

EPSILON TIMBER & RECYCLING CRANES

PALFINGER

HELPING YOU TO SUCCEED

RECYCLING & CONSTRUCTION

LIFETIME EXCELLENCE



IMPRESSIVE PERFORMANCE FOR RECYCLING AND CONSTRUCTION

Handling construction material and recyclable material is extremely demanding for both man and machine. Robust design, high-precision control and many solutions specific to EPSILON are intended to make this work easier and more efficient.

For decades, the PALFINGER EPSILON brand has represented solution-oriented and highly reliable cranes. Innovative, technically advanced and easy to service, our cranes are the professional choice. Throughout their entire life cycles, they are tailor-made for any application in the recycling sector as well as in construction.



SCAN ↓

PALFINGER
EPSILON M12Z
RECYCLING



ONE DAY WITH THE M12Z RECYCLING CRANE
EQUIPPED WITH HPSC

Download App
"PALFINGER XR"



1. Open the PALFINGER XR app and click "Scan marker".
2. Scan the video clip to start playback of the product video.



OVERVIEW

APPLICATIONS FOR EPSILON CRANES

To guarantee adequate performance, it is necessary to use the crane for the intended applications. Using a crane incorrectly will lead to high repair costs after just a short time. In terms of the European EN 12999 standard, the “S” factor indicates the intensity level in the use of the crane. From this, it is possible to determine how many work cycles the crane needs to withstand without the main components being severely damaged.

Based on this standard, PALFINGER EPSILON cranes are classified in the S4 group of cranes and are ideal for long periods of work without interruption and quick (turning) movements.



S3 – Loader cranes

- 2 hours per day; hook device, light clamshell grabber applications, pallets, etc.
- EPSILON cranes are oversized for this application.
- 200.000 cycles.



S4 – Cranes (EPSILON)

- 4–8 hours per day; timber, scrap, heavy clamshell grabber and glass container applications.
- Crane is mounted on a truck; timber machinery, recycling, tractor trailers, etc.
- **The right application for EPSILON cranes.**
- 630.000 cycles.



S5 – Excavators / wheel loaders

- Continuous operation, excavations, heavy-duty handling.
- EPSILON cranes are not designed for this application.
- 1.200.000 cycles and beyond

EPSOLUTION

THE PROFESSIONAL CHOICE

With EPSCOPE, EPSLINK and EPSLIGHT, EPSILON has developed innovative concepts that clearly focus on the benefits for operators. PALFINGER EPSILON sees it as its duty to implement the requirements and feedback from customers in its designs, thus arriving at a sound solution that provides customers with a product that is tailored to their intended applications.



EPSCOPE

- This allows safe working without the risk of damage from external sources thanks to an internally protected hose guide and internal telescopic cylinder.
- Patented PALFINGER EPSILON system



EPSLINK

- Extremely strong four-lug link with rotator and perfect hose guide. Suitable for EPSILON polyp grabs and clamshell grabbers.
- Patented PALFINGER EPSILON system



EPSLIGHT

- Thanks to the latest LED technology, the spotlights are considerably smaller with the same light output and are protected by a cover.



Double slewing system

- Double slewing system with limit position damper
- Precise toothed rack slewing system
- Self-aligning roller bearing running in an oil bath
- Maximum slewing capacity



EASYFOLD

- A Z-crane usually needs to be supported on the ground during extension in order to bridge the dead center of the outer boom ram – but not with the EASYFOLD system:
- Dead center is negotiated with the aid of an auxiliary cylinder
 - Patented PALFINGER EPSILON system



KTL

- In the individual dip tanks, the components are degreased, rinsed, activated and coated with zinc phosphating. Then they are rinsed again, passivated, rinsed with ultrapure water and coated by means of an electrostatic dip-coating process. Painting robots finish off the surface treatment.

L-CRANE

THE PERFORMER

EPSILON L-cranes

These crane models feature a design characterized above all by its outstanding performance. The long main boom and short knuckle boom ensure the perfect working geometry, because the longer the main boom and the shorter the knuckle boom, the less the knuckle boom has to be moved.



L-CRANES SCRAP

The maximum outreach of the EPSILON L-cranes is very well suited to scrap handling. The long main boom and the shorter knuckle boom result in a perfect working geometry.



L-CRANES CONTAINERS

Thanks to the long main boom, L-cranes can operate at high speed and boast excellent hook height, both of which in turn increase productivity. The parked position is usually inside a container. The ability of the telescopic main boom for the TR models to extend further means that the arm system can be stowed within the container.



L-CRANES CLAMSHELL GRABBER APPLICATIONS

Due to their performance and level of resistance with regard to loading and unloading, EPSILON L-cranes are ideal for the clamshell grabber applications. The various control methods ensure maximum utilization.

L-cranes are available for:

- » **M-Series** (Epsolution & Next Epsolution); medium-duty class covers lifting capacities of 10 to 13 ton-meters; *pages: 8–11, 14–15.*
- » **Q-Series** (Epsolution); upper end of the medium-duty class covers lifting capacities of 15 to 18 ton-meters; *pages: 12–15.*



ML CRANES – EPSOLUTION

Lifting capacities from 10 to 13 ton-meters.

EPSSLINK (standard on all EPSILON crane models): link/rotator combination with internally routed hoses provides maximum protection for the hoses between the crane and grabbers during operation.

Wide range of control variants: Radio remote control, high stand, top seat (shown: radio remote control).

Robust design for a long service life.



Top seat

Whether behind the column as standard or as a side-mounted arrangement, controlling the crane from the top seat guarantees optimum functionality and ergonomics.

The side top seat, mounted either on the left or right, provides the best possible view of the working area.

High stand

Perfect view into the tipper; can also be combined with radio remote control.

Variants:

- High stand with manual control
- High stand with radio remote control and manual control

Radio remote control

Highly precise and easy operation with the best possible view of the load.

Available as linear lever, four-way control lever, four-way control lever with twist function or joystick.

TECHNICAL DATA

| | M100L | | | | | M100LD | | M110L | | | | | M120L | | | | | M130L HPLS | | | | |
|---|-------------|------|------|------|------|--------|------|-------|------|------|------|---------|-------|------|------|------|------|------------|------|------|------|------|
| | 75 | 80V | 80 | 83 | 97 | 80 | 97 | 75 | 80V | 80 | 83 | 97 | 75 | 80V | 80 | 83 | 97 | 75 | 80V | 80 | 83 | 97 |
| Number of extensions | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 |
| Load torque (net) [kNm] | 100 | 97 | 97 | 95 | 92 | 89 | 85 | 111 | 108 | 108 | 106 | 103 | 119 | 117 | 116 | 114 | 112 | 132 | 129 | 129 | 127 | 124 |
| Slewing torque (net) [kNm] | 24 | | | | | | | 27 | | | | | 28 | | | | | | | | | |
| Slewing angle [°] | 425 | | | | | | | | | | | | | | | | | | | | | |
| Max. outreach [m] | 7,5 | 8,0 | 8,0 | 8,3 | 9,7 | 8,0 | 9,7 | 7,5 | 8,0 | 8,0 | 8,3 | 9,7 | 7,5 | 8,0 | 8,0 | 8,3 | 9,7 | 7,5 | 8,0 | 8,0 | 8,3 | 9,7 |
| Operating pressure [bar] | 215 | | | | | 200 | | 235 | | | | | 250 | | | | | 280 | | | | |
| Pump capacity (max.) | 1K [l/min] | | | | | | | | | | | 1 x 80 | | | | | | | | | | |
| | 2K [l/min] | | | | | | | | | | | 2 x 70 | | | | | | | | | | |
| | 1K LS [l/m] | | | | | | | | | | | 1 x 130 | | | | | | | | | | |
| Dead weight without link/rotator incl. Classic Drive [kg] | 1990 | 2080 | 1990 | 2040 | 2110 | 2060 | 2180 | 2020 | 2110 | 2020 | 2070 | 2140 | 2060 | 2150 | 2060 | 2110 | 2180 | 2070 | 2160 | 2070 | 2120 | 2190 |



ML CRANES – NEXT EPSOLUTION

EPSHOOD

Crane operator protection for maximum comfort in any situation.

