



E-LINEKCA AL

Industrial Aluminium Cable Ladder System



E-LINEKCA AL



CONTENTS

►► E-LINE KCA AL

Company Profile	4
References	6
EAE Code Description	7
Certificates	8
Straight	9-17
Fittings	18
YD30-YD45-YD60-YD90 Horizontal Elbow	20-23
DD30-DD45-DD60-DD90 Vertical Outside Elbow	24-31
ID30-ID45-ID60-ID90 Vertical Inside Elbow	32-39
YT Horizontal Tee	40-41
AD Horizontal Cross	42-43
MR Middle Reduction	44
LR Left Side Reduction	45
RR Right Side Reduction	46
Cover	
Straight Cover	47
Omega Straight Cover Clamp	47
Slope Bracket	48
Omega Slope Cover Clamp	48
YD30 YD30-YD45-YD60-YD90 Horizontal Elbow	50-53
DD30-DD45-DD60-DD90 Vertical Outside Elbow	54-57
ID30-ID45-ID60-ID90 Vertical Inside Elbow	58-61
YT Horizontal Tee	62
AD Horizontal Cross	63
MR Middle Reduction	64
LR Left Side Reduction	65
RR Right Side Reduction	66
Accessories	
End Cover	67
Splice Plate	68
Expansion Splice Plate	69
Fixing Brackets	70-71
Vertical Adjustable Couplers	73
Vertical Adjustable Fitting	74-75
Bonding Jumper	76
Ladder Divider and SPR Clamp	77
Horizontal Adjustable Couplers	78
Accessories	79
Installation	80-82
Installation Guide to Thermal Movements	83-85
Load Class	86
Corrosion	87-88
KCA AL Specification	89-90
Packaging	91

OVER 40 YEARS

Expertise in Cable Support System

Production

12.000.000 mt tray / year

1.500.000 mt ladder / year

66.000 tones / year steel process capacity

CAPABLE

Reliable support systems are vital to any electrical installation. EAE is an innovative designer and manufacturer of modern, leading-edge support systems that suit multiple industries.

RANGE

The EAE range consists of over 6000 products that are suited to so many sectors, that they have been used for many iconic projects.

As well as this, EAE offers specialist systems designed for when specific standard compliance is required; as well as in-house engineers capable of producing customised products to address any unique requirements that your project may have.

PROJECT MANAGEMENT

We can offer you a dedicated Project Manager as a single point of contact, and who will manage design, conformance, manufacturing and distribution of your products.

DISTRIBUTION & SUPPLY

Wherever it is around the world, EAE can manage all the logistical needs of any size project, including export packaging and documentation.



100 **KCA AL**

125 **KCA AL**

HIGH PERFORMANCE

Aluminium Cable Ladder KCA AL

E-Line KCA AL has a reputation for setting the industry standard for cable support systems across all around world. E-Line KCA AL has a unique combination of high strength, resilience, and lightweight design.

E-Line KCA AL Cable Ladder range is engineered for the ultimate load bearing strength in its class, high resistance to impact and environmental forces, while also achieving all weight reductions possible. The structural design maximises the capabilities of the steel. Project Engineers for large offshore, modular, marine and other projects now have a cable support solution that can give them the strength they need over long spans, while also meeting project weight requirements.

IEC 61537 is a standard for cable management which provides test methods and a classification regime for cable ladders. E-Line KCA AL is tested in accordance with this standard for load capability, electrical continuity and impact resistance.

DEKRA witnessed these tests and checked our quality systems to ensure we manufacture these ladders consistently, to the tested specifications, before awarding certification. For installation, splicing and fitting design and recommendations, contact EAE. All raw materials are tested to relevant standards for your project. EAE maintains ISO 9001 (Quality) as well as ISO 14001 (Environmental) compliance.



150 **KCA AL**

175 **KCA AL**



EAE Elektrik A.Ş., the original company of the EAE Group, was established in 1973 EAE Elektrik A.S products include:

- Busbar Power Distribution Systems
- Lighting Busbar Systems
- Cable Tray Systems
- Underfloor Trunking
- Trolley Busbar System



EAE Elektrik A.Ş. has 4 factories in İstanbul where the company headquarter is also situated, additionally 1 factory in Kocaeli and 1 factory in Alexandrov, Russia. Three of the EAE Factories manufacture Cable Support Systems using cutting-edge technology for domestic and foreign markets.

Having a widespread branch and authorised dealer network in Turkey. EAE Elektrik also exports its products to more than 65 countries whom products are used in industrial facilities, the textile industry, business centres, the automotive industry, malls, high-rise buildings, factories and offices, etc.

EAE is a leader and pioneer of the cable management system market with it's high quality, innovative and proven products. Over 45 years experienced EAE has continuously invested global strategic locations with high technologic facilities . High quality raw metaterials are supplied and processed in automated production lines to ensure high product quality and consistency of deliveries. In 2015, EAE includes 40 000 m² manufacturing and warehousing facility in Kocaeli, Turkey which was planned and designed according to satisfy major industrial projects needs.

For perfect match with the needs of Oil&Gas, Power Generation and Heavy Industry Projects, EAE has developed "KCA OG" Cable Ladder System in addition to E-Line Cable Support Systems which contains; Perforated Cable Trays, Ladders, Trunking, Wire Mesh, Binrak Strut and large range of Support Solutions. For the specific needs of major project, EAE can be performed to satisfy the customer with technical experienced Sales Support Team.

