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ENGINEERING

Strip-Till **CULEX**



CULEX

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Strip-Till **CULEX**

The CULEX System is an innovative technology designed to apply two fertilizer (e.g. slurry) lines at different heights, allowing for more precise nutrient application and improved crop yields.

*This unique strip-till technique, which involves applying fertilizer underneath the soil surface and subsoil, can effectively optimize nutrient utilization in row crops such as **potatoes, maize, raps, beets, sunflowers** and many others. This innovative approach to fertilization can improve crop yields while reducing the amount of fertilizer needed, making it a more sustainable and cost-effective solution for farmers.*

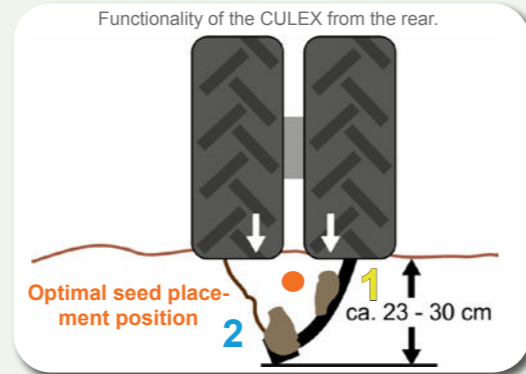
Significant Advantages of the Culex-System for Plant-Cultivation:

- Application of two fertilizer (e.g. slurry) lines at different heights in a single, seamless operation.
- Minimal damage to the soil structure caused by excessive moisture in the fertilizer depot.
- Efficient conversion of organically bound nutrients by mixing the slurry with the soil (soil bacteria).
- Better root penetration in the entire area due to greater nutrient attraction (less drought stress).
- No abrupt transitions between loosened and non-loosened soil parallel to the soil surface. (no solidified soil to the bottom due to the working tine/no smear layer)

VOLMER Engineering STRIP-TILL - More effective with less effort

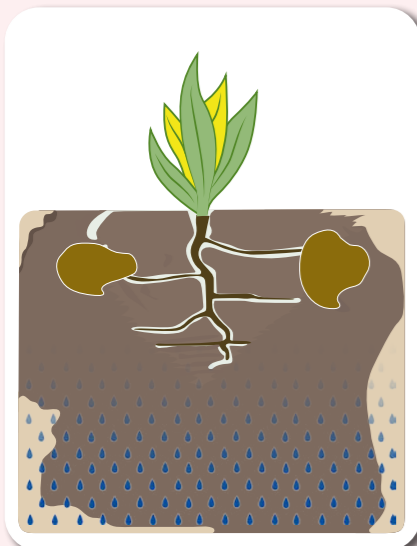


- V-shaped, up to 30 cm deep soil loosening
- Good rootability
- Good reconsolidation
- Optimally positioned double fertiliser and moisture reservoir (1 + 2)



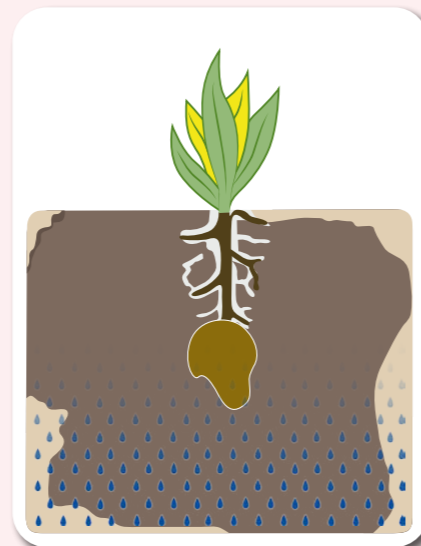
- 1/3 of the pressure wheels run on solid ground and guide the tine to the working depth.
- Wheel pressure automatically increases at higher working speeds due to the under-grip of the tines.
- Intentional compression of soil into the slurry

Disadvantages of conventional systems:



Weak growth can result from wrong fertilizer placement and lack of loosening.