Lifting capacities from 10 to 13 ton-meters.

Lightest crane in its class.

Particularly fast and precise.

Wide range of control variants:
Classic Drive, Master Drive and EPSCAB
(shown: Master Drive).



TECHNICAL DATA

| | M10L | | | M10LD | | | M12L | | | M13L | | |
|---|------------|------|------|-------|------|------|--------|------|------|------|-----|-----|
| | 80 | 83 | 97 | 80 | 83 | 97 | 80 | 83 | 97 | 80 | 83 | 97 |
| Number of extensions | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| Load torque (net) [kNm] | 98 | 95 | 93 | 86 | 84 | 82 | 115 | 113 | 110 | 115 | 113 | 110 |
| Slewing torque (net) [kNm] | 24 | | | 24 | | | 28 | | | 28 | | |
| Slewing angle [°] | 425 | | | | | | | | | | | |
| Max. outreach [m] | 8,0 | 8,3 | 9,7 | 8,0 | 8,3 | 9,7 | 8,0 | 8,3 | 9,7 | 8,0 | 8,3 | 9,7 |
| Operating pressure [bar] | 220 | | | 200 | | | 250 | | | 280 | | |
| Pump capacity (max.) | 1K [l/min] | | | | | | 1 x 80 | | | | | |
| | 2K [l/min] | | | | | | 2 x 70 | | | | | |
| Dead weight without link/rotator including Classic Drive [kg] | 2070 | 2090 | 2160 | 2140 | 2160 | 2230 | 2140 | 2160 | 2230 | - | - | - |

Classic Drive

The lightweight standard top seat from PALFINGER EPSILON – lightweight, robust, reliable and proven to offer great performance.

Control: available with four-way control lever (JM) or linear lever (LM).

Master Drive

Master Drive gives the operator full control in any situation. The hydraulic servo-controlled joysticks help to achieve maximum precision and productivity in handling.

The ergonomic design of the mechanically suspended top seat ensures a high level of seat comfort, and all functions are immediately within reach with the multifunction armrest.

EPSCAB

Cabin with hydraulic servo control for top performance regardless of the weather.

Excellent visibility thanks to the hydraulically height-adjustable crane operator cabin.



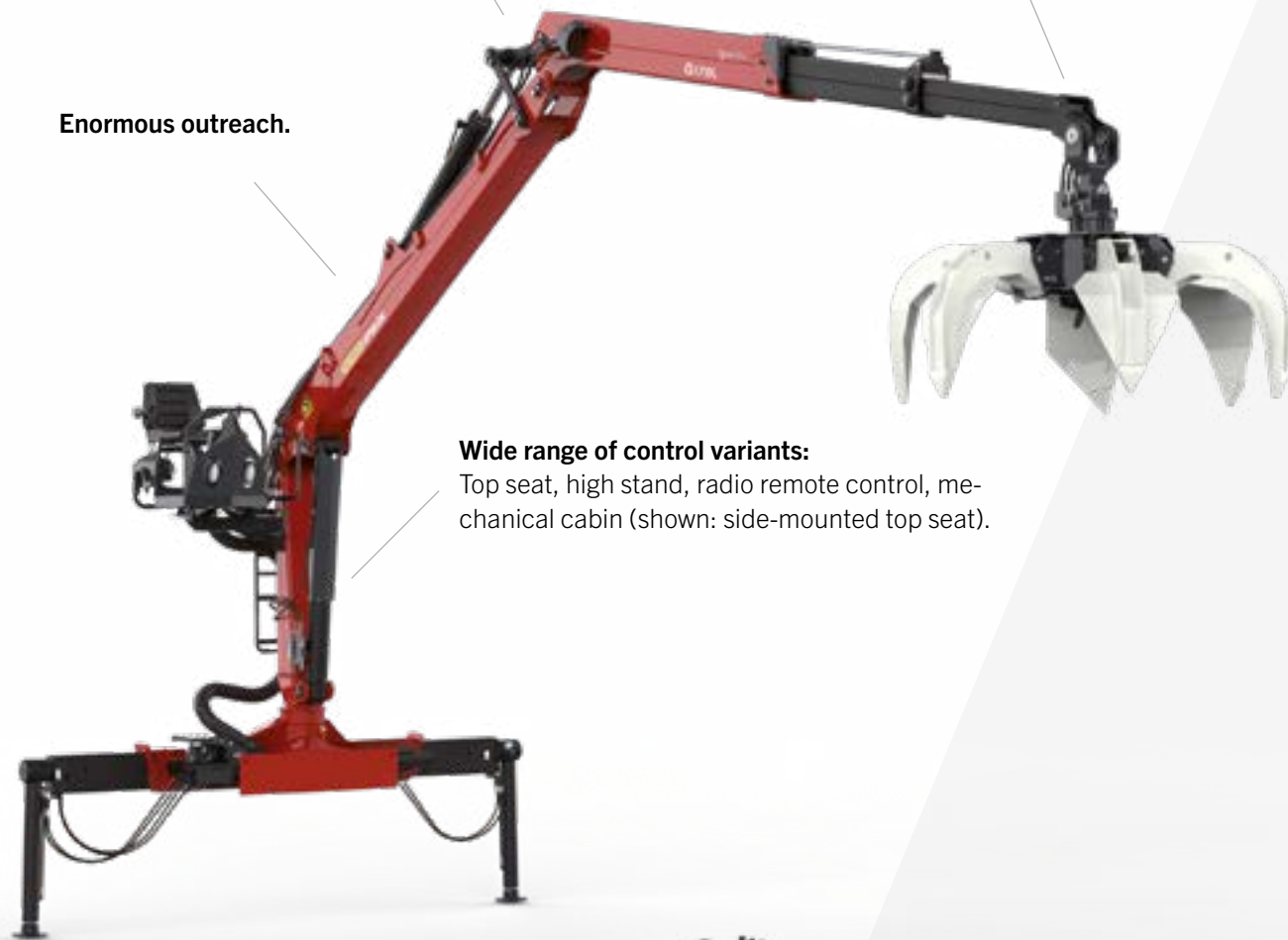
QL CRANES – EPSOLUTION

Lifting capacities from 15 to 18 ton-meters.