EAE Cable Support System Manufacturing Facilities



26.000 m² (Istanbul/Turkey)



13.500 m² Alexandrov/Russia

Over 40 years experienced EAE Cable Support System Department is proud to be presenting new Industrial Cable Ladder Series "KCA AL".

With the participation of the new KCA AL, EAE can supply all ranges of demands.

Cable Ladder Series:

KM: Light Duty Pre-galvanized Foldable Cable Ladder

KMH: Medium Duty Hot Dip Galvanized Cable Ladder

KMA: Heavy Duty Hot Dip Galvanized Cable Ladder

KCA OG HDG: Extra Heavy Duty Hot Dip Galvanized Industrial Cable Ladder

KCA OG SS: Extra Heavy Duty Stainless Industrial Cable Ladder

KCA AL: Extra Heavy Duty Aluminium Alloy Industrial Cable Ladder

KCA OG and KCA AL is designed to satisfy highly performance of all Industrial Market.

Stainless Steel Finishes:

For the off-shore applications, KCA OG can be manufactured with Stainless Steel (316L) which can supply high performance against the corrosive effect of salt water combined with very variable weather conditions.

High Load Performance:

For the long span applications, KCA AL can be Manufactured in 3000 mm / 6000 mm standard length. Aluminium alloy, I-Beam side rail and rung design help KCA AL to upgrade loading capacity.

Largest Capacity:

H: 175mm series cable ladder supplies largest cable capacity.



Oil&Gas Industry



Power Generation Industry



Power Generation Industry



Baku Flame Towers	Azerbaijan	Serdivan Shopping Mall	Turkey
Baku Triumph Towers	Azerbaijan	Triumph Towers	Turkey
Port Baku Residences	Azerbaijan	Hunplus Project	Turkey
Baku Waste To Energy	Azerbaijan	Anthill Bomonti Project	Turkey
Socartower	Azerbaijan	Kuyumcu Kent Extanion Part	Turkey
Sofaz Tower	Baku - Azerbaijan	Perlavista Shopping Mall	Turkey
Baku Shipyard Project	Baku - Azerbaijan	Nish Istanbul Office Blocks	Turkey
Hilton Otel	Baku - Azerbaijan	Holiday Inn Otel	Turkey
Al Tahady Uni. - All Faculties	Libya	Atakoy Shopping Mall	Turkey
Veterinary Fac. Al Fateh Uni.	Libya	Dumankaya Vizyon	Turkey
Mathematic Fac. Al Fateh Uni.	Libya	Areva Adh2 New Transformer Plant	Turkey
Bab Trablus Shopping Mall And Complex	Libya	Sapphire Project	Turkey
Ruby Shooping Mall	Kazakistan	Mashattan Residance Project	Turkey
Zorlu Center Shopping Mall	Turkey	Sabiha Gokcen Int. Airport	Turkey
Optimum K.maras Shopping Mall	Turkey	Deeppo Shopping Mall	Turkey
Vialand Avm Shopping Mall	Turkey	Gordion Shopping Mall	Turkey
Eroğlu Merter Shopping Mall	Turkey	Marmara Forum Shooping Mall	Turkey
Koru Florya Shopping Mall	Turkey	Ora Shooping Mall	Turkey
Mall Of Istanbul – Torunlar	Turkey	Btc Pipeline Pump Stations	Turkey
Marmarapark Shopping Mall Ece Group	Turkey	Tupras Rup Project	Turkey
Eroğlu Merter Shopping Mall	Turkey	Skyport Tower	Turkey
Florya Akvaryum Shopping Mall	Turkey	870 Mw Samsun Ccpp	Turkey
Antalya Erasta Park Avm – Torunlar	Turkey	865 Mw Yeni Elektrik A.S. Ccpp	Turkey
Istwest	Turkey	755 Mw Denizliccpp	Turkey
Buyaka Shopping Mall	Turkey	Mary Amonium&Urea Plant	Turkmenistan
Akbati Shopping Mall	Turkey	Onshore Gas Terminal	Turkmenistan
Olimpa Shopping Mall	Turkey	Turkmenbashi Int. Airport	Turkmenistan
Airport Shopping Mall	Turkey	Autoclaved Aerated Concrete Factory	Turkmenistan
Zonguldak Eren Termic Power Plant	Turkey	South Yoleten Gas Field Development Pr.	Turkmenistan