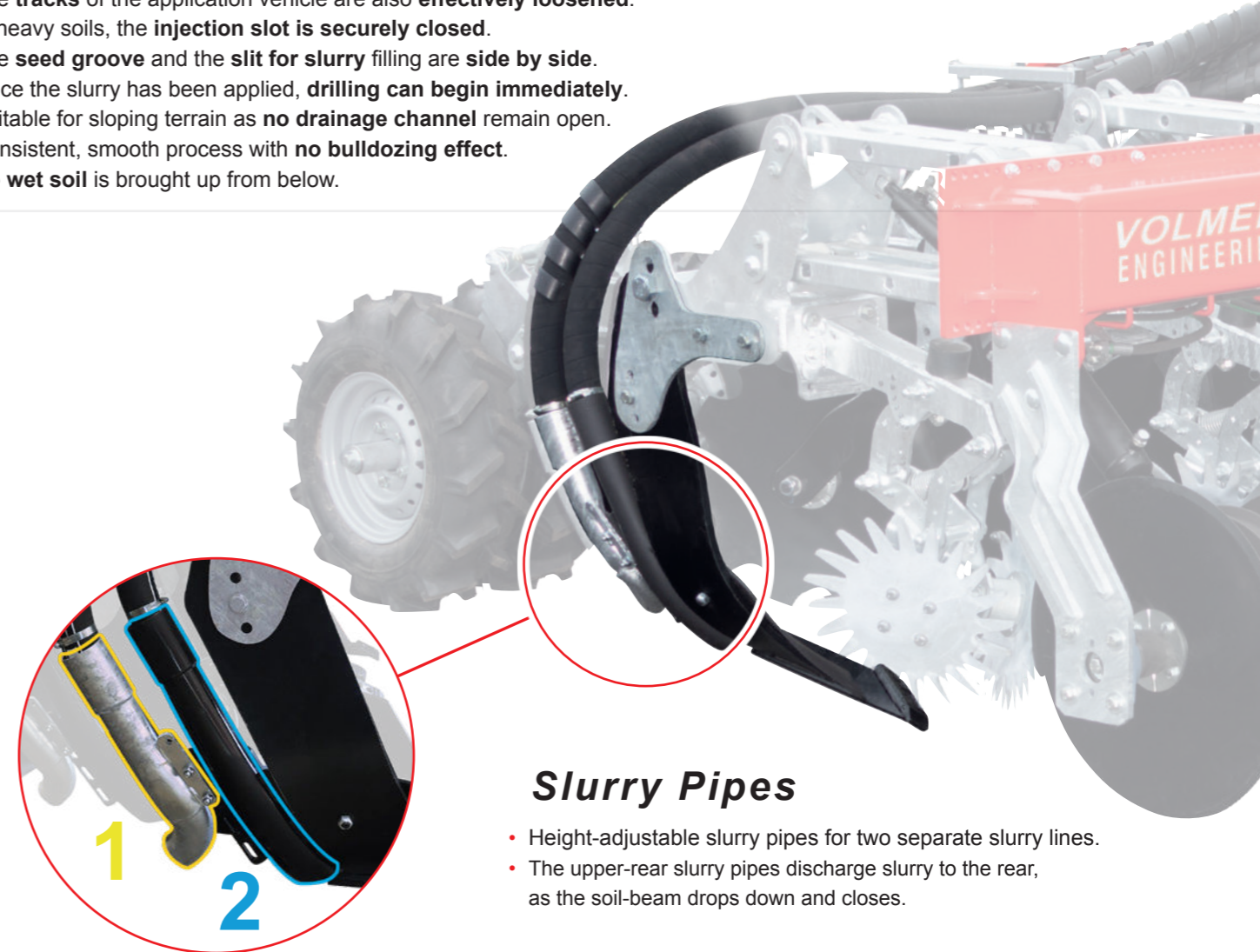
The rooting depth determines the volume of the soil from which plants draw water.



The Strip-Till Parabolic Tine Centerpiece of the CULEX System

Soil-mechanical Advantages of the Culex-System:

- Good loosening of the soil, very effective against the „flowerpot-effect“
- The tracks of the application vehicle are also effectively loosened.
- In heavy soils, the injection slot is securely closed.
- The seed groove and the slit for slurry filling are side by side.
- Once the slurry has been applied, drilling can begin immediately.
- Suitable for sloping terrain as no drainage channel remain open.
- Consistent, smooth process with no bulldozing effect.
- No wet soil is brought up from below.



Slurry Pipes

- Height-adjustable slurry pipes for two separate slurry lines.
- The upper-rear slurry pipes discharge slurry to the rear, as the soil-beam drops down and closes.



VOLMER Engineering CULEX

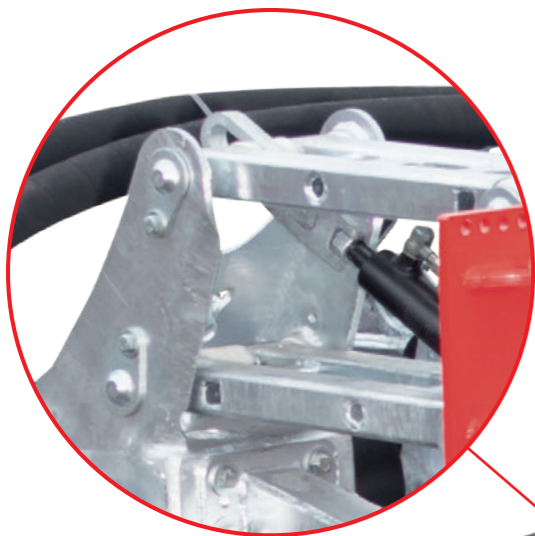


Competition

- Both units are in compliance with “the 12 cm rule”.
- With the CULEX system, the lower edge of the second slurry line is at a depth of about 30 cm.

All CULEX models are equipped with the Strip-Till parabolic tine!

CULEX *ST* STANDARD



Parallelogram

- Each unit is attached to the main frame with an extra strong parallelogram. This allows accurate depth control of each row.