Highly service-friendly
All hoses and lines are installed inside the boom system.

Enormous outreach.

Wide range of control variants:
Top seat, high stand, radio remote control, mechanical cabin (shown: side-mounted top seat).



Top seat

Whether behind the column as standard or as a side-mounted arrangement, controlling the crane from the top seat guarantees optimum functionality and ergonomics.

The side top seat, mounted either on the left or right, provides the best possible view of the working area.

High stand

Perfect view into the tipper; can also be combined with radio remote control.

Variants:

- High stand with manual control
- High stand with radio remote control and manual control

Radio remote control

Highly precise and easy operation with the best possible view of the load.

Available as linear lever, four-way control lever, four-way control lever with twist function or joystick.

Mechanical cabin

Top performance regardless of the weather.

Variable control options with four-way control lever or linear lever.

TECHNICAL DATA

| | Q130LD | | | | | Q150L | | | | | Q170L | | | | | Q180L HPLS | | | | |
|---|------------|------|------|------|------|-------|------|------|------|------|--------|------|------|------|------|------------|------|------|------|------|
| | 80 | 97 | 104 | 80V | 80 | 83 | 97 | 104 | 115 | 80V | 80 | 83 | 97 | 104 | 115 | 80V | 80 | 83 | 97 | 104 |
| Number of extensions | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 |
| Load torque (net) [kNm] | 119 | 116 | 111 | 142 | 142 | 138 | 136 | 131 | 122 | 156 | 156 | 153 | 150 | 145 | 136 | 177 | 177 | 174 | 171 | 166 |
| Slewing torque (net) [kNm] | 30 | | | | | | | | | | 32 | | | | | | | | | |
| Slewing angle [°] | 425 | | | | | | | | | | | | | | | | | | | |
| Max. outreach [m] | 8,0 | 9,7 | 10,4 | 8,0 | 8,0 | 8,3 | 9,7 | 10,4 | 11,5 | 8,0 | 8,0 | 8,3 | 9,7 | 10,4 | 11,5 | 8,0 | 8,0 | 8,3 | 9,7 | 10,4 |
| Operating pressure [bar] | 210 | | | | | 240 | | | | | 260 | | | | | 290 | | | | |
| Pump capacity (max.) | 1K [l/min] | | | | | | | | | | 1 x 90 | | | | | | | | | |
| | 2K [l/min] | | | | | | | | | | 2 x 80 | | | | | | | | | |
| Dead weight without link/rotator including Classic Drive [kg] | 2450 | 2630 | 2690 | 2550 | 2410 | 2490 | 2590 | 2650 | - | 2590 | 2450 | 2530 | 2630 | 2690 | - | 2600 | 2460 | 2540 | 2640 | 2700 |



TRIPLE-L CRANES – EPSOLUTION

Lifting capacities

ML TR: 10 to 13 ton-meters
QL TR: 15 to 18 ton-meters

Wide range of control variants:

Radio remote control, high stand, top seat (shown: four-way control lever).

Maximum outreach with minimum stowed length.

Optimum hook height thanks to telescopic main boom.

Ideal for working with containers and scrap.



Top seat

Whether behind the column as standard or as a side-mounted arrangement, controlling the crane from the top seat guarantees optimum functionality and ergonomics.

The side top seat, mounted either on the left or right, provides the best possible view of the working area.

High stand

Perfect view into the tipper; can also be combined with radio remote control.

Variants:

- High stand with manual control
- High stand with radio remote control and manual control

Radio remote control

Highly precise and easy operation with the best possible view of the load.

Available as linear lever, four-way control lever, four-way control lever with twist function or joystick.

TECHNICAL DATA

| | M100L | | M110L | | M120L | | Q150L | | Q170L | |
|---|---------------|------|---------|------|-------|------|---------|------|-------|------|
| | 81TR | 95TR | 81TR | 95TR | 81TR | 95TR | 82TR | 95TR | 82TR | 95TR |
| Number of extensions | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Load torque (net) [kNm] | 92 | 90 | 103 | 100 | 111 | 109 | 134 | 131 | 148 | 145 |
| Slewing torque (net) [kNm] | 24 | | 27 | | 28 | | 30 | | 32 | |
| Slewing angle [°] | 425 | | | | 425 | | | | | |
| Max. outreach [m] | 8,1 | 9,5 | 8,1 | 9,5 | 8,1 | 9,5 | 8,2 | 9,5 | 8,2 | 9,5 |
| Operating pressure [bar] | 215 | | 235 | | 250 | | 240 | | 260 | |
| Pump capacity (max.) | 1K [l/min] | | 1 x 80 | | | | 1 x 90 | | | |
| | 2K [l/min] | | 2 x 70 | | | | 2 x 80 | | | |
| | 1K LS [l/min] | | 1 x 130 | | | | 1 x 150 | | | |
| Dead weight without link/rotator incl. Classic Drive [kg] | 2330 | 2400 | 2360 | 2430 | 2400 | 2470 | 2780 | 2880 | 2820 | 2920 |



Z-CRANE THE TRANSFORMER

EPSILON Z-cranes

Compared with the L-crane, the Z-crane is much more compact and so can be folded up transversely to the direction of travel. This means that it is possible to load the vehicle fully up to the legally permissible total height and operate the tipper / hook device.



Z-CRANES SCRAP

The parking concept enables the vehicle to be loaded up to the legally permissible total assembly height even with grabs mounted. Asymmetrical polyp grabs mean that the vehicle width of 2.55 m is not exceeded.



Z-CRANES CONTAINERS

Further crane models such as the Triple Z enable the best possible loading options thanks to their geometries and hook heights. Furthermore, the additional EASYFOLD equipment offers an enormous advantage in daily use.



Z-CRANES CLAMSHELL GRABBER APPLICATIONS

TIPPER Z – the crane for clamshell grabber applications on tipper trucks. Ideal working geometry for mounting on a tipper truck chassis for clamshell grabber applications. Thanks to the low height of the tipper truck's side walls, it is possible to forgo an elbow lever between the crane column and the main boom, thereby saving weight.

Z-cranes are available for:

- » **M-Series** (Epsolution & Next Epsolution); medium-duty class covers lifting capacities of 10 to 13 ton-meters; *pages: 18–21, 24–27.*
- » **Q-Series** (Epsolution); upper end of the medium-duty class covers lifting capacities of 15 to 18 ton-meters; *pages: 22–27.*



Lifting capacities from 10 to 13 ton-meters.

Particularly fast and precise.



Wide range of control variants:
Top seat, high stand, radio remote control, mechanical cabin (shown: top seat).



Top seat

Whether behind the column as standard or as a side-mounted arrangement, controlling the crane from the top seat guarantees optimum functionality and ergonomics.

The side top seat, mounted either on the left or right, provides the best possible view of the working area.



High stand

Perfect view into the tipper; can also be combined with radio remote control.

Variants:

- High stand with manual control
- High stand with radio remote control and manual control



Radio remote control

Highly precise and easy operation with the best possible view of the load.

Available as linear lever, four-way control lever, four-way control lever with twist function or joystick.



Mechanical cabin

Top performance regardless of the weather.

