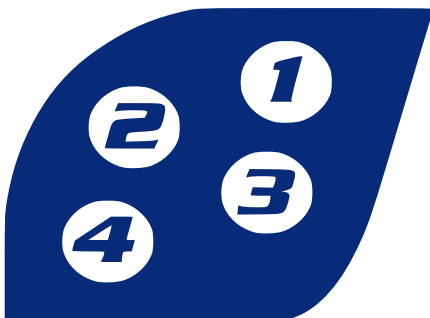


STEP[®]

IN FURROW MOUNTED PLOUGH WITH MECHANICAL FURROW WIDTH
ADJUSTMENT



*Made in Italy
since 1957*



MORO
ARATRI 



STEP

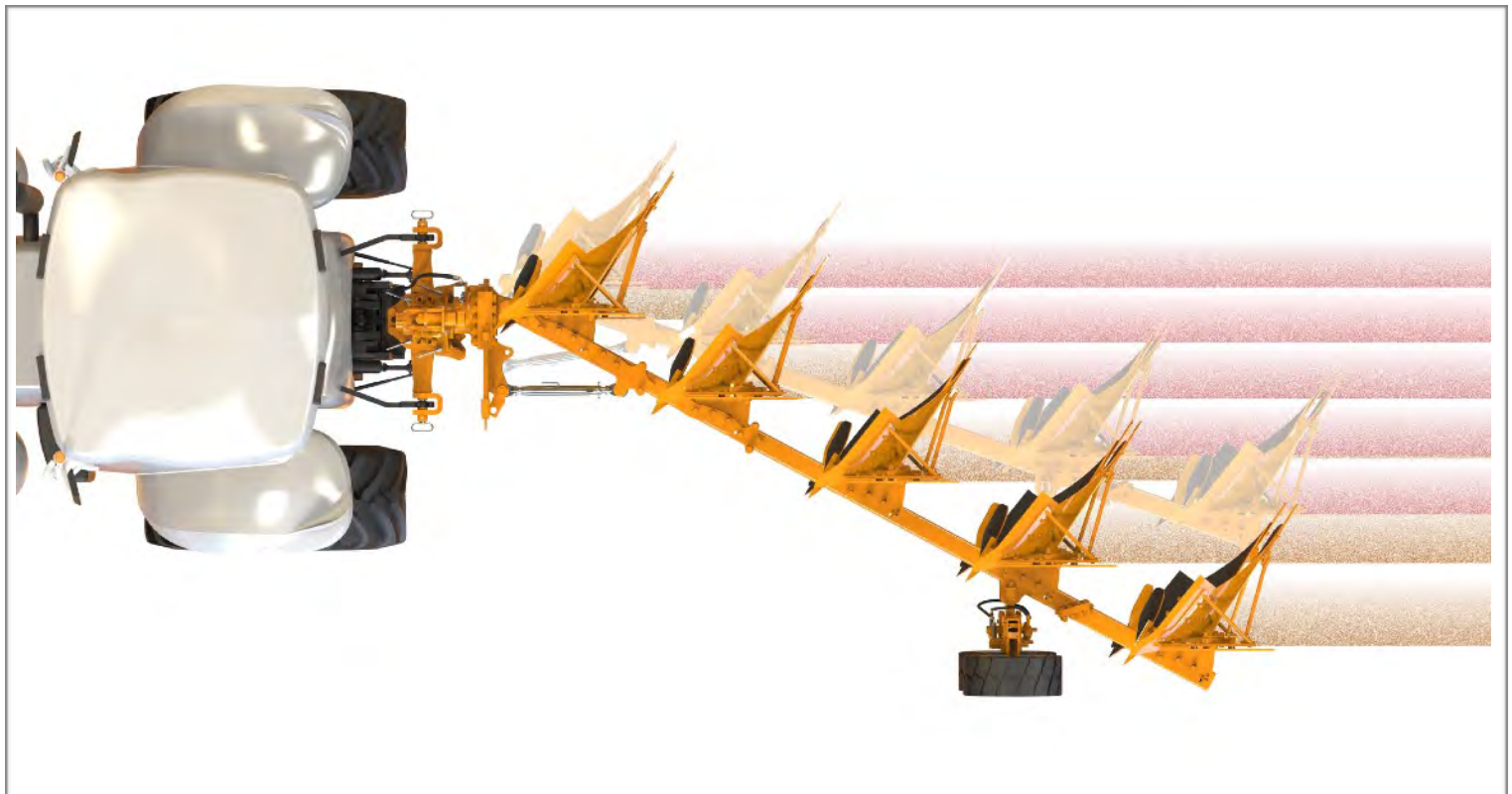
It is the innovative line of mounted ploughs, equipped with mechanical working width adjustment, available in versions with 2 to 6 bodies. Advanced CAD software is used for design and structural analysis of these machines, with simulated performance and fatigue testing. The chassis of the Step plough, 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.

