

COMPOSANTS +



PRODUCT INFO

**VERLINDE NEW RANGE OF PENDANT
FOR ELECTRIC HOIST**

PRODUCT RELEASE INFO: NEW PENDANT CONTROL SERIES

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1. PROJECT BACKGROUND

This project started as a research study of crane usage and ended as development project for new crane controls. The target was to improve ergonomics and usability of the user interfaces. The project was carried out following user-centered design methods. Actual crane operators were interviewed and observed at the start and during the project. Benchmarking covered competitors' remote controls, power tools and even game controllers. The results were analyzed and formulated as user requirements, which were further applied as product solutions and features. Multiple rounds of prototypes were build and tested with operators, the designs were adjusted according to feedback.

According to the research, the most important user requirements were compactness of the control, natural posture and position of the fingers, reachability of the buttons without changing grip and applicability to both right and left-handed use. A key requirement was to make it easy as possible to drive the crane simultaneously in several directions.

Early days of the development:



2. PRODUCT FEATURES



General	
Enclosure colors	Yellow (RAL1021) Verlinde
Applications	Chain hoists and wire rope hoists. Solo hoists and overhead cranes.
Operation environment	Indoor or Outdoor
Operating elements for ERG02, 04, 06	<p>Default:</p> <ul style="list-style-type: none"> • 2-step push buttons for movements • Emergency stop button <p>Optional control elements:</p> <p>1-step contact block for push buttons</p>
Operating elements for ERG10	<p>Default:</p> <ul style="list-style-type: none"> • 2-step push buttons for movements • Emergency stop button <p>Optional/additional control elements (up to 4 per pendant):</p> <ul style="list-style-type: none"> • 1-step contact block for push buttons for movements • Push button, e.g. for horn • Key switch • 2-position selector switch • 3-position selector switch <p>Pilot lamp (Green, Red or Orange)</p>
Operating element symbols	DIN, SFS, ANSI

2.1. Product options

1-step contact block:

All ERGOMOVE control pendants can be equipped with 1-step push button contact blocks for movements instead of 2-step.

Magnet:

All ERGOMOVE pendant control series products are possible to have with an additional magnet. With the help of the magnet pendant control can be attach the metal surface when it's not needed. Magnet is 25 mm diameter neodymium magnet with the pull force of approximately 20 kg. Technical clause for the magnet feature is PE21.

In ERG02 and 04 the magnet is attached to the back cover of the pendant control.































In ERG06 and 10 the magnet is attached to additional strap which is attached to pendant cable. When magnet is not in use, it settles to its place on the back cover of the pendant.



2.2. Direction symbols

Direction symbols are placed to rubber push buttons on top of the contact blocks.



	DIN		SFS		ANSI
	1-speed	2-speed	1-speed	2-speed	
Up / Down					
					
Right / Left					
					
Forward / Backward					
					

2.3. Additional control elements and symbols for ERG10

ERG10 pendant control can be equipped with up to four additional control elements. Empty holes will be filled with the cover. Control elements operating temperature have been rated from -20 to 70 °C.

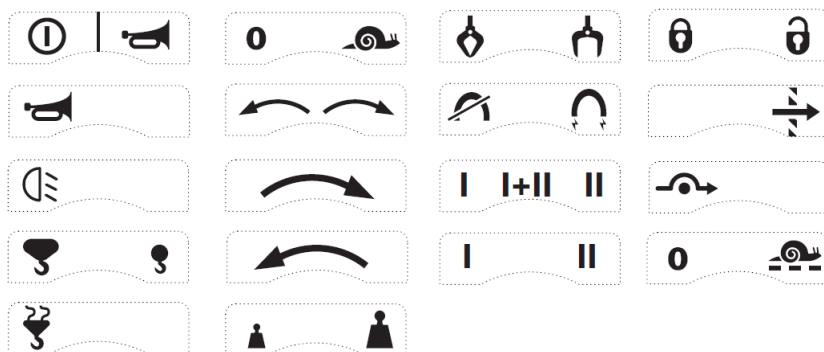
Additional control elements are not suitable to be used with ERG02, 04 or 06.

