establish the exact amount of fluid from the display, based on the road surface (I/m2) or mixing volume (I/m3).



#### **SETTING STAGE**

This allows you to choose the perfect nozzles for the job during the initial stages.



#### **WORK STAGE**

All of the machine's vital parameters are monitored and recorded.



#### **ANALYSIS STAGE**

The software lets you create a work report that can be easily saved to a USB drive (for example the number of m2 or m3 processed, water flow, etc.).



The machine's sensors also ensure the correct, automatic operation of this cutting-edge

1291,4

522.5 [m3]

7187[1]

The material is mixed to the moisture ratio required to achieve perfect stabilization.

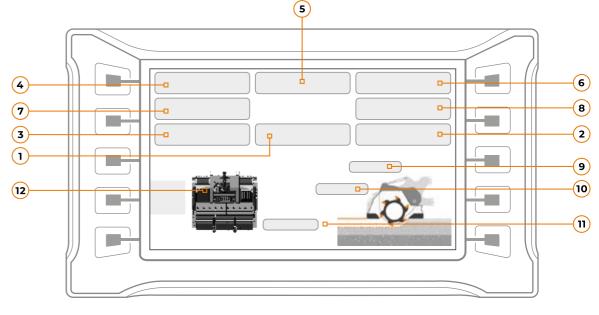
Compared to manual adjustment, the FCS leaves no room for error and ensure the best possible results in every application. The machine sensors ensure correct and automatic operation of this first-class

0 [l/m3]

O [I/min]

The system constantly monitors forward feed speed through the ISOBUS connection on the tractor, or via optional radar sensor, while other sensors control the working depth.

A magnetic flow meter ensure the capacity required.



- Current speed
- Current injection flow
- Total flow from the start of the job
- Area covered
- Delivery requirement (I/m²)
- Current delivery (I/m<sup>2</sup>)

- Volume mixed
- Current delivered (I/m³)
- Rotor movement percentage
- 10. Percentage of rear panel opening
- 11. Working depth
- 12. Number of nozzles open

Our Multitask machines offer you an unmatched advantage: being able to use a single machine to perform different operations. Thanks to a mixing chamber and to the wide selection of tools, these machines can crush stones, stabilize soil and, in certain conditions, shred asphalt for road building and maintenance purposes.



#### MTL

FAE multi-function head for tractors from 140 to 240 hp.



#### MTM

FAE multi-function head for tractors from 240 to 360 hp.

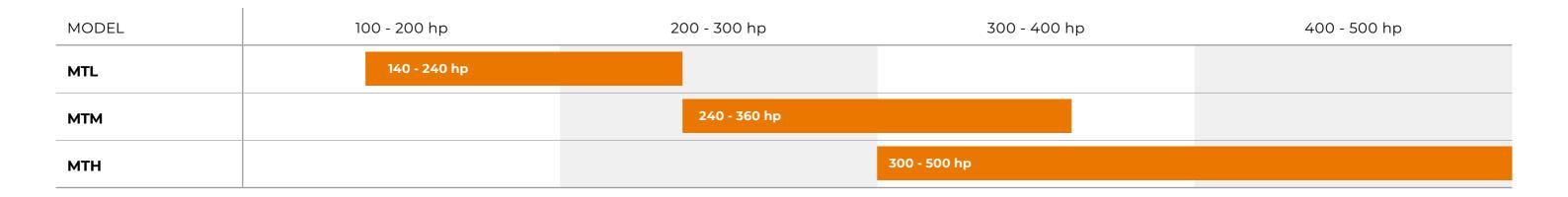


#### MTH

FAE multi-function head for tractors from 300 to 500 hp.



## MULTIPURPOSE USES FOR **EXCELLENT RESULTS.**



## MTL

#### FAE multi-function head for tractors from 140 to 240 hp.

The MTL enables ground stabilization, milling of asphalt and slabs of rock, and crushing of stones, down to a maximum operating depth of 28 cm. The variable-geometry crushing chamber, adjustable grid on the hood and adjustable Hardox® counter blade enable constantly optimal crushing results. Internal protection plates on the frame, bolted both centrally

and laterally, ensure the head is robust and reliable. The handy depth indicator allows you to check the operating level directly from the cab. The central gearbox system with universal-joint alignment system is designed to be compatible with a wide range of tractors on the market.