Hose System

- Robust spiral pressure hoses with 50mm ID and 10 bar maximum pressure made of rubber.
- Due to the hoses being secured within the slurry pipe, there is no inner edge.

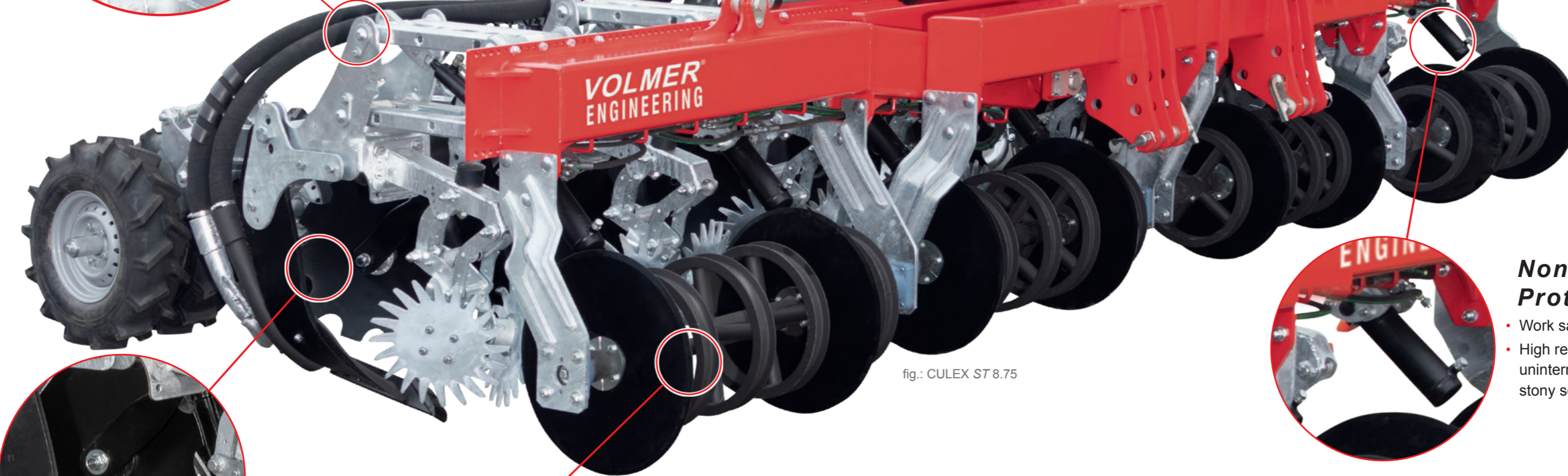
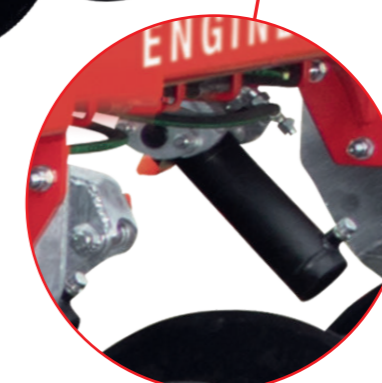


fig.: CULEX ST 8.75



Non-Stop Stone Protection

- Work safely up to 30cm deep.
- High release force of 1,800 kg for uninterrupted cultivation, even in stony soil conditions.



Filling Discs

- The filling discs run at about the same height as the field. They throw the soil thrown off by the tines back onto the row.



Rollers and Cutting Discs

- The rollers hold the main frame at the specified working height and support its weight. This makes it easy to move the lifting unit (3 point hitch) to the floating position.
- Additional reconsolidation in loose soil by the rollers.
- The cutting discs have a diameter of 570 mm and a thickness of 6 mm and cut up all the weeds in the path of the tines.

Row Spacing 75 cm

CULEX <i>ST</i>	Unit of meas.	CULEX ST 4.75	CULEX ST 8.75
Rows/Distance	units/cm	4/75	8/75
Working depth	cm	23 - 30	23 - 30
Working width	m	3,00	6,00
Transport width	m	3,00	3,00
Weight	kg	2,050	3,800
Outlets per row	units	2	2
Adjustable upper outlet		✓	✓
Pressure roller per row	units	2	2
Non-Stop Stone Protection		✓	✓

Weights and measures are approximate and non-binding. We reserve the right to make changes.

fig.: CULEX ST 8.75 folded



CULEX *ML* MODULAR



Pressure Wheels

- The stepless height-adjustable pressure wheels keep the parabolic tines precisely at the specified working depth, ensuring optimum reconsolidation of the soil.

Mounting Device

- Stable three- or four-point mounting device (Categorie 2 +3)
- High strength bolts of category 3

Front Wheels

- The front wheels carry the main frame at the specified working height and support its weight. This makes it easy to move the lifting unit (3 point hitch) to the floating position.

Star-Shaped Scrapers

- The parallelogram-guided scrapers tear up and push crop residues out of the way.
- This assembly is configured to work in all situations without adjustment (plug and play).