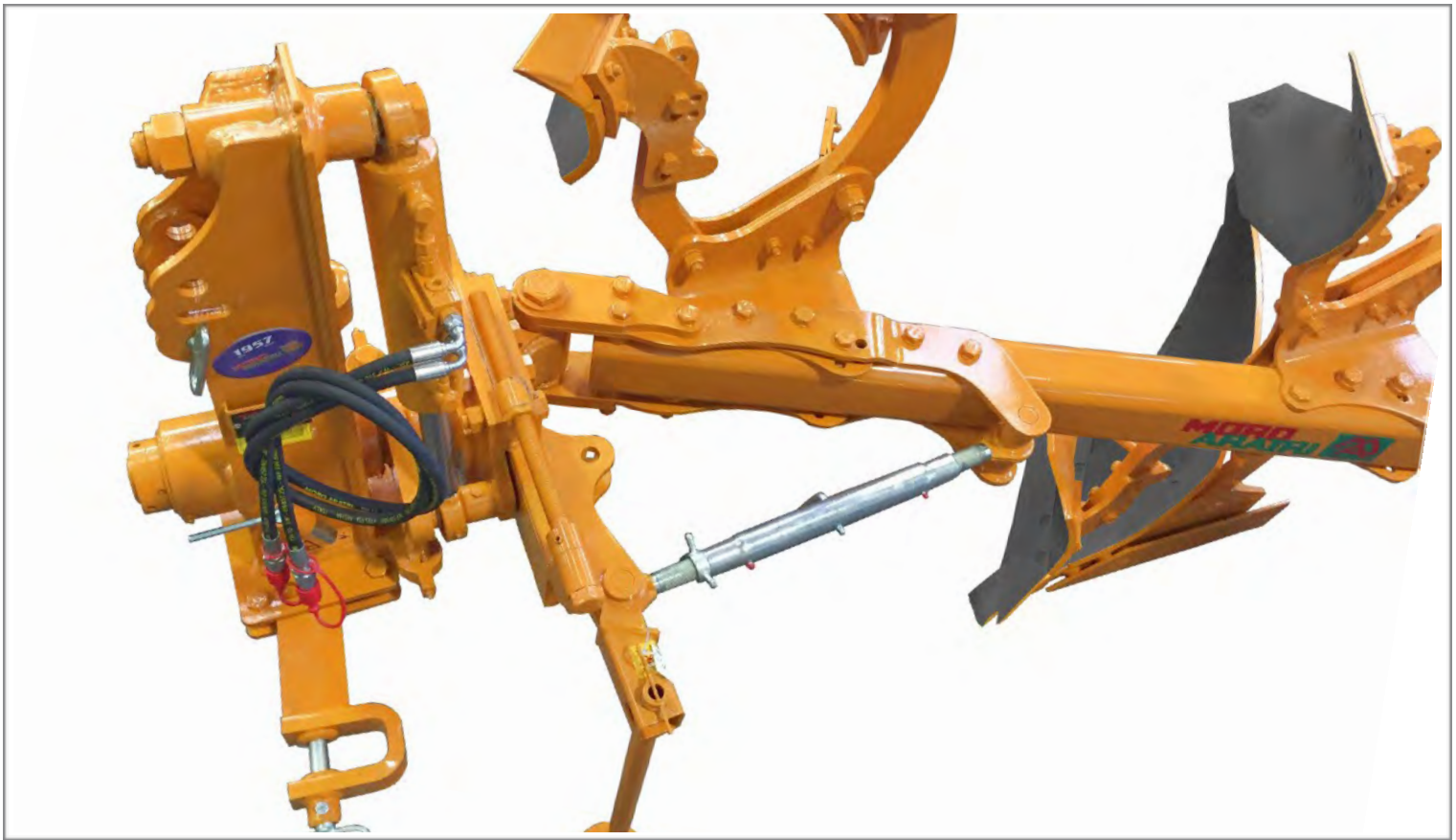


MECHANICAL ADJUSTMENT

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.



