

Cable Ladder System for Ships

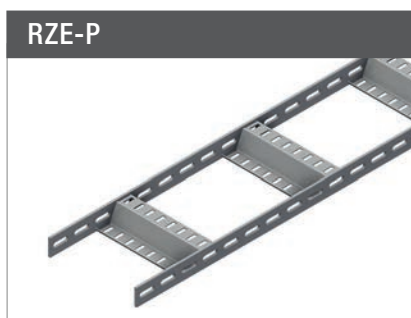
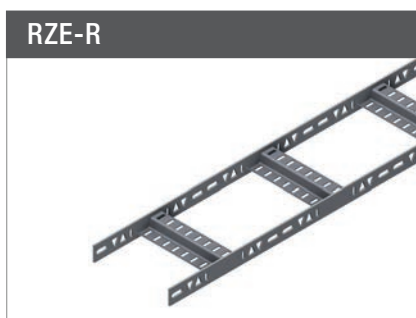
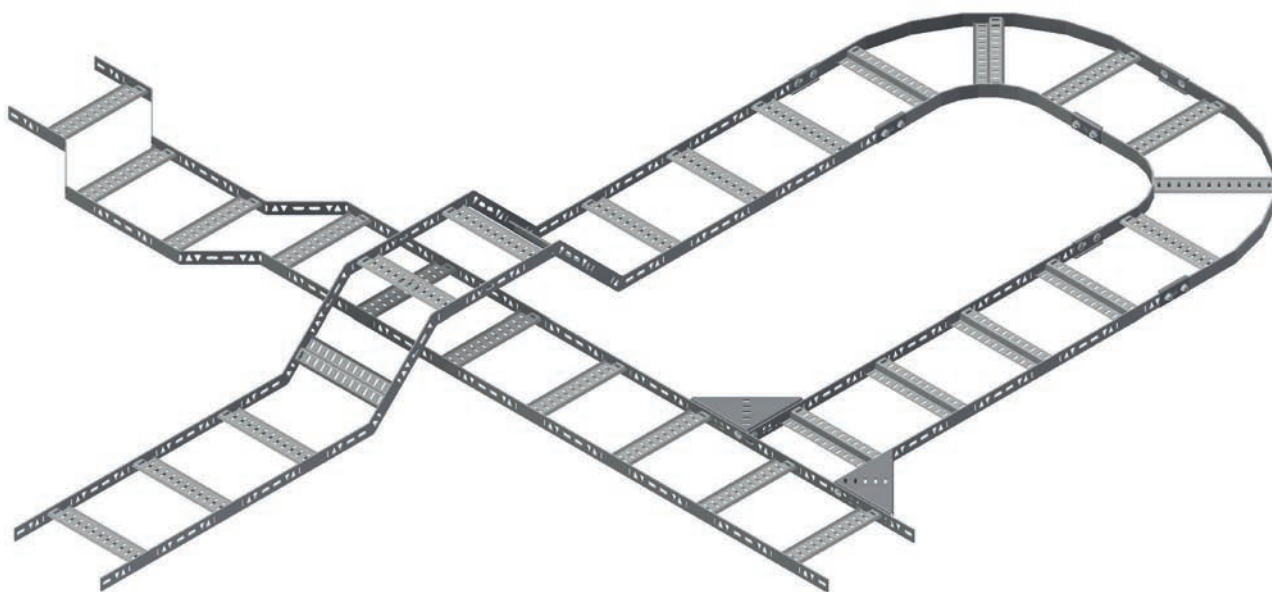
Our product range specially designed for installation in ships is available in two distinctive types:

RZE-R is a cable ladder with a smart design which reduces the need for fittings to change direction of the cable run. The RZE-R side rails feature a hole pattern which allows the ladder to be partially cut, then bent to create horizontal side steps and vertical risers. The cuts are then welded in place. This feature greatly reduces the number of parts and stock required, and allow for a cost effective and efficient installation.

RZE-P is the preferred system for heavy loads. Perforations in the side rails enable simple splicing of ladder lengths and for connecting fittings.

Both systems are complemented by a comprehensive range of accessories. Both also have rung designs suitable for direct installation of our ETIN™ tubing clamps. Adapter brackets are also available for the entire INKO® tubing clamps range.

AVAILABLE MATERIALS



See the Perforated Profiles chapter for various support profiles.