Cutting Discs

- The cutting discs cut up all the weeds in the path of the tines.
- All discs are protected by non-stop stone protection system, as standard.
- Cutting Disc Diameter: 570 mm
Disc thickness: 6 mm

fig.: CULEX ML 8.75

fig.: CULEX ML 8.75 folded



Row Spacing 60 cm

CULEX ML	Unit of meas.	CULEX ML 5.60	CULEX ML 7.60	CULEX ML 9.60	CULEX ML 11.60
Rows /Distance	units/cm	5/60	7/60	9/60	11/60
Working depth	cm	23 - 30	23 - 30	23 - 30	23 - 30
Working width	m	3,00	4,20	5,40	6,60
Transport width	m	3,00	3,00	3,00	3,00
Weight	kg	2,250	3,350	3,960	4,550
Outlets per row	units	2	2	2	2
Height-adjustable upper slurry pipe		✓	✓	✓	✓
pressure roller per row	units	2	2	2	2
Non-Stop Stone Protection		✓	✓	✓	✓

Row Spacing 70 cm

CULEX ML	CULEX ML	CULEX ML
4.70	6.70	8.70
4/70	6/70	8/70
23 - 30	23 - 30	23 - 30
2,80	4,20	5,60
3,00	3,00	3,00
2,100	3,100	3,800
2	2	2
✓	✓	✓
2	2	2
✓	✓	✓

Row Spacing 75 cm

CULEX ML	Unit of meas.	CULEX ML 4.75	CULEX ML 6.75	CULEX ML 8.75
Rows /Distance	units/cm	4/75	6/75	8/75
Working depth	cm	23 - 30	23 - 30	23 - 30
Working width	m	3,00	4,50	6,00
Transport width	m	3,00	3,00	3,00
Weight	kg	2,100	3,100	3,850
Outlets per row	units	2	2	2
Height-adjustable upper slurry pipe		✓	✓	✓
pressure roller per row	units	2	2	2
Non-Stop Stone Protection		✓	✓	✓

Row Spacing 80 cm

CULEX ML	CULEX ML	CULEX ML
4.80	6.80	8.80
4/80	6/80	8/80
23 - 30	23 - 30	23 - 30
3,20	4,80	6,40
3,20	3,00	3,00
2,200	3,120	3,900
2	2	2
✓	✓	✓
2	2	2
✓	✓	✓

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CULEX **CL** CLOSE

The CULEX CL's short row spacing makes it ideal for sunflowers, rape, beet and more.



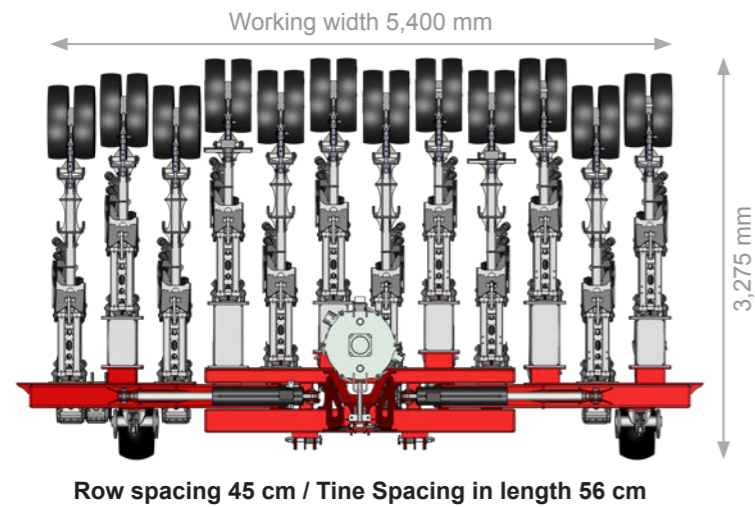
Beets - row spacing 45 cm



Raps - row spacing 50 cm



Sunflowers - row spacing 50 cm



Due to its design, the CULEX CL is only supplied **without** star-shaped scrapers and **without** filling discs!