TECHNOLOGY

STONE SYSTEM[®]

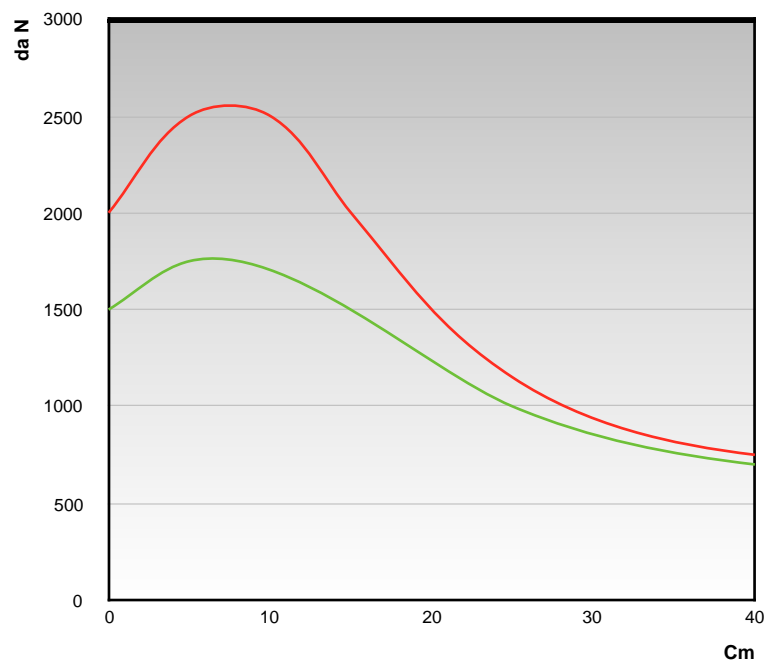


STONE SYSTEM

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.

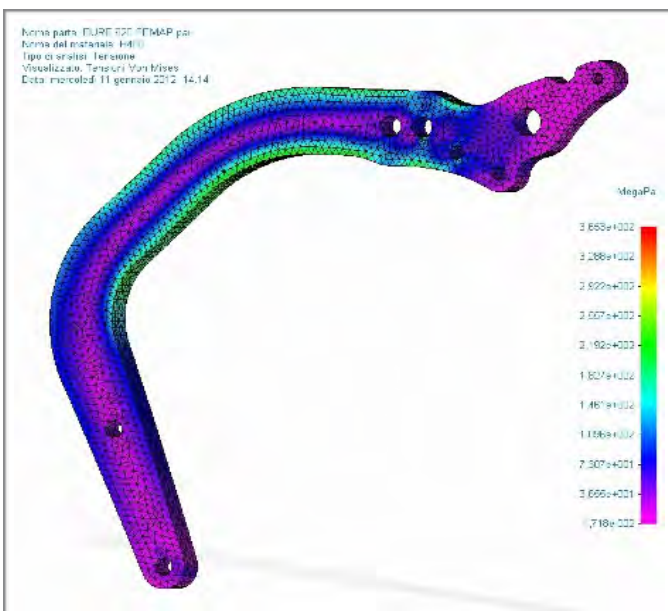
The triggering pressure is adjustable, thus allowing the ploughing both in tenacious and light soils, avoiding the extraction of stones.



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.