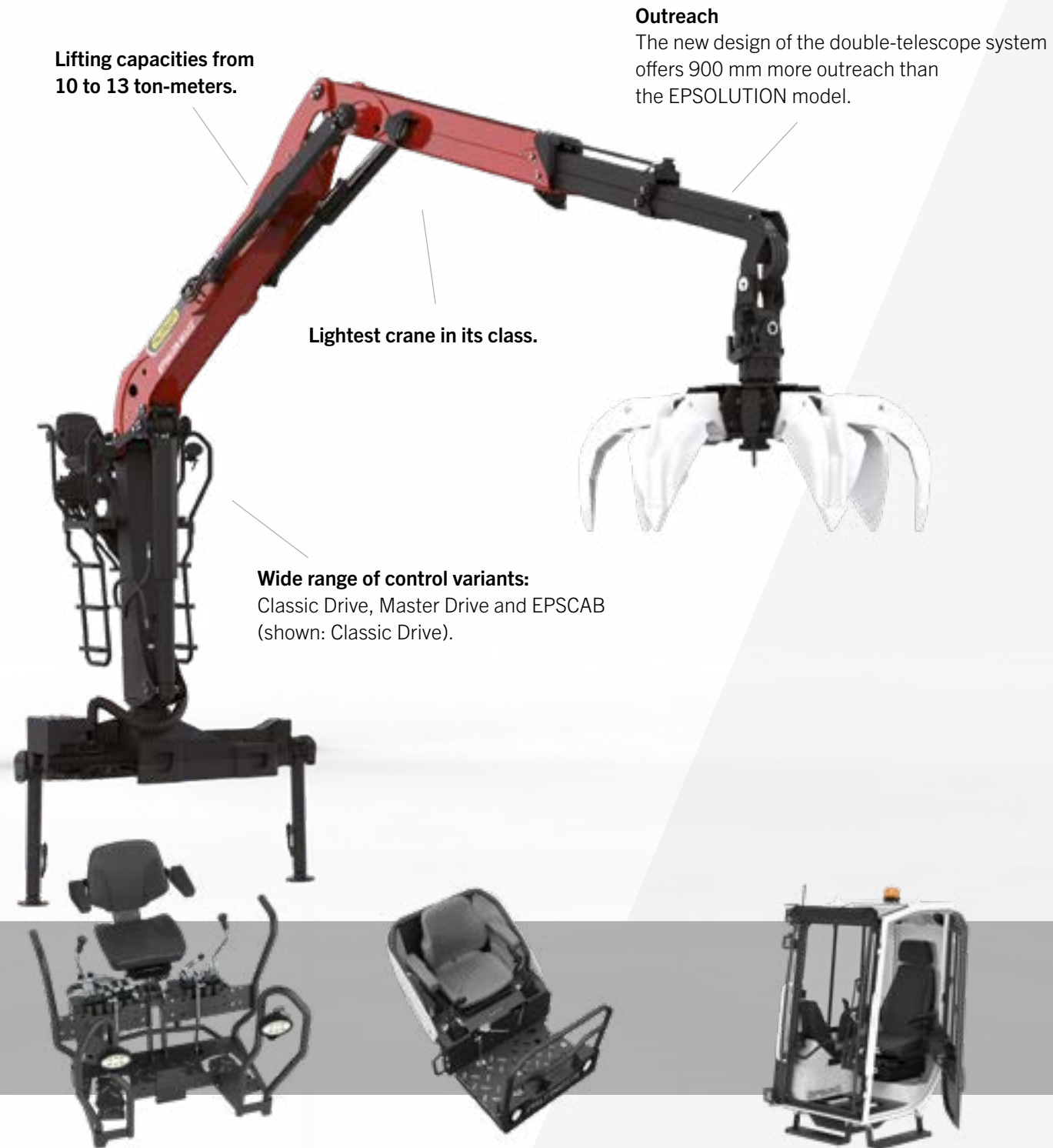
Variable control options with four-way control lever or linear lever.

TECHNICAL DATA

| | M100Z | | | | M100ZD | M110Z | | | | M120Z | | | | M130Z HPLS | | | |
|---|----------------|------|------|------|--------|-------|------|------|------|-------|------|------|------|------------|------|------|------|
| | 77 | 79 | 82 | 96 | 96 | 77 | 79 | 82 | 96 | 77 | 79 | 82 | 96 | 77 | 79 | 82 | 96 |
| Number of extensions | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 |
| Load torque (net) [kNm] | 94 | 93 | 92 | 90 | 79 | 101 | 99 | 99 | 97 | 109 | 109 | 107 | 105 | 123 | 123 | 121 | 119 |
| Slewing torque (net) [kNm] | 24 | | | | 27 | | | | 28 | | | | 28 | | | | |
| Slewing angle [°] | 425 | | | | | | | | | | | | | | | | |
| Max. outreach [m] | 7,7 | 7,9 | 8,2 | 9,6 | 9,6 | 7,7 | 7,9 | 8,2 | 9,6 | 7,7 | 7,9 | 8,2 | 9,6 | 7,7 | 7,9 | 8,2 | 9,6 |
| Operating pressure [bar] | 230 | | | | 210 | 245 | | | | 260 | | | | 290 | | | |
| Pump capacity (max.) | 1K [l/min] | | | | | | | | | | | | | | | | |
| | 2K [l/min] | | | | | | | | | | | | | | | | |
| | 1K LSI [l/min] | | | | | | | | | | | | | | | | |
| Dead weight without link/rotator incl. Classic Drive [kg] | 2140 | 2100 | 2150 | 2200 | 2270 | 2170 | 2130 | 2180 | 2230 | 2210 | 2170 | 2220 | 2270 | 2220 | 2180 | 2230 | 2280 |



MZ CRANES – NEXT EPSOLUTION



Lifting capacities from 10 to 13 ton-meters.

Outreach
The new design of the double-telescope system offers 900 mm more outreach than the EPSOLUTION model.

Lightest crane in its class.

Wide range of control variants:
Classic Drive, Master Drive and EPSCAB (shown: Classic Drive).

Classic Drive

The lightweight standard top seat from PALFINGER EPSILON – lightweight, robust, reliable and proven to offer great performance.

Control: available with four-way control lever (JM) or linear lever (LM).

Master Drive

Master Drive gives the operator full control in any situation. The hydraulic servo-controlled joysticks help to achieve maximum precision and productivity in handling.

The ergonomic design of the mechanically suspended top seat ensures a high level of seat comfort, and all functions are immediately within reach with the multifunction armrest.

EPSCAB

Cabin with hydraulic servo control for top performance regardless of the weather.

Excellent visibility thanks to the hydraulically height-adjustable crane operator cabin.

TECHNICAL DATA

| | M10Z | | | M12Z | | | M13Z | | |
|---|------------|------|------|--------|------|------|------|-----|------|
| | 83 | 91 | 105 | 83 | 91 | 105 | 83 | 91 | 105 |
| Number of extensions | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| Load torque (net) [kNm] | 93 | 91 | 87 | 109 | 107 | 104 | 109 | 107 | 104 |
| Slewing torque (net) [kNm] | 24 | | | 28 | | | | | |
| Slewing angle [°] | 425 | | | | | | | | |
| Max. outreach [m] | 8,3 | 9,1 | 10,5 | 8,3 | 9,1 | 10,5 | 8,3 | 9,1 | 10,5 |
| Operating pressure [bar] | 230 | | | 260 | | | 290 | | |
| Pump capacity (max.) | 1K [l/min] | | | 1 x 80 | | | | | |
| | 2K [l/min] | | | 2 x 70 | | | | | |
| Dead weight without link/rotator including Classic Drive [kg] | 2220 | 2270 | 2350 | 2260 | 2310 | 2390 | - | - | - |



QZ CRANES – EPSOLUTION

Lifting capacities from 15 to 18 ton-meters.