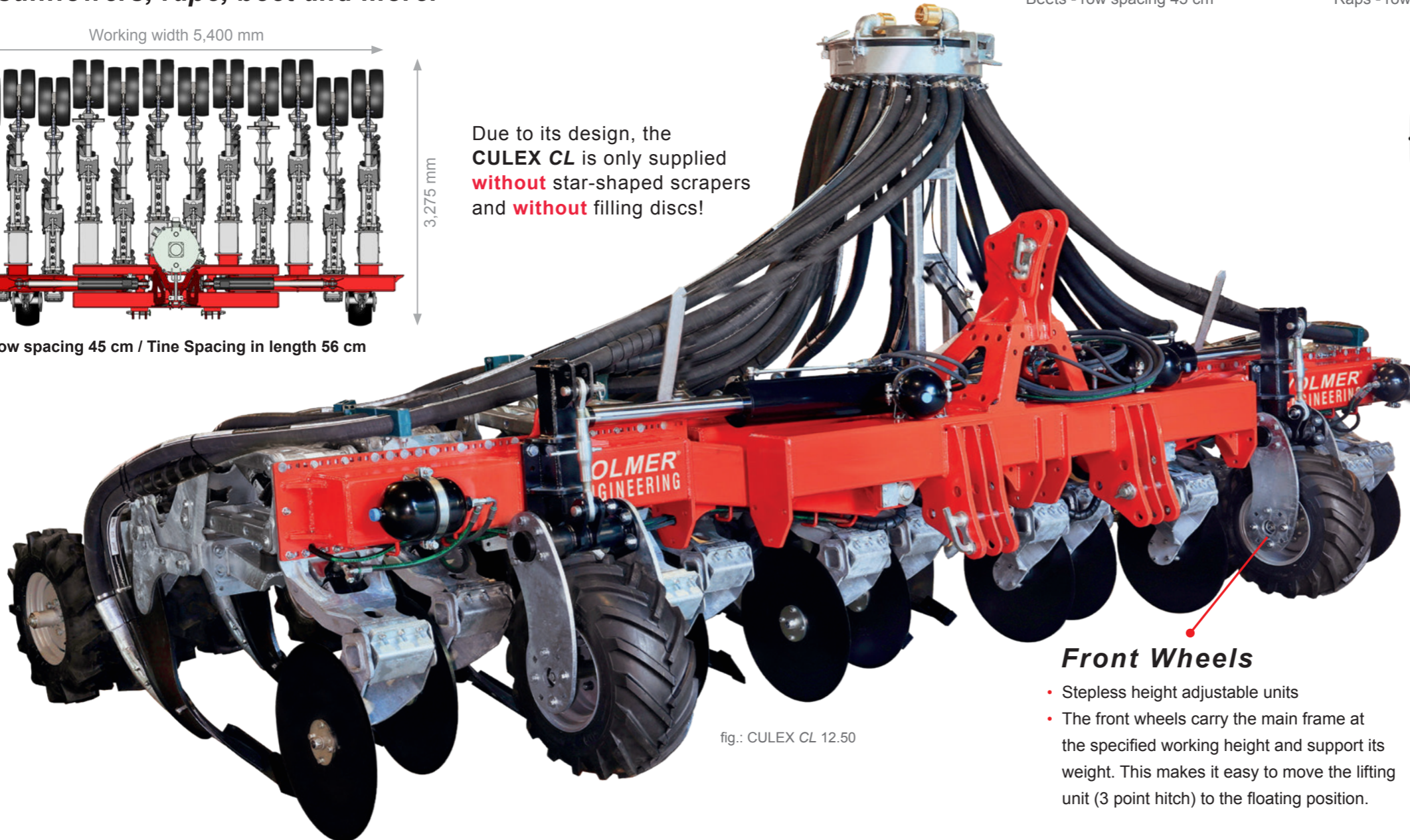
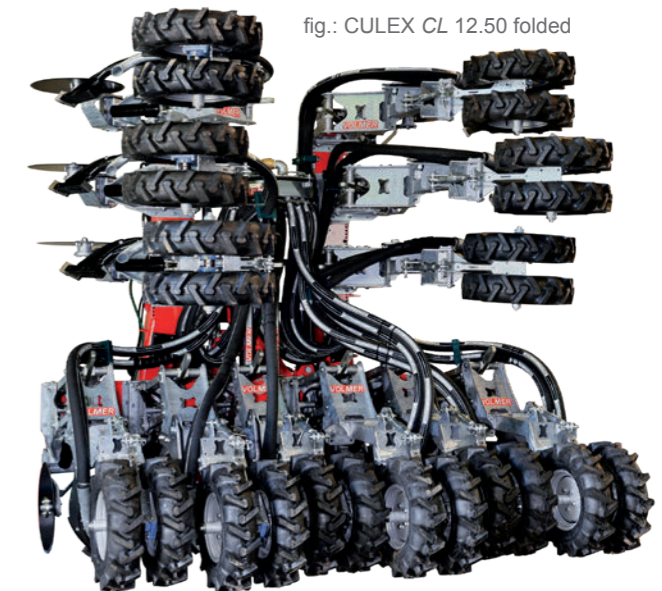
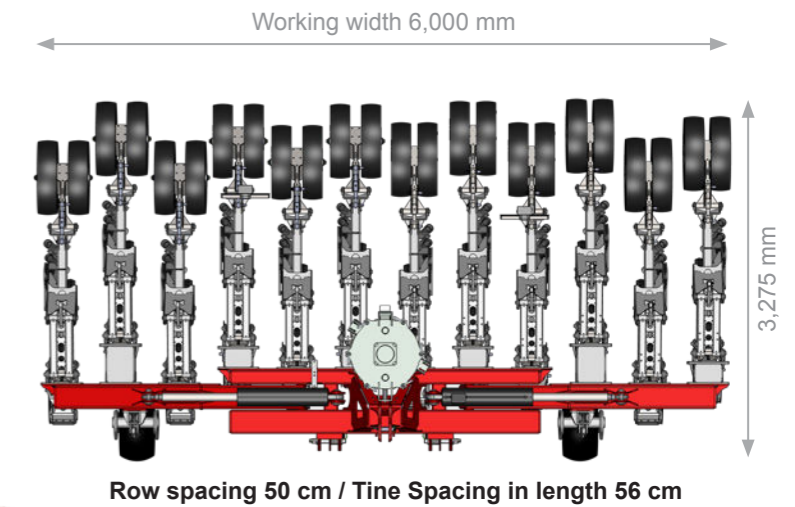