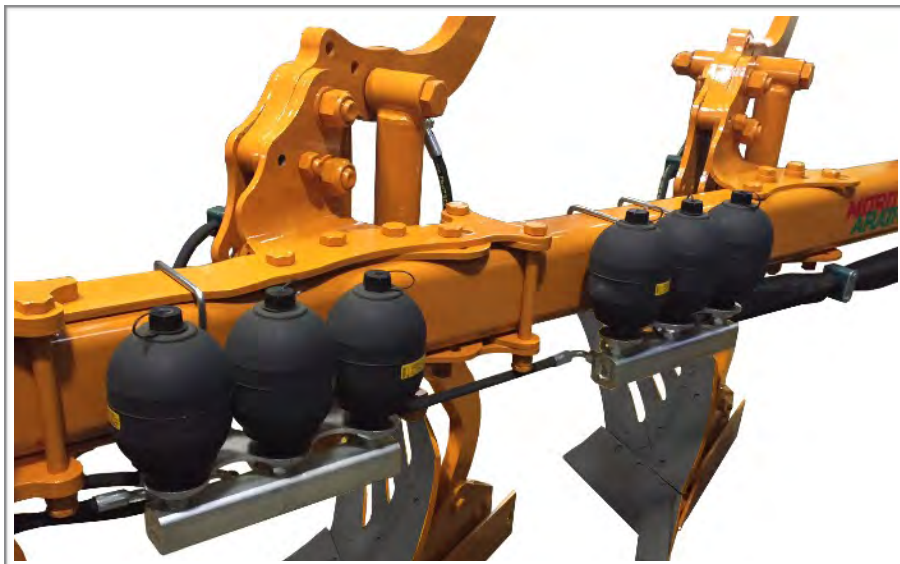


PATENTED

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.

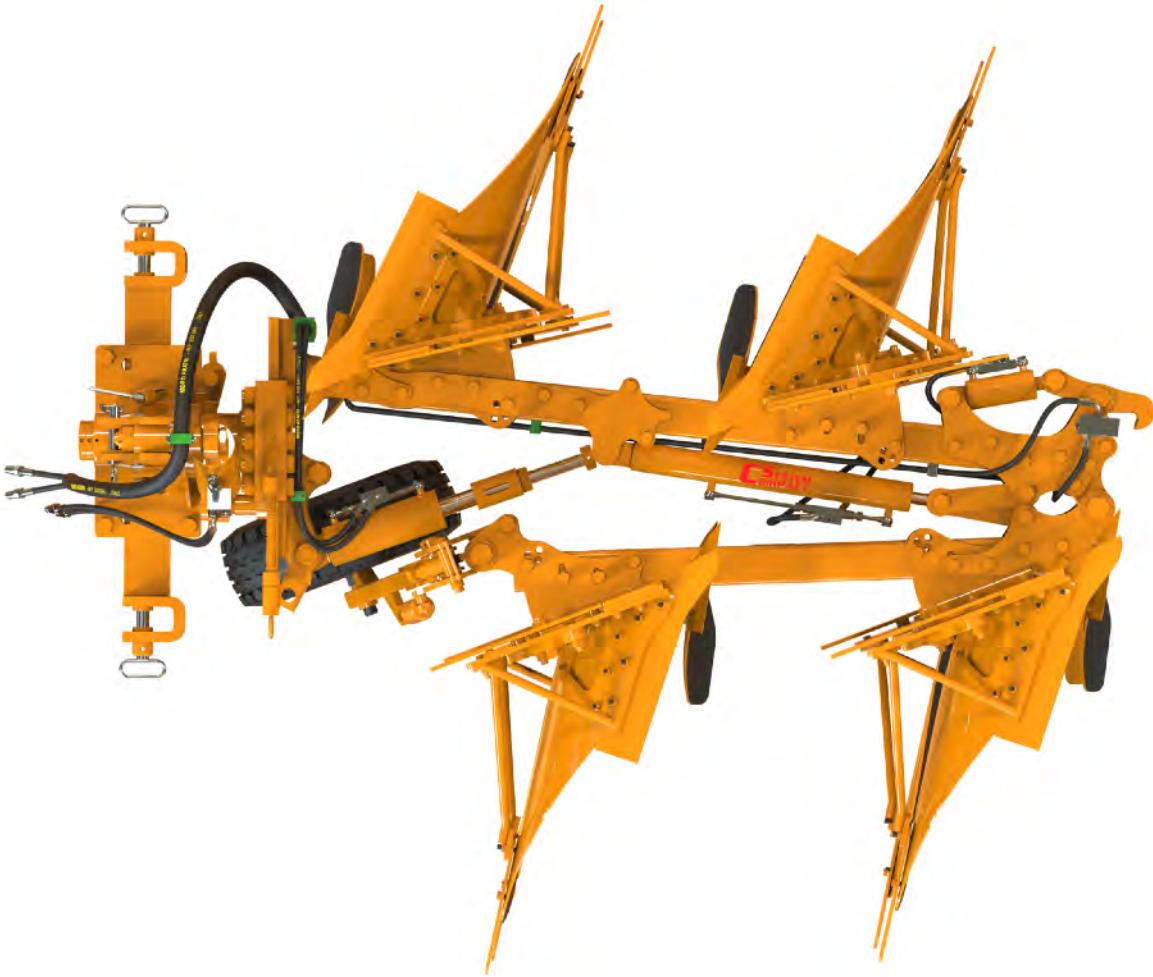
All locking and re-opening movements are automatic, without manual operations: operating the hydraulic distributor of the tractor, the hydraulic jacks perform all movements.

