

Maintenance & Modifications

Quick guide for selection, sizing and ordering of EIT & HVAC support systems



Reduce MMO costs with >30%



Flexible cold
work solutions



Quick and Easy
On-site modifications



Light weight
support system



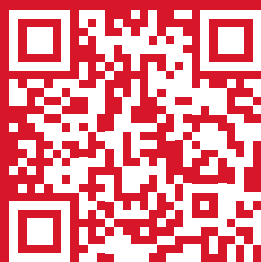
Reduce deferment
& installation cost

We Support You!

This is your tool for selection, sizing and ordering of EI&T support systems used in offshore maintenance and modification work.

By following the step-by-step guide you can reduce your MMO costs with >30%.

Full product overview is found at www.oglaend-system.com/selector



www.oglaend-system.com/selector

STEP-BY-STEP GUIDE

TO REDUCING PROJECT COSTS WITH >30%



ENGINEERING

- Rout in cables, tubing and HVAC
- Identify total load (cables, tubing, HVAC and more).
- Define starter points, then select support system.
- Select parts for cable ladders/ cable trays/HVAC support.
- All our systems for EI&T are pre-engineered. Calculations and documentation are completed by using Mekano® loading table on page 3.



Multi-discipline design reduces cost and optimizes volume.



PURCHASE

- Order using the procedure described at the back of the brochure or produce a MTO/ BOM through company purchase procedures.
- Call us for support - we have done this since 1977.

Phone: (+47) 51 78 81 00
E-mail: order@oglaend-system.com



We can answer any question you might have.



INSTALLATION

- Re-use existing grid or install new starters
- Install the support typicals.
- Install the cable ladder, cable tray and HVAC.
- Redline original or project drawings.
- Ready for as-built of DFO.



Our webpage contains installation guides for all products.

www.oglaend-system.com

Mekano® Support System

MEKANO® CHANNELS

Type	Art. no. SS	Weight (kg)
① CH100-1	1371685	5.1
② CH50-2T1.5	1372181	4.2
③ CH100-2T2	1372184	11.5

Length = 3000 mm.

H-BEAM CLAMP 50

Type	Art. no. SS	Weight (kg)
④ Fixing Clamps	85197	0.4
④ Beam Clamp	85622*	1.2
④ Beam Clamp	85624**	1.7

For flange thickness up to 14 mm.
* Flange width 88-160 mm.
Must be used with fixing clamps.
** Flange width 102-300 mm.
Must be used with fixing clamps.

H-BEAM CLAMP 100

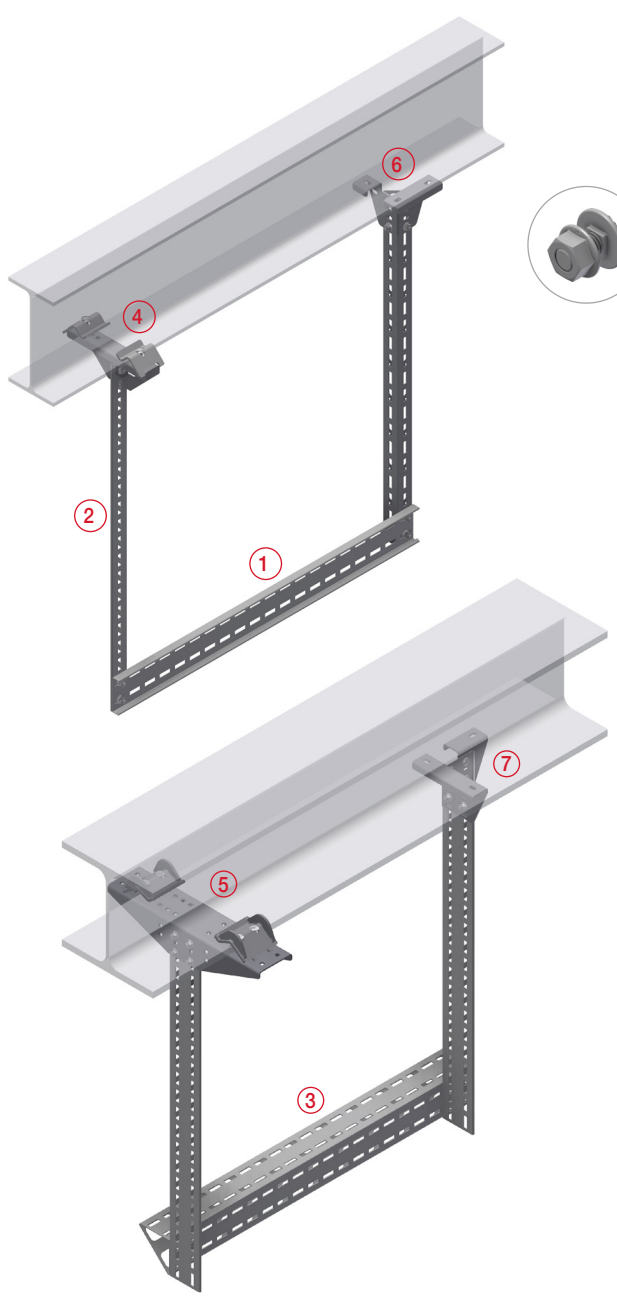
Type	Art. no. SS	Weight (kg)
⑤ Fixing Clamps	1372491	3.0
⑤ Beam Clamp	1372495*	3.5
⑤ Angle Bracket	1372497	0.1

For flange width 100-350 mm and up to 30 mm thick. Angle brackets can be used to reinforce connectors.
* Must be used with fixing clamps.