CABLE LADDER DATA

LADDER SYSTEMS	Rail Height (mm)	Load 1.5 m support spacing (HDG/SS kg/m)	Load 2 m support spacing (HDG/SS kg/m)	Load 2.5 m support spacing (HDG/SS kg/m)	Available lengths (m)	Material thickness HDG/SS (mm)
RZE-R	40	184	102	56	3	4
RZE-P	40	260/337	134/159	75/ -	3	5

Loading data according to IEC61537. The length of the end span must be reduced to 3/4 of the support spacing.

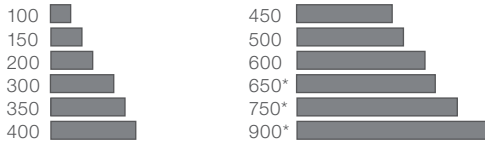
LADDER DESIGN

Z-rungs

The Z profile of the rungs allow for easy access for cable ties. The design also allows for equipment to be installed both above and below the rungs.



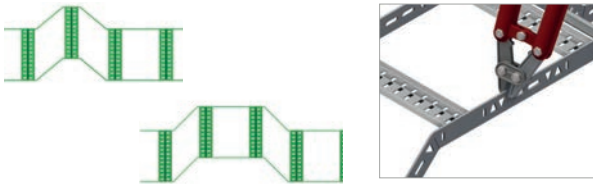
Available widths



*Only available for RZE-P.
2 x 450 are recommended for 900 mm widths.

RZE-R: Riser Slots

The RZE-R side rails feature a hole pattern which allows the ladder to be partially cut, then bent to create horizontal side steps and vertical risers. The cuts are then welded in place.

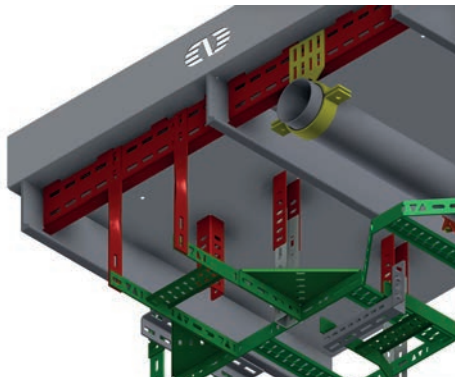


MultiGrid® for ships

In order to provide flexibility in installation and future extension or adaptation, we strongly suggest using our recommended installation method; MultiGrid® for Ships. MultiGrid® for ships can be included in two distinct ways. Firstly, a matrix is formed by welding lengths of perforated channel either in line with, or parallel to stringers. These form starting points for vertical supports at any point to directly support cable ladders, light piping or equipment.

Alternatively, welded starter brackets can be installed in a grid pattern which can then either be used for direct support, or they can be connected by traverse channels allowing full flexibility where support is required. This flexibility allows for change and collision avoidance throughout the installation and service life of the installation.

Both systems of welded channels or starter brackets are installed at the construction phase and are then cleaned and painted with the rest of the ship sections. Cable ladders in hot dip galvanised finish can then be installed and cable installation can begin immediately.



CERTIFICATES



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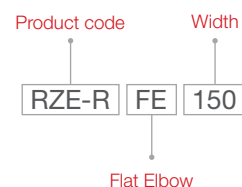
133 Multigrad for Ships



Intellectual Property Rights

Please note that several of the products presented in this catalogue are protected by our intellectual property rights in the form of patents, registered designs and trademarks, and that we have made the strategic decision to police and enforce these rights in all relevant jurisdictions.

HOW TO READ TYPE DESCRIPTIONS



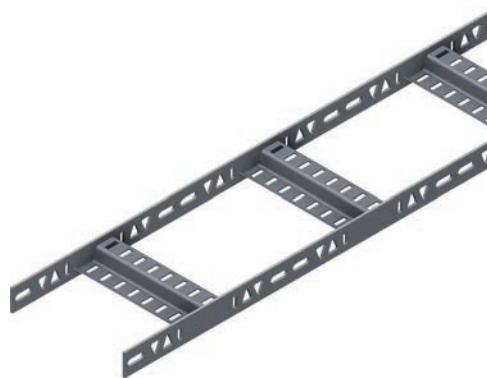
TE = Tee-Piece
FE = Flat Elbow
TE-PA = Tee-Piece Part
RI = Riser
SC = Splice Connector
RB = Riser Bracket
HV = Hinge Vertical
FC = Fixing Clamp
CS = Central Support
EP = Edge Protector

RZE-R Cable Ladder System

RZE-R Cable Ladder

Flexible Cable Ladder with Z-profiled and slotted rungs. The ladder features perforation on the siderails to easily change direction vertically or sideways.