YAMAL LNG-RUSSIA



YENI ELEKTRİK 865MW CCPP-TURKEY



SOCAR STAR REFINERY - TURKEY

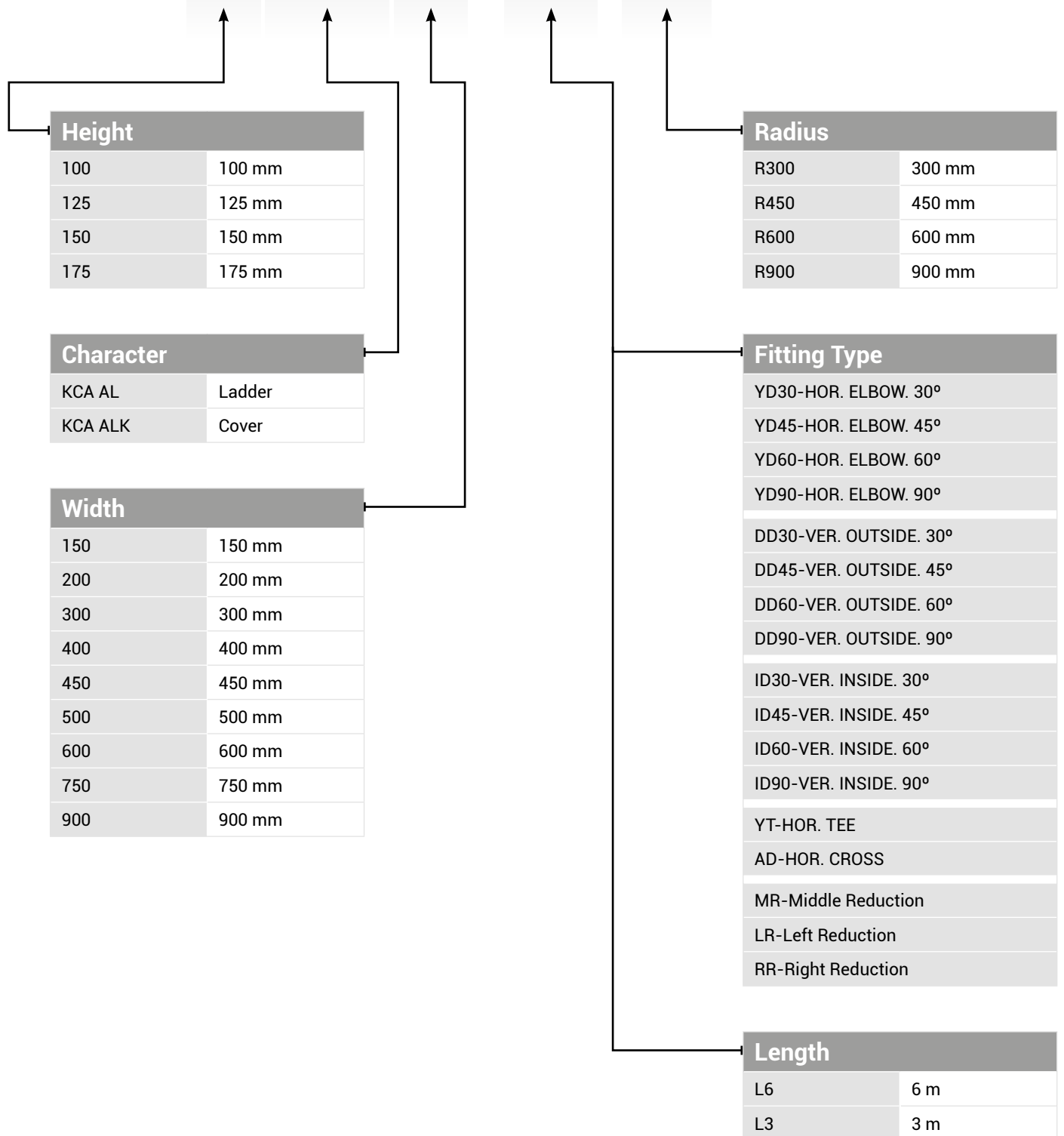


MARY AMONIUM & UREA PLANT

►►EAE Code Description

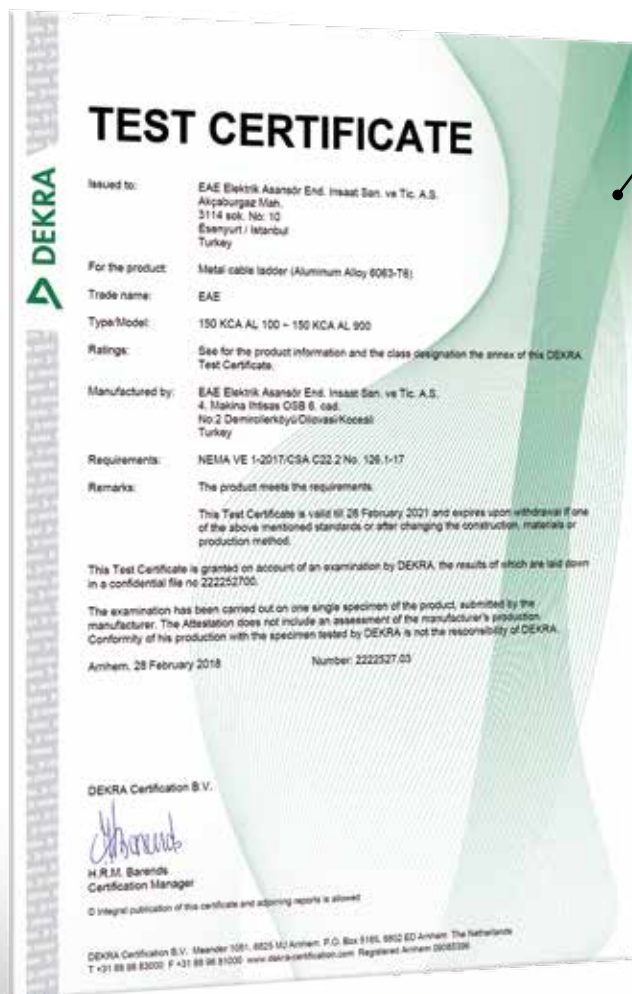
Example 1: 150 KCA AL 600 / L6 → 150 KCA AL600/L6