fig.: CULEX CL 12.50

Front Wheels

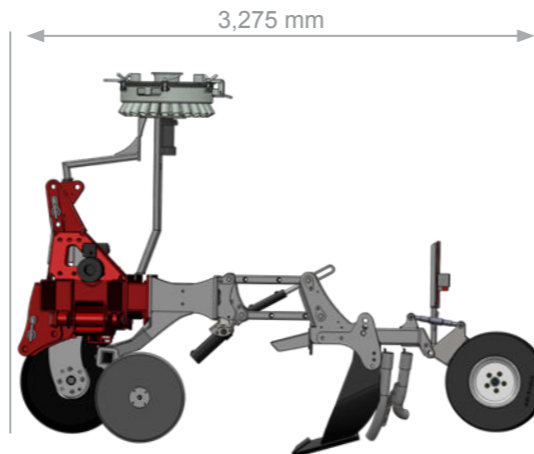
- Stepless height adjustable units
- The front wheels carry the main frame at the specified working height and support its weight. This makes it easy to move the lifting unit (3 point hitch) to the floating position.



Row Spacing 45 cm

CULEX CL	Unit of meas.	CULEX CL 6.45	CULEX CL 8.45	CULEX CL 10.45	CULEX CL 12.45
Rows/Distance	units/cm	6/45	8/45	10/45	12/45
Working depth	cm	23 - 30	23 - 30	23 - 30	23 - 30
Working width	m	2,70	3,60	4,50	5,40
Transport width	m	3,00	3,00	3,00	3,00
Weight	kg	2,650	3,750	4,450	5,290
Outlets per row	units	2	2	2	2
Height-adjustable upper slurry pipe		✓	✓	✓	✓
pressure roller per row	units	2	2	2	2
Non-Stop Stone Protection		✓	✓	✓	✓

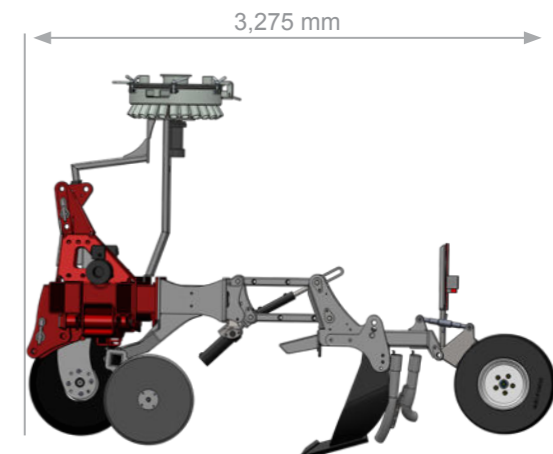
Row spacing 45 cm / Tine Spacing in length 56 cm



Row Spacing 50 cm

CULEX CL	Unit of meas.	CULEX CL 6.50	CULEX CL 8.50	CULEX CL 10.50	CULEX CL 12.50
Rows/Distance	units/cm	6/50	8/50	10/50	12/50
Working depth	cm	23 - 30	23 - 30	23 - 30	23 - 30
Working width	m	3,00	4,00	5,00	6,00
Transport width	m	3,00	3,00	3,00	3,00
Weight	kg	2,500	3,650	4,300	5,050
Outlets per row	units	2	2	2	2
Height-adjustable upper slurry pipe		✓	✓	✓	✓
pressure roller per row	units	2	2	2	2
Non-Stop Stone Protection		✓	✓	✓	✓