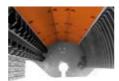




Side wear plates on the inner sides of the frame highly resistant to wear and tear, equalling less down time due to replacement

Rear access panel

Hardox® steel - Wear plates these allow the machine to resist wear and tear and can be easily replaced as needed





#### Rear grid

the grid on the rear door helps define the size of the output materials



this technological solution, witch is one of a kind in the industry, allows the ground to be penetrated with the rotor alone



#### **MAIN OPTIONS**



Hydraulic top link



Multiple tooth options



The Water Spray System (Basic & High Flow) has the dual function of cooling and mixing



140-240 hp



Depth 28 cm max



Variable displacement chamber



#### STANDARD EQUIPMENT

Hydraulic rear hood	Transmission with side gearbox	
Interchangeable inner antiwear plates in Hardox®	Gearbox with freewheel	
Enclosed machine body	Friction clutches	
Variable displacement chamber	PTO shaft with cam clutch	
Bolted grid on rear hood	Bolted-on rotor shafts (in forged steel)	
Inside lateral protection	Adjustable Hardox® counter-blade	
Bolted on protection chains	Dozing blades with spring system	

#### **OPTIONS**

Multiple tooth options	Water spray system WSS Basic	
Hydraulic top link	Water spray system WSS High Flow	

MODEL		MTL-150	MTL-175	MTL-200	MTL-225
	Tractor (hp)	140-240	150-240	160-240	170-240
	PTO (rpm)	1000	1000	1000	1000
	Working width (mm)	1480	1720	1960	2200
	Total width (mm)	1820	2060	2300	2540
	Weight (Kg)	3370	3620	3870	4120
	Rotor diameter (mm)	595	595	595	595
ROTOR G/3	Working depth (mm) (Max. 1-Max. 2)	150-280	150-280	150-280	150-280
-,-	<b>No. teeth</b> type G/3+STC/3/FP	42+6	50+6	60+6	70+6
	Rotor diameter (mm)	612	612	612	612
ROTOR R (optional)	Working depth (mm) (Max. 1-Max. 2)	150-280	150-280	150-280	150-280
	No. picks type R/65+R/65/HD	98+16	114+16	138+16	154+16

Max. 1: with rotor only Max. 2: maximum depth (maximum working depth depending on ground conditions).

This information refers to the machine equipped as standard. The technical data in this catalogue may be altered without prior notice.

**ROTOR** TYPE G



TOOTH G/3



TOOTH G/3/HD

**ROTOR** TYPE R











TOOTH STC/3/FP



(side scraper)

MULTITASKS 44 / 45 🛆

## MTM

#### FAE multi-function head for tractors from 240 to 360 hp.

The MTM enables ground stabilization, milling of slabs of rock, crushing of stones, and milling of asphalt, down to a maximum operating depth of 40 cm. The compact size and excellent maneuverability enable the MTM to work on surfaces which are difficult to reach using self-powered vehicles. The variablegeometry crushing chamber guarantees excellent

results in terms of breaking down material. The volume of the chamber increases based on depth with a reduction in fuel consumption and an increase in operating speed. The Hardox® wear-resistant counter blade and grid on the rear hood guarantee the desired granulometry of material processed.

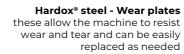




Side wear plates on the inner sides of the frame

highly resistant to wear and tear, equalling less down time due to replacement

Rear access panel







Rear grid

the grid on the rear door helps define the size of the output materials

#### **Displacement Chamber**

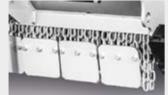
this technological solution, witch is one of a kind in the industry, allows the ground to be penetrated with the rotor alone



#### **MAIN OPTIONS**



**Extended 3 point linkage** 



**Bolt-on chain's protection** plates



**Multiple tooth options** 



The Water Spray System (High Flow & FCS) has the dual function of cooling and mixing



240-360 hp



Depth 40 cm max



Variable displacement chamber



#### STANDARD EQUIPMENT

Gearbox with freewheel		
PTO shaft (MTM/HP)		
Friction clutches		
PTO shaft with cam clutch (MTM)		
Bolted-on rotor shafts (in forged steel)		
Adjustable Hardox® counter-blade		
Adjustable skids		
Dozing blades with spring system		

#### **OPTIONS**

Extended 3 point linkage	Water spray system WSS High Flow
Multiple tooth options	FCS full control system
Hydraulic top link	

MODEL		MTM-200	MTM-225	MTM/HP-200	MTM/HP-225
	Tractor (hp)	240-300	240-300	300-360	300-360
	PTO (rpm)	1000	1000	1000	1000
	Working width (mm)	2053	2293	2053	2293
	Total width (mm)	2495	2735	2495	2735
	Weight (Kg)	5850	6350	5900	6400
	Rotor diameter (mm)	940	940	940	940
ROTOR G/3	Working depth (mm) (Max. 1-Max. 2)	250-400	250-400	250-400	250-400
0,5	No. teeth type G/3+STC/3/FP+STC/FP	94+4+4	106+4+4	94+4+4	106+4+4
	Rotor diameter (mm)	915	915	915	915
ROTOR R	Working depth (mm) (Max. 1-Max. 2)	240-400	240-400	240-400	240-400
	<b>No. pciks/teeth</b> type R/65+R/65/HD+STC/3/FP +STC/FP	126+20+4+4	144+20+4+4	126+20+4+4	144+20+4+4

with rotor only maximum depth (maximum working depth depending on ground conditions).

This information refers to the machine equipped as standard. The technical data in this catalogue may be altered without prior notice.

**ROTOR** TYPE G

ROTOR

TYPE R



TOOTH G/3

(standard)



TOOTH G/3/HD

PICK R/65/HD



WITH PICK R/44



**ADAPTOR R/65** WITH PICK R/44



TOOTH STC/FP (side scraper)



TOOTH STC/3/FP (side scraper)



PICK R/65/HD (side scraper)



## MTH

#### FAE multi-function head for tractors from 300 to 500 hp.

The top-of-the-range FAE multi-function machine enabling milling of rock slabs, crushing of stones, milling of asphalt and ground stabilization, with a maximum operating depth of 50 cm. The gear transmission enables operation with constantly optimal levels of torque and power. The variablegeometry crushing chamber guarantees excellent results in terms of breaking down material. The volume of the chamber increases based on depth with a reduction in fuel consumption and an increase in operating speed. The Hardox® wear-resistant counter blade and grid on the rear hood guarantee the desired granulometry of material processed.



#### **Kinematics**

for the adjustable frame, allows a perfect synchronization of the rotor when penetrating the soil



#### **Bolt-on extensions**

allow to perfectly cover the working width of the machine, easy to change



#### Cooling system

guarantees high performance in all working conditions

#### Internal replaceable protections

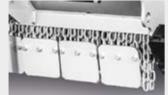
to allow using the machine in extreme conditions



#### **MAIN OPTIONS**



**Extended 3 point linkage** 



**Bolt-on chain's protection** plates



**Multiple tooth options** 



The Water Spray System (High Flow & FCS) has the dual function of cooling and mixing





Variable displacement chamber



#### STANDARD EQUIPMENT

Hydraulic rear hood	Gearbox with oil cooling system (MTH/HP)
Interchangeable inner antiwear plates in Hardox®	PTO shaft
Enclosed machine body	Friction clutches
Variable displacement chamber	Bolted-on rotor shafts (in forged steel)
Bolted grid on rear hood	Hydraulic top link
Inside lateral protection	Flat pressed welded steel counter-blades
Bolted on protection chains	Adjustable Hardox® counter-blade
Transmission with side gearbox	Adjustable skids
Side gearbox with oil cooling system (MTH/HP)	Dozing blades with spring system
Gearbox with freewheel	

#### **OPTIONS**

Hydraulic front hood	Multiple tooth options
Extended 3 point linkage	Water spray system WSS High Flow
Centralized greasing hub	FCS full control system

MODEL		MTH-225	MTH-250	MTH/HP-225	MTH/HP-250
	Tractor (hp)	300-400	300-400	360-500	360-500
	PTO (rpm)	1000	1000	1000	1000
	Working width (mm)	2320	2560	2320	2560
	Total width (mm)	2901	3141	2901	3141
	Weight (Kg)	7900	8150	8100	8325
	Rotor diameter (mm)	1115	1115	1115	1115
ROTOR G/3	Working depth (mm) (Max. 1-Max. 2)	320-500	320-500	320-500	320-500
0/3	No. teeth type G/3+STC/3/FP+STC/FP	116+4+4	132+4+4	116+4+4	132+4+4
	Rotor diameter (mm)	1065	1065	1065	1065
(optional)	Working depth (mm) (Max. 1-Max. 2)	340-500	340-500	340-500	340-500
(optional)	No. teeth type R/65+R/65/HD+STC/3/FP+STC/FP	160+24+6+6	180+24+6+6	160+24+6+6	180+24+6+6

Max. 1: with rotor only Max. 2: maximum depth (maximum working depth depending on ground conditions). This information refers to the machine equipped as standard. The technical data in this catalogue may be altered without prior notice.

**ROTOR** TYPE G

**ROTOR** TYPE R



TOOTH G/3

PICK R/65



TOOTH G/3/HD



**ADAPTOR G/3 WITH** 



**ADAPTOR R/65** 

WITH PICK R/44

PICK R/65/HD



TOOTH STC/FP (side scraper)



TOOTH STC/3/FP PICK R/65/HD (side scraper)







## SPHEROIDAL CAST-IRON PARALLEL AXIS

## REDUCTION GEAR

Reduction gears are designed to make penetrating the ground easier. Reduction gears are attached using a pendular system separate from the frame and the rotor and are therefore not affected by stress or deformation. The single reduction gear is also easily detachable.



#### **GEAR REDUCTION SYSTEM**

The single and dual gear reduction system, depending on the model, requires no forced hydraulic fluid cooling under any work condition. This component's high heat tolerance is a significant feature as it avoids the need for high maintenance parts such as oil coolers and pumps.



## DUAL LATERAL GEARBOX TRANSMISSION

The dual side geared transmission perfectly transforms engine power into grinding power. Compared to a belt driven transmission, the gearbox transmission offers important advantages such as greater transmission torque, less wear on teeth because of lower rotor speed, more effective ground penetration due to the smaller size.



## **VARIABLE GEOMETRY MIXING AND GRINDING CHAMBER**

This technical solution is unique in the industry. The Variable Geometry Crushing Chamber enables ground penetration with just the rotor, and is adjustable from the cab of the tractor. The volume of the crushing chamber, where the material is blended, is variable. Thus, the deeper the work, the larger the volume of the chamber. Compared with machines that sink into the ground with their frame, the variable geometry crushing chamber reduces resistance with the tractor, lowers fuel consumption, speeds up operations. Saving time.

#### **BOTTOM SIDE PROTECTION** FOR GUARANTEED RELIABILITY, **EVEN AT MAXIMUM WORKING DEPTHS**





- Guaranteed mixing quality of the material in any situation
- Reduced traction forces and fuel consumption
- Increased operating speeds and greater time savings

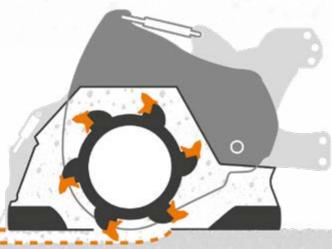


- Newly engineered rotor depth control system
- Depth gauge to monitor an achieve ideal depth
- Easily visible from the cab, for precise, efficient depth adjustment

**DEPTH IS ADJUSTED USING 2 CYLINDERS** 

MTL: 0 cm\* MTM: 4,5 cm\* MTH: 8,5 cm\*

\*with G/3 rotor



SPECIALLY DESIGNED TO ACHIEVE A CONSISTENT DEPTH

MTL: 15 cm\* MTM: 25 cm\* MTH: 32 cm\*

\*with G/3 rotor



The heart of FAE technology is the rotor, which grinds rocks and asphalt, turns the ground and evenly mixes lime or cement that is spread over the area to be stabilized. The patented tooth pattern ensures even distribution of the forces over its entire width, limits stress to the structure, reduces power absorption and enables uniform distribution of the output materials.

Guards with easily replaceable parts.

The ends of the rotor and outside tooth holders have wear plates to protect from excessive wear.

Rotors are equipped with different types of tools depending on the application.

#### **RING LABYRINTH SYSTEM**

Standard for all PTO Construction products, the system increases rotor bearing protection from outside contamination. This technical trait makes equipment more reliable, reducing maintenance costs.





## **YOU CAN BE CONFIDENT** OF DURABILITY

Our teeth and tooth holders are the result of intensive research and development. The tooth holders are all made of forged steel, and welded to the rotor automatically. Tungsten carbide (Widia®) inserts offer hardness with limited wear and tear.

The special design of FAE teeth guarantees the following advantages:

- MAXIMUM RESISTANCE **TO MECHANICAL STRESS**
- **TOOLS LAST LONGER**
- **MAXIMUM RELIABILITY** AND PERFORMANCE **EVEN IN TOUGH TERRAIN**
- **REDUCED OPERATING COSTS**

Cutting-edge tooth design ensures the utmost protection for the tooth holder, reducing operating costs. Improved resistance to mechanical stress and maximum durability are the result of a larger support surface on the rotor.





TOOTH G/3 (standard)



TOOTH G/3/HD (optional)



PICK R/44 (optional)



**TOOTH STC/FP** (side scraper)



**TOOTH STC/3/FP** (side scraper)

#### **GROUND STABILIZING**

TOOTH G/3 PICK R/44



#### **STABILIZING IN PRESENCE OF ROCKS**

PICK R/44 TOOTH G/3



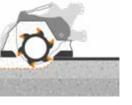
#### **STONE CRUSHING**

TOOTH STC/FP (side scraper) TOOTH G/3



#### **ASPHALT GRINDING**

PICK R/44 TOOTH G/3



#### **STUMP GRINDING**

TOOTH STC/3/FP (side scraper) TOOTH G/3



## THE R ROTOR

The heart of FAE technology is the rotor, which grinds rocks and asphalt, turns the ground and evenly mixes lime or cement that is spread over the area to be stabilized. The patented tooth pattern ensures even distribution of the forces over its entire width, limits stress to the structure, reduces power absorption and enables uniform distribution of the output materials.

Guards with easily replaceable parts.

The ends of the rotor and outside tooth holders have wear plates to protect from excessive wear.

A labyrinth ring system avoids dust contamination in the rotor bearing.

Rotors are equipped with different types of tools depending on the application.

Interchangeable tools that can be easily replaced are symbol of efficiency in every application. A leading-edge technical solution means that the same asphalt shredding tooth (Pick R/44) can be fitted to each rotor.

The rotor hubs are interchangeable and made of forged steel for excellent resistance to mechanical stress.

## **YOU CAN BE CONFIDENT** OF DURABILITY

Our teeth and tooth holders are the result of intensive research and development. The tooth holders are all made of forged steel, and welded to the rotor automatically. Tungsten carbide (Widia®) inserts offer hardness with limited wear and tear.

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(standard)





PICK R/65/HD (optional)



PICK R/44 (optional)



PICK R/65/HD (side scraper)



TOOTH STC/FP (side scraper)



**TOOTH STC/3/FP** (side scraper)

#### **GROUND STABILIZING**

PICK R/65 PICK R/65/HD PICK R/44



#### **STABILIZING IN PRESENCE OF ROCKS**

PICK R/65/HD PICK R/65



#### **STONE CRUSHING**

PICK R/44 PICK R/65 PICK R/65/HD



#### **ASPHALT GRINDING**

TOOTH STC/FP PICK R/65/HD PICK R/44



#### **SLAB GRINDING**

TOOTH STC/3/FP PICK R/65/HD



## **ENDURING** THROUGH TIME, DESIGNED FOR EVERY NEED



#### **REAR GRID**

The grid on the rear door helps define the size of the of the final product. It is easy to adjust mechanically from the outside using the adjustment slots. Its use is indispensable when working on clay-like soils that have a large amount of surface rocks. The grid enables the rear door to be opened so that the soil can flow out without losing the regulation of the average size of the final product.



#### **REAR DOOR**

With hydraulic adjustment to regulate the quantity of material in output.



#### MATERIAL ENTRY POINT

Comes with hydraulic adjustment to stop rocks from being ejected along the length of the tractor (MTL excluded).

#### SIDE WEAR PLATES

On the inner side of the frame are easily replaceable without having to remove the rotor, while ensuring excellent resistance to wear and reduce replacement intervals.

#### HARDOX® SECTIONAL **WEAR PLATES**

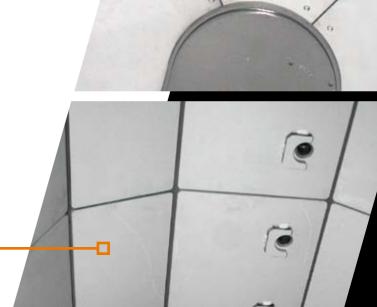
Internal Hardox® guards against wear and tear. The sectional plates are easy to replace without having to remove the rotor.

#### HARDOX® COUNTER BLADE

Helps to achieve the desired final product size. It is easily replaceable, due to its attachment screws, thus making maintenance fast and easy.

#### **COUNTER BLADE ADJUSTMENT SYSTEM**

Adjustment system that enables the rapid change of position of the Hardox® counter blade depending on material size requirements.







#### **SPRING LOADED LEVELING BLADE**

The spring loaded leveling blade produces an even final product as a result of its engineering and design.



To ensure high strength and easy handling.

#### **SELF-PRIMING WATER SYSTEM PUMP**

This system provides a consistent flow rate throughout the water system, no matter the slope of the machine.

#### **CONTROL PANEL**

This is fitted as standard on all machines (MTL excluded). Thanks to 4 indicator lights that signal any failures, the Control Panel allows the oil pressure and temperature to be monitored, together with the alignment of mobile rotor cylinders, for safer machine operations.

## FOR TOP LEVEL PERFORMANCE THE DIFFERENCE IS IN THE DETAILS





#### INSPECTION HATCH WITH KEY CLOSURE

The special design of the hatches ensures easy maintenance and inspections. The key closure, specially designed with an incorporated dust screen, allows the quick opening of both hatches in any situation.



#### **SUPPORT SKIDS**

(to prevent the sinking)

The support skids are height adjustable and easily removable to increase working depths. Additional optional features are not necessary for the machine to penetrate to its maximum depth (support skids assembled).



#### **TEFLON INSERTS**

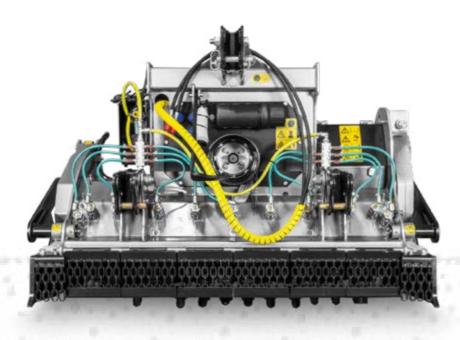
Easily replaceable. They ensure that the two frames slide easily.

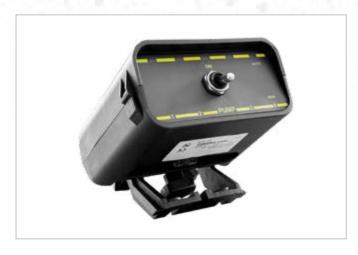


## **WATER SPRAY SYSTEM** (WSS) BASIC AND HIGH FLOW

#### **WSS BASIC FOR MTL**

Compact, convenient and simple system for those who want to carry out asphalt milling and recycling operations. Thanks to a 200-liter tank placed directly on the tractor's front lift and an electric pump that can be operated directly from the tractor cab, the water flow will cool the tools during asphalt processing.





#### SWITCH (ON/OFF)

Switch (on/off) located in the tractor cab. Thanks to this switch, it is possible to easily enable, from the tractor cab, the Water flow.

Flow of a few litres per minute 3-7 l/min.

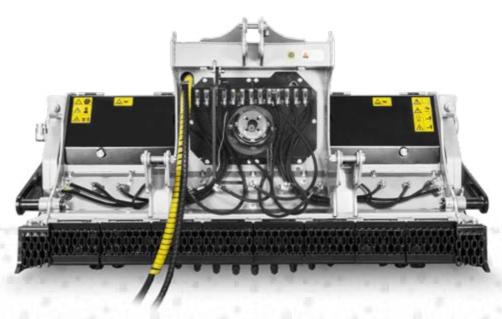


#### **WATER TANK**

(positioned on the tractor's front mount) Tank volume 200 litres.

#### WSS HIGH FLOW FOR MTL

Water system operated by a hydraulic motor and equipped with a pump with a high flow rate, it has been designed to allow for better mixing; in fact, the high flow rate of the pump not only limits the temperature of the tools, making asphalt milling and recycling operations possible, but also favors the increase of the moisture of the mixed soil, making the machine suitable for stabilization works.





#### LOCATED IN THE CAB

1/Control panel, used to adjust the amount of fluid injected by the stabilizer

2 / Control panel, with display showing the instantaneous flow rate



DATA SHEET	MINIMUM FLOW RATE	MAXIMUM CAPACITY	MAXIMUM PRESSURE
Centrifugal pump	65 I/min	230 l/min	5 bar
Hydraulic engine	-	50 l/min	200 bar

	NO. NOOZLE	MINIMUM FLOW RATE	MAXIMUM CAPACITY
MTL-150	8	70 l/min	145 l/min
MTL-175	8	70 l/min	145 l/min
MTL-200	8	90 l/min	170 l/min
MTL-225	10	135 l/min	230 l/min

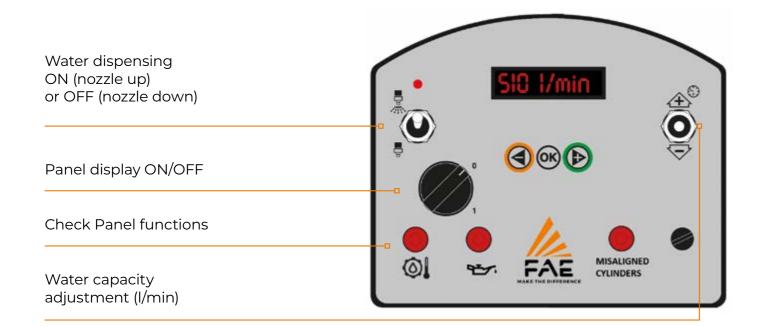
## **ALL MACHINES CAN** BE EQUIPPED WITH

## **A WATER INJECTION SYSTEM**

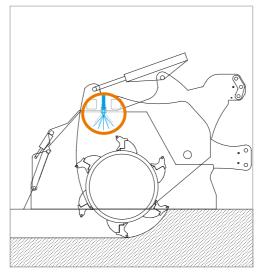
(EVEN AT A LATER DATE)

#### WATER SPRAY SYSTEM HIGH FLOW (WSS for MTM - MTH)

Thanks to the control panel and display showing the water flow rate, it is possible to easily monitor and adjust, from the tractor cab and in complete safety, the instantaneous value of the liters of water delivered and the overall value from the beginning of the operations.



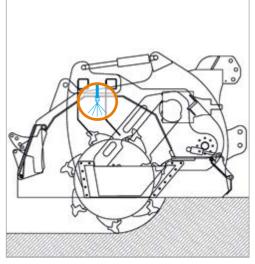
CAPACITY FROM SINGLE NOZZLE AT 3 BAR	CAPACITY FROM SYSTEM
7.9 l/min	65-110 l/min
15.8 l/min	115-235 l/min
24 l/min	150-330 l/min
39 l/min	210-500 l/min
59 l/min	240-580 l/min
79 l/min	260-640 l/min
	7.9 I/min 15.8 I/min 24 I/min 39 I/min



#### **MIXING FUNCTION**

(only for stabilize machines or multitask machines)

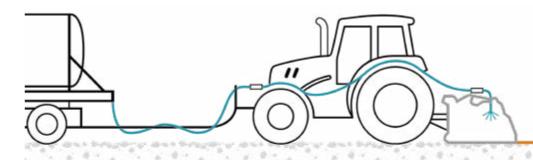
This function increases the moisture level in the soil, improves mixing with the stabilising agent during stabilisation operations and optimises the results of the consolidation work. It also helps to ensure proper compaction. This is the ideal solution even for liquid binders mixed directly in the mixing chamber.



#### **COOLING FUNCTION**

(only for multitask machines)

This function reduces heat build up in the teeth during asphalt grinding operations, thus avoiding overheating of tools and other rotor parts. It greatly reduces tool wear and is recommended for asphalt, cement and very hard rock grinding.



The individual nozzles are independent from one another.

It is possible to decide the number of nozzles being operated.

A vast choice of nozzle type, easily exchangeable according to the amount of water.



0 [1/m2]

0 [l/m3]

O [I/min

150 [L/min]

0.7 [Km/h]

1291,4

522.5 [m3]

7187[1]

## **HELPING YOU MAKE THE RIGHT CHOICES**

#### **FCS FULL CONTROL SYSTEM** (FCS FOR MTM - MTH)

The FAE automatic injection system, FCS, is a cutting-edge system built for excellent supply and distribution of water and/or to stabilize the fluid binding agent. Using this intuitive system, the operator is able to establish the exact amount of fluid from the display, based on the road surface (I/m2) or mixing volume (I/m3).



#### **SETTING STAGE**

This allows you to choose the perfect nozzles for the job during the initial stages.



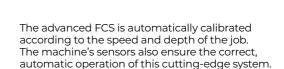
#### **WORK STAGE**

All of the machine's vital parameters are monitored



#### **ANALYSIS STAGE**

The software lets you create a work report that can be easily saved to a USB drive (for example the number of m2 or m3 processed, water flow, etc.).

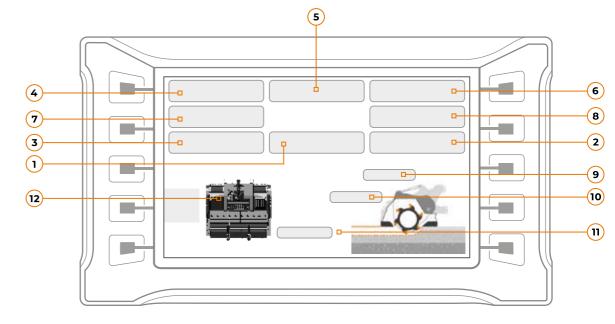


Start

The material is mixed to the moisture ratio required to achieve perfect stabilization.

Compared to manual adjustment, the FCS leaves no room for error and ensure the best possible results in every application. The machine sensors ensure correct and automatic operation of this first-class system. The system constantly monitors forward feed speed through the ISOBUS connection on the tractor, or via optional radar sensor, while other sensors control the working depth.

A magnetic flow meter ensure the capacity required.



- 1. Current speed
- Current injection flow
- Total flow from the start of the job
- Area covered
- Delivery requirement (I/m²)
- Current delivery (I/m<sup>2</sup>)

- 7. Volume mixed
- Current delivered (I/m³)
- 9. Rotor movement percentage
- 10. Percentage of rear panel opening
- 11. Working depth
- 12. Number of nozzles open



ALWAYS BY
YOUR SIDE
TO MAKE THE
DIFFERENCE