Classic, ideal crane for scrap handling.

Highly service-friendly

All hoses and lines are installed inside the boom system.



Wide range of control variants:

Top seat, high stand, radio remote control, mechanical cabin (shown: top seat).



Top seat

Whether behind the column as standard or as a side-mounted arrangement, controlling the crane from the top seat guarantees optimum functionality and ergonomics.

The side top seat, mounted either on the left or right, provides the best possible view of the working area.

High stand

Perfect view into the tipper; can also be combined with radio remote control.

Variants:

- High stand with manual control
- High stand with radio remote control and manual control

Radio remote control

Highly precise and easy operation with the best possible view of the load.

Available as linear lever, four-way control lever, four-way control lever with twist function or joystick.

Mechanical cabin

Top performance regardless of the weather.

Variable control options with four-way control lever or linear lever.

TECHNICAL DATA

| | Q130ZD | Q150Z | | Q170Z | | Q180Z HPLS | | | | |
|---|--------|---------------|------|-------|---------|------------|------|------|------|------|
| | 96 | 79 | 82 | 96 | 79 | 82 | 96 | 79 | 82 | 96 |
| Number of extensions | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| Load torque (net) [kNm] | 120 | 145 | 142 | 140 | 163 | 160 | 158 | 185 | 181 | 180 |
| Slewing torque (net) [kNm] | | 30 | | | 32 | | | | | |
| Slewing angle [°] | | 425 | | | | | | | | |
| Max. outreach [m] | 9,6 | 7,9 | 8,2 | 9,6 | 7,9 | 8,2 | 9,6 | 7,9 | 8,2 | 9,6 |
| Operating pressure [bar] | 210 | 235 | | | 260 | | | 290 | | |
| Pump capacity (max.) | | 1K [l/min] | | | 1 x 90 | | | | | |
| | | 2K [l/min] | | | 2 x 80 | | | | | |
| | | 1K LS [l/min] | | | 1 x 150 | | | | | |
| Dead weight without link/rotator incl. Classic Drive [kg] | 2720 | 2550 | 2600 | 2680 | 2590 | 2640 | 2720 | 2600 | 2650 | 2730 |



TRIPLE-Z CRANES – EPSOLUTION

Telescopic main boom opens up the working geometry of an L-crane.

Lifting capacities

MZ TR: 10 to 13 ton-meters
QZ TR: 15 to 18 ton-meters

Classic recycling crane thanks to compact design.

Optimum geometry and hook height enables the best possible loading options.

300l polyp grabs can be stowed within the vehicle width.



TECHNICAL DATA

| | M100Z | | M110Z | | M120Z | | Q150Z | | Q170Z | | Q180Z | |
|---|---------------|------|---------|------|-------|------|-------|------|---------|------|-------|------|
| | 79TR | 95TR | 79TR | 95TR | 79TR | 95TR | 79TI | 95TR | 79TR | 95TR | 79TR | 95TR |
| Number of extensions | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| Load torque (net) [kNm] | 91 | 88 | 98 | 94 | 104 | 101 | 143 | 138 | 156 | 150 | 175 | 170 |
| Slewing torque (net) [kNm] | 24 | | 27 | | 28 | | 30 | | 32 | | | |
| Slewing angle [°] | 425 | | | | 425 | | | | | | | |
| Max. outreach [m] | 7,9 | 9,5 | 7,9 | 9,5 | 7,9 | 9,5 | 7,9 | 9,5 | 7,9 | 9,5 | 7,9 | 9,5 |
| Operating pressure [bar] | 260 | | 275 | | 290 | | 240 | | | | | |
| Pump capacity (max.) | 1K [l/min] | | 1 x 80 | | | | | | 1 x 90 | | | |
| | 2K [l/min] | | 2 x 70 | | | | | | 2 x 80 | | | |
| | 1K LS [l/min] | | 1 x 130 | | | | | | 1 x 150 | | | |
| Dead weight without link/rotator incl. Classic Drive [kg] | 2360 | 2460 | 2390 | 2490 | 2430 | 2530 | 2820 | 2920 | 2860 | 2960 | 2870 | 2970 |

Top seat

Whether behind the column as standard or as a side-mounted arrangement, controlling the crane from the top seat guarantees optimum functionality and ergonomics.

The side top seat, mounted either on the left or right, provides the best possible view of the working area.

High stand

Perfect view into the tipper; can also be combined with radio remote control.

Variants:

- High stand with manual control
- High stand with radio remote control and manual control

Radio remote control

Highly precise and easy operation with the best possible view of the load.

Available as linear lever, four-way control lever, four-way control lever with twist function or joystick.