Row spacing 50 cm / Tine Spacing in length 56 cm

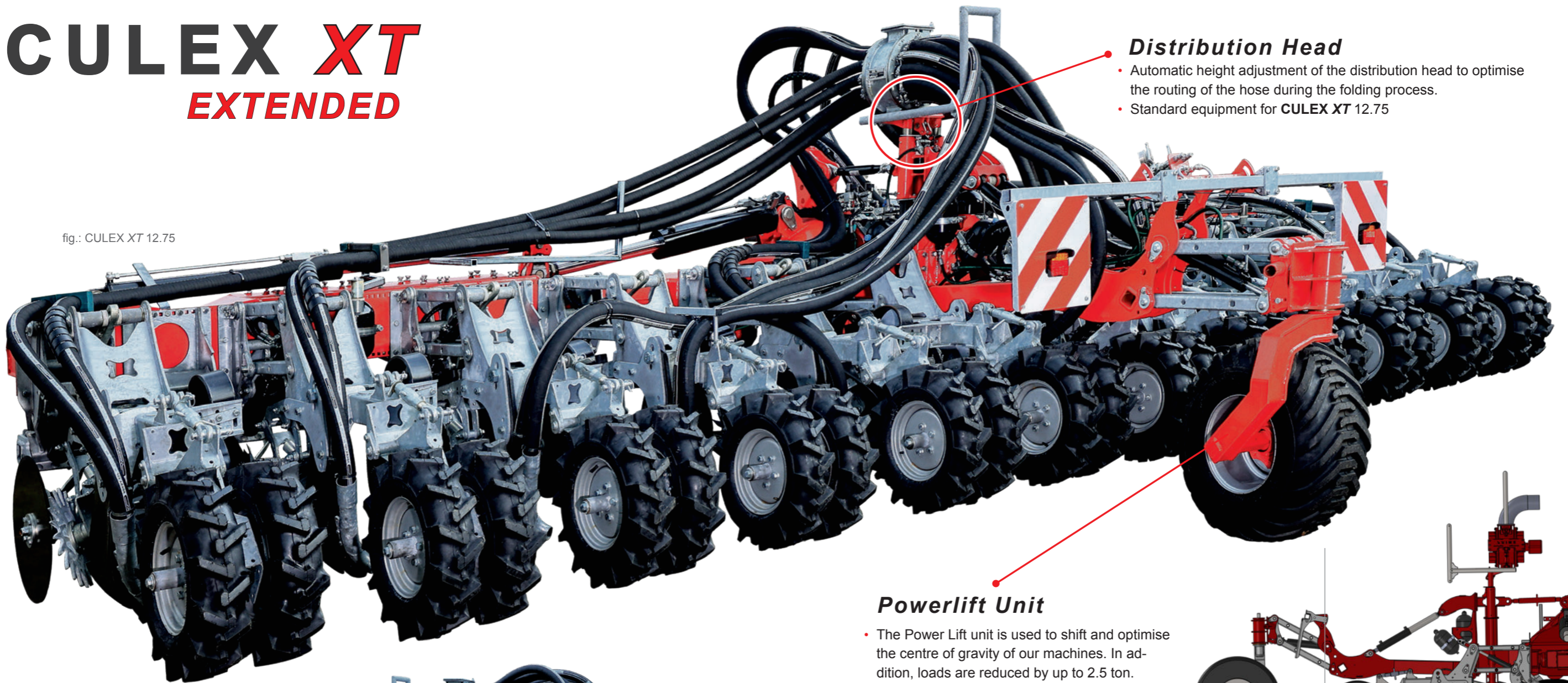


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CULEX XT EXTENDED

fig.: CULEX XT 12.75

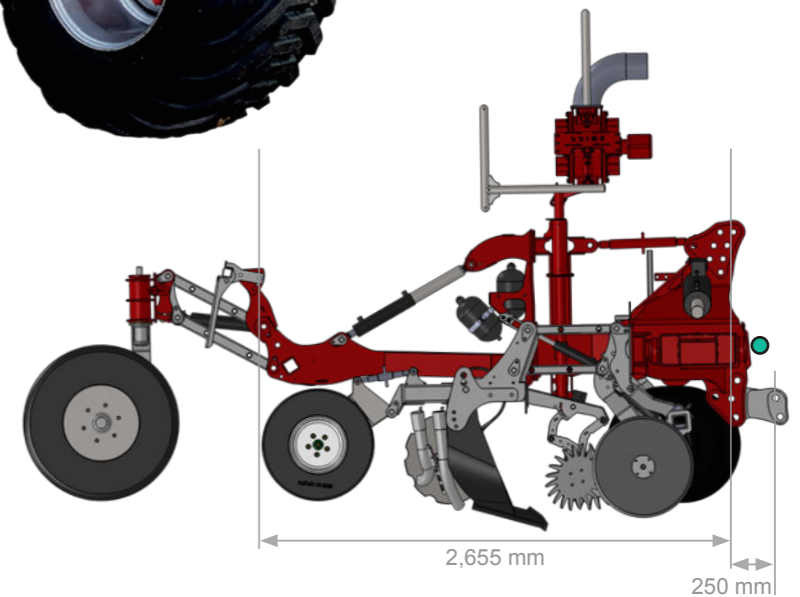


Distribution Head

- Automatic height adjustment of the distribution head to optimise the routing of the hose during the folding process.
- Standard equipment for CULEX XT 12.75