	Cover to fill the hole
	Push button 0-1
	Key switch 0-1
	Selector switch 0-1 Selector switch 1-2 Selector switch 1-0-2 Selector switch 1-0-2, center return Selector switch 1-1+2-2
	Pilot lamp GREEN 48, 115, 230 VAC Pilot lamp ORANGE 48, 115, 230 VAC Pilot lamp RED 48, 115, 230 VAC



Below symbols are available for additional control elements. Please see the features from next chapter.

Empty symbol plates are available for special enquiries. Required symbol is manufactured to order.



Please note product release information is not meant to be updated. Up to date list of available additional control elements and symbols is in ERGOMOVE product file.

2.4. Additional features with ERG10

ERG10 pendant control stations can be equipped with up to 4 additional control elements. Empty holes will be filled with the cover. If the required additional feature can't be realized with ERG10, we will use Telemecanique if the feature can be done with it.

ERG10 pendant control stations can be used with following additional features:

- Key switch to lock the controller
- Horn
- Crane flood lights, ON/OFF control with pushbutton
- Tandem use of hoists, V2 and V3
- THT hoists
- Motorized hooks
- Lifting device with rotation function
- Crab cranes, Grap claw Open/Close
- Magnet devices (ON/OFF)
- Microspeed
- Inching
- 1-step load limiter
- Restricted area bypass
- Slack rope bypass
- Operating limit switch bypass
- or similar when below symbols are applicable
- Empty symbol plates are available for special enquiries.
- Required symbol is manufactured to order.



Start / Horn	Micro speed	Lifting device control	Lock, unlock
Horn	Rotate	Magnet control	Restricted area bypass
Flood lights	Rotate right	Trolley selection	Bypass
Hook selection	Rotate left	Trolley selection	Inching
Slack rope bypass	Load limiter		

Please note product release information is not meant to be updated. Up to date list of available additional control element symbols is in ERGOMO

VE product file.

2.5. Product branding

Enclosure colour yellow is for Verlinde.

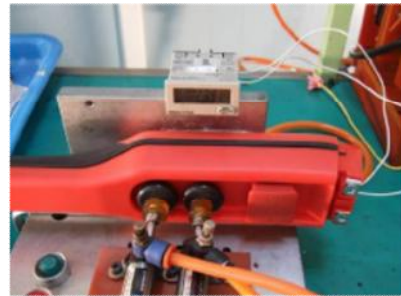
Stickers:



3. PRODUCT QUALITY VERIFICATION

ERGOMOVE pendant control series is thoroughly tested by Group Corporation, manufacturer and certification authorities. ERGOMOVE series have successfully passed below tests done by Group and manufacturer.

1. Lifetime tests*
 - a. 1 000 000 cycles @ +20 °C
 - b. 500 000 cycles @ -30 °C
2. Service temperature from -25 °C to 40 °C
3. IP/NEMA protection
4. Strain relief load carrying capability
5. Impact load carrying capacity
6. Screw hole strength
7. Impact strength
8. Emergency stop vibration
9. Emergency stop lifetime tests
10. Emergency stop impact load carrying capacity
11. Contact resistance
12. Insulating resistance & withstand voltage
13. Contact block material analysis
14. Chemical corrosion tests for enclosure and rubber materials



*Please note lifetime can be more than tested.

4. PRODUCT AWARDS

EUROCHAIN VR chain hoist won the Red Dot product design award with ERG02 control pendant in 2013.



red**dot** design award
winner 2013

5. COMPARISON TO OTHER PRODUCTS



	ERGOMOVE	PENDANT
Operating temperature*	-30...70 °C	-25...70 °C
Operating environment	Indoor, Outdoor	Indoor, Outdoor
Ex-proof	✗	✗
Operating voltage**	48, 115, 230 VAC	48, 115, 230 VAC
Applications	Chain hoists, Wire rope hoists and overhead cranes.	Chain hoists, Wire rope hoists and overhead cranes.
Travelling controls with one grip	✓	✗
Brand differentiation	✓	✗
Magnet <i>(additional option)</i>	✓	✗
Additional control elements	✓	✓
Protection rating	IP65 / NEMA4	IP65