BOLTED L-BRACKET

Type	Art. no. SS	Weight (kg)
⑥ Bolted Starter	1306907*	0.7
⑦ Bolted Starter	1306908**	1.3

* For Mekano® CH 50-2T1.5
** For Mekano® CH 100-2T2

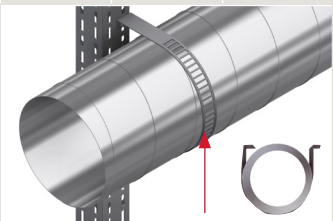


FASTENERS

Type	Art. no.	Qty/ pack
M6x12	1371981	200
M6x16	1306886	100
M6x20	1371982	100
M10x20	1371983	100
M10x25	1371437	100

HVAC CLAMP

Diameter (mm)	Art. no. SS	Weight (kg)
80	87984	0.25
100	87985	0.28
125	87613	0.30
160	87614	0.30
180	87615	0.30
200	87616	0.30
230	87617	0.40
250	87618	0.40
315	87619	0.50
400	87620	0.60
500	87621	1.00
600	87622	1.10
630	87877	1.20
800	87623	1.50
900	87988	1.80
1000	87989	2.00
1250	87990	3.40



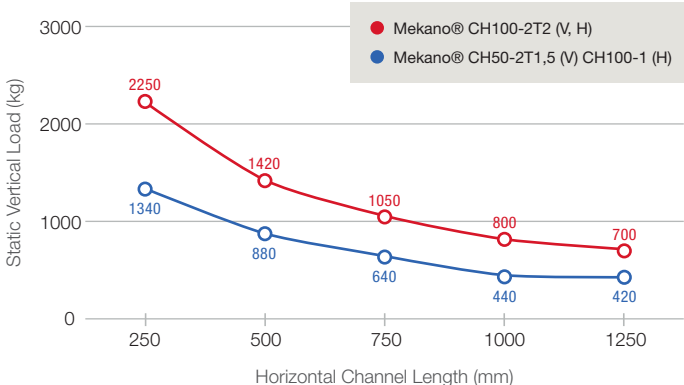
INSTALLATION GUIDELINES FOR SUPPORT SYSTEM

Our systems are **pre-engineered**. The need for further calculations in PMO projects will in most cases be unnecessary.

- System segregation distance: 0.3 m
- Distance between supports: Ladder < 5 m, Tray < 3 m
- Maximum distance to bend or raiser: 0.6 m
- Spare 20% capacity for future modifications
- Fill all slots at connection points with bolts (minimum two bolts per connection point)

Mekano® Loading Table

U-support: vertical channel length 1000 mm
Deflection allowance: L/200



OE100 Cable Ladder System

CABLE LADDER		
Width (mm)	Art. no. SS	Weight (kg)
150	1371606	12.2
300	1371607	13.8
450	1371608	15.5
600	1371609	17.2
750	1371610	18.8
900	1371611	20.4

Length = 3 m,
also available in 6 m.

FLAT ELBOW 90°		
Width (mm)	Art. no. SS	Weight (kg)
150	1384036	5.2
300	1384037	6.7
450	1384038	8.2
600	1384039	9.6
750	1384040	11.0
900	1384041	12.4

Radius = 600 mm,
4 x M10 fastener(s) included.

FLAT ELBOW 45°		
Width (mm)	Art. no. SS	Weight (kg)
150	1384012	2.7
300	1384013	3.5
450	1384014	4.2
600	1384015	4.9
750	1384016	5.6
900	1384017	6.4

Radius = 600 mm,
4 x M10 fastener(s) included.

FLEXI RISER PART		
Width (mm)	Art. no. SS	Weight (kg)
150	1371642	1.5
300	1371643	1.6
450	1371644	1.7
600	1371645	1.8
750	1371646	2.0
900	1371647	2.3

Any required angle from 0-90°.

FLEXI RISER		
Width (mm)	Art. no. SS	Weight (kg)
150	1371636	2.6
300	1371637	2.7
450	1371638	2.8
600	1371639	2.9
750	1371640	3.1
900	1371641	3.2

Any required angle from 0-90°.
8 x M10 fastener(s) included.

CROSS PIECE		
Width (mm)	Art. no. SS	Weight (kg)
150	1384720	15.0
300	1384721	16.6
450	1384722	18.9
600	1384723	20.9
750	1384724	23.7
900	1384725	25.9

Radius = 600 mm,
8 x M10 fastener(s) included.

TEE PIECE		
Width (mm)	Art. no. SS	Weight (kg)
150	1384288	10.3
300	1384301	11.8
450	1384314	13.9
600	1384327	15.6
750	1384340	18.2
900	1384353	20.1

Radius = 600 mm,
6 x M10 fastener(s) included.

END COVER		
Width (mm)	Art. no. SS	Weight (kg)
150	60009	0.6
300	60010	0.9
450	60011	1.2
600	60012	1.5
750	60013	1.8
900	60014	2.1

Provides a tidy end point on the cable ladder run. Fastener(s) not included.