Type Description	PR	PR (kg)	HDG	HDG (kg)
RZE-R-100	1372250	7.5	85923	8.3
RZE-R-150	1372251	8.1	85924	8.8
RZE-R-200	1372252	8.6	85925	9.3
RZE-R-300	1372253	9.6	85926	10.5
RZE-R-350	1372254	10.2		
RZE-R-400	1372255	10.6	85927	11.5
RZE-R-450	1372256	11.1	85928	12.1
RZE-R-500	1372257	11.6	85929	12.7
RZE-R-600	1372258	12.6	85930	13.8



RZE-R 90° Flat Elbow

90° Flat Elbow for the RZE-R Cable Ladder system.

Type Description	PR	PR (kg)	HDG	HDG (kg)
RZE-R FE-150	85222	2.9	1372068	2.9
RZE-R FE-200	84845	3.2	1372069	3.2
RZE-R FE-300	84833	4.1	1372070	4.1
RZE-R FE-400	84834	4.8	1372071	4.8
RZE-R FE-450	84835	5.1	1372072	5.1
RZE-R FE-500	84836	5.5	1372073	5.5
RZE-R FE-600	84837	6.2	1372074	6.2



RZE-P Cable Ladder System

RZE-P Cable Ladder

Cable Ladder for heavy loads with slotted rails, featuring slotted Z-profile rungs.

Type Description	PR	PR (kg)	HDG	SS
RZE-P-100	86793	9.5	86780	86819
RZE-P-150	86794	10.1	86781	86820
RZE-P-200	86795	10.7	86782	86821
RZE-P-250	86796	11.4	86783	86822
RZE-P-300	86797	12.1	86784	86823
RZE-P-350	86798	12.6	86785	86824
RZE-P-400	86799	13.3	86786	86825
RZE-P-450	86800	13.8	86787	86826
RZE-P-500	86801	14.5	86788	86827
RZE-P-600	86802	15.7	86789	86828
RZE-P-650	86803	16.4	86790	86829
RZE-P-750	86804	17.0	86791	86830
RZE-P-900	86805	19.0	86792	86831



RZE-P 90° Flat Elbow

90° Flat Elbow for the RZE-P Cable Ladder System.

Type Description	PR	PR (kg)	HDG	SS
RZE-P 90-100	87678	2.6	87652	87665
RZE-P 90-150	87679	2.9	87653	87666
RZE-P 90-200	87680	3.2	87654	87667
RZE-P 90-250	87681	3.5	87655	87668
RZE-P 90-300	87682	3.9	87656	87669
RZE-P 90-350	87683	4.2	87657	87670
RZE-P 90-400	87684	4.5	87658	87671
RZE-P 90-450	87685	5.9	87659	87672
RZE-P 90-500	87686	6.4	87660	87673
RZE-P 90-600	87687	7.2	87661	87674
RZE-P 90-650	87688	7.7	87662	87675
RZE-P 90-750	87689	8.5	87663	87676
RZE-P 90-900	87690	9.8	87664	87677



RZE Accessories

Splice Connector

Splice Connector for RZE-P and RZE-R Cable Ladder System. Two Splice Connectors required for each connection.

Type Description	Fasteners included	SS	SS (kg)	HDG
RZE SC-40-P	2×M10	82873	0.1	85516



Tee and Cross Piece Bracket

Bracket for forming Tee and Cross-pieces for RZE-P and RZE-R Cable Ladder System.

Type Description	Fasteners included	SS	SS (kg)	HDG
RZE-P TE-PA	8×M10	87973	0.7	87972



Riser Bracket (Only needed for RZE-P)

45° Riser Bracket for the RZE-P Cable Ladder System.

Type Description	Fasteners included	PG	PG (kg)
RZE -P RB-45	8×M10	81769	0.2



Hinge Vertical

Vertical Hinge for the RZE-P and RZE-R Cable Ladder Systems. Two hinges are required for each connection.

Type Description	Fasteners included	HDG	HDG (kg)
RZE HV	2×M6	81575	0.5



Fixing Clamp

Fixing Clamp for clamping on the siderail of the RZE-P and RZE-R Cable Ladders.