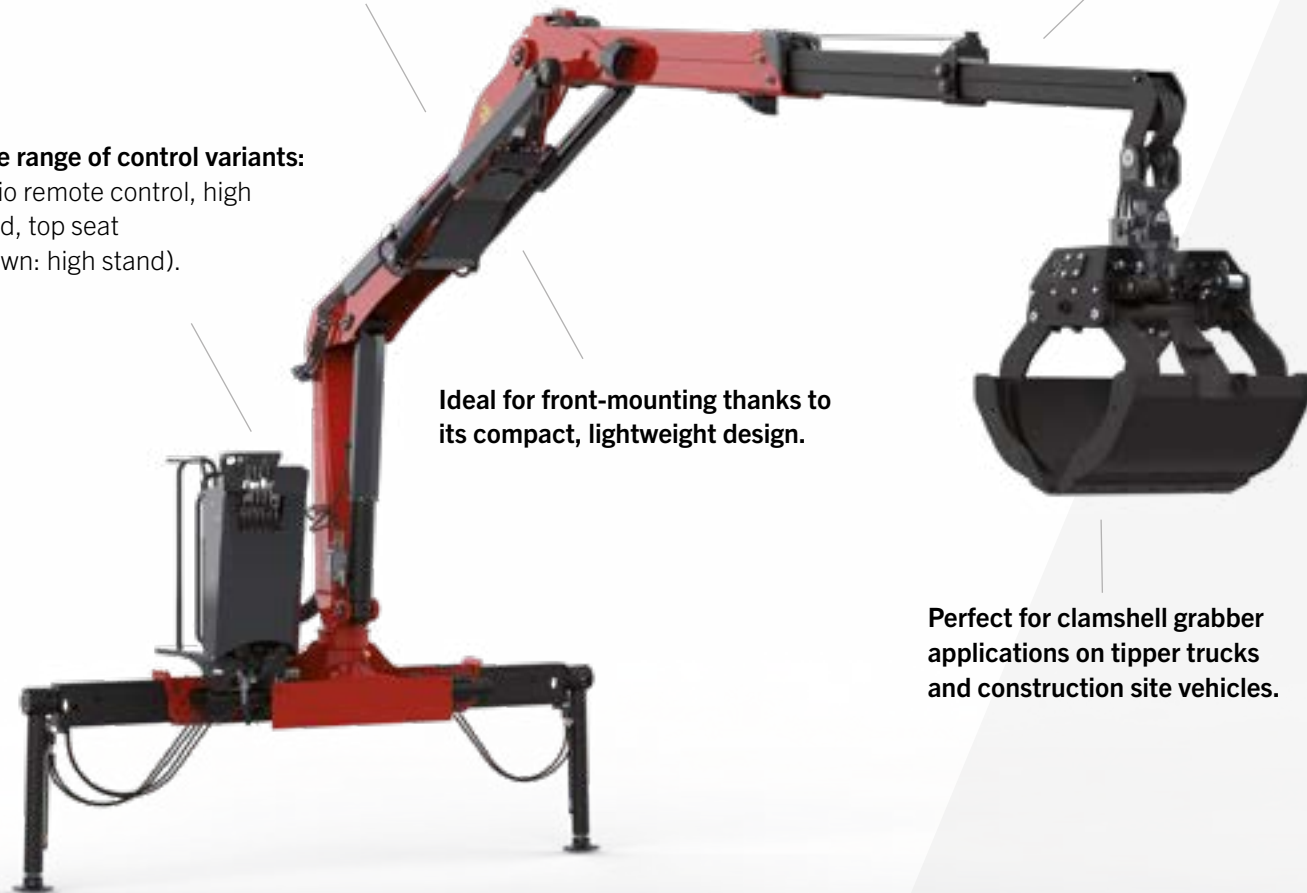
TIPPER-Z CRANES – EPSOLUTION

Lifting capacities

MZ TI: 10 to 13 ton-meters
QZ TI: 15 to 18 ton-meters

Wide range of control variants:

Radio remote control, high stand, top seat (shown: high stand).



Ideal for front-mounting thanks to its compact, lightweight design.

Thanks to its short stowed length, the crane including grab can be stowed within the width of the vehicle.

Perfect for clamshell grabber applications on tipper trucks and construction site vehicles.

TECHNICAL DATA

| | M100Z | M110Z | M120Z | Q150Z | Q170Z |
|---|---------------|---------|-------|---------|-------|
| | 84TI | 84TI | 84TI | 84TI | 84TI |
| Number of extensions | 2 | 2 | 2 | 2 | 2 |
| Load torque (net) [kNm] | 93 | 101 | 107 | 141 | 160 |
| Slewing torque (net) [kNm] | 24 | 27 | 28 | 30 | 32 |
| Slewing angle [°] | | 425 | | 425 | |
| Max. outreach [m] | | 8,4 | | 8,4 | |
| Operating pressure [bar] | 230 | 245 | 260 | 240 | 260 |
| Pump capacity (max.) | 1K [l/min] | 1 x 80 | | 1 x 90 | |
| | 2K [l/min] | 2 x 70 | | 2 x 80 | |
| | 1K LS [l/min] | 1 x 130 | | 1 x 150 | |
| Dead weight without link/rotator incl. Classic Drive [kg] | 2210 | 2240 | 2270 | 2560 | 2600 |



Top seat

Whether behind the column as standard or as a side-mounted arrangement, controlling the crane from the top seat guarantees optimum functionality and ergonomics.

The side top seat, mounted either on the left or right, provides the best possible view of the working area.



High stand

Perfect view into the tipper; can also be combined with radio remote control.

Variants:

- High stand with manual control
- High stand with radio remote control and manual control



Radio remote control

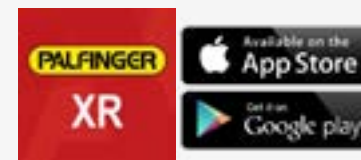
Highly precise and easy operation with the best possible view of the load.

Available as linear lever, four-way control lever, four-way control lever with twist function or joystick.



SCAN ↓

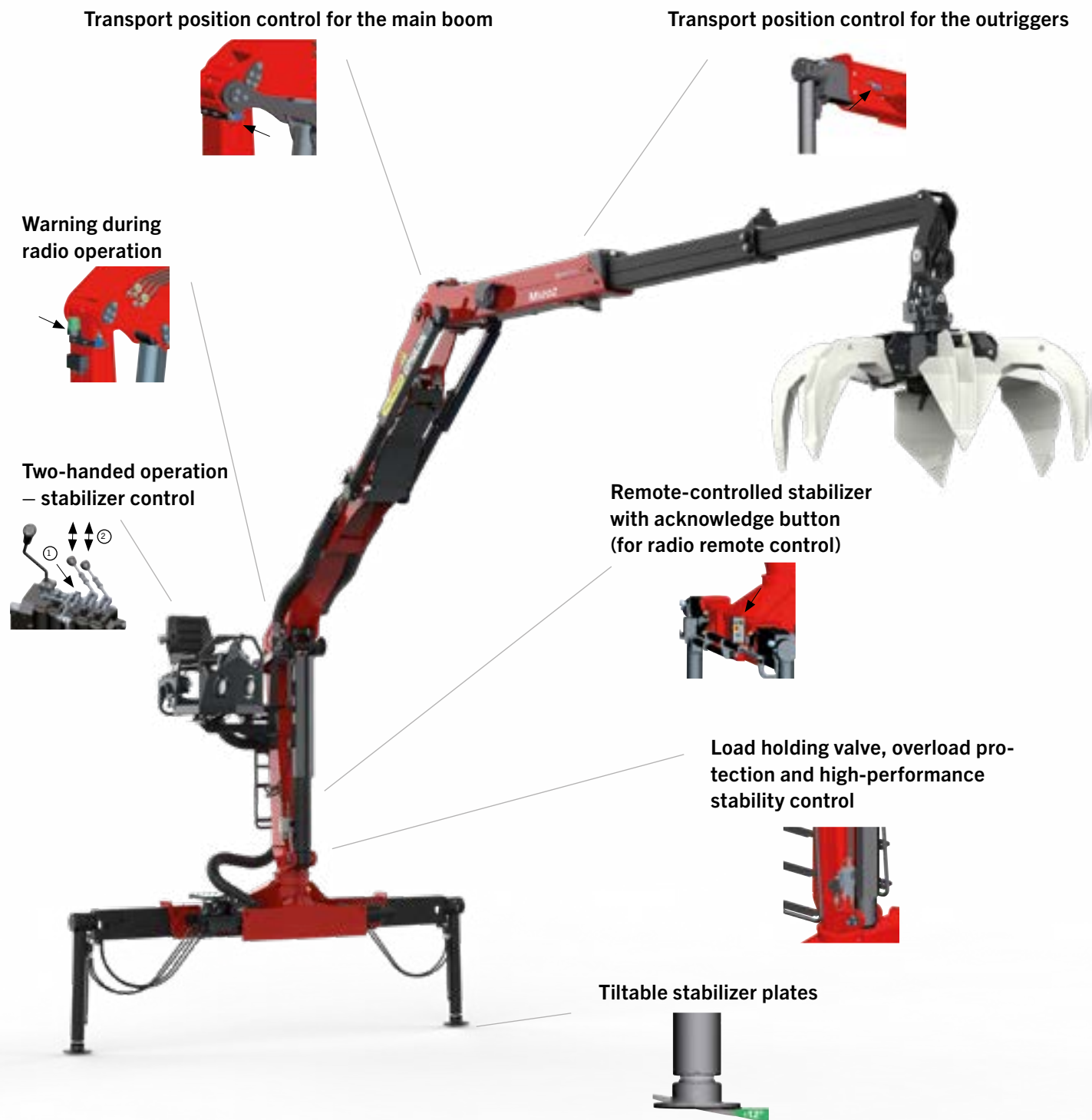
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STANDARD EQUIPMENT FOR RECYCLING EN 12999 STANDARD



STANDARD EQUIPMENT FOR RECYCLING EN 12999 STANDARD

Besides the “S” factor explained on page 4, the European EN 12999 standard defines the minimum requirements for the design, calculation, inspection and testing of hydraulic loader cranes and their mounting on vehicles.