*ERG10 operating temperature -20...70 °C

**24 VAC available for Brazilian NR regulations

6. PRODUCT ARGUMENTATION

6.1. Customer benefits

- **Suitable in demanding environments:** excellent flammability rating, 5VA is the most flame retardant UL 94 rating existing. Operating temperature from -30 up to +70 °C. Enclosure ratings IP65/NEMA4.
- **Improved usability:** single hand operation for trolley and bridge in ERG06/10, easier direction mapping.
-
- **Enhanced safety:** large size of stop button in operator's eyesight. Magnet to attach the pendant in safe place when not in use.
- **Advanced ergonomics:** compact and light-weight shape

6.2. Internal brand benefits

- **Logistics:** Configured to order in own factories. Flexible manufacturing keeps delivery times reasonable.
- **Branding:** improved concept, different body colours and stickers
- **Proprietary technology:** enhances differentiation from competitors, patented design
- **Profitability:** own spare parts

7. MARKETING SUPPORT

7.1. Photography

Branded studio photos are available from Jean-Yves BEAUSSART.

7.2. Training materials

PowerPoint training materials can be required through Michael Ghesquière.

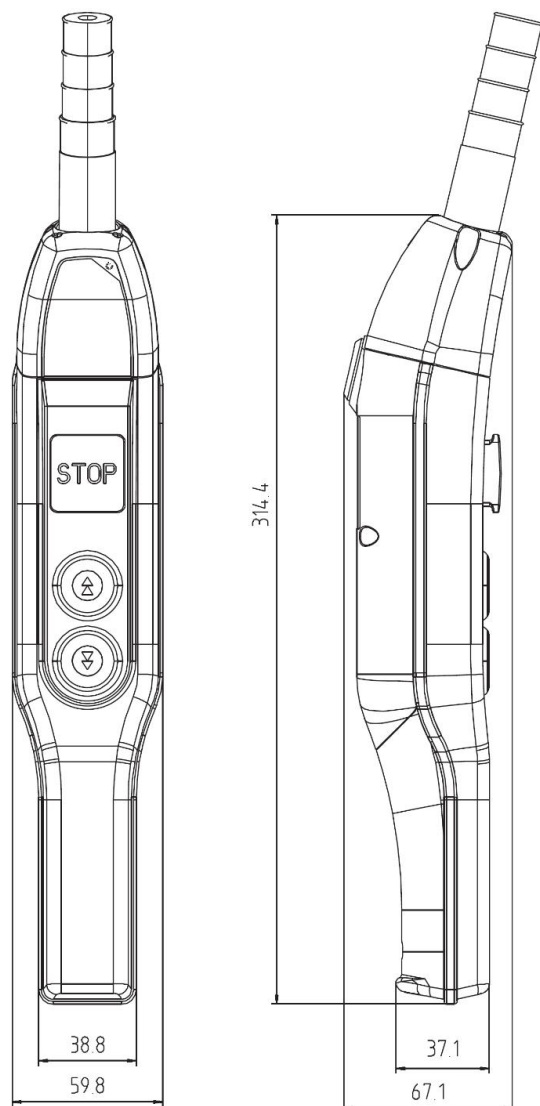
8. PRODUCT CODE

ERG	06	2	2	2	0	D	00	-N	092	000	0	0
1-3	(PE11) 4,5	6	7	8	PE12 9	(ELE44) 10	PE13 11,12	13,14	15-17	ELE16 18-20	21	22

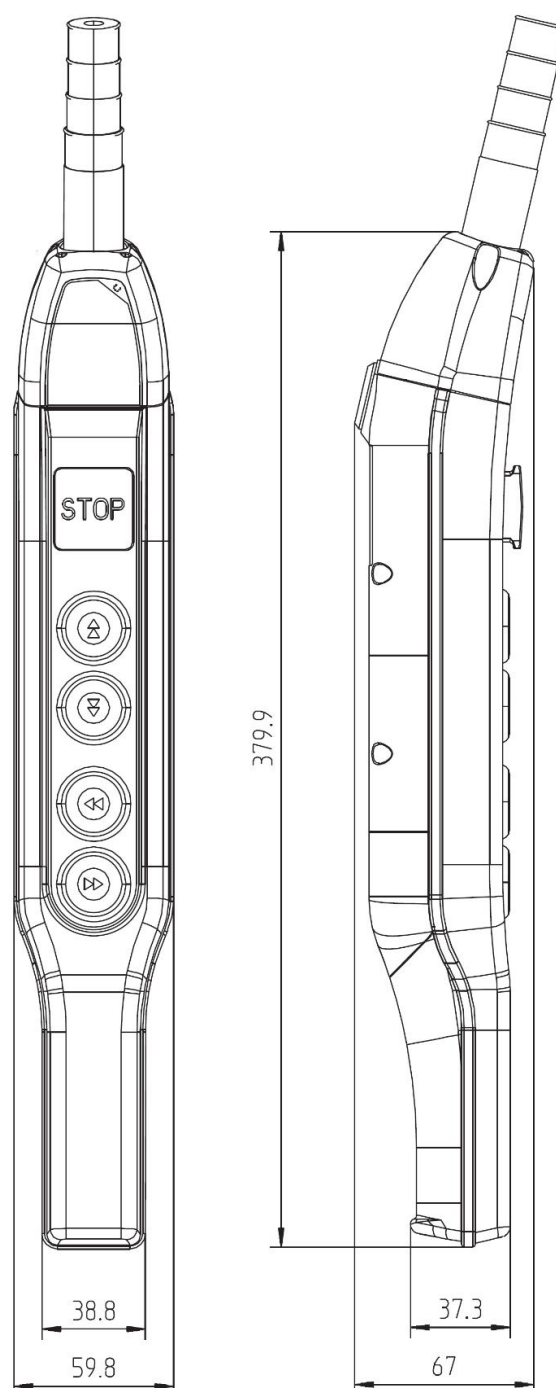
Pos.	Code	Feature code	Feature	Available properties	
1-3	ERG		Product name	ERGOMOVE	
4,5	06	(PE11)	Pendant housing type	02 Housing with 2 holes for buttons 04 Housing with 4 holes for buttons 06 Housing with 6 holes for buttons 10 Housing with 10 holes for buttons <i>All models have Emergency stop button as standard</i>	<u>PE11 value</u> ERG02 ERG04 ERG06 ERG10