Type Description	Fasteners included	SS	SS (kg)	HDG
RZE FC-40	1×M10	86876	0.09	1372099



Fixing Clamp to Channel

Fixing Clamp to fasten the RZE-P and RZE-R side rail to a Vertical Channel.

Type Description	Fasteners included	HDG	HDG (kg)
RZE FC-CH-30/40	1×M10	1372098	0.2



Light Fitting Fixing Bracket

Light Fitting Bracket for attaching Light Fittings to Cable Ladder type RZE-R.

Type Description	Fasteners included	SS	SS (kg)
A-RZE/RHF LB Glamox	2×M6	85618	0.1
A-RZE LB-Ceag	1×M6/1×M8	83599	0.09



Light Fitting Welding Bracket

Welding Bracket for Light Fittings to be combined with a 100 mm wide Cable Tray.

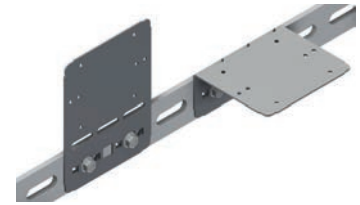
Type Description	PR	PR (kg)
S-RZE LB-WB	85195	0.4



Socket Plate

Socket Plate for bolting to RZE-P and RZE-R Cable Ladders. Can be easily formed to a 90° angle.

Type Description	Fasteners included	PG	PG (kg)
A-RZE SO-40	2×M10	85194	0.3



Exit Plate

Exit Plate for exiting cables over the siderail of RZE-R & RZE-P Cable Ladders. The plate is fitted by pressing it onto the siderail. No fasteners are required.

Type Description	SS	SS (kg)
A-RZE/RHF EX	83598	0.08



Edge Protector

To protect cables from sharp edges. 50 m spool.

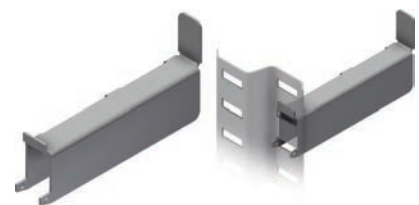
Type Description	CS	CS (kg/m)
A-RZE EP	84636	0.2



Cantilever Arm for rung

Cantilever Arm for temporary fixing to slots on Z-rung when the Cable Ladder is fitted on edge. Holds the cables prior to cable ties being fixed.

Type Description	PG	PG (kg)
A-RZE CA	85437	0.1



Cable Pulling Tool

Stainless steel cable pulling tool for fast and easy cable installation. Two sizes. Size 1 suits cables up to Ø=60 mm. Size 2 is suitable for cables up to Ø=120 mm.

Type Description	SS	SS (kg)
Rig n Roll size 1	84629	0.4
Rig n Roll size 2	84628	0.5



RZE Central Support

Central Support Bracket for RZE-P and RZE-R Cable Ladder Systems. Can be combined with Mekano Channel 50-1. A single central support facilitates easier cable pulling.

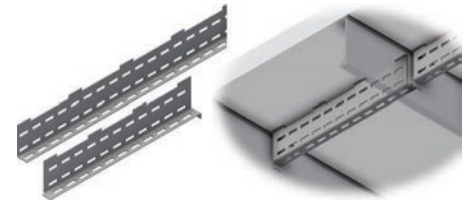
Type Description	HDG	HDG (kg)
RZE CS-150	82820	0.7
RZE CS-200	82821	0.8
RZE CS-300	82822	1.0
RZE CS-400	82823	1.3
RZE CS-450	82824	1.4
RZE CS-500	82825	1.6
RZE CS-600	82826	1.8
RZE CS-750	82827	2.3
RZE CS-900	82828	2.5



Multigrid for Ships

Welding Channels

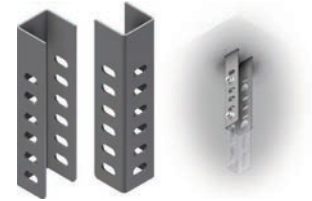
Perforated Welding Channel in carbon steel. To be welded and painted together with the structure.



Type Description	CS	CS (kg)
S-M WCH-100L 600	87999	1.6
S-M WCH-100L 1500	85167	3.9

Starter Bracket

Welding Bracket in carbon steel. To be welded and painted together with the structure.



Type Description	PR	PR (kg)
S-M WB-200-UNO-3	87998	0.4

Splice Channel

300 mm long Channel Splice for connecting Starter Brackets to the Cable Ladder.



Type Description	HDG	HDG (kg)
S-M CH-42-3-300	87997	0.6