Example 2: 150 KCA AL 600 / YD90 / R600 → 150 KCA AL600/YD90/R600

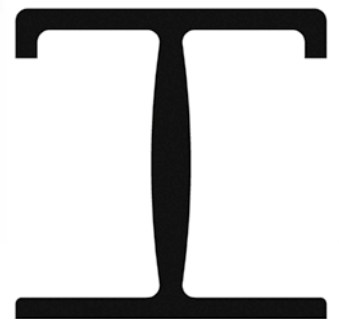
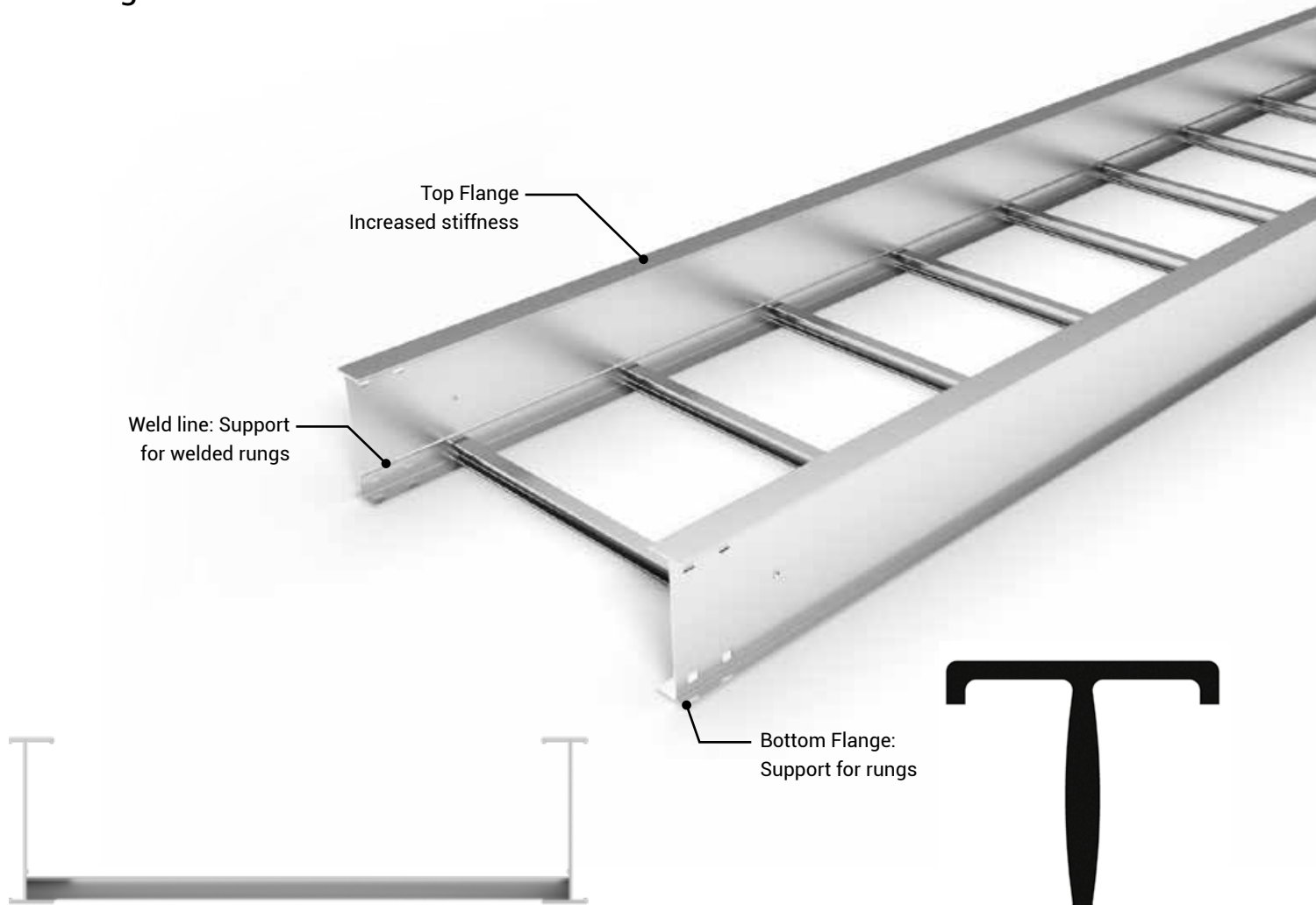




SERIES CABLE LADDER



SERIES CABLE LADDER



**I-BEAM RUNG
DESIGN**



**I-BEAM SIDE
RAIL DESIGN**

Aluminium Cable Ladder Material Features

Material: Extruded Aluminium Alloy 6063-T6
(Also called Marine Grade Aluminium and Cooper-free Aluminium)

- Excellent And Best Strength-to-weight Ratio
- Can Carry Loads As Much As Steel And Stainless Steel Material
- Can Be Loaded Up To 6-meter Span
- Used In Indoor / Outdoor Service Applications
- Excellent Corrosion-resistance At Marine Environment (where Mostly Corrosive Saline Chlorides Exist)
- Excellent Electrical Conductivity

Dimensional Features

Manufactured dimensions are in Metric Units.
Available in Various Lengths, Heights and Widths:

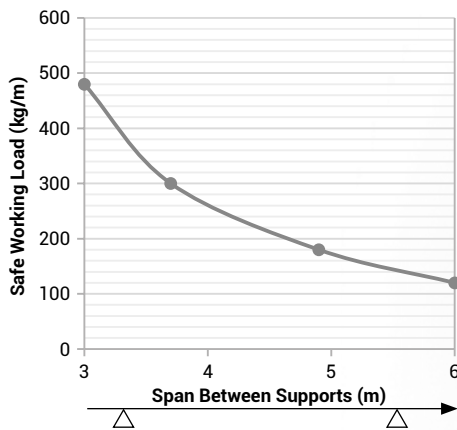
- Length** : Standard in 3000 mm / 6000 mm
- Width** : 150 mm / 200 mm / 300 mm / 400 mm / 450 mm / 500 mm / 600 mm / 750 mm / 900 mm
- Side Rail Height** : 100 mm / 125 mm / 150 mm /175 mm (I-BEAM DESIGN)
- Loading Depth** : 75 mm / 100 mm / 125 mm / 150 mm
- Rung Spacing** : Standard in 300 mm (Welded) (I-BEAM DESIGN)