On the following pages, you will find the measures required by EN 12999 listed together with the solutions that PALFINGER EPSILON has found to meet these requirements.

Requirements of EN 12999

Transport position control for the main boom

- **EN 12999 requirement:** Monitoring of the transport position for the main boom to prevent collisions with objects such as bridges.
- **PALFINGER EPSILON solution:** A limit switch on the crane column indicates whether the main boom has been parked at an angle of less than 90°. The mounting specialist must install a visual and audible warning system in the cab to warn the driver.

Transport position control for the outriggers

- **EN 12999 requirement:** Monitoring of the transport position for manually and hydraulically actuated outriggers.
- **PALFINGER EPSILON solution:** A limit switch on each transverse spar indicates whether the outriggers are retracted. The switches must be cabled up to the crane base and the mounting specialist must install a visual and audible warning system in the cab to warn the driver if either of the outriggers is not in the transport position.

Two-handed operation – stabilizer control

- **EN 12999 requirement:** The stabilizer must be secured against inadvertent actuation by means of e.g. two-step activation – “two-handed operation” – on the top seat.
- **PALFINGER EPSILON solution:** Hand lever for stabilizer control on the mechanically controlled top seat with two-step control:
1.) Overcome the spring travel and 2.) Operate the stabilizer. Alternatively, switch from crane to stabilizer operation via a changeover switch for the Master Drive and radio remote control.

Load holding valves

- **EN 12999 requirement:** In the event that a hose breaks, the arm system must not lower in an uncontrolled manner.
- **PALFINGER EPSILON solution:** Load holding valves installed on slewing and lifting cylinders and outer boom rams.

Tiltable stabilizer plates

- **EN 12999 requirement:** The stabilizer plates must compensate for surface unevenness of up to 10° in all directions.
- **PALFINGER EPSILON solution:** Stabilizer cylinders with plates that tilt by up to 12°, also available in extended 170 mm design.

Overload protection & high-performance stability control

- **EN 12999 requirement:** Depending on the control method used, cranes must be protected against overloads by electrical or mechanical means.
- **PALFINGER EPSILON solution:** Three different recycling packages: CERM, HPSC, HPSC-L.

Warning during radio operation

- **EN 12999 requirement:** Cranes must show a warning signal during radio operation.
- **PALFINGER EPSILON solution:** Green warning light flashes on the crane during radio operation.

Remote-controlled stabilizer with acknowledge button

- **EN 12999 requirement:** Cranes must have an acknowledge button at each end where radio remote control is used for a remote-controlled stabilizer.
- **PALFINGER EPSILON solution:** Operator terminal for radio remote control including an acknowledge button for the stabilizer is mounted on the crane. Indication of lifting capacity is provided by means of an LED traffic light display. Many other functions such as speed +/-, engine start/stop, operating hour counter and key-operated switch for crane/stabilizer functions.

RECYCLING PACKAGES

CERM AND CE RECYCLING MINI

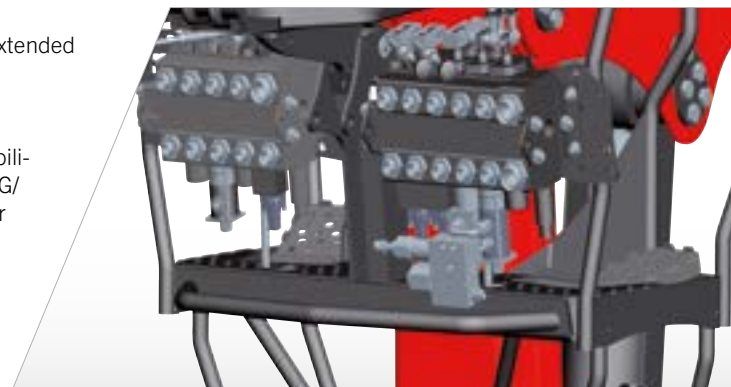
This simple variant is ideal when there are no restrictions on the stabilization width of the crane. The crane can be operated only when the outriggers are fully extended and with full stabilization. While the crane is not fully stabilized, or the stabilizer is being actuated, the crane switches to overload, meaning that the functions for raising/lowering the main boom and knuckle boom are blocked. At the same time, the terminal on the top seat is equipped with a capacity utilization indicator that informs the operator visually and audibly when capacity utilization of 90 percent is reached. This recycling package was designed exclusively for the standard top seat variants of the EPSOLUTION series and the Classic Drive in the NEXT EPSOLUTION series.

Operation:

A crane cannot be operated until the outriggers are fully extended and the stabilizer rams are down.

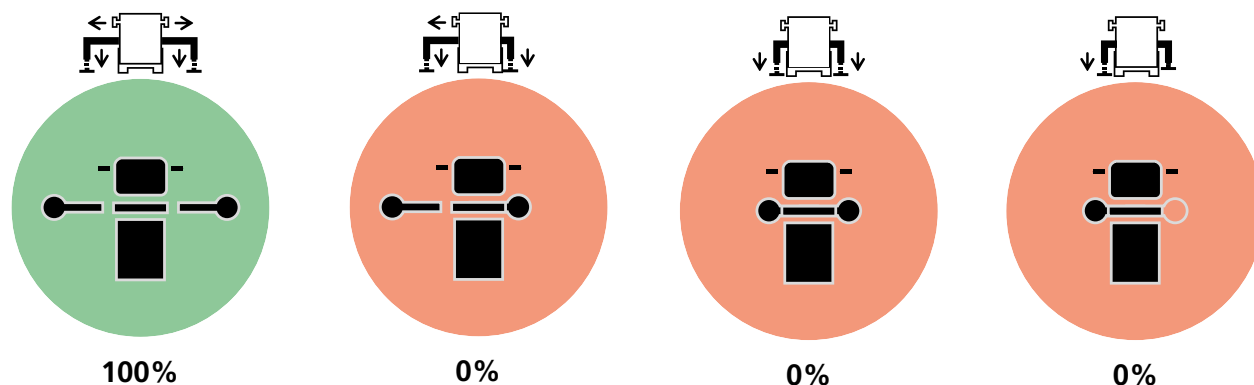
Function description:

Slide rods of the stabilizer are monitored. As soon as the stabilizer is actuated, the crane switches to overload. The RAISING/ LOWERING functions for the main boom as well as RAISING for the knuckle boom and telescope OUT are blocked.