6	2		Hoisting control type	2 2-step push button 1 1-step push button	0 Without hoisting buttons
7	2		Trolley travel control type	2 2-step push button 1 1-step push button	0 Without trolley travel buttons
8	2		Bridge travel control type	2 2-step push button 1 1-step push button	0 Without bridge travel buttons
9	0	PE12	Main contactor button function	0 No main contactor button 1 Main contactor, push button energizing main contactor. 2 Main contactor + horn, push-button energizing the main contactor and horn at the same time	
10	D	(ELE44)	Direction symbols	D DIN and FEM standard F SFS standard (Finnish) C ANSI standard (compass)	<u>ELE44 value</u> DIN FIN L English letters E Special symbols <u>ELE44 value</u> ENG NON STD
11,12	00	PE13	Hoist selection switch function	00 Without selection V2 Selection I or II, Two hoists controlled separately, one at time V3 Selection I, I+II, II, Two hoists controlled one at time or common controls (I+II)	VE Special selection
13,14	-N		Extra buttons	-N No extra buttons	-Y Extra buttons
15-17	092	PEN02	Rising cable length	Length is given from the bottom of the P.B. housing to the festoon C-rail 092 9,2 m 135 13,5 m	000 Without cable etc.
18-20	000	ELE16	Pendant cable top connector	PE1 Connector connected to the bridge panel (for back-up use) PE2 Connector connected to the hoist panel (monorail hoists) PE3 Connector connected to the festoon (moveable pendant) 000 Without connector	
21	0	(PE21)	Magnet	0 No magnet <u>PE21 value</u> -	M Magnet <u>PE21 value</u> YES
22	0		System features	0 No special features	E Special features