CERTIFICATES

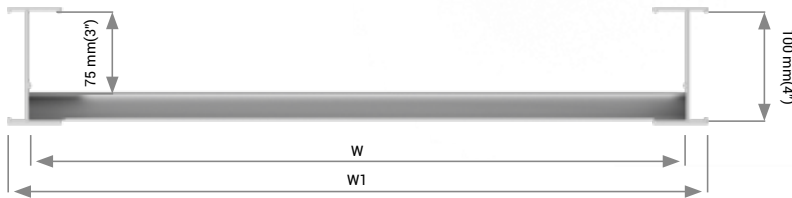
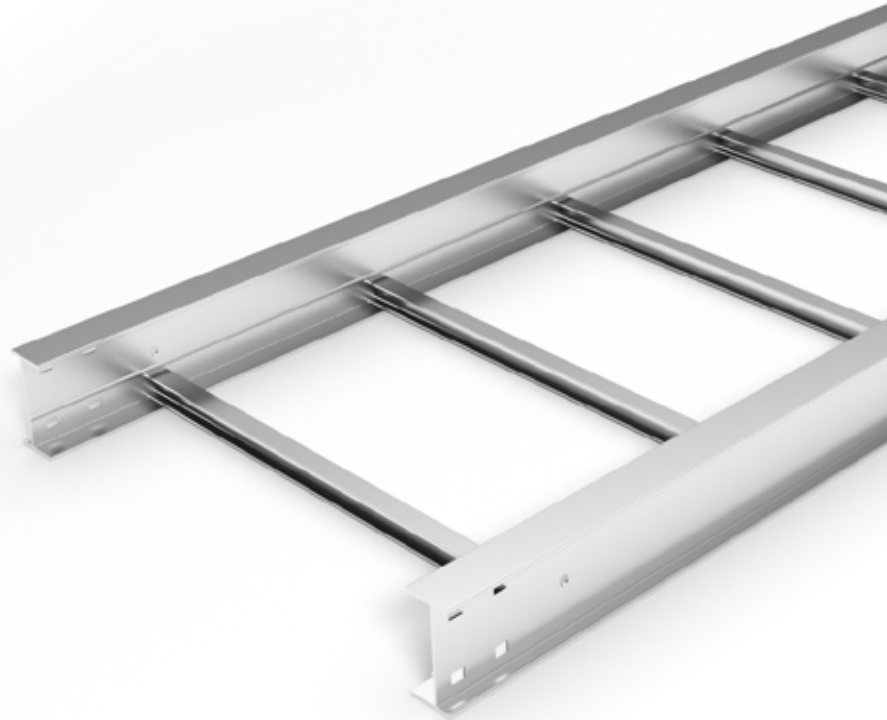
NEMA VE-1 2017 - Tested and Certified
IEC 61537 / BS EN 61537 / TS EN 61537 - Tested and Certified

100 KCA AL NEMA 20B Series ALUMINIUM Cable Ladder

- Side Rail Height (H) :100mm (Loading depth: 75mm)
- Internal Widths (W) :150mm, 200mm, 300mm, 400mm, 450mm, 500mm, 600mm, 750mm, 900mm
- Overall Widths (W1) :W+40
- Standard Rung Spacing :300mm
- Standard Lengths (L) :3 m/6 m



Safe working load values are based on simple beam test according to NEMA VE-1-2017 edition.
*Please check Page 86 for NEMA Class Designations.

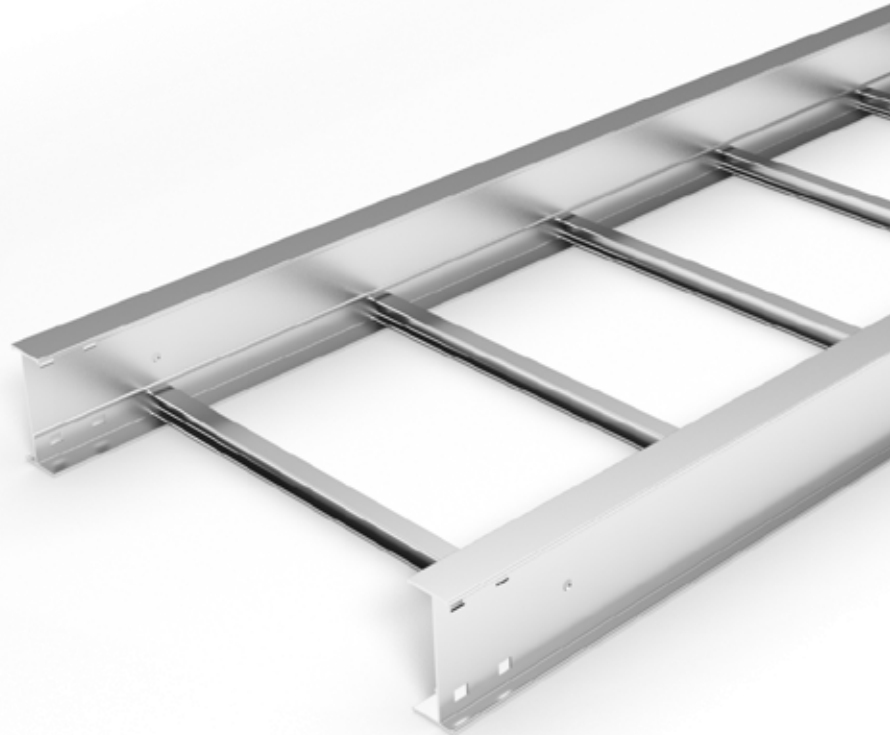
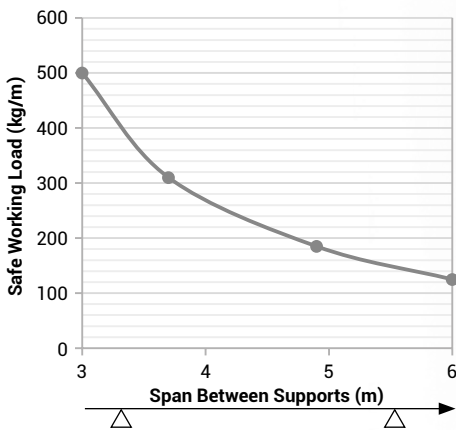