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.



The movements of the COMPACT SYSTEM take place within a mono-block of steel, connected by pins and bushings with a special anti-wear treatment. Coupling of elements to the frame are made by bolts with 10.9 class, avoiding welded joints.



TECHNOLOGY

TS SYSTEM[®]
TRANSPORT



TRANSPORT SYSTEM

The patented working and transport system for ploughs which definitively resolves the problem of road safety.



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



TRANSPORT SYSTEM is available both hydraulic or mechanical.



TRANSPORT SYSTEM

Designed, built and patented by MORO Aratri, TRANSPORT SYSTEM is highly regarded for its exceptional functionality.

Easy road transport, safety and quick conversion from working to transport position, are the characteristics that make this system unique.

Tested by many farmers, TRANSPORT SYSTEM is not just a trailing system, but a real working tool that allows to carry and use the plough at its best.

It is provided with the MORO Aratri special and patented steering head.



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 - Synthetic - Steel



EQUIPMENTS



TRASHBOARDS

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

SHARES

High quality boron steel shares, heat treated and wear resistant. MORO shares provide an excellent penetration in any soil.

Available with reversible and interchangeable point.

DISC COULTER

Smooth or scalloped coultter disc, 500 or 580 mm diameter.

Easy to set in every soil condition.

Non-stop version available.

KNIFE COULTER

Available on all the plough bodies

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.



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.



TRANSPORT AND DEPTH WHEEL

Depth wheel with hydraulic shock absorber, adjustable via turnbuckle. Positioned on the last body, can be used as a transport wheel. On 4 furrow ploughs upwards, it may be positioned on the penultimate body.



STANDARD HEADSTOCK

Each MORO plough is equipped with a hydraulic headstock with a double acting reversing cylinder. Vertical tilt can be adjusted independently via 2 turnbuckles. On request, for the reversing unit it is possible to mount a memory cylinder.

DETACHABLE COUPLING YOKES HEADSTOCK



T SYSTEM[®]
RANSPORT

TRANSPORT SYSTEM HEADSTOCK

Patented and designed by MORO ARATRI, this exclusive headstock is available with the TRANSPORT SYSTEM and it is equipped with a steering axle. During transport, the axle can be unblocked, allowing the plough to act as a tractor trailer.



S FAST
YSTEM

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.

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



TECHNICAL DATA

6 FURROW

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MODEL	BODY SPACING cm	WORKING WIDTH cm	WORKING DEPTH cm	UNDERBEAM CLEREANCE cm	BEAM CROSS SECTION mm	WEIGHT kg	POWER	
							HP	MAX *
EXA 18A Step	100-105	36/41/46/52	25-38	79/84	200x120	2650	310-420	450
EXA 16A Step	95-10	33/37/42/47	20-30	78/83	150x120	2350	260-320	350
EXA 14A Step	90-95	31/36/40/45	20-30	78	150x120	2050	200-270	300
EXA 12A Step	90-95	31/36/40/45	20-30	74/79	120x120	1780	180-230	250