9. DIMENSIONS

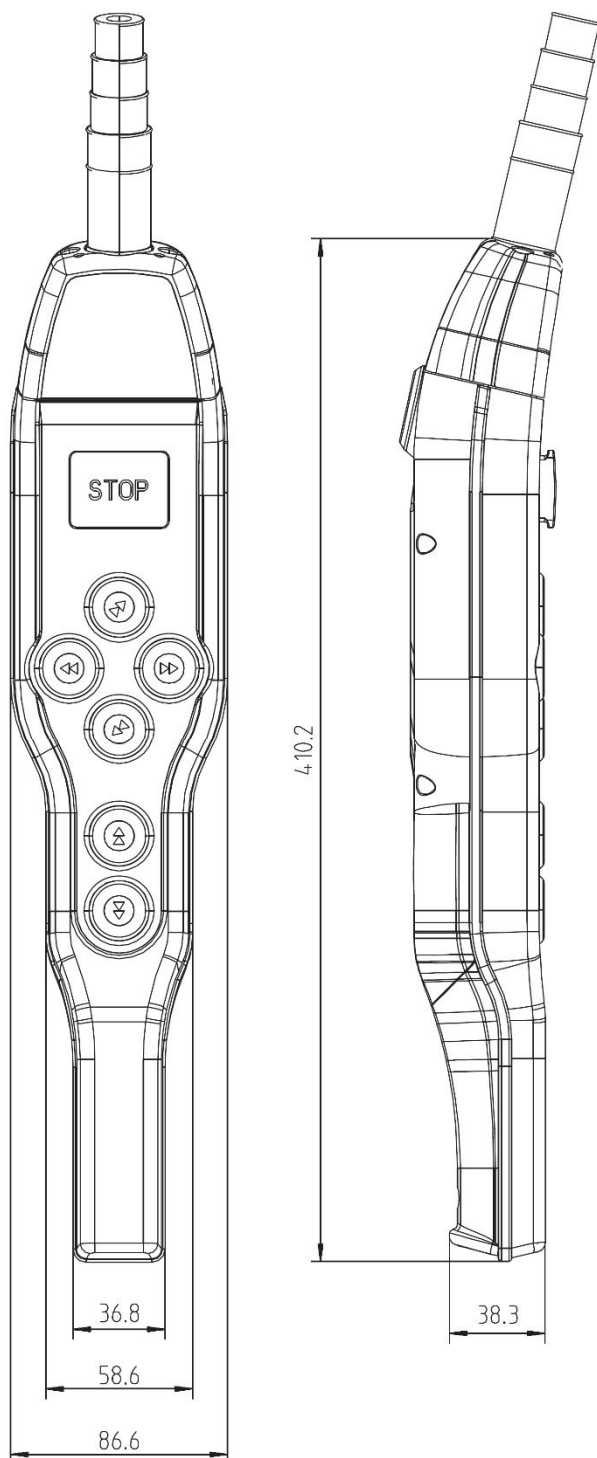
ERG02



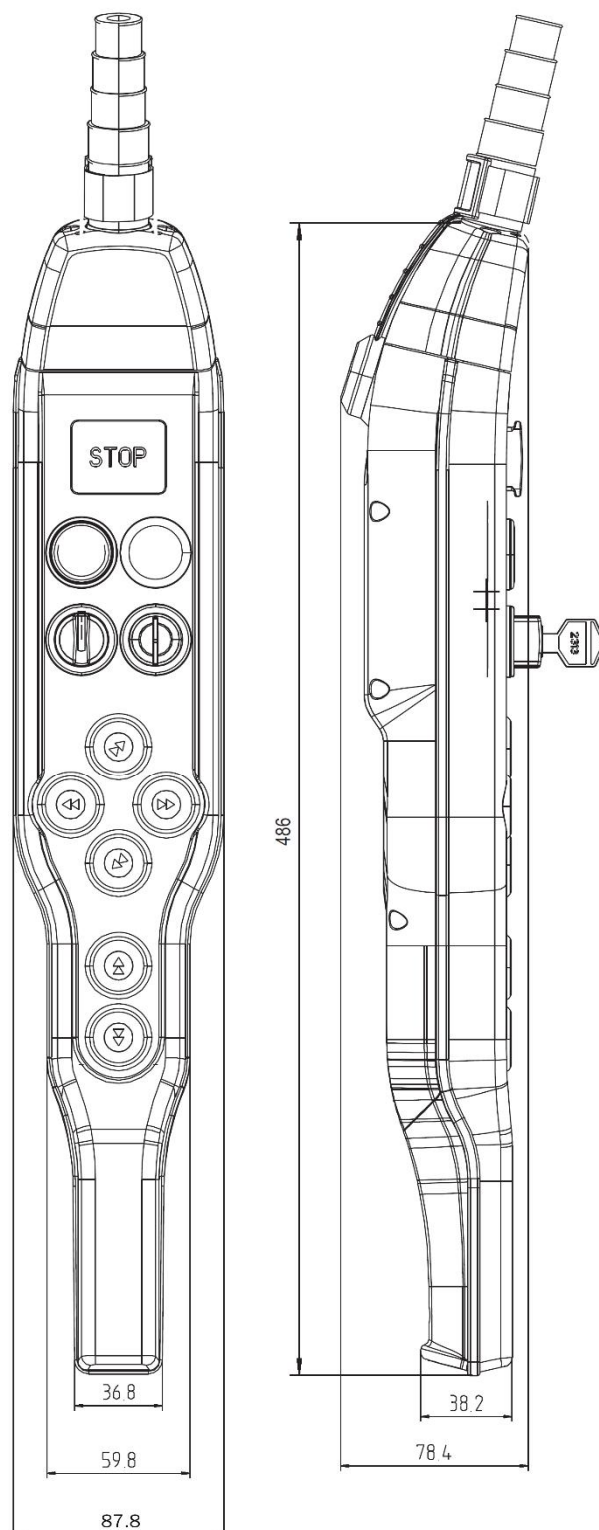
ERG04



ERG06



ERG10 with magnet

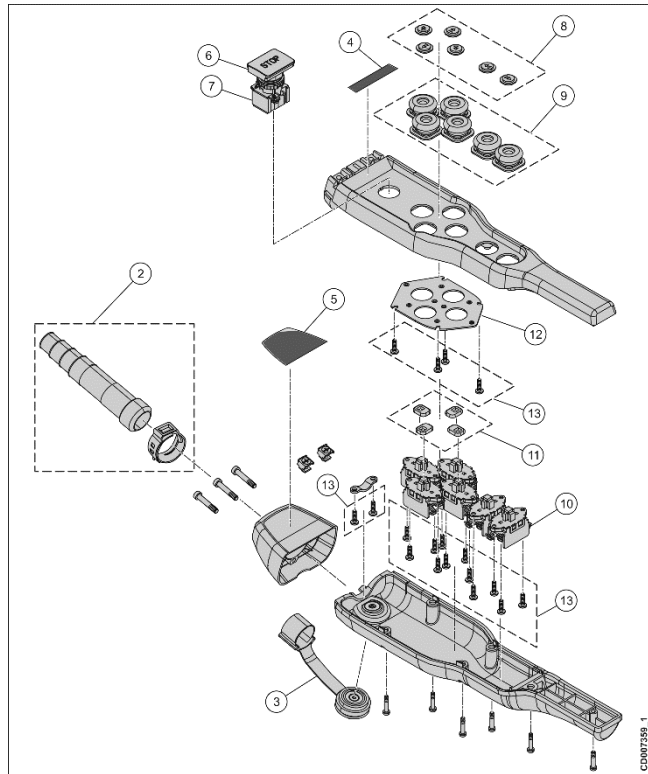


10. SPARE PARTS

Spare part catalogue is automatically generated according to order and delivered with the product.

Following spare parts are available:

- Complete branded pendant controls with symbols, both colors
- Push button contact block, 2-step
- Push button contact block rubbers
- Symbols for contact block rubbers
- All additional control elements
- All additional control element labels
- Blank cover to ERG10 additional element fixing place
- Cable inlet + clamp
- Magnet (& magnet strap for ERG06/10)
- Screw set
- Pendant housing, both colors



11. QUALITY MANAGEMENT AND WARRANTY ISSUES

Normal warranty policy.

12. SALES AND ENGINEERING TOOLS

Products are available:

- for chain hoists from NETPRICE
- for wire rope hoists & overhead cranes from EUROPONT
- Specialities can be requested through our technical support team

13. DOCUMENTATION

- Spare part catalogue is automatically generated according to order and delivered with the product.
- Service manual is not created for ERGOMOVE pendant control series.

14. ERGOMOVE BACK-UP PENDANT IN RADIO CONTROLLED CRANE

ERGOMOVE back-up pendant is delivered to overhead cranes by default without the horn button!