HILTI S-BT FASTENER		
Type	Art. no. SS	Qty/ pack
S-BT M10 bolt and nut	87390	100



BOLTED FLEXI STARTER		
Type	Art. no. SS	Weight (kg)
BS-360	87051	1.5

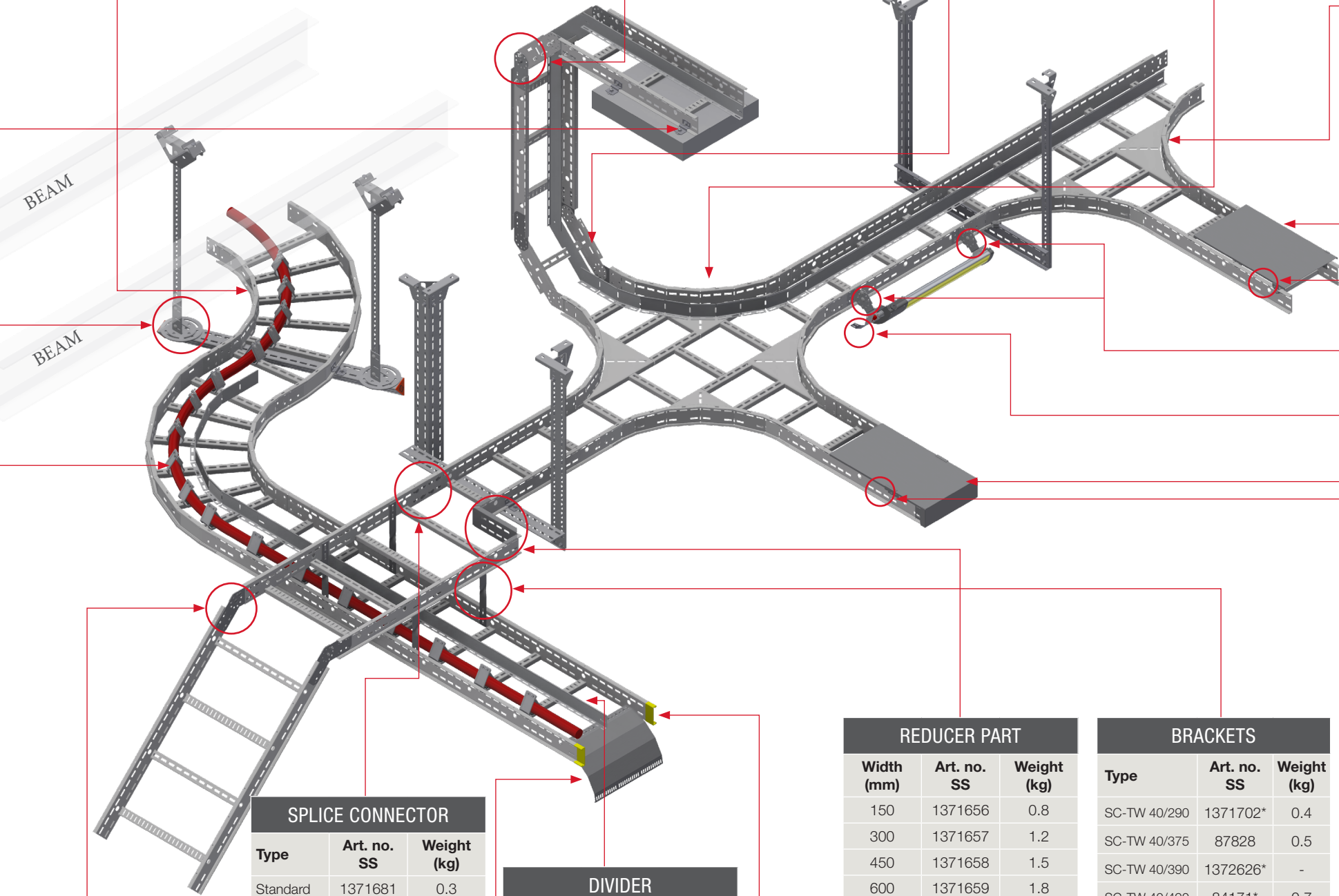
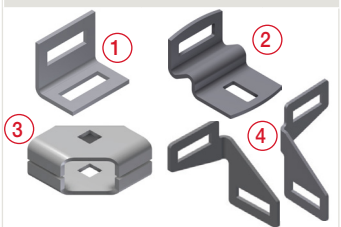
Flexible design with 360° rotation.
For CH50-2T channels.

SMARTCLEAT		
Single Ø25mm - Ø99mm		
Trefoil Ø25mm - Ø99mm		
Quad Ø25mm - Ø99mm		
Spacer mats and pads		
See www.oglaend-system.com for full selection		



FIXING CLAMPS		
Type	Art. no. SS	Weight (kg)
1 Standard	1306889*	0.1
2 Outside	60900*	0.1
3 Clamp	1302598**	0.1
4 Twisted pair	1371705***	0.3

*2 x M10 fasteners included.
**1 x M6 fastener included.
***4 x M10 fasteners included.



HINGE		
Type	Art. no. SS	Weight (kg)
Vertical*	1371679	0.7
Horizontal	1371680	0.6

4 x M10 fastener(s) included.
*Adjust in steps of 4°.

SPLICE CONNECTOR		
Type	Art. no. SS	Weight (kg)
Standard	1371681	0.3

4 x M10 fastener(s) included.
Splice with notches.

EXIT PLATE		
Type	Art. no. SS	Weight (kg)
Standard	1371723	0.7

2 x M10 fastener(s) included.

DIVIDER		
Type	Art. no. Duplex SS	Weight (kg)
Straight	1303284	3.7
Flexi Riser	1303290*	0.5
Flat Elbow	1303286	3.6

Made in magnetic Duplex SS.
Fastener(s) included. *Made to fit both inside and outside risers.

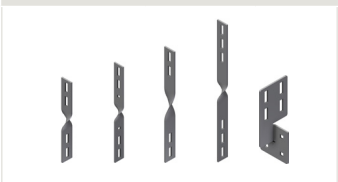
REDUCER PART		
Width (mm)	Art. no. SS	Weight (kg)
150	1371656	0.8
300	1371657	1.2
450	1371658	1.5
600	1371659	1.8
750	1371660	2.1

4 x M10 fastener(s) included.

END PROTECTOR	
Yellow Plastic	1306893

BRACKETS		
Type	Art. no. SS	Weight (kg)
SC-TW 40/290	1371702*	0.4
SC-TW 40/375	87828	0.5
SC-TW 40/390	1372626*	-
SC-TW 40/490	84171*	0.7
SC-TW 90/213	1371700*	0.5

*M10 fastener(s) included.