Powerlift Unit

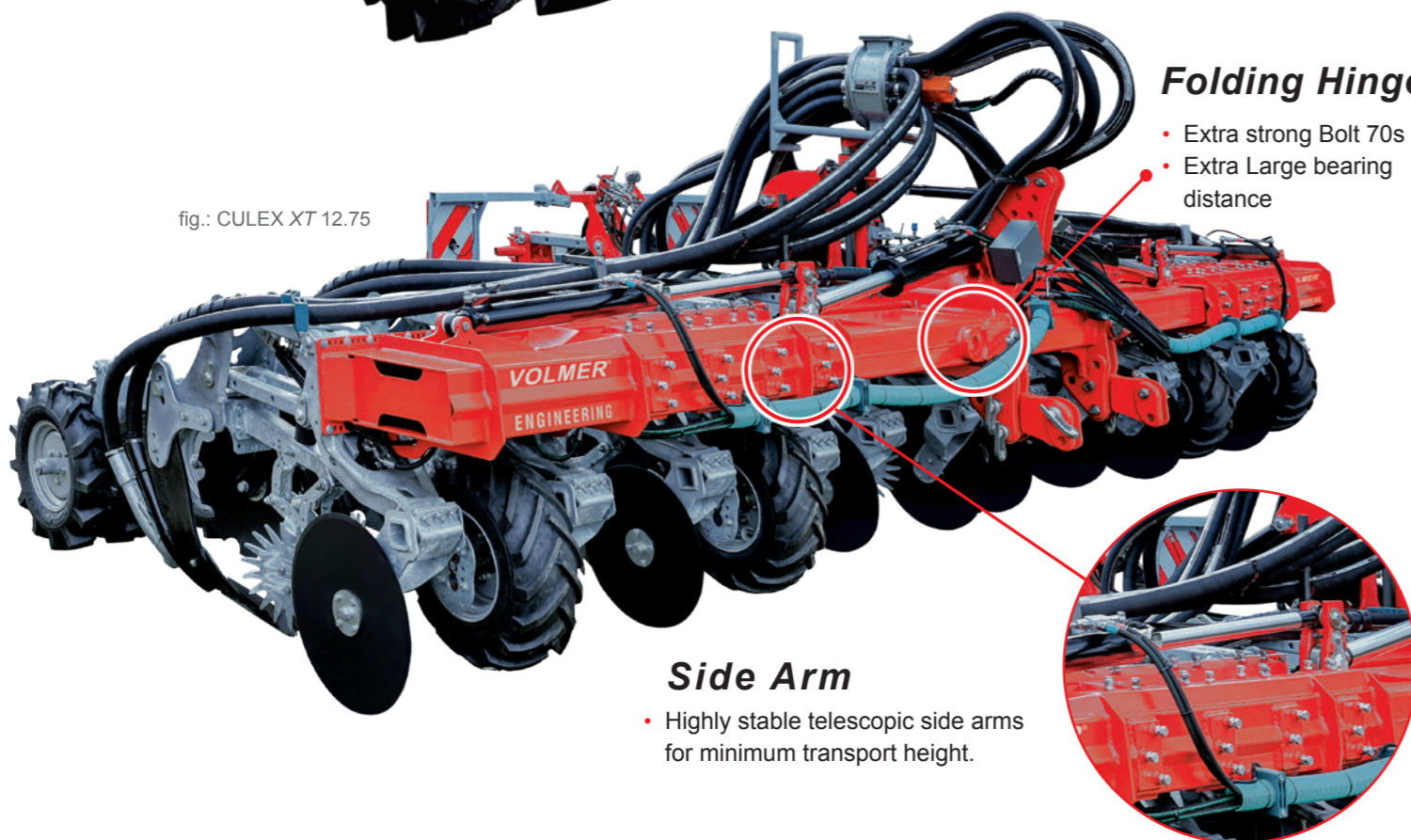
- The Power Lift unit is used to shift and optimise the centre of gravity of our machines. In addition, loads are reduced by up to 2.5 ton.
- Load capacity approx. 1,200 to 1,400 kg
- Standard Equipment on the CULEX XT 10.75 and CULEX XT 12.75.



Folding Hinge

- Extra strong Bolt 70s
- Extra Large bearing distance

fig.: CULEX XT 12.75



Side Arm

- Highly stable telescopic side arms for minimum transport height.

Row Spacing 75 cm

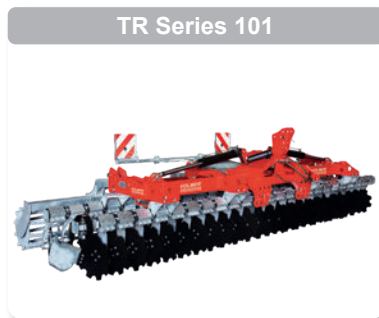
CULEX XT	Unit of meas.	CULEX XT 10.75	CULEX XT 12.75
Rows/Distance	units/cm	10/75	12/75
Working depth	cm	23 - 30	23 - 30
Working width	m	7,50	9,00
Transport width	m	3,00	3,00
Transport height	m	3,97	3,87
Weight	kg	5.300	7.350
outlets per row	units	2	2
Telescopic side arms and distribution head		✘	✓
Height-adjustable upper slurry pipe		✓	✓
pressure roller per row	units	2	2
Non-Stop Stone Protection		✓	✓

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fig.: CULEX XT 12.75 folded

The VOLMER Engineering machine range



Your contact persons



Bernd Volmer



Thomas Volmer



Dirk Rygol



Thomas Fehmer



Mathias Theil



VOLMER ENGINEERING GmbH

Lingener Damm 229
48429 Rheine

www.volmer-engineering.de

Tel. +49 59 71 94 63 2 - 0
Fax +49 59 71 94 36 2 - 90

info@volmer-engineering.de