Overload protection on the top seat is provided by lock cylinders, slide rod monitoring for the stabilizer, only in conjunction with the standard top seat, HSCJ, not Paltronic.

STABILIZER SUPPORT



The stabilizer is fully extended and supported on both sides.
Full lifting power

Both stabilizer rams down. Only one outrigger extended.
No lifting power

Both stabilizer rams down. Both outriggers retracted.
No lifting power

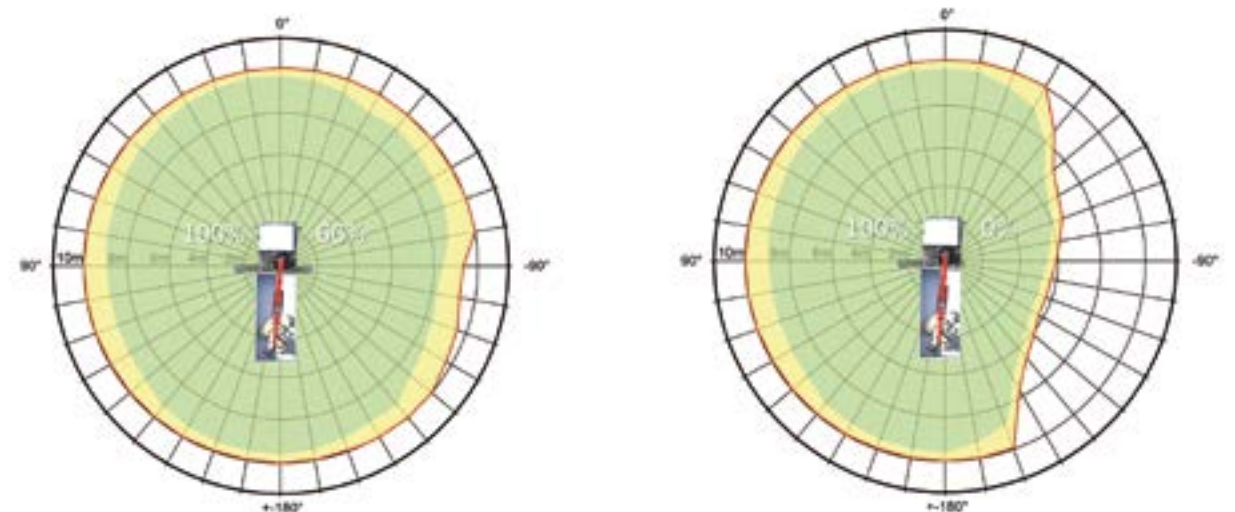
Only one stabilizer ram down.
No lifting power

RECYCLING PACKAGES

HPSC AND HPSC-LIGHT (HIGH PERFORMANCE STABILITY CONTROL)

HPSC means that the crane operator benefits from the maximum level of comfort and safety – including during crane deployments in confined spaces. In heavily built-up areas, in flowing traffic or similar situations, the vehicle can often be stabilized only on one side, partially or not at all. HPSC guarantees that crane work can be carried out safely even in cases like these, because it is no longer necessary to ensure that the predefined stabilizer conditions are achieved.

Compared with conventional proportional systems, the HPSC system from PALFINGER EPSILON comes closest to true stability. HPSC and HPSC-L provide a real-time calculation of the lifting capacity depending on the support situation, slewing angle, etc.



HPSC

- Outriggers: left 100%; right 66%.
- Infinitely variable outrigger monitoring (retracted 0% to extended 100%).
- Control variants available: standard top seat, HSCJ, SCMD, SCRCD, RCE.
- Auxiliary support possible, but not cabled up.
- Ballast weights (LCA 03 and LCA 05) possible.

HPSC-L

- Outriggers: left 100%; right 0%.
- Two-step outrigger monitoring (retracted 0% or extended 100%).
- Control variants available: standard top seat, HSCJ, SCMD, SCRCD, RCE.
- No auxiliary support possible.
- Ballast weights (LCA 03 and LCA 05) possible.



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LIFETIME SERVICE A UNIQUE NETWORK

A high level of service quality demands speed and expertise. Hand in hand with our service partners, we form a powerful global service network. Together we develop solutions designed to enhance efficiency, safety and comfort. You can be confident that our entire service portfolio is designed specifically to ensure your long-term success.

To ensure that it can respond rapidly, PALFINGER has built a tightly knit network of general representatives and service partners. Globally, this translates to more than 5,000 service centers in 130 countries. For you, this means quick communication and speedy support.

For the extensive network of manufacturers, general representatives and service partners, we have developed a comprehensive certification structure. This ensures that every single partner within this system can help to ensure customer satisfaction as effectively as possible.



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LIFTING SUSTAINABILITY ENVIRONMENT, QUALITY & SUSTAINABILITY

As a responsible employer, PALFINGER produces eco-efficient, sustainable products and is committed to doing business fairly. Sustainability management at PALFINGER comprises four areas: responsible employer, eco-efficient production, sustainable products and doing business fairly.

At PALFINGER EPSILON, dealing with environment and sustainability issues does not just take place at management level. It is very important to the company to involve every single employee and, as far as possible, every customer in the process.

In order to ensure that, PALFINGER EPSILON guarantees the following points from the area of environmentally friendly products / production processes / procurement:

- EPSILON material** –
- reliability, short transportation routes and top quality
 - 95 percent of the material volume made in the EU
 - 60 percent of the material volume made by PALFINGER
 - In-house manufacturing plants – 1 in Austria, 2 in Bulgaria

- ISO environmental certification**
- EPSILON Elsbethen plant certified in accordance with ISO 14001:2015

- LIGHTER, FASTER, STRONGER** –
- EVERY new product development must
- either: achieve a reduction in the resources used
 - or: increase the efficiency of the products



YOUR PARTNER FOR THE FUTURE

With PALFINGER EPSILON, every product is much more than the sum of its parts. Throughout the entire company, we work to ultra-modern requirements and always aim to create durable, innovative and customized solutions for our customers. Customer satisfaction is the top priority for us. That is why you can rely on long-lasting and low-maintenance products from PALFINGER EPSILON that are characterized by a high degree of cost-effectiveness and low energy consumption.

We are always striving for long-term solutions and our machines have their origins in the requirements of customers. We then implement these in terms of lifting capacity, installation height and arm geometry, for example. Together with our partners, we continue to pull out all the stops when it comes to supplying you with the best customized solutions by creating innovative products.

PALFINGER EPSILON.



KP-PR056M2+EN 03/2020

KP-PR056 is for international use. Standard and special equipment and the availability of some models may vary from country to country. EPSILON reserves the right to modify designs and technical implementation at any time and without advance notice without being obligated in any way to transfer these changes to units that have already been purchased. Specifications, descriptions and illustrations are up to date at the time of going to print but may also be modified without advance notice. Images may show particular designs for specific countries, special equipment as well as incomplete standard designs. Dimensions may vary. Load representations are standardized figures and do not correspond to the optimum boom position in which the maximum lifting capacity can be achieved.