COVER CLAMP		
Type	Art. no. SS	Weight (kg)
Standard	1302531	0.1
Ventilated	89062	0.1

Fastener(s) included.

STRETCH PREVENTER		
Type	Art. no. SS	Weight (kg)
Glamox	1371854*	0.3
Glamox LED	91248	0.3
Stahl Ø32	1302225	0.3
Stahl Ø25	83498	0.3
Ceag	1371853	0.3
Chalmit Ø20	85165	0.3

*1 x M8 fastener included.

COVER		
Width (mm)	Art. no. SS	Weight (kg)
150	1302543	7.9
300	1302544	13.2
450	1302545	18.7
600*	1302546	12.2
750*	1302547	14.8
900*	1302548	17.0

Length = 3 m and *1,5 m.
Cover for 45°/90° bend, Tee- and Cross-pieces on request.

LIGHT FITTING BRACKET		
Type	Art. no. SS	Weight (kg)
OE100-AH	1371720	0.5

Can be fitted at any required angle in 4° increments. 2 x M10 fasteners included.

This poster shows the main/most used parts of the OE100 System.
For a full overview of the OE System view our products online:
www.oglaend-system.com/selector

Certificates, please contact us for exact application:



SPB-RF40 Cable Tray System

CABLE TRAY		
Width (mm)	Art. no. SS	Weight (kg)
50	1371751	5.3
100	1371752	6.4
150	1371753	7.8
200	1371754	9.2
300	1371755	13.7
400	1371756	17.0
500	1371757	20.5
600	1371758	23.4
Length = 3 m. Material thickness = 1,5 mm (2 mm also available).		

FLAT ELBOW 45°		
Width (mm)	Art. no. SS	Weight (kg)
50	1371766	0.3
100	1371767	0.4
150	1371768	0.6
200	1371769	0.8
300	1371770	1.3
400	1371771	1.9
500	-	-
600	-	-
Radius = 75 mm, 4 x M6x12 fastener(s) included.		

FLAT ELBOW 90°		
Width (mm)	Art. no. SS	Weight (kg)
50	1371760	0.4
100	1371761	0.7
150	1371762	1.0
200	1371763	1.3
300	1371764	2.2
400	1371765	3.2
500	79036	4.5
600	79037	5.9
Radius = 75 mm, 4 x M6x12 fastener(s) included.		

ELBOW FLEXI 0°-90°		
Width (mm)	Art. no. SS	Weight (kg)
50	60269	0.4
100	60271	0.6
150	60272	0.8
200	60273	1.2
300	60274	2.0
400	60275	3.2
500	60276	4.6
600	60277	6.4
Any required angle from 0 to 90°, 8 x M6x12 fastener(s) included.		

STANDARD FLEXI RISER		
Width (mm)	Art. no. SS	Weight (kg)
50	1371775	0.4
100	1371776	0.5
150	1371777	0.7
200	1371778	0.8
300	1371779	1.1
400	1371780	1.5
500	1371781	1.8
600	1371782	2.1
Radius = 75 mm, flexible inside/outside riser 0-90°. Bent by hand.		

MODULAR FLEXI RISER		
Width (mm)	Art. no. SS	Weight (kg)
50	60119	0.9
100	60121	1.0
150	60122	1.2
200	60123	1.3
300	60124	1.6
400	60125	1.9
500	60126	2.2
600	60127	2.5
Radius = 175 mm. Flexible inside and outside riser. Can be expanded with multiple joints.		

COMBI RISER		
Width (mm)	Art. no. SS	Weight (kg)
50	1302139	0.4
100	1302140	0.4
150	1302141	0.5
200	1302142	0.5
300	1302143	0.5
400	1302144	0.6
500	1302145	0.6
600	1302146	0.6
Inside/outside riser in 90° or 2 x 45°. 6 x M6x12 fastener(s) included.		

END CAP		
Width (mm)	Art. no. SS	Weight (kg)
50	1300732	0.1
100	1300733	0.2
150	1300734	0.2
200	1300735	0.2
300	1300736	0.3
400	1300737	0.4
500	1300738	0.5
600	1300739	0.6
2 x M6x12 fastener(s) included.		

CANTILIVER ARM		
Width (mm)	Art. no. SS	Weight (kg)
100	1300055	0.3
150	1300056	0.3
200	1300057	0.4
300	1300058	0.7
400	1300059	0.8
Width (mm) denotes width of supported cable tray.		

TEE PIECE		
Width (mm)	Art. no. SS	Weight (kg)
50	1371785	0.6
100	1371786	0.9
150	1371787	1.4
200	1371788	1.8
300	1371789	2.9
400	1371790	4.2
500	1302073	5.7
600	1302074	7.2
Radius = 75 mm, 6 x M6x12 fastener(s) included.		

HILTI S-BT FASTENER		
Type	Art. no. SS	Qty/pack
S-BT M10 bolt and nut	87390	100

SPLICE CONNECTOR		
Type	Art. no. SS	Weight (kg)
Inside fit	1371808	0.2
Outside fit	77516	0.2
Splice Plate	1371813	0.2
M6x12 fastener(s) included. Recommended to use splice plate for tray widths above 300 mm.		

Z-REDUCER		
Width (mm)	Art. no. SS	Weight (kg)
50	86133	0.1
100	86134	0.1
150	86136	0.2
200	86135	0.2
250	86148	0.3
300	86137	0.3
Splice connector must be used on the opposite side of the reducer.		