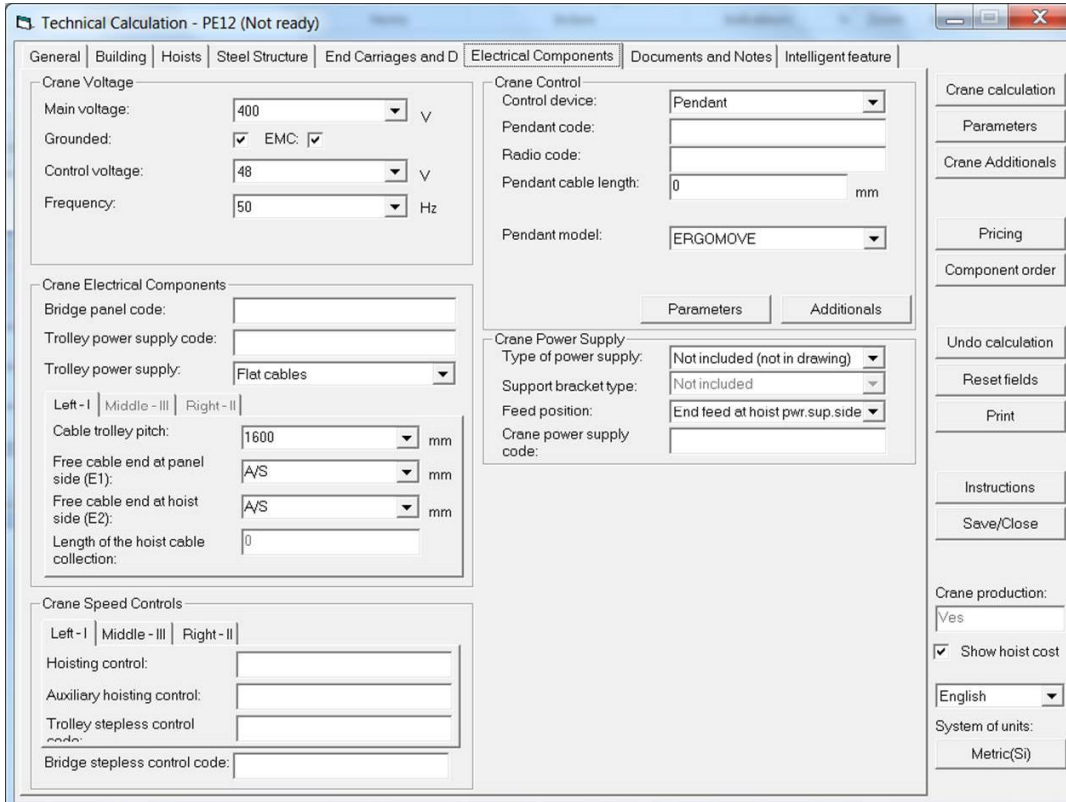
EN15011 requires the bridge and gantry cranes to have acoustic warning device only with the radio control.

Start and horn button can be added to ERGOMOVE pendant as an option. Pendant housing type changes from ERG06 to ERG10, which increases the pendant sales price.

Option must be ordered by technical feature PE12 with the value 2.

PE12	Main contactor button function	0	No main contactor button. Pendant without main contactor push-button. Only for KHK chain hoist.
		1	Main contactor. Push-button energising main contactor.
		2	Main contactor + horn. Push-button energising the main contactor and horn at the same time

Option can be found from Electrical Components tab → Crane Control → Additional



15. PRODUCT AVAILABILITY

	Factory					
	Finland	China				France
Verlinde	03/15	03/15				07/14

Stored pendant models may vary between factories.

Please consult factory for availability.

16. PENDANT (TELEMECANIQUE) RAMP-DOWN

ERGOMOVE pendant control station is the default pendant model for all chain and wire rope hoists .

Telemecanique pendant control stations will be ramped-down from standard offering after successful launch of ERGOMOVE pendants. In the meantime Telemecanique pricing is increased significantly.

17. SALES RELEASE

Sales release for VR chain hoists was in summer 2014.

Global sales release for VT overhead cranes is in March 2015 EUROPONT release.

18. CONTACTS

Technical information and production availability:

- Light lifting components: Lionel Le Heno
- VT-components: Lionel Le Heno

Sales tools:

- EUROPONT: Philippe Sinaeve