NEMA 20B		DIMENSIONS					
		HEIGHT		WIDTH		LENGTH	RUNG
CODE	DESCRIPTION	Side Rail Height	Loading Depth	Internal Width (W)	Overall Width (W1)	Standard Length	Standard Rung Spacing
		mm (inch.)		mm (inch.)			m (ft.)
3128202	100 KCA AL 150 / L	100 (4")	75 (3")	150 (6")	190 (7,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128203	100 KCA AL 200 / L	100 (4")	75 (3")	200 (8")	240 (9,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128204	100 KCA AL 300 / L	100 (4")	75 (3")	300 (12")	340 (13,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128205	100 KCA AL 400 / L	100 (4")	75 (3")	400 (16")	440 (17,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128206	100 KCA AL 450 / L	100 (4")	75 (3")	450 (18")	490 (19,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128207	100 KCA AL 500 / L	100 (4")	75 (3")	500 (20")	540 (21,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128208	100 KCA AL 600 / L	100 (4")	75 (3")	600 (24")	640 (25,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128209	100 KCA AL 750 / L	100 (4")	75 (3")	750 (30")	790 (31,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128210	100 KCA AL 900 / L	100 (4")	75 (3")	900 (36")	940 (37,6")	3m / 6m (10 ft./20ft.)	300 (12")

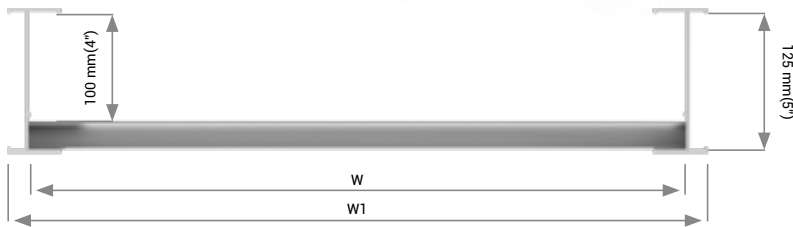
Standard manufacturing lengths are in metric system. Dimensions given in the parenthesis imperial and only for information.
Please check page 47-48 for cover selection.

125 KCA AL NEMA 20B Series ALUMINIUM Cable Ladder

- Side Rail Height (H) :125mm (Loading depth: 100mm)
- Internal Widths (W) :150mm, 200mm, 300mm, 400mm, 450mm, 500mm, 600mm, 750mm, 900mm
- Overall Widths (W1) :W+40
- Standard Rung Spacing :300mm
- Standard Lengths (L) :3 m/6 m



Safe working load values are based on simple beam test according to NEMA VE-1-2017 edition.
*Please check Page 86 for NEMA Class Designations.

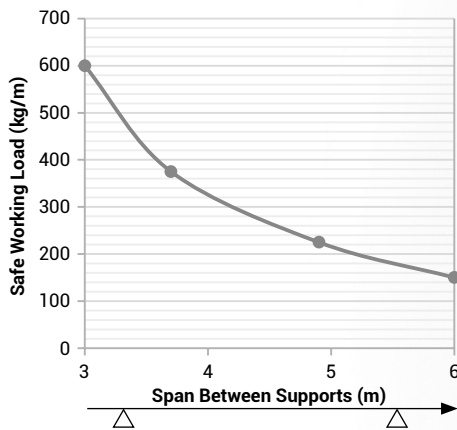


NEMA 20B		DIMENSIONS					
		HEIGHT		WIDTH		LENGTH	RUNG
CODE	DESCRIPTION	Side Rail Height	Loading Depth	Internal Width (W)	Overall Width (W1)	Standard Length	Standard Rung Spacing
		mm (inch.)		mm (inch.)			m (ft.)
3128211	125 KCA AL 150 / L	125 (5")	100 (4")	150 (6")	190 (7,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128212	125 KCA AL 200 / L	125 (5")	100 (4")	200 (8")	240 (9,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128213	125 KCA AL 300 / L	125 (5")	100 (4")	300 (12")	340 (13,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128214	125 KCA AL 400 / L	125 (5")	100 (4")	400 (16")	440 (17,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128215	125 KCA AL 450 / L	125 (5")	100 (4")	450 (18")	490 (19,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128216	125 KCA AL 500 / L	125 (5")	100 (4")	500 (20")	540 (21,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128217	125 KCA AL 600 / L	125 (5")	100 (4")	600 (24")	640 (25,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128218	125 KCA AL 750 / L	125 (5")	100 (4")	750 (30")	790 (31,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128219	125 KCA AL 900 / L	125 (5")	100 (4")	900 (36")	940 (37,6")	3m / 6m (10 ft./20ft.)	300 (12")

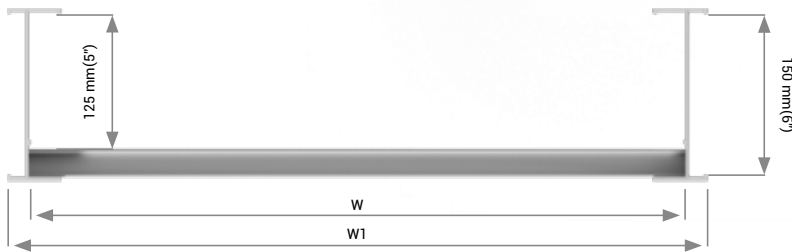
Standard manufacturing lengths are in metric system. Dimensions given in the parenthesis imperial and only for information.
Please check page 47-48 for cover selection.

150 KCA AL NEMA 20C Series ALUMINIUM Cable Ladder

- Side Rail Height (H) :150mm (Loading depth: 125mm)
- Internal Widths (W) :150mm, 200mm, 300mm, 400mm, 450mm, 500mm, 600mm, 750mm, 900mm
- Overall Widths (W1) :W+40
- Standard Rung Spacing :300mm
- Standard Lengths (L) :3 m/6 m



Safe working load values are based on simple beam test according to NEMA VE-1-2017 edition.
*Please check Page 86 for NEMA Class Designations.

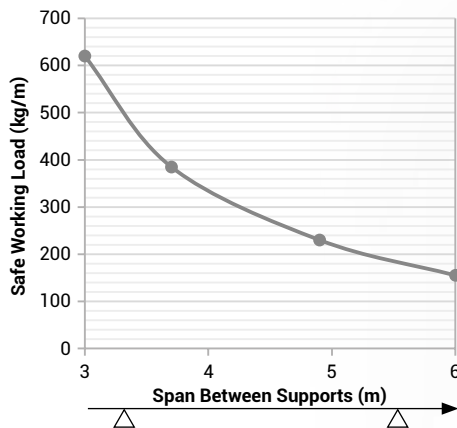


NEMA 20C		DIMENSIONS					
		HEIGHT		WIDTH		LENGTH	RUNG
CODE	DESCRIPTION	Side Rail Height	Loading Depth	Internal Width (W)	Overall Width (W1)	Standard Length	Standard Rung Spacing
		mm (inch.)		mm (inch.)			m (ft.)
3128220	150 KCA AL 150 / L	150 (6")	125 (5")	150 (6")	190 (7,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128221	150 KCA AL 200 / L	150 (6")	125 (5")	200 (8")	240 (9,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128222	150 KCA AL 300 / L	150 (6")	125 (5")	300 (12")	340 (13,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128223	150 KCA AL 400 / L	150 (6")	125 (5")	400 (16")	440 (17,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128224	150 KCA AL 450 / L	150 (6")	125 (5")	450 (18")	490 (19,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128225	150 KCA AL 500 / L	150 (6")	125 (5")	500 (20")	540 (21,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128226	150 KCA AL 600 / L	150 (6")	125 (5")	600 (24")	640 (25,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128227	150 KCA AL 750 / L	150 (6")	125 (5")	750 (30")	790 (31,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128228	150 KCA AL 900 / L	150 (6")	125 (5")	900 (36")	940 (37,6")	3m / 6m (10 ft./20ft.)	300 (12")

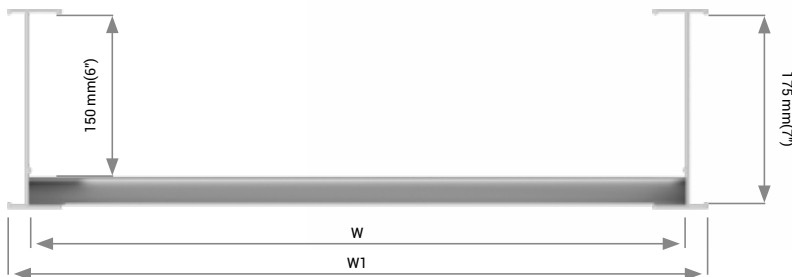
Standard manufacturing lengths are in metric system. Dimensions given in the parenthesis imperial and only for information.
Please check page 47-48 for cover selection.

175 KCA AL NEMA 20C Series ALUMINIUM Cable Ladder

- Side Rail Height (H) :175mm (Loading depth: 150mm)
- Internal Widths (W) :200mm, 300mm, 400mm, 450mm, 500mm, 600mm, 750mm, 900mm
- Overall Widths (W1) :W+40
- Standard Rung Spacing :300mm
- Standard Lengths (L) :3 m/6 m



Safe working load values are based on simple beam test according to NEMA VE-1-2017 edition.
*Please check Page 86 for NEMA Class Designations.

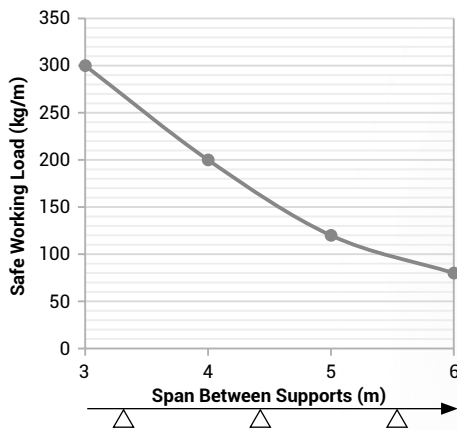


NEMA 20C		DIMENSIONS					
		HEIGHT		WIDTH		LENGTH	RUNG
CODE	DESCRIPTION	Side Rail Height	Loading Depth	Internal Width (W)	Overall Width (W1)	Standard Length	Standard Rung Spacing
		mm (inch.)		mm (inch.)			m (ft.)
3128229	175 KCA AL 200 / L	175 (7")	150 (6")	200 (8")	240 (9,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128230	175 KCA AL 300 / L	175 (7")	150 (6")	300 (12")	340 (13,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128231	175 KCA AL 400 / L	175 (7")	150 (6")	400 (16")	440 (17,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128232	175 KCA AL 450 / L	175 (7")	150 (6")	450 (18")	490 (19,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128233	175 KCA AL 500 / L	175 (7")	150 (6")	500 (20")	540 (21,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128234	175 KCA AL 600 / L	175 (7")	150 (6")	600 (24")	640 (25,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128235	175 KCA AL 750 / L	175 (7")	150 (6")	750 (30")	790 (31,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128236	175 KCA AL 900 / L	175 (7")	150 (6")	900 (36")	940 (37,6")	3m / 6m (10 ft./20ft.)	300 (12")

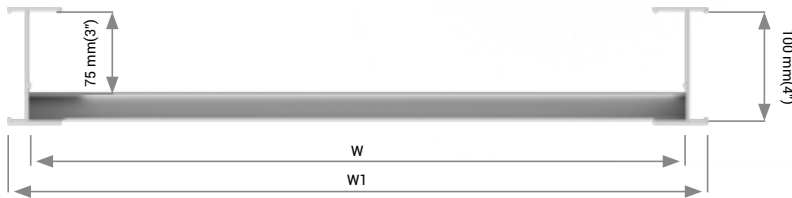
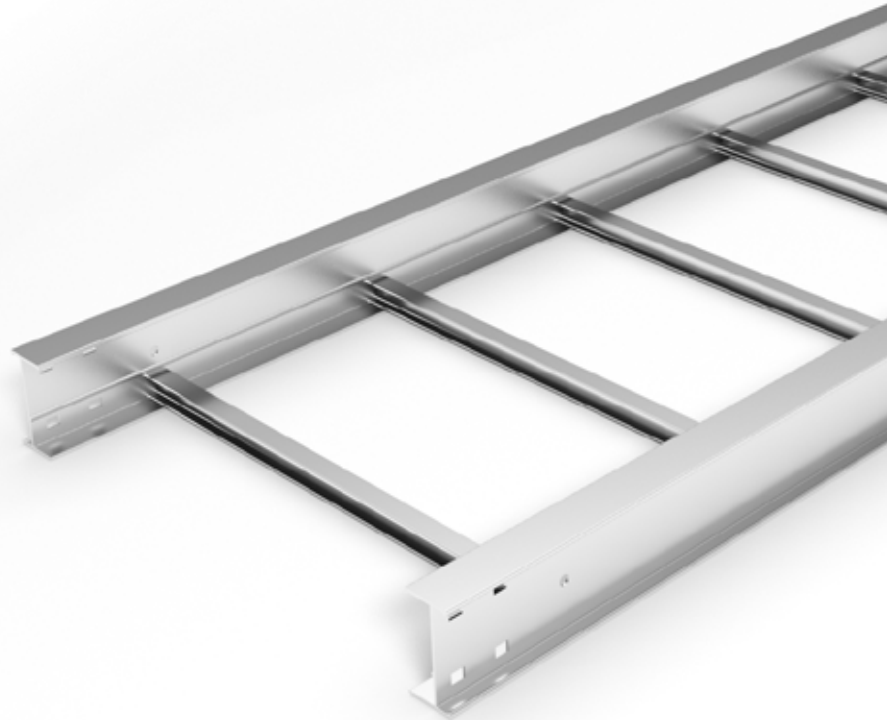
Standard manufacturing lengths are in metric system. Dimensions given in the parenthesis imperial and only for information.
Please check page 47-48 for cover selection.

100 KCA AL IEC Series ALUMINIUM Cable Ladder

- Side Rail Height (H)** :100mm (Loading depth: 75mm)
- Internal Widths (W)** :150mm, 200mm, 300mm, 400mm, 450mm, 500mm, 600mm, 750mm, 900mm
- Overall Widths (W1)** :W+40
- Standard Rung Spacing** :300mm
- Standard Lengths (L)** :3 m/6 m



Safe working load values are based on continuous beam test according to IEC 61537 standard.

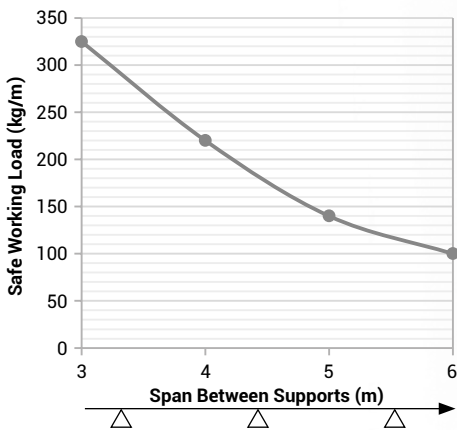