LIGHT FITTING BRACKET		
Width (mm)	Art. no. SS	Weight (kg)
110	1371851	0.3
160	57637	0.3
210	57638	0.4
310	57639	0.5
Can be attached to have the light facing flat, 45° or 30°. 4 x M6x12 fastener(s) included.		

STRETCH PREVENTER		
Type	Art. no. SS	Weight (kg)
Glamox	1371854*	0.3
Glamox LED	91248	0.3
Stahl Ø32	1302225	0.3
Stahl Ø25	83498	
Ceag	1371853	0.3
Chalmit Ø20	85165	0.3
*1 x M8 fastener included.		

TWISTED BRACKET		
Type	Art. no. SS	Weight (kg)
Twisted	1371818	0.3
Suits tray widths 100-150 mm. 2 x M10 & 2 x M6 fasteners included.		

CROSS PIECE		
Width (mm)	Art. no. SS	Weight (kg)
50	1302628	1.0
100	1302629	1.3
150	1302630	1.6
200	1302631	2.0
300	1302632	2.6
400	1302633	4.0
500	-	-
600	-	-
Radius = 75 mm, 8 x M6x12 fasteners included.		

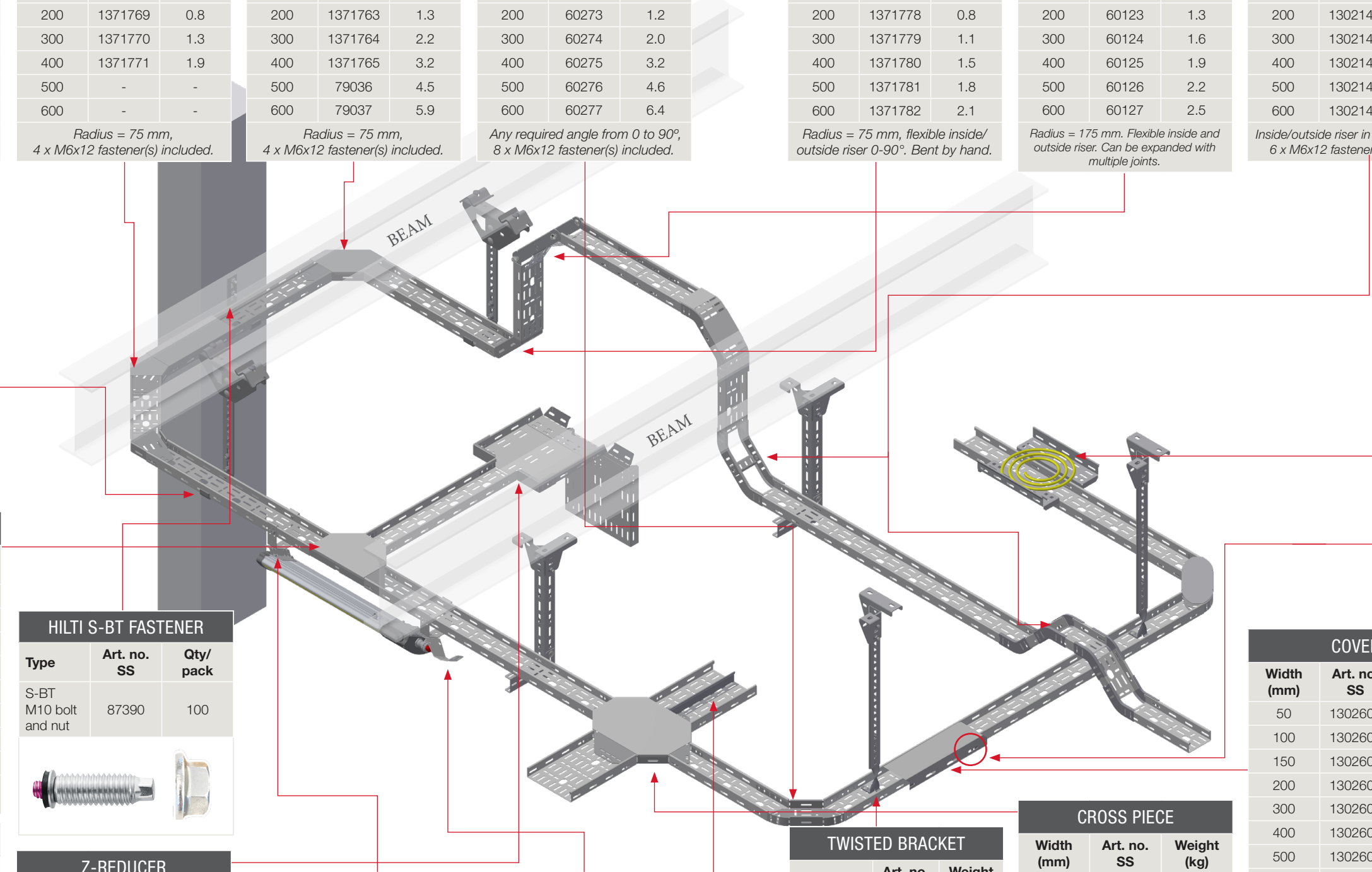
COVER		
Width (mm)	Art. no. SS	Weight (kg)
50	1302603	1.8
100	1302604	3.0
150	1302605	4.2
200	1302606	8.2
300	1302607	11.8
400	1302608	15.4
500	1302609	19.0
600	1302610	22.6
Length = 3 m. Cover for Flat Elbows, Tee-and Cross-pieces on request.		

TAGPLATE		
Type	Art. no. SS	Weight (kg)
① TAG14	1302588	0.2
② TAG12	1302163	0.1
2 x M6x12 fastener(s) included.		

This poster shows the main/most used parts of the SPB-RF40 System. For a full overview of the SPB System view our products online: www.oglaend-system.com/selector

Certificates, please contact us for exact application:



Please note: Whilst every effort has been made to ensure the accuracy of the content, our systems and products are under continual improvement and development, therefore we reserve the right to make changes to products or specification without prior notice. Product graphics are intended to be representative, however small differences in actual products may occur.

Hilti Fastening on Steel solutions

Hilti Fastening on Steel (FoS) is a fast, secure and simple fastening method. Ideal **cold work solution** for offshore modification and maintenance, shipping or for greenfield projects.

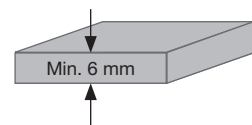
The systems allow fast and easy single operator installation with battery driven tools. There is **no through penetration** and rework of the coating required.

The stud is **installed in 2 minutes** and is tested for **40 years of service life**. 2h mandatory training course is included.

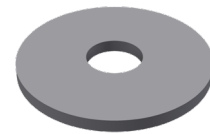
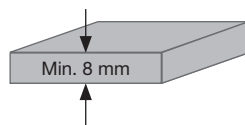
HILTI S-BT AND X-BT HL BOLT SYSTEM



S-BT
Self-threading studs screwed into base material. Minimum 6 mm base material.



X-BT
Studs driven into base material by piston-type tool. Minimum 8 mm base material.



Spacer
3 mm Sleeve SS for X-BT HL and S-BT applications.
Spacers can be used when fastening applications with M10 studs where the fixing holes are Ø11-12 mm. For example Mekano® CH50-2T1.5 channel.

ELECTRICAL CONNECTIONS

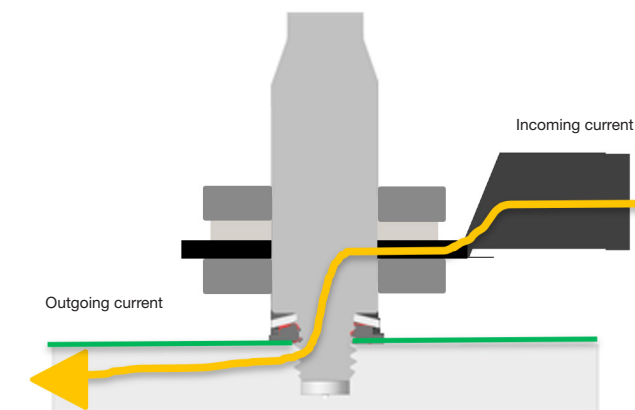


BONDING - FOR EQUALIZATION OF POTENTIALS

Installation time: 2 min
Bolt size: M10



57A permanent current or 1.2kA per 1 second (IEC EN 60947-7-2).



BEST PRACTICE: HILTI S-BT
OPTIONAL: HILTI X-BT

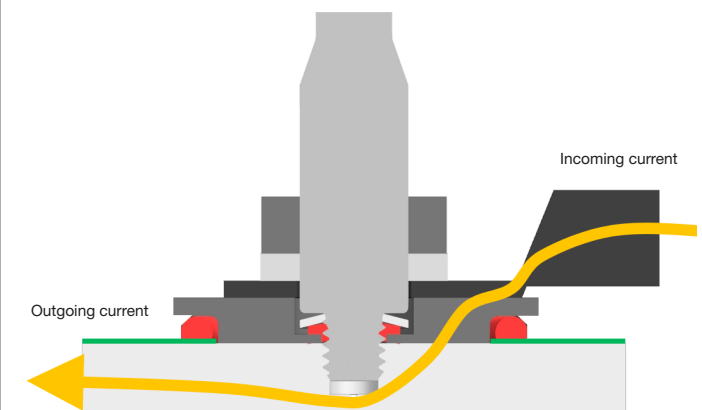


EARTHING - EQUIVALENT TO WELDING BOSS

Installation time: 2 min
Bolt size: M10



269A permanent current or 14.4kA per 1 second (IEC EN 60947-7-2)



BEST PRACTICE: HILTI S-BT

GRATING FASTENING

For quick and safe fastening of NORSOK approved offshore grating of 25-50+ mm height.

Eliminates need of threading, through bolting and clamping. Requires access only from one side.

2 minutes installation time per fastening point. Minimum 4 grating fasteners per grating panel.



BEST PRACTICE: HILTI X-BT
OPTIONAL: HILTI S-BT

CERTIFICATES



MULTI PURPOSE FASTENING

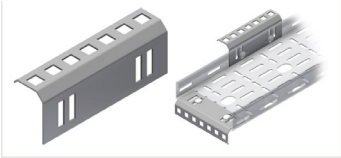
BEST PRACTICE:
OPTIONAL:

HILTI S-BT
HILTI X-BT

EXIT PLATE

Type	Art. no. SS	Weight (kg)
Exit plate	70263	0.1

2 x M6 fasteners included.



TAG PLATE

Type	Art. no. SS	Weight (kg)
TAG 14	1302588	0.2

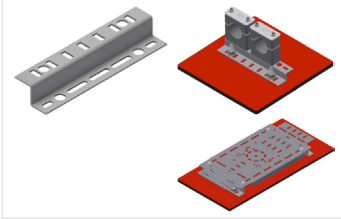
2 x M6 fasteners included.



UNIVERSAL BRACKET

Type	Art. no. SS	Weight (kg)
Uni. Bracket	70240	0.2

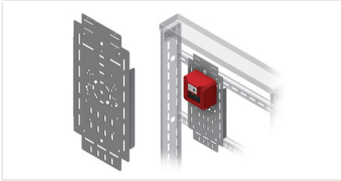
Used to install equipment plate or as tubing adapter for tubing clamps. Fastened with 2 S-BT M10 bolts.



STANDARD EQUIPMENT PLATE

Type	Art. no. SS	Weight (kg)
Eqmt plate	88364	1.2

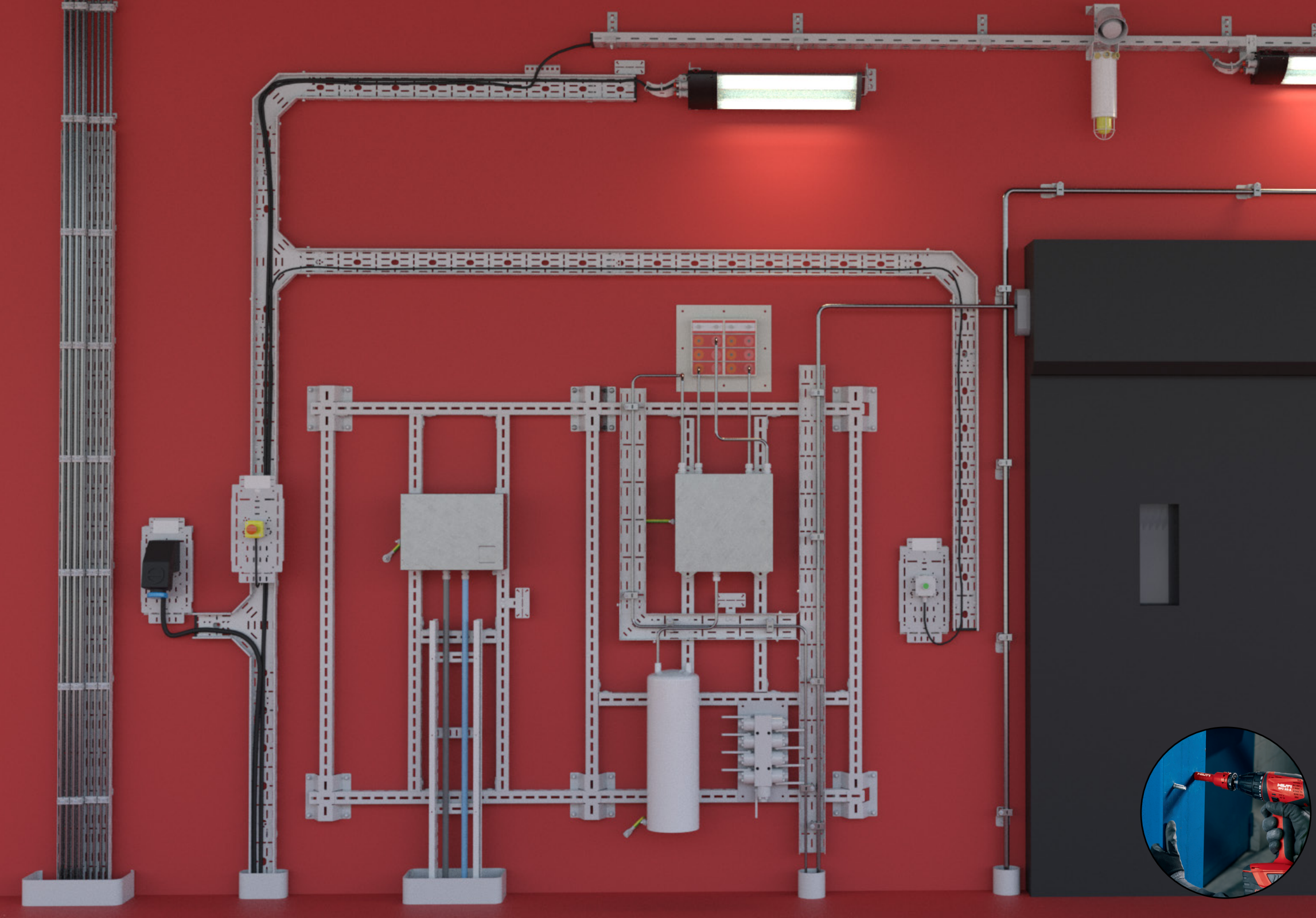
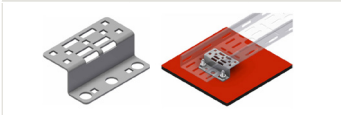
Fastened to art.no 70240 using 2 M6 fasteners (not included).



UNIVERSAL BRACKET

Type	Art. no. SS	Weight (kg)
Universal	68634	0.1

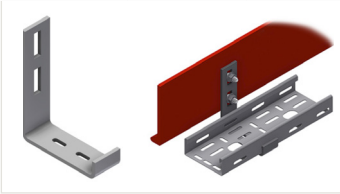
For fastening of 100 mm wide cable tray and other equipment. May also be used as cable protector/stretch preventer. Fastened with 1-2 S-BT M10 bolts.



CABLE TRAY CANTILEVER SUPPORT

Type	Art. no. SS	Weight (kg)
Cantilever	1302323	0.5

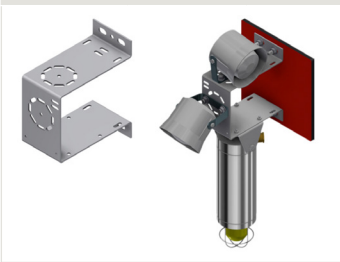
Fastened with 2 S-BT M10 bolts.



EQUIPMENT BRACKET

Type	Art. no. SS	Weight (kg)
Bracket	1302695	1,3

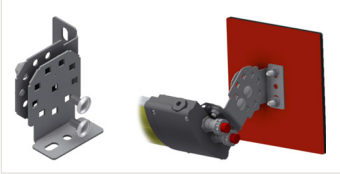
For equipment such as speakers, beacons and signal lamps. Can support 100 mm wide cable tray. Fastened with 4 S-BT M10 bolts.



LIGHT SUPPORT BRACKET

Type	Art. no. SS	Weight (kg)
Flexi	1371720	0.5

Fastened with 2 S-BT M10 bolts.



STRETCH PREVENTER

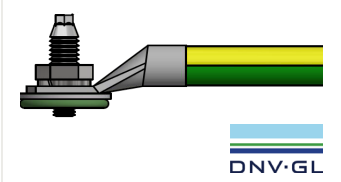
Type	Art. no. SS	Weight (kg)
Glamox	1371854*	0.3
Glamox LED	91248	0.3
Stahl Ø32	1302225	0.3
Stahl Ø25	83498	-
Ceag	1371853	0.3
Chalmit Ø20	85165	0.3

*1 x M8 fastener included.



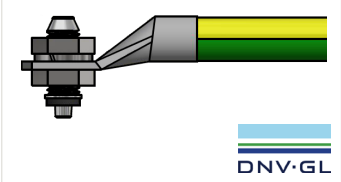
EARTHING

Welding free earthing system installed in minutes. See page 9 or www.oglaend-system.com



BONDING

Welding free bounding system installed in minutes. See page 9 or www.oglaend-system.com



HILTI CABLE TRANSITS

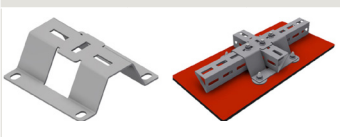
For offshore use. See www.oglaend-system.com for full overview.



STARTER BRACKET GRID LIGHT

Type	Art. no. SS	Weight (kg)
Grid Light Bracket	91253	0.9

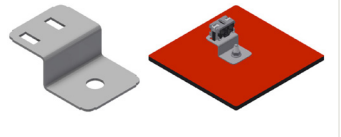
Fastened with 4 S-BT M10 bolts.



ETIN™ TUBING CLAMP BRACKET

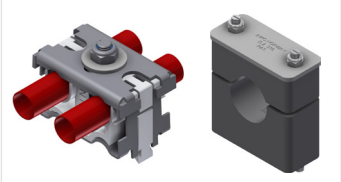
Type	Art. no. SS	Weight (kg)
Tubing Bracket	70235	0.09

Fastened with 1 S-BT M10 bolt.



ETIN™ AND INKO® TUBING CLAMPS

For tubing Ø6-42 mm. See www.oglaend-system.com for full overview.



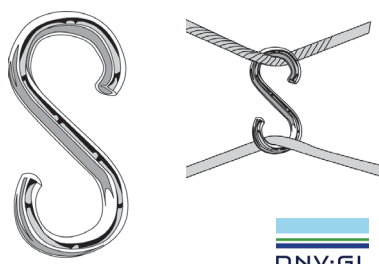
Temporary support for shut-down & decom projects

Temporary support for shut-down and decommissioning projects. Ensures direct, quick and safe attachment. May be used to support free hanging cables, temporary cable ladder or cable tray runs or temporary equipment such as speakers, beacons, boxes and signal lights.

SAFETY HOOKS

Length (cm)	Art. no.	Safe working load (kg)
160	1372893	60
230	1372894	55
310	1372895	190

Made in non-conductive thermoplastic polyester.

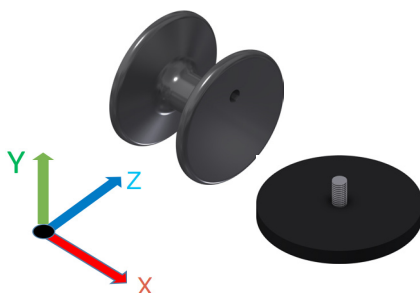


CIRCULAR SUPPORT MAGNET

Size (mm)	Art. no.	Safe working load X-Y-Z (kg)
Ø88 M8	68967*	27-42-27
Plastic boss	69769**	27-42-27

Plastic boss fits circular magnet

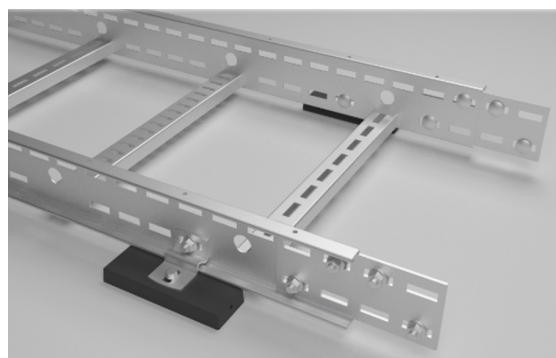
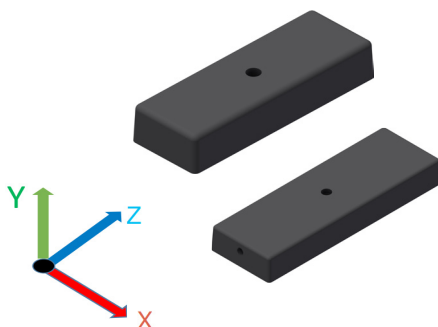
*Covered with rubber to ensure grip and vibration dampening



RECTANGULAR SUPPORT MAGNETS

Size (mm)	Art. no.	Safe working load X-Y-Z (kg)
175x60 M8	68965*	190-340-260
94x34 M6	68966*	27-70-53

*Covered with rubber to ensure grip and vibration dampening.



ORDERING

Send your order directly to ordre@oglaend-system.com

Øglænd System AS
P.O. box 133, Engelsvollvegen 264
N-4358 Kleppe, Norway

Phone: (+47) 51 78 81 00
E-mail: oglaend@oglaend-system.com

Order/purchase orders:
ordre@oglaend-system.com

www.oglaend-system.com



A Group Company of **HILTI**