5 FURROW

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MODEL	BODY SPACING cm	WORKING WIDTH cm	WORKING DEPTH cm	UNDERBEAM CLEREANCE cm	BEAM CROSS SECTION mm	WEIGHT kg	POWER	
							HP	MAX *
PNT 20A Step	110-120	39/45/51/56	40-45	89/94	200x120	2600	320-420	450
PNT 18A Step	100-110	36/41/46/52	30-42	84/89	200x120	2400	250-350	370
PNT 16A Step	95-110	36/41/46/52	30-38	84/89	150x120	2100	190-260	280
PNT 14A Step	90-105	34/39/44/49	25-35	79/84	150x120	1830	160-210	230
PNT 12A Step	90-100	33/37/42/47	20-30	79	120x120	1580	140-180	190
PNT 10A Step	90-95	31/36/40/45	20-30	74	120x120	1400	130-150	160

4 FURROW

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MODEL	BODY SPACING cm	WORKING WIDTH cm	WORKING DEPTH cm	UNDERBEAM CLEREANCE cm	BEAM CROSS SECTION mm	WEIGHT kg	POWER	
							HP	MAX *
QRV 20A Step	110-120	39/45/51/56	40-50	89/94	200x120	2150	270-350	370
QRV 18A Step	100-115	37/43/49/54	35-45	84/89	200x120	1850	210-280	300
QRV 16A Step	100-110	36/41/46/52	30-40	84/89	150x120	1650	160-220	230
QRV 14A Step	100-110	36/41/46/52	25-35	84	150x120	1480	140-180	190
QRV 12A Step	90-105	34/39/44/49	25-33	84	120x120	1330	120-150	160
QRV 10A Step	90-100	33/37/42/47	25-33	80	120x120	1200	110-140	150
QRV 8A Step	90-95	31/36/40/45	22-28	74	120x120	1080	90-130	140

3 FURROW

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MODEL	BODY SPACING cm	WORKING WIDTH cm	WORKING DEPTH cm	UNDERBEAM CLEREANCE cm	BEAM CROSS SECTION mm	WEIGHT kg	POWER	
							HP	MAX *
TRV 22A Step	110-130	42/49/55/61	45-60	94	200x200	2250	300-400	420
TRV 20AP Step	110-130	42/49/55/61	45-55	89/94	200x120	1900	260-320	340
TRV 20A Step	110-120	39/45/51/56	40-50	89	200x120	1750	230-270	290
TRV 18A Step	110-115	37/43/49/54	35-45	84/89	200x120	1600	180-230	240
TRV 16A Step	100-115	37/43/49/54	30-40	89	150x120	1430	150-180	190
TRV 14A Step	100-110	36/41/46/52	30-35	84	150x120	1260	130-150	160
TRV 12A Step	100-110	36/41/46/52	25-33	84	120x120	1150	110-130	140
TRV 10A Step	95-105	34/39/44/49	25-33	80	120x120	1000	100-110	120
TRV 8A Step	90-100	33/37/42/47	22-28	74	120x120	850	80-90	110

2 FURROW

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MODEL	BODY SPACING cm	WORKING WIDTH cm	WORKING DEPTH cm	UNDERBEAM CLEREANCE cm	BEAM CROSS SECTION mm	WEIGHT kg	POWER	
							HP	MAX *
BVM 22A Step	120-140	46/52/59/66	50-60	94	200x120	1700	210-260	270
BVM 20AP Step	120-130	42/49/55/61	50-55	94	200x120	1600	180-210	220
BVM 20A Step	120-130	42/49/55/61	45-55	94	200x120	1500	150-180	190
BVM 18AP Step	120-130	42/49/55/61	45-50	94	150x120	1350	130-150	165
BVM 18A Step	110-120	39/45/51/56	35-45	89	150x120	1230	120-140	150
BVM 16AP Step	110-120	39/45/51/56	35-45	89	150x120	1080	100-120	130
BVM 16A Step	110-120	39/45/51/56	30-40	84	150x120	980	100-110	120
BVM 14A Step	100-120	39/45/51/56	30-40	84	150x120	900	90-100	110
BVM 12A Step	100-110	36/41/46/52	25-30	80	120x120	800	80-90	100
BVM 10A Step	90-105	34/39/44/49	25-30	80	120x120	750	75-80	90
BVM 8A Step	90-100	33/37/42/47	22-28	74	120x120	660	65-75	80

The data indicated in this folder are approximate. The models described here can be subjected to modifications without any notice by the manufacturer. The drawings and photos may refer to equipment that is either optional or intended for other countries. Please apply to our Sales Network for any further information.

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