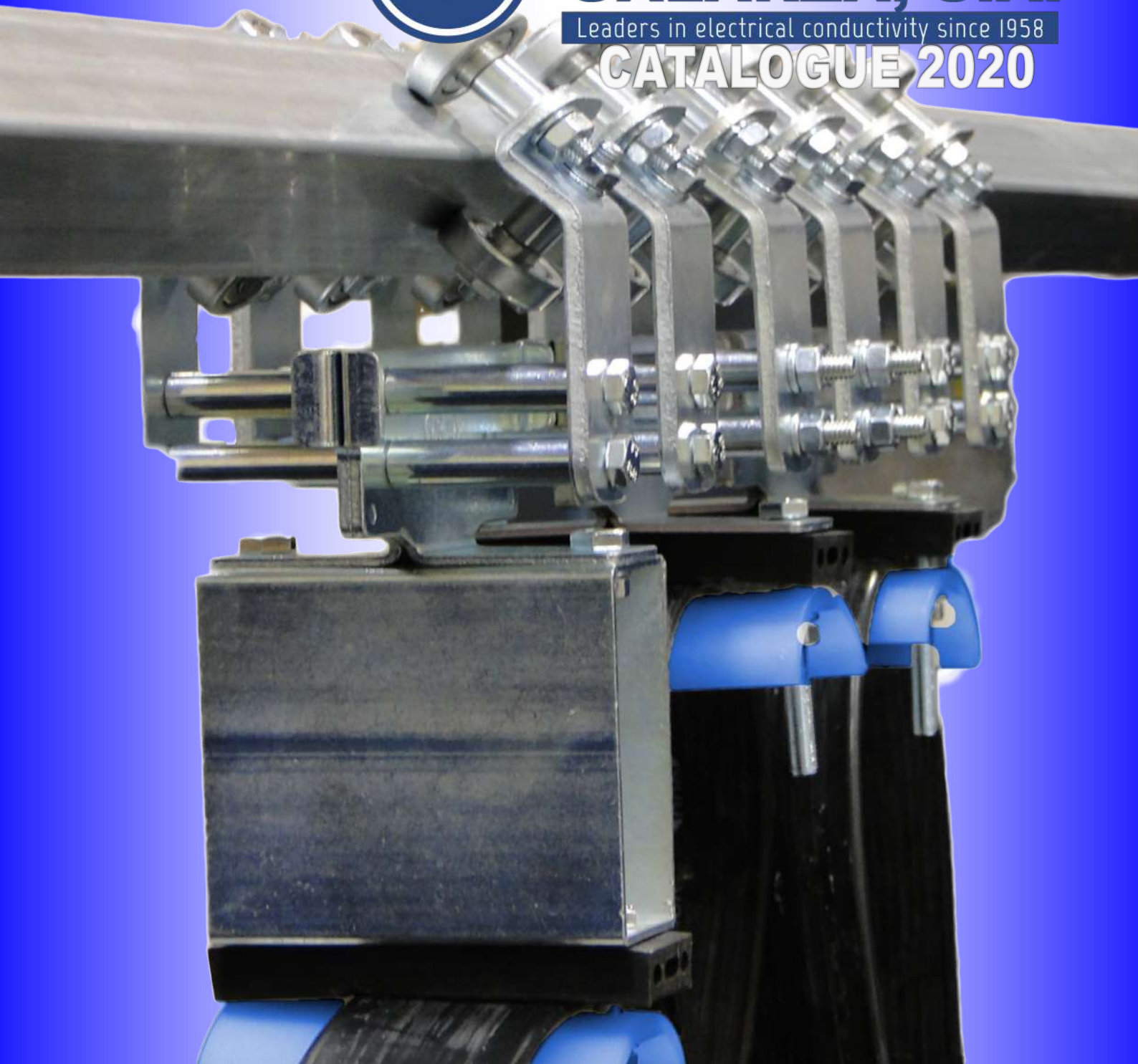




Industrias GALARZA, S.A.®

Leaders in electrical conductivity since 1958

CATALOGUE 2020

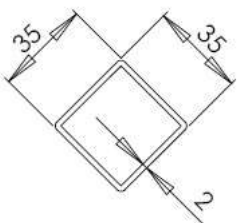


PROFILE

**MAX.
LOAD PER
TROLLEY**

DESCRIPTION

SERIES



30 KG

**FESTOON SYSTEM
RUNNING ON
DIAMOND PROFILE
35 X 35MM**

2307





GENERAL SALES CONDITIONS, SUPPLY AND WARRANTY

Generalities

The supply of the products contained in this catalogue is subject to the conformity of the tariff in force at the moment and the terms contained in these General Conditions of Sale and Guarantees.

Orders and prices

All orders received by IGA will be confirmed via fax or email. If in the following 24 hours IGA does not receive any claim, they will be considered definitive. IGA reserves the right to accept or reject any order.

Codes

The codes indicated in this catalogue are the standard products of IGA.

Delivery time

If for reasons beyond our control we can not fulfill this service commitment, IGA will inform the customer of the new term within a maximum of 48 hours after the reception of the order. The rest of references will be served in the shortest period of time possible and may make partial deliveries. Orders received that have a delivery time less than 72 hours, will follow the procedure described above. The breach of the previous commitment or a fractioned issue will not be grounds for compensation.

Transport

Our products are considered expired in our warehouse and the date of issue is shown on the delivery note. The goods travels at the addressee expense and risk, even if they are sent prepaid. In the case of lack of packages or visible damages due to transportation, the addressee must write it down on the delivery note, claim the carrier and inform the commercial department of IGA within 48 hours. Otherwise, it will be considered the conformity of the goods in quantity and condition. Claims for delays in transportation will not be accepted.

After 8 days from receipt of the goods, no claims will be accepted about the contents of the boxes.

Refunds

The products invoiced by IGA are considered a firm sale and has no right to refund. In case of an error in the execution of the order, the following shall be taken into account:
- The change must be authorized by the commercial direction of IGA. The warehouse of IGA will not accept any product without authorization.
- The accepted material will have a 20% reduction of its value for verification expenses.
-The goods returned to IGA travel at the client's risk.

Installations

IGA is exempted from any responsibility in the installations that do not comply with the advice or with the specifications and features of each range of product.

Warranty

IGA range of products has a 2 year warranty. The acknowledgment of the responsibility in warranty corresponds only to IGA and / or to its insurance company. Any other defect caused by aging, corrosion, improper installation or improper application, will not be subject to possible claims.

Jurisdiction

IGA will try to resolve any divergence with his clients through friendly channels. Having said that, in case of litigation, the parties agree and are obliged to submit to the arbitration appointed by the Court of the Arbitration Association of Bilbao, which will be responsible for the administration of the aforementioned arbitration in accordance with its Statute and Regulations. Likewise, they are obliged from now on to comply with the arbitral report that is issued.

IGA reserves the modification of the articles without previous notice.

NOTES OF INTEREST

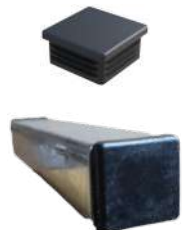
KIT FESTOON:

IGA offers the possibility of supplying the entire FESTOON system assembled under the customer's specifications.



FINAL PLUGS FOR THE PROFILE:

The option of plastic material caps to close both ends of the rolling profile has been added to our catalog. NOTE: The CM mounting assemblies have these series plugs incorporated.



Twitter
@indgalarza



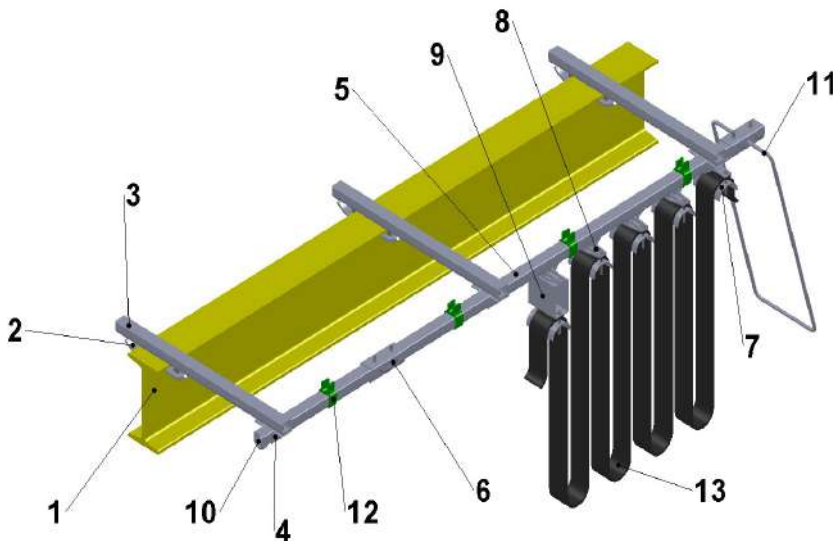
Facebook
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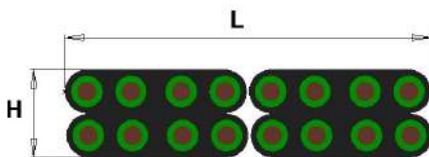
LinkedIn
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1. Beam
2. Beam clip
3. Support arm
4. Track support
5. Profile
6. Joint
7. End clamp
8. Cable trolley
9. Towing trolley
10. End stop
11. Joint with protection
12. Cable clamp
13. Electric cables



- In aggressive indoor / outdoor conditions the metal parts (bodies and cable holders) are supplied with EPOXY or made in stainless steel AISI 304.
- Option of bearings in stainless steel AISI316 with closure RS dust

NUMBER OF TROLLEYS REQUIRED:

$$N = (L / 2xH) - 1$$

Where:

- N: number of cable trolleys
- L: travelling length
- H: maximum loop height

REQUIRED AMBUSH:

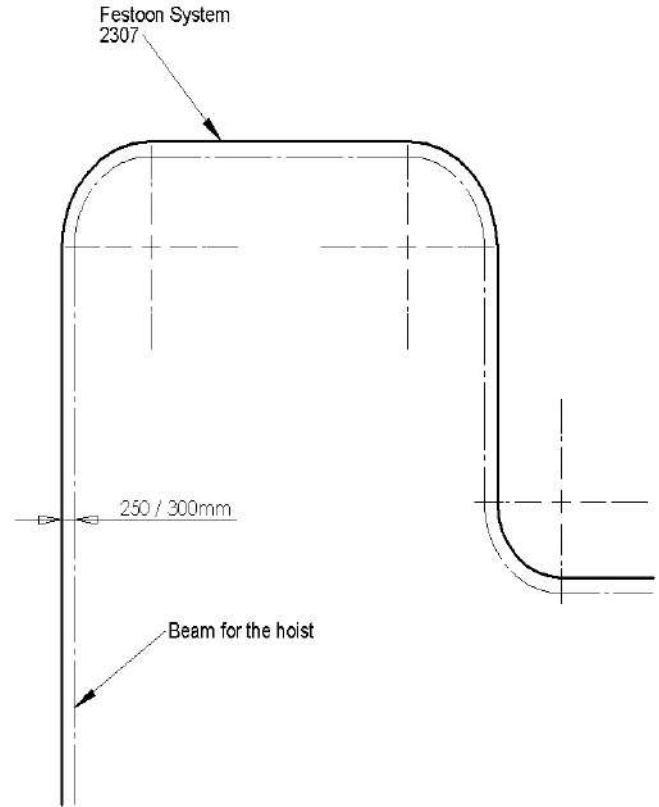
$$b = (N + 1) \times m$$

Where :

- b: maximum ambush length
- N: number of cable trolleys
- m: trolley length

CHARACTERISTICS

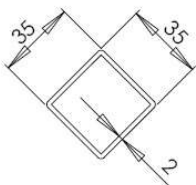
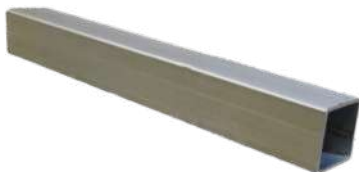
- Festoon system travelling in parallel to the beam of the hoist.
- Square tube 35x35mm in diamond shape.
- With customer's provided sketch, we supply the complete installation with curved and cut-to-size profiles.
- The profiles are supplied drilled at the support points recommended by IGA.
- Max. load per trolley: 30Kg.
- Smallest bending radius for curves: 500mm.
- Maximum distance between trolleys in the curves is 60°; so the maximum loop height would be half of the smallest radius in the track if the mentioned curve is $\geq 60^\circ$



OPTIONS

- Rolling profile. Running square tubes:
 - 30 x 30mm.
 - 32 x 32mm.
 - Etc.
- Trolleys:
 - Zinc plated steel + polyester coat.
 - Stainless Steel AISI 316.
- Wheels:
 - Ball bearings with anti dust RS sealing.

PROFILE

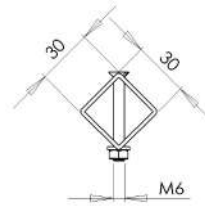
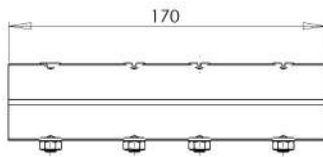


REFERENCE	CODE	MATERIAL	LEGTH	WEIGHT
2307-1	306031	Galvanized steel	5 meters	2,1 Kg/m
2307-1-Inox	306150	Stainless steel AISI 304	5 meters	2,1 Kg/m



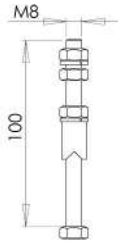
FESTOON SYSTEM SERIES 2307

JOINT



REFERENCE	CODE	MATERIAL		WEIGHT
		Body	Screws	
2307-3	306071	Zinc plated steel	Zinc plated steel	0,345 Kg
2307-3-Inox	306152	Stainless steel	Stainless steel	0,345 Kg

SUPPORT

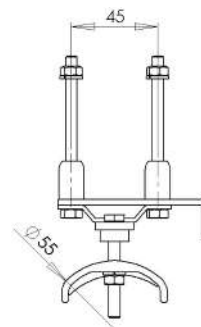
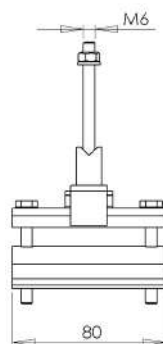


REFERENCE	CODE	MATERIAL		WEIGHT
		Cartridge shell	Screws	
2307-4	306072	Zinc plated steel	Zinc plated steel	0,085 Kg
2307-4-Inox	306153	Stainless steel	Stainless steel	0,085 Kg

TROLLEYS FOR MAXIMUM CABLE PACKAGE 58x20mm

END CLAMP

Saddle \varnothing 55mm



REFERENCE	CODE	MATERIAL		WEIGHT
		Body + Screws	Saddle	
2307-2	306070	Zinc plated steel	Polypropylene	0,330 Kg
2307-CH-2	306122	Zinc plated steel	Zinc plated steel	0,425 Kg
2307-CH-2-Inox	306482	Stainless steel	Stainless steel	0,425 Kg

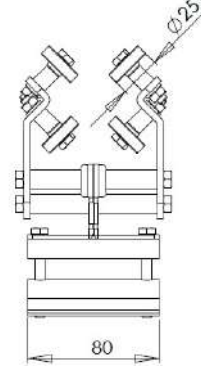
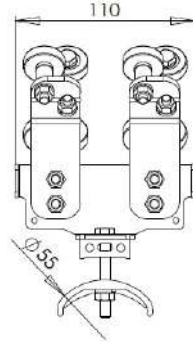


FESTOON SYSTEM SERIES 2307

TROLLEYS FOR MAXIMUM CABLE PACKAGE 58x20mm

CABLE TROLLEY

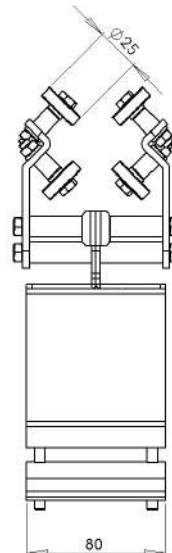
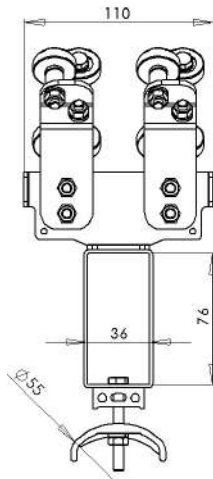
Saddle $\varnothing 55\text{mm}$



REFERENCE	CODE	MATERIAL			WEIGHT
		Body + Screws	Saddle	Ball bearings and seal	
H-2307-5	306404	Zinc plated steel	Polypropylene	Zinc plated steel-ZZ	1,102 Kg
H-2307-CH-5	306480	Zinc plated steel	Zinc plated steel	Zinc plated steel-ZZ	1,197 Kg
H-2307-CH-5-Inox	306483	Stainless steel	Stainless steel	Stainless steel-RS	1,197 Kg

TOWING TROLLEY

Saddle $\varnothing 55\text{mm}$



REFERENCE	CODE	MATERIAL			WEIGHT
		Body + Towing attachm. + Screws	Saddle	Ball bearings and seal	
H-2307-6	306405	Zinc plated steel	Polypropylene	Zinc plated steel-ZZ	1,500 Kg
H-2307-CH-6	306481	Zinc plated steel	Zinc plated steel	Zinc plated steel-ZZ	1,595 Kg
H-2307-CH-6-Inox	306484	Stainless steel	Stainless steel	Stainless steel-RS	1,595 Kg

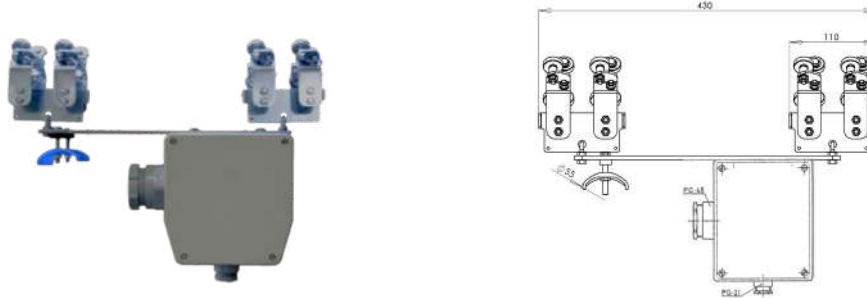


FESTOON SYSTEM SERIES 2307

TROLLEYS FOR MAXIMUM CABLE PACKAGE 58x20mm

PENDANT CONTROL UNIT TROLLEY

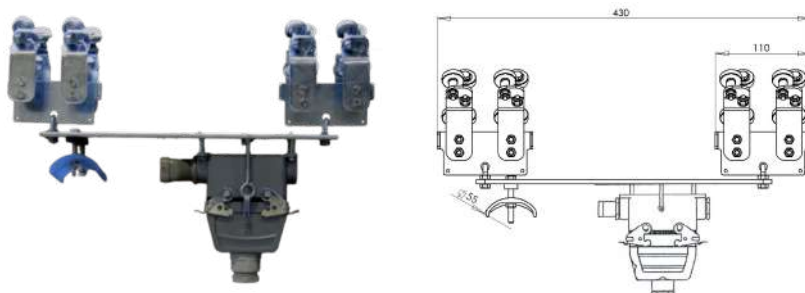
Saddle ø55mm



REFERENCE	CODE	MATERIAL						WEIGHT
		Body	Ball bearings +Screws	Saddle	Connection box	Cable glands		
H-2307-7	306558	Zinc plated steel	Zinc plated steel	Polyprop.	Polyester + glass fiber	Polyamide	4,130 Kg	
H-2307-CH-7	306559	Zinc plated steel	Zinc plated steel	Zinc plated steel	Polyester + glass fiber	Polyamide	4,226 Kg	
H-2307-CH-7-Inox	306560	Stainless steel	Stainless steel	Stainless steel	Polyester + glass fiber	Polyamide	4,226 Kg	

QUICK DISCONNECT PENDANT CONTROL UNIT TROLLEY

Saddle ø55mm



Reference C16 for 16 poles
(1u cable entry PG21)
Reference C24 for 24 poles
(2u cable entry PG21)

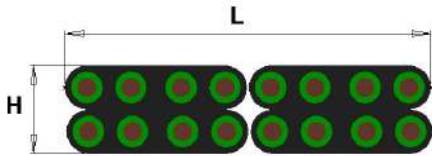
REFERENCE	CODE	MATERIAL					WEIGHT
		Body	Ball bearings +Screws	Saddle	Multipole connector	Cable glands	
H-2307-7-C16	306408	Zinc plated steel	Zinc plated steel	Polyprop.	Formed aluminium	Polyethylene	4,133 Kg
H-2307-7-C24	306562	Zinc plated steel	Zinc plated steel	Polyprop.	Formed aluminium	Polyethylene	4,441 Kg
H-2307-CH-7-C16	306563	Zinc plated steel	Zinc plated steel	Zinc plated steel	Formed aluminium	Polyethylene	4,229 Kg
H-2307-CH-7C24	306564	Zinc plated steel	Zinc plated steel	Zinc plated steel	Formed aluminium	Polyethylene	4,537 Kg
H-2307-CH-7-C16-Inox	306565	Stainless steel	Stainless steel	Stainless steel	Formed aluminium	Polyethylene	4,229 Kg
H-2307-CH-7-C24-Inox	306566	Stainless steel	Stainless steel	Stainless steel	Formed aluminium	Polyethylene	4,537 Kg



FESTOON SYSTEM SERIES 2307

TROLLEYS FOR MAXIMUM CABLE PACKAGE 90x30mm

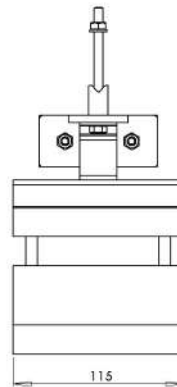
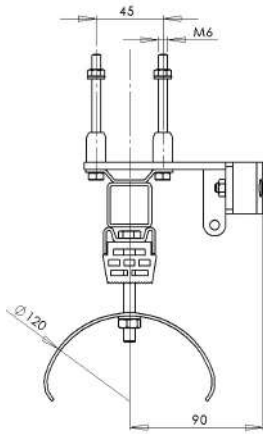
Serie 2307-L180-PL120x90



Maximum cable package : 90 (L) x 30 (H) mm.

END CLAMP

Saddle \varnothing 120mm



REFERENCE	CODE	MATERIAL			WEIGHT
		Body	Saddle	Screws	
2307-L180-PL120x90-2	306173	Zinc plated steel	Zinc plated steel	Zinc plated steel	1,136 Kg
2307-L180-PL120x90-2-PLY	306280	EPOXI painted steel	EPOXI painted steel	Stainless steel	1,146 Kg
2307-L180-PL120x90-2-Inox	306443	Stainless steel	Stainless steel	Stainless steel	1,136 Kg

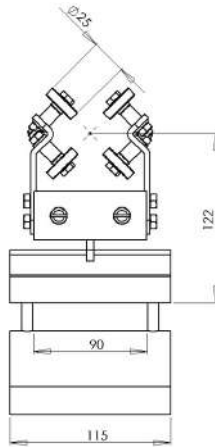
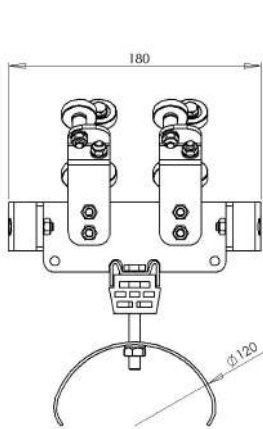


FESTOON SYSTEM SERIES 2307

TROLLEYS FOR MAXIMUM CABLE PACKAGE 90x30mm

CABLE TROLLEY

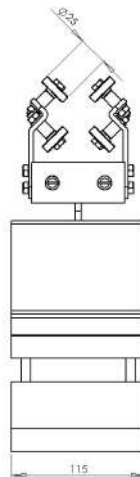
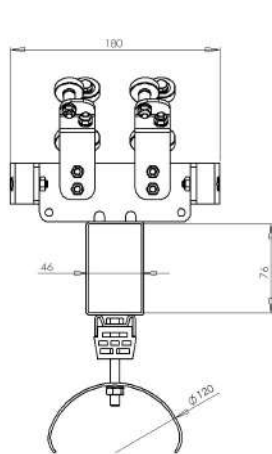
Saddle $\varnothing 120\text{mm}$



REFERENCE	CODE	MATERIAL			WEIGHT
		Body	Saddle	Ball bearings + Screws	
H-2307-L180-PL120x90-5	306425	Zinc plated steel	Zinc plated steel	Zinc plated steel	2,050 Kg
H-2307-L180-PL120x90-5-PLY	306455	EPOXI painted steel	EPOXI painted steel	Stainless steel	2,060 Kg
H-2307-L180-PL120x90-5-Inox	306444	Stainless steel	Stainless steel	Stainless steel	2,050 Kg

TOWING TROLLEY

Saddle $\varnothing 120\text{mm}$

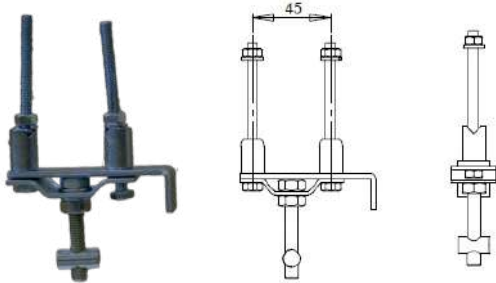


REFERENCE	CODE	MATERIAL			WEIGHT
		Body + Towing attachment	Saddle	Ball bearings + Screws	
H-2307-L180-PL120x90-6	306426	Zinc plated steel	Zinc plated steel	Zinc plated steel	2,470 Kg
H-2307-L180-PL120x90-6-PLY	306456	EPOXY painted steel	EPOXY painted steel	Stainless steel	2,480 Kg
H-2307-L180-PL120x90-6-Inox	306445	Stainless steel	Stainless steel	Stainless steel	2,470 Kg



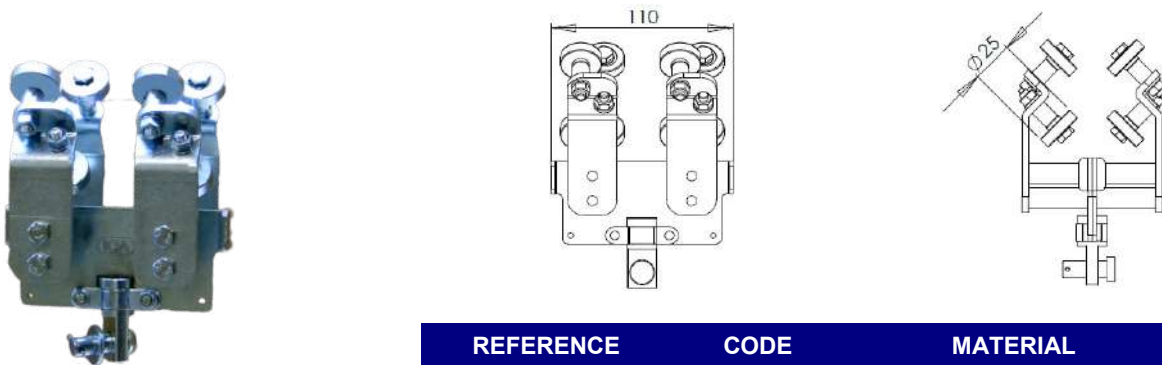
TROLLEYS FOR ROUND CABLES / HOSES

END CLAMP



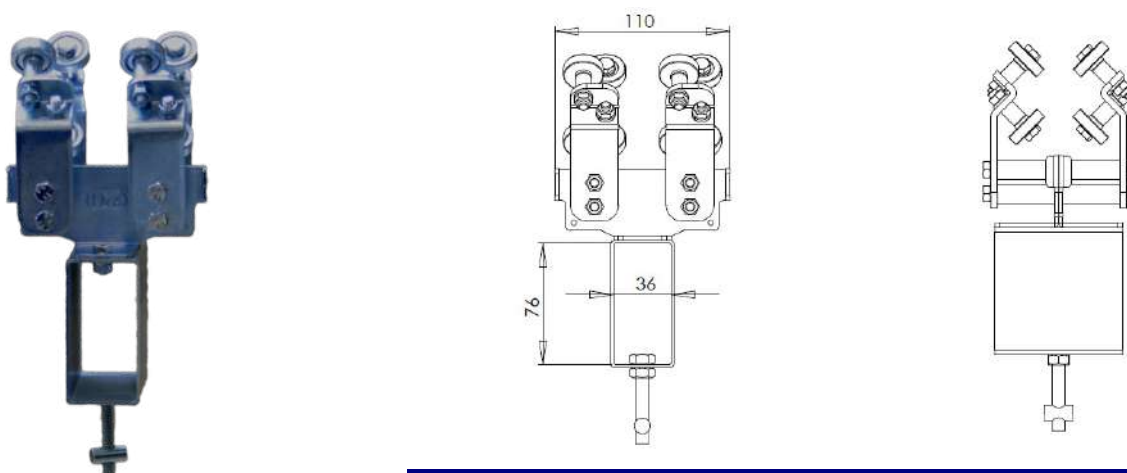
REFERENCE	CODE	MATERIAL	WEIGHT
2307/2	306567	Zinc plated steel	0,540 Kg
2307/2-Inox	306568	Stainless steel	0,540 Kg

CABLE TROLLEY



REFERENCE	CODE	MATERIAL	WEIGHT
2307/5	306569	Zinc plated steel	1,083 Kg
H-2307/5-Inox	306570	Stainless steel	1,083 Kg

TOWING TROLLEY

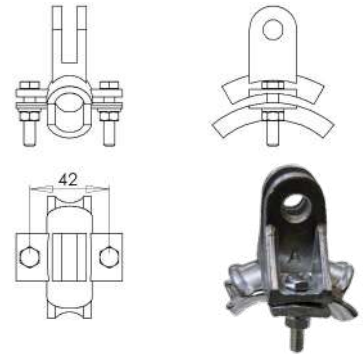


REFERENCE	CODE	MATERIAL	WEIGHT
2307/6	306571	Zinc plated steel	1,280 Kg
H-2307/6-Inox	306572	Stainless steel	1,280 Kg



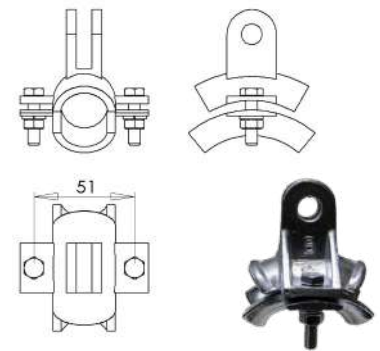
CLIP +A for cables from $\varnothing 8\text{mm}$ to $\varnothing 15\text{mm}$

REFERENCE	CODE	BODY	SCREWS	WEIGHT
+A	303251	Aluminium	Zinc plated steel	0,104 Kg
+A-Inox	303596	Aluminium	Stainless steel	0,104 Kg



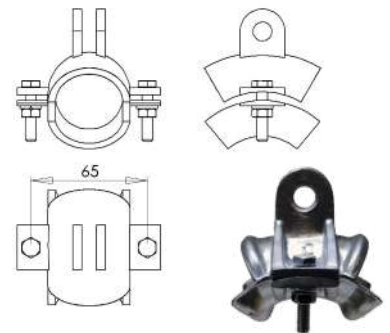
CLIP +B for cables from $\varnothing 16\text{mm}$ to $\varnothing 24\text{mm}$

REFERENCE	CODE	BODY	SCREWS	WEIGHT
+B	303252	Aluminium	Zinc plated steel	0,114 Kg
+B-Inox	303597	Aluminium	Stainless steel	0,114 Kg



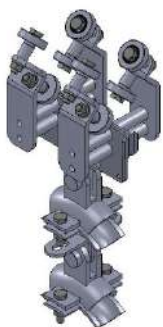
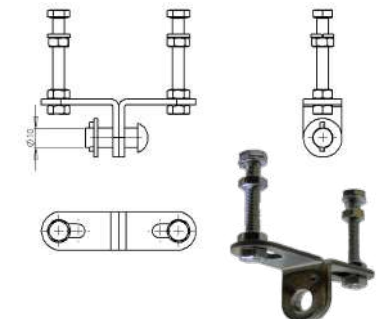
CLIP +C for cables from $\varnothing 25\text{mm}$ to $\varnothing 35\text{mm}$

REFERENCIA	CODE	BODY	SCREWS	WEIGHT
+C	303253	Aluminium	Zinc plated steel	0,150 Kg
+C-Inox	303598	Aluminium	Stainless steel	0,150 Kg



"T" UNION

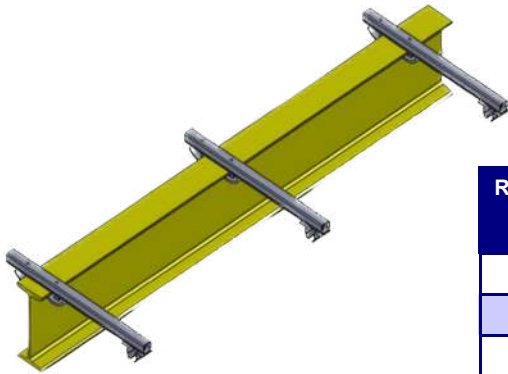
REFERENCE	CODE	BODY	SCREWS + RIVETS	WEIGHT
T	303496	Stainless steel	Zinc plated steel	0,107 Kg
T-Inox	303599	Stainless steel	Stainless steel	0,107 Kg



The clips make a 90 degree turn, in order to facilitate the parking.
When ordering, add to the reference, the necessary clip(s), followed by the indicative number:
end clamp (-2), cable trolley (-5) or towing trolley (-6).

Example:
END CLAMP ref. 2307/C+B-2
CABLE TROLLEY ref. H-2307/B+B+A-5
TOWING TROLLEY ref. H-2307/A-6

UNIVERSAL SUPPORT



REFERENCE	CODE	MATERIAL			WEIGHT
		Anchoring device	Beam clip	Track support	
SU-1	---	Zinc plated steel	Zinc plated steel	Galvanized steel	---
SU-1-Inox	---	Stainless steel	Stainless steel	Stainless steel	---
SU-2	---	Zinc plated steel	Zinc plated steel	Galvanized steel	---
SU-24-Inox	---	Stainless steel	Stainless steel	Stainless steel	---

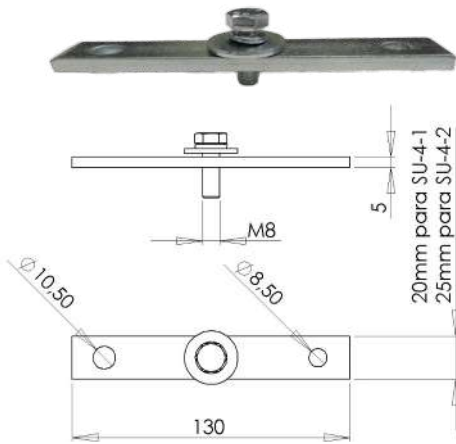
Cross support arm options:
 - 2331-1 (30 x 28 mm) = **SU-1**
 - 2500-1 (40 x 35 mm) = **SU-2**

Once we have chosen the cross support arm, point out the total length (L) of it.

- Brackets formed by:
 - 1 Profile 2331-1 o profile 2500-1. (L)
 - 2 Beam clip.
 - 1 Support arm clip SU-4

Example:
 - **SU-1-500.** (500mm)
 - **SU-2-500.** (500mm)

SUPPORT ARM CLIP



REFERENCE	CODE	MATERIAL		WEIGHT
		Body	Screws	
SU-4-1	713114	Zinc plated Steel	Zinc plated Steel	0,121 Kg
SU-4-1-Inox	713115	Stainless Steel	Stainless Steel	0,121 Kg
SU-4-2	713129	Zinc plated Steel	Zinc plated Steel	0,140 Kg
SU-4-2-Inox	713130	Stainless Steel	Stainless Steel	0,140 Kg

BEAM CLIP

45x20x5mm para perfil 2331-1
 25x25x5mm para perfil 2500-1

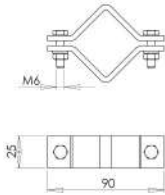


REFERENCE	CODE	MATERIAL		WEIGHT	
		Body	Screws		
For 2331-1 profile	2340-12	309005	Zinc plated steel	Zinc plated steel	0,140 Kg
For 2500-1 profile	2340-12-500	309006	Zinc plated steel	Zinc plated steel	0,156 Kg
For Inox 2331-1 profile	2340-12-Inox	309321	Stainless steel	Stainless steel	0,140 Kg
For Inox 2500-1 profile	2340-12-500-Inox	309316	Stainless steel	Stainless steel	0,156 Kg



ACCESSORIES

END STOP



REFERENCE	CODE	MATERIAL		WEIGHT
		Body	Screws	
2307-T	306089	Zinc plated steel	Zinc plated steel	0,176 Kg
2307-T-Inox	306573	Stainless steel	Stainless steel	0,176 Kg

END CAPS

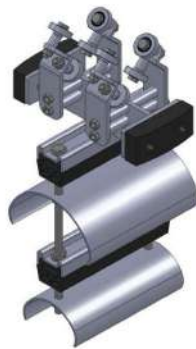


FOR PROFIL	REFERENCE	CODE	MATERIAL	WEIGHT
2307-1	2307-EC	306587	Black polyethylene	0,006 Kg

SPECIAL SERIES

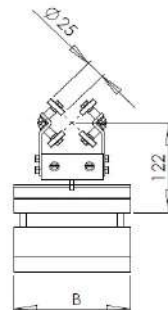
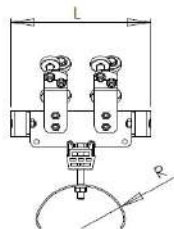
TROLLEYS WITH MORE STAGES

Electric cables can be assembled in different stages



CUSTOMIZED DIMENSIONS

Dimensions could be modified in order to accomplish the Customer's specifications



ATEX

Under enquiry, special materials for ATEX classified zones are available.



1) SECURITY

1.1 Advices about electricity

- Disconnect the power from the system before starting any assembly operation.
- Do not use electrical cables for higher loads than the specified voltage and current.

1.2 Operational advices

- Do not use different cables for which the festoon system is specified. Any change in number, diameter, weight, etc., may affect the normal operation of the cable system.

1.3 Maintenance advice

- The modification of the number and/or characteristics of the festoon system components cancels the warranty.

2) INSTALLATION

The support structure for the festoon system must be capable of supporting the total weight of the festoon system.

Take into consideration that the supplied line is manufactured according to the dimensioned drawing from the customer. All the tracks (straight and curved) have connecting holes at both edges for installing the joints 2307-3 which allows assembling the complete track. Another holes are drilled on the track to allow the assembling of the supports 2307-4.

Place the tracks on the floor just under the beam. Tracks are numbered:

- The first track with - 1.
- The second track with 1 - 2.
- The third track with 2 - 3.
-

Assemble the supports 2307-4 on the first track and lift it near to the beam. Mark the place where the supporting arms have to be placed.

Assemble the supporting arms along the beam.

Supporting arms can be steel plates, steel angles or universal supports as follows:



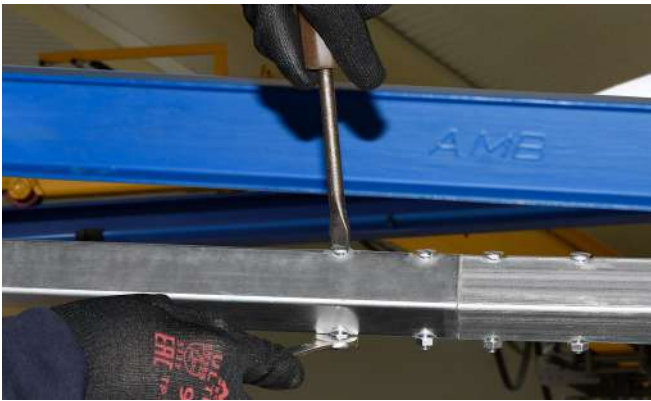
UNIVERSAL SUPPORTS



Lift the tracks and fix the support 2307-4 on the corresponding support arm.
Tighten the screws of every support 2307-4.



Assemble the joint 2307-3 on the required track edge.



Joint consecutive tracks in order to make a continuous track.
Tighten the screws of every joint.
Assemble supports 2307-4 where required.
Repeat the same operations for the restant tracks.
Check that the track is correctly in paralell with the beam.



Cut the necessary length of electrical cable leaving enough length on both sides to make the electrical connections later.
Make marks with white chalk on the cable in the required points, according to the height of the loop or number of trolleys to be assembled. Put the cables in the saddle (biggest cables should be mounted on top of the cable package).



Tighten the screws of the cable holders avoiding damaging the cables due to excessive tightening.
The cable package should be as centered as possible on the cable holder, so that the trolley runs in a balanced way.
Make sure that the smallest cables do not slip into the cable package.



Insert the festoon system into the profile, starting first with the towing trolley and then following the cable trolleys. Insert the end clamp the last. The cables must be mounted without any rotation.
Tighten the end clamp at the end of the profile.
Make the connections of the cables on both sides of the system in their respective connection boxes.

3) OPERATION

3.1 Previous tests

Carry out several travels by hand to check that it moves throughout its length without problems.
Check that there is plenty of space in the ambush area.
Check that the cable loops don't get hooked in any part of the travel.
In the cable management system, check the correct height between the pushbutton pendant control station and the floor.

3.2 Final tests

Once the electric current is connected, check that the trolleys move forward and backward without problems.
Check that the device the festoon system is powered on, works correctly.

3.3 Normal functioning

Do not exceed the maximum voltage and / or amperage specified for the electric cables.
Use the festoon system within its corresponding electrical and / or mechanical specifications.

4) MAINTENANCE

Perform periodic maintenance tasks to ensure the status of the festoon system. The maintenance operations will depend on the use given to the system.

During each inspection the following points should be checked:

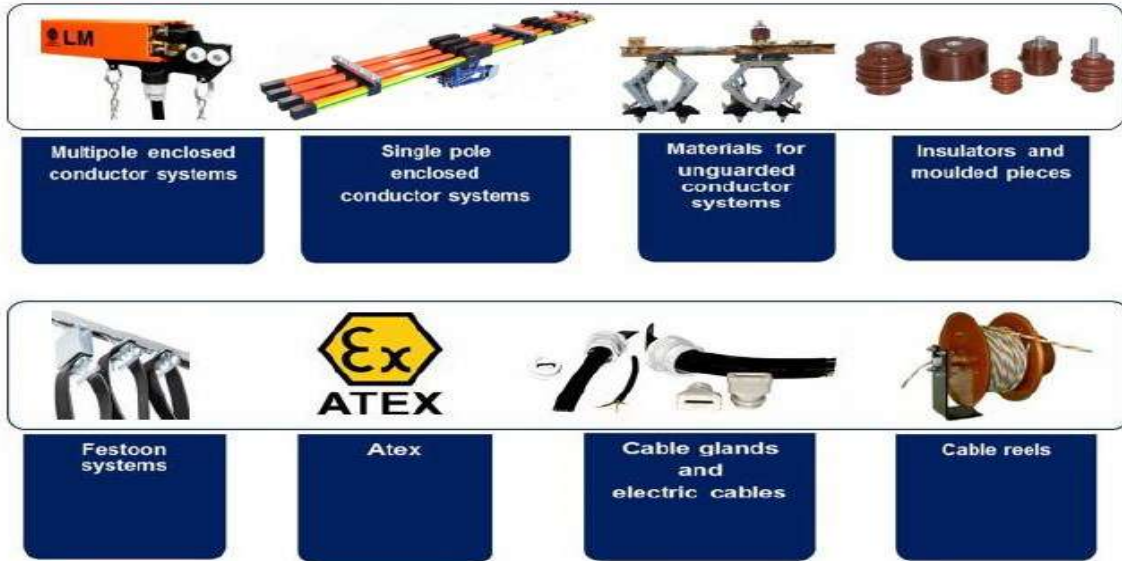
- Wear of ball bearings.
- Ensure screws are correctly tightened.
- Separation or alignment in the joints.
- Electric cables: cuts, cracks, etc...
- The profile must be clean in the running edges.



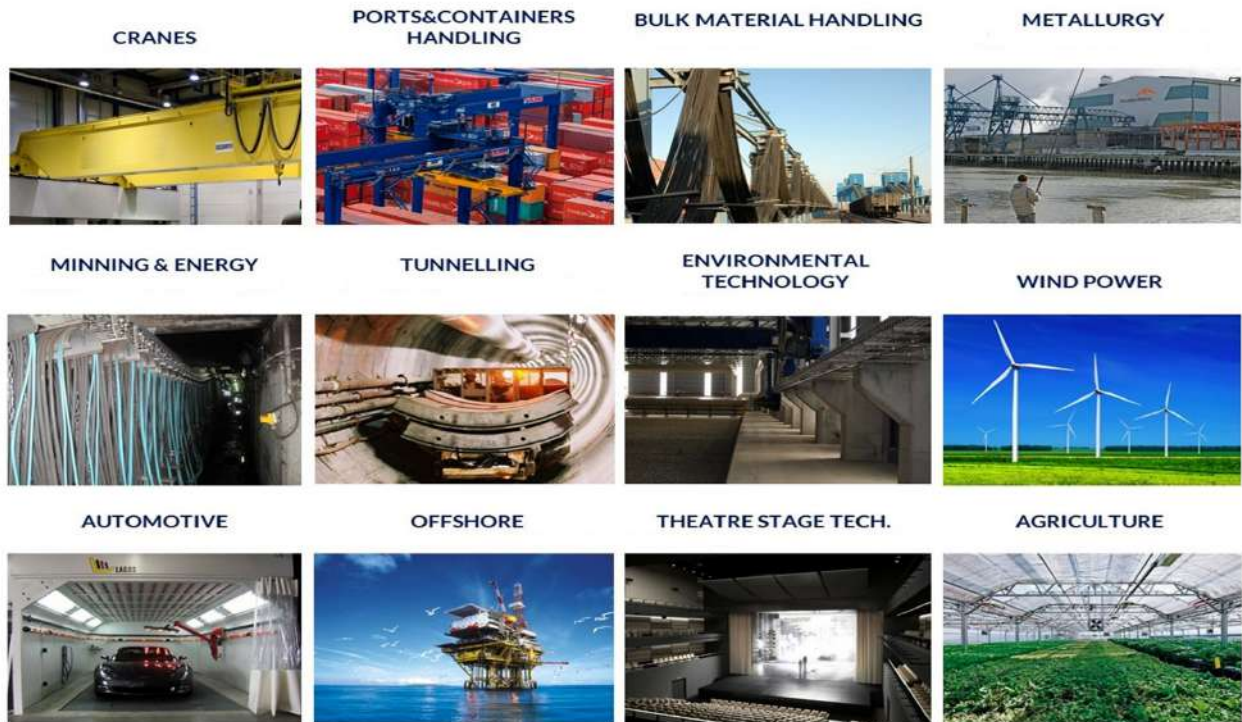
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