

STEP

IN FURROW MOUNTED PLOUGH
WITH MECHANICAL FURROW WIDTH ADJUSTMENT

EN



MORO
YOUR OWN FURROW



STEP

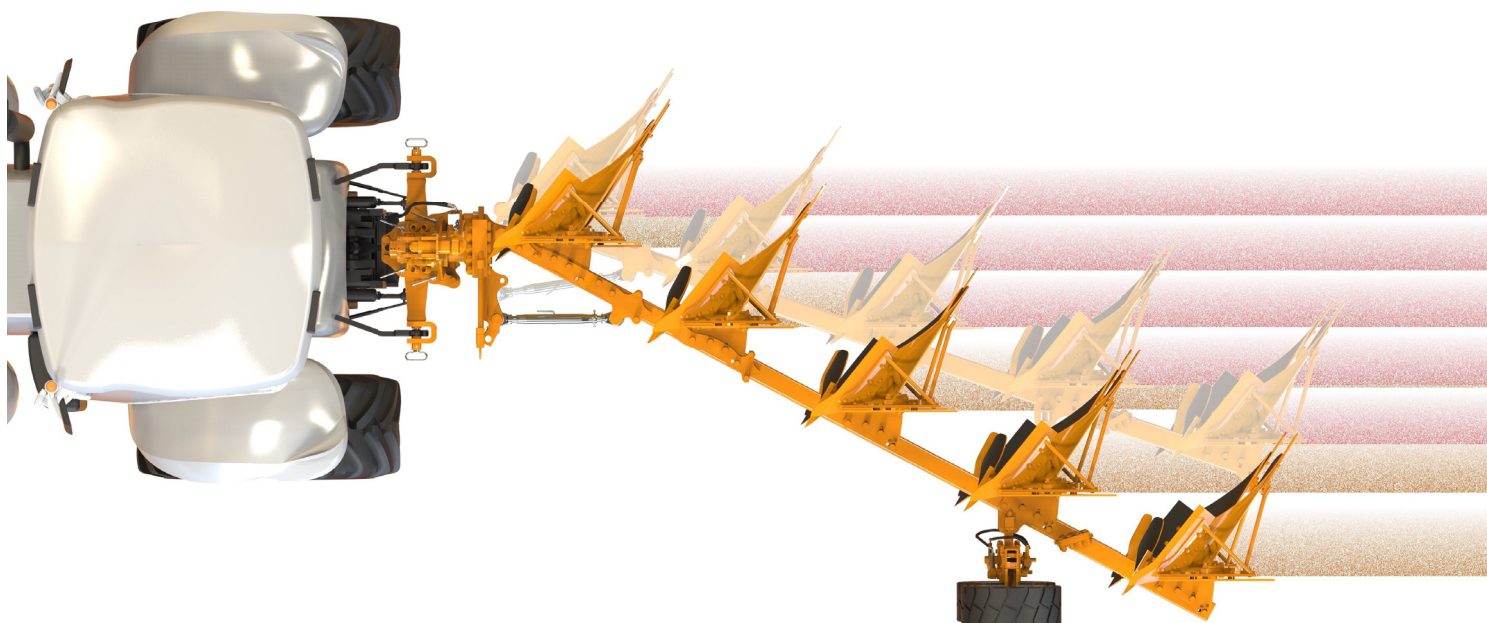
It is the innovative line of mounted ploughs, equipped with mechanical working width adjustment, available in versions with 2 to 6 bodies. Advanced CAD software is used for design and structural analysis of these machines, with simulated performance and fatigue testing. The chassis of the Step plough, like all the other structural parts, is made of special steel, with a very high yield load. Coupling of the elements are made by bolts, avoiding welded joints, and all the movements are made with pins and bushing with special anti-wear treatment.



MECHANICAL ADJUSTMENT

Equipped with the mechanical furrow width adjustment, the Step ploughs allow the operator an accurate setting, according to different soil and climatic conditions. The plough is also provided with all the necessary adjustments for the perfect match and alignment to the tractor:

- First body adjustment (hydraulic version on request)
- Pulling point adjustment
- Vertical tilt adjustment





STEP ADJUSTMENT

The optimal adjustment of the plough minimizes fuel consumption and material wear. The Step plough is equipped with a simple and quick adjustment of the first body and the pulling point, for a time and cost optimization: once the first body is set with the provided turnbuckle, use the second turnbuckle to adjust the pulling point.

FOUR POSITIONS

The Step system has four positions in order to adjust the furrow width.



MEMORY CYLINDER

The swing-in device with memory allows the beam to align while reversing, keeping the furrow width unchanged. A convenient option in case of tractors with a low lifting system, it is provided as standard equipment starting from the 5 furrow plough.



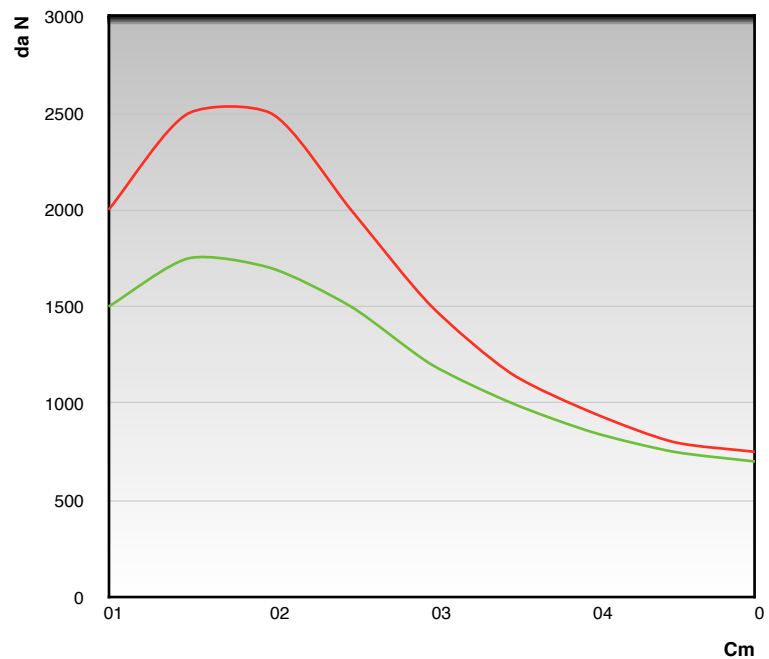


STONE SYSTEM

The MORO Aratri non-stop security system, protects the plough from damages when a body encounters an obstacle. This ensures a safe ploughing in stony soils.

The release is soft and without shocks, with a reduction of force as the leg rises.

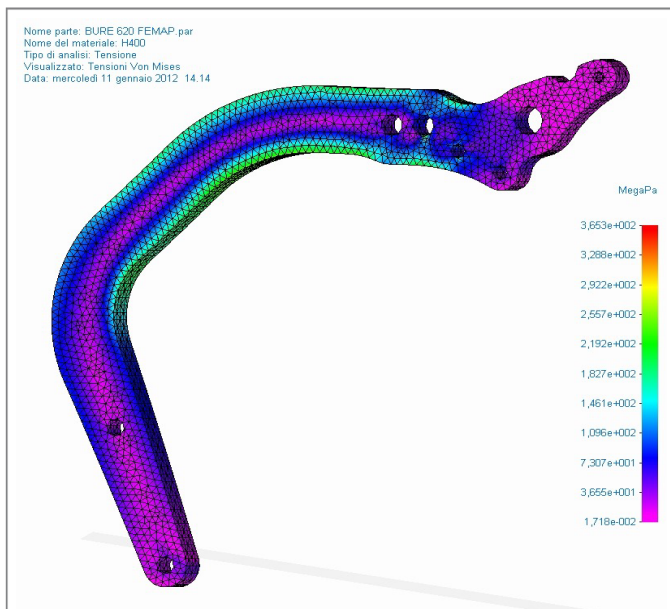
The triggering pressure is adjustable, thus allowing the ploughing both in tenacious and light soils, avoiding the extraction of stones.



UNIQUE

The special shape of the leg guarantees the optimal kinematic: in case of impact, the body is quickly guided outside of the soil, overcoming the obstacle.

Special elastic steels enables also lateral movement: the STONE SYSTEM is able to absorb all the stresses and to ensure reliability and durability.





PATENTED

Each STONE SYSTEM body is provided with a couple of hydraulic jacks which allow the system to work.

Bodies are fixed with bolts to the chassis, avoiding joints and connecting rods that could affect the reliability of the plough.

STONE SYSTEM element
in working position and in
simulation of obstacle



The constructive solution to entrust the delicate task of safeguarding the structure to a battery of accumulators, in comparison to a single accumulator, represents an important advantage in terms of reliability.

The STEP STONE SYSTEM is able to continue ploughing even in case of failure of one or more accumulators. Moreover, it is possible to exclude the hydraulic device and add a couple of shear bolt.



COMPACT SYSTEM

It is the folding system invented by MORO Aratri.

Available on request, not only it reduces the longitudinal encumbrance of the plough during transport, it also allows to significantly lighten the load on the tractor lift system.

All locking and re-opening movements are automatic, without manual operations: operating the hydraulic distributor of the tractor, the hydraulic jacks perform all movements.

At the end of cycle, the hooks automatically take action to ensure the structural continuity and the perfect alignment of the frame.



The special coupling system at the end of the opening cycle is carried out with specific levers with backlash and adjustable limit switches. Even after intensive use, the coupling accuracy is not compromised.

The whole system is assembled with bolts and, in case of need, the disassembly of the parts does not require demanding operations.

TECHNOLOGY

TRANSPORT SYSTEM



TRANSPORT SYSTEM

The patented plow work and transport system that completely resolves the issue of road safety.

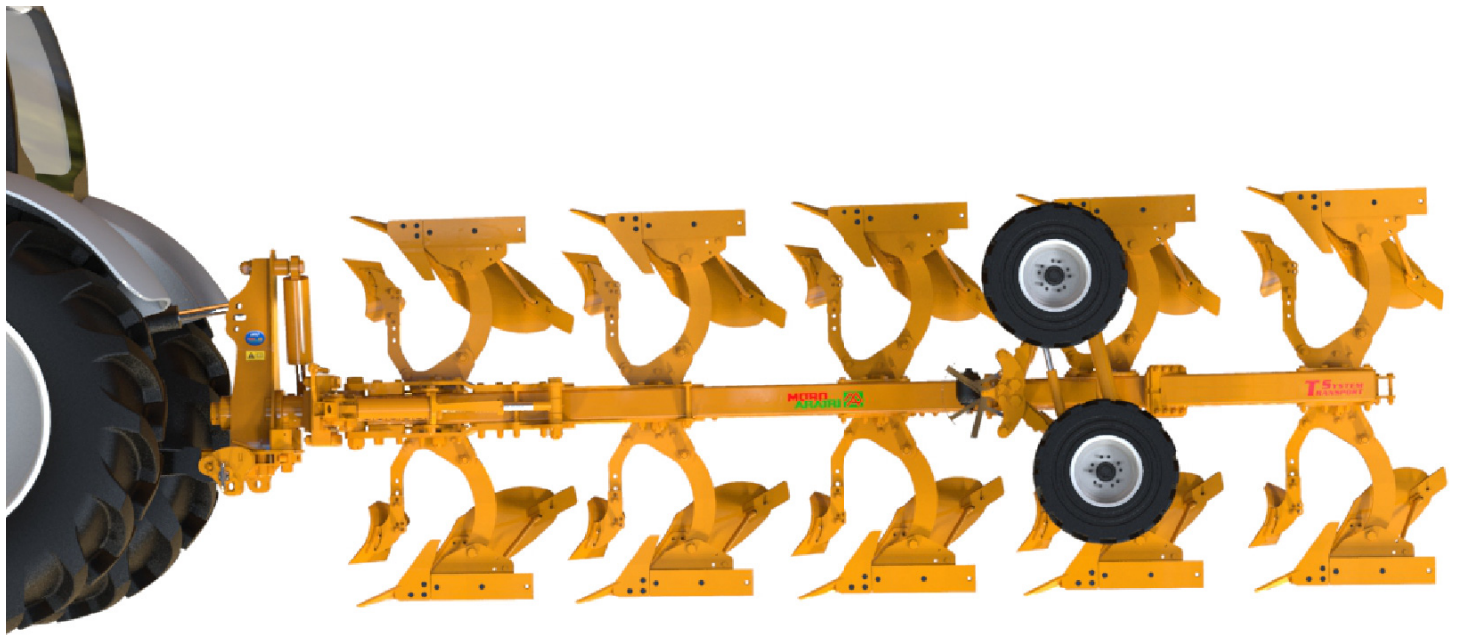


Movements from working to transport position and vice versa, are hydraulically actuated. Due to the unique steering head, during transport the plow acts like a tractor-trailer .



The TRANSPORT SYSTEM is available both hydraulic and mechanical versions

TRANSPORT SYSTEM 2.0



TRANSPORT SYSTEM 2.0

The evolution of the patented plow work and transport system that definitively solves the road safety issue.

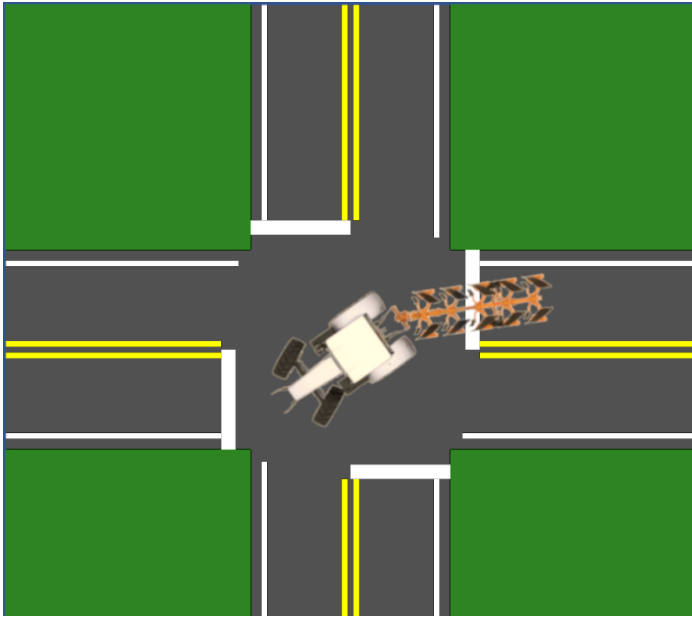
ROAD APPROVAL

The plow equipped with the Transport System can be approved for road use.

This classifies the plow as a towed implement, as required by the "Mother Regulation," making it compliant with individual national regulations throughout the European Union

TECHNOLOGY

TRANSPORT SYSTEM 2.0



All movements are carried out hydraulically

1. From the working position to the transport configuration and back
2. Working depth adjustment

Thanks to the special steering head, the plow behaves like a trailer during transport.

MORO NEXT

THE SENSORY PLOUGH

Equipped with special sensors and interconnected, the plough becomes SMART.

Moro Next is an integrated system that allows visualization of movement data from Moro plough range and interaction with the web environment, enabling remote access and data modification

(For more information, please contact the sales network.)



MOULDBOARDS



STEEL

Boron steel mouldboard extremely wear resistant, for a precise and low power absorption ploughing.

Various models for a working depth ranging from 16 cm to 100 cm. Also available in multi layer steel plate.

(for further information please contact the sales network)



SLATTED

Boron steel slatted mouldboard for sticky soils. Excellent crumbling.

Various models for a working depth ranging from 26 cm to 50 cm. Synthetic version available.

(for further information please contact the sales network)



SYNTHETIC

Plastic mouldboard for wet and sticky soils without stones. It allows the soils to flow with less effort.

Various models for a working depth ranging from 16 cm to 100 cm.

(for further information please contact the sales network)



SCANDIC

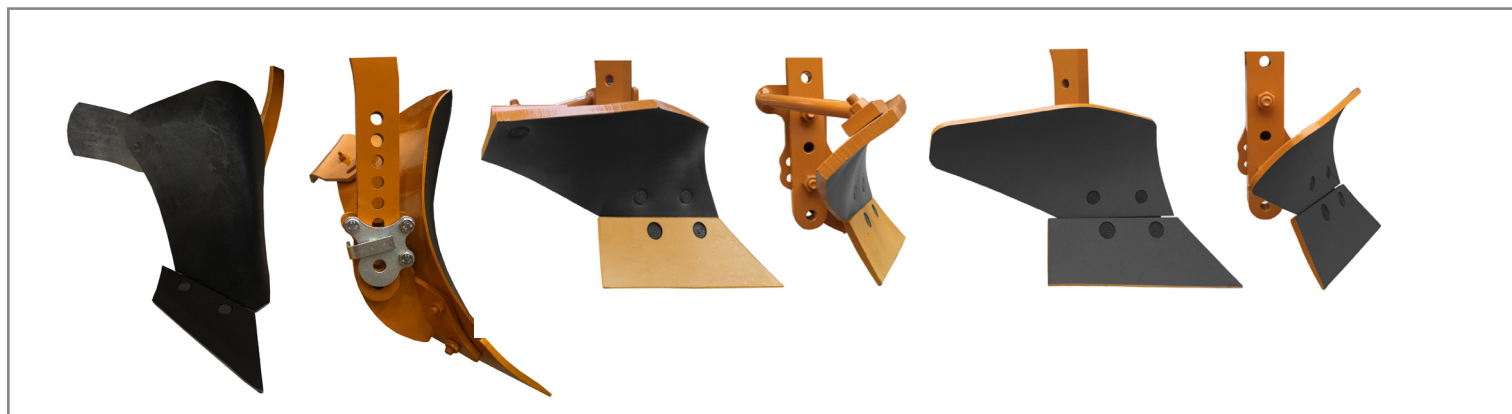
Helicoidal mouldboard for a low power absorption ploughing. Specifically designed for the north european markets and for rice fields. Various models for a working depth ranging from 16 cm to 30 cm.

Synthetic version available.

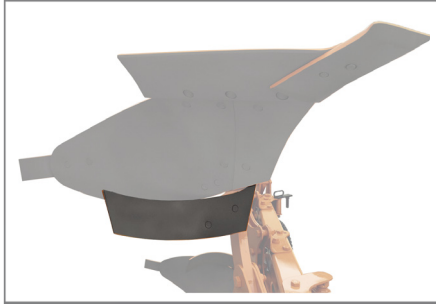
(for further information please contact the sales network)

SKIMMERS

Rice field / Maize - Synthetic - Steel



ACCESSORIES



TRASHBOARDS

Available on all the plough bodies, for ploughing without skimmers.



EXTRA LARGE LANDSIDE

For a better stability of the plough. Available on all the plough bodies, it can be turned for an efficient use of the material.



SHARES

Made of high-quality boron steel, heat-treated and wear-resistant, MORO shares ensure excellent penetration in any type of soil.

Available with:

- Reversible point
- Premium tungsten point
- 450 mm length (standard)
- 1650 mm length

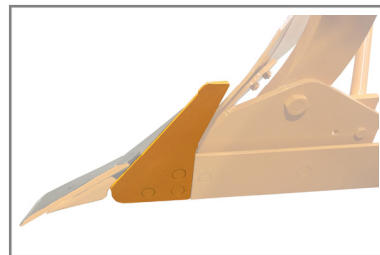


DISC COULTER

Smooth or scalloped coultter disc, with 500 mm diameter

Easy to set in every soil condition.

Non-stop version available.



KNIFE COULTER

Available on all the plough bodies



QUICK ADJUSTMENT FOR SKIMMER

Certain skimmer models can be equipped with quick adjustment.

(For more information, please contact the sales network.)



PRECISION JOINT

On request, it is possible to add a precision joint which allows the addition or the removal of the last plough body, making the plough extremely versatile.

ACCESSORIES



SINGLE DEPTH WHEEL

Depth wheel with hydraulic shock absorber, adjustable via turnbuckle. Positioned on the last body and mountable on every plough model.

DUAL DEPTH WHEEL

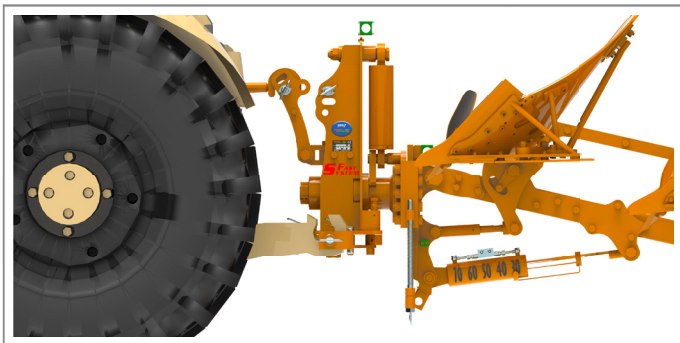
Adjustable dual depth wheel. Positioned on the penultimate or last body and mountable on every plough model.



WORKING AND TRANSPORT WHEEL (SINGLE/DOUBLE FORK)

A hydraulically cushioned working wheel with depth adjustment via a regulator.

Positioned on the last body and can also be used as a transport wheel on the road. Starting from the four-furrow model, it can be mounted on the second-to-last body.



ARTICULATED TOP LINK

Patented and designed by MORO Aratri, the special FAST SYSTEM accessory is available on the TRANSPORT SYSTEM headstock. During the conversion from working to transport position, the top link is freed without detaching it from the plough.

**FAST
SYSTEM**



HYDRAULIC INCLINATION ADJUSTMENT

The plough can be equipped with a turnover cylinder that enables adjustment of its inclination

This cylinder also stores the set position, eliminating the need for readjustment after each turnover.



KIT MOTHER REGULATION ROAD APPROVAL

For plows equipped with the Transport System, the kit includes:

- Fast System
- Lighting system with signal panels
- Side reflectors
- Safety locks
- Share protections
- Chocks

SPECIFIC VERSIONS

For specific needs, the 2 and 3 furrow ploughs can be equipped with an hydraulic swift device, which allows a perfect field finishing, even in case of obstacles. **Maximum excursion: 95 cm.**



← FINISHING

The STEP plough is equipped with a specific reversible wheel with hydraulic shock absorber and adjustable depth, which can be easily placed in finishing position.

IN FURROW →



WORKING WIDTH

BODY SPACING cm	STEP cm
90	29-34-38-42
95	31-36-40-45
100	33-37-42-47
105	34-39-44-49
110	36-41-46-52
115	37-43-49-54
120	39-45-51-56
125	41-47-53-59
130	42-49-55-61

TECHNICAL DATA

6 FURROW					S6		
MODEL	BODY SPACING cm	WORKING WIDTH cm	UNDERBEAM CLEREANCE cm	BEAM CROSS SECTION cm	WEIGHT Kg	POWER	
						HP	MAX*
EXA 18A Step	100-105	Pag.14	84	200x120	2650	310-420	450
EXA 16A Step	95-100	Pag.14	83	150x120	2350	260-320	350
EXA 13A Step	95-100	Pag.14	74	150x120	2100	170-240	270
5 FURROW					S5		
MODEL	BODY SPACING cm	WORKING WIDTH cm	UNDERBEAM CLEREANCE cm	BEAM CROSS SECTION cm	WEIGHT Kg	POWER	
						HP	MAX*
PNT 20A Step	110-120	Pag.14	94	200x120	2600	320-420	450
PNT 18A Step	100-110	Pag.14	89	200x120	2400	250-350	370
PNT 16A Step	95-110	Pag.14	89	150x120	2100	190-260	280
PNT 14A Step	90-105	Pag.14	84	150x120	1830	160-210	230
PNT 13A Step	95-105	Pag.14	79	150x120	1700	160-210	230
PNT 10A Step	90-95	Pag.14	74	120x120	1400	130-150	160
4 FURROW					S4		
MODEL	BODY SPACING cm	WORKING WIDTH cm	UNDERBEAM CLEREANCE cm	BEAM CROSS SECTION cm	WEIGHT Kg	POWER	
						HP	MAX*
QRV 20A Step	110-120	Pag.14	94	200x120	2150	270-350	370
QRV 18A Step	100-115	Pag.14	89	200x120	1850	210-280	300
QRV 16A Step	100-110	Pag.14	89	150x120	1650	160-220	280
QRV 14A Step	100-110	Pag.14	84	150x120	1480	140-180	190
QRV 13A Step	95-105	Pag.14	79	150x120	1400	130-170	180
QRV 12A Step	90-105	Pag.14	84	120x120	1330	120-150	160
QRV 10A Step	90-100	Pag.14	80	120x120	1200	110-140	150
3 FURROW					S3		
MODEL	BODY SPACING cm	WORKING WIDTH cm	UNDERBEAM CLEREANCE cm	BEAM CROSS SECTION cm	WEIGHT Kg	POWER	
						HP	MAX*
TRV 20AP Step	110-130	Pag.14	94	200x120	1900	260-320	340
TRV 20A Step	110-120	Pag.14	89	200x120	1750	230-270	290
TRV 18A Step	110-115	Pag.14	89	200x120	1600	180-230	240
TRV 16A Step	100-110	Pag.14	89	150x120	1430	150-180	190
TRV 14A Step	100-110	Pag.14	84	150x120	1260	130-150	160
TRV 12A Step	100-110	Pag.14	84	120x120	1150	110-130	140
TRV 10A Step	95-105	Pag.14	80	120x120	1000	100-110	120
TRV 8A Step	90-100	Pag.14	74	120x120	850	80-90	110
2 FURROW					S2		
MODEL	BODY SPACING cm	WORKING WIDTH cm	UNDERBEAM CLEREANCE cm	BEAM CROSS SECTION cm	WEIGHT Kg	POWER	
						HP	MAX*
BVM 20AP Step	120-130	Pag.14	94	200x120	1600	180-210	220
BVM 20A Step	120-130	Pag.14	89	200x120	1500	150-180	190
BVM 18AP Step	120-130	Pag.14	94	150x120	1350	130-150	165
BVM 18A Step	110-120	Pag.14	89	150x120	1230	120-140	150
BVM 16AP Step	110-120	Pag.14	89	150x120v	1080	100-120	130
BVM 16A Step	110-120	Pag.14	84	150x120	980	100-110	120
BVM 14A Step	100-120	Pag.14	84	150x120	900	90-100	110
BVM 12A Step	100-110	Pag.14	84	120x120	800	80-90	100
BVM 10A Step	90-105	Pag.14	80	120x120	750	75-80	90
BVM 8A Step	90-100	Pag.14	74	120x120	600	65-75	80

Disclaimer:

The data provided in this brochure is for guidance only; the manufacturer reserves the right to make changes to the models described without prior notice. Drawings and photographs may show optional equipment or setups intended for other countries.

For any further information, please contact our sales network.

MORO Aratri s.r.l.

Via Gentile, 209 - 24056 Fontanella (BG) - Italy

www.moroaratri.com

mail@moroaratri.com

Telefono: +39 0363 997766

Fax: +39 0363 907168

MORO
YOUR OWN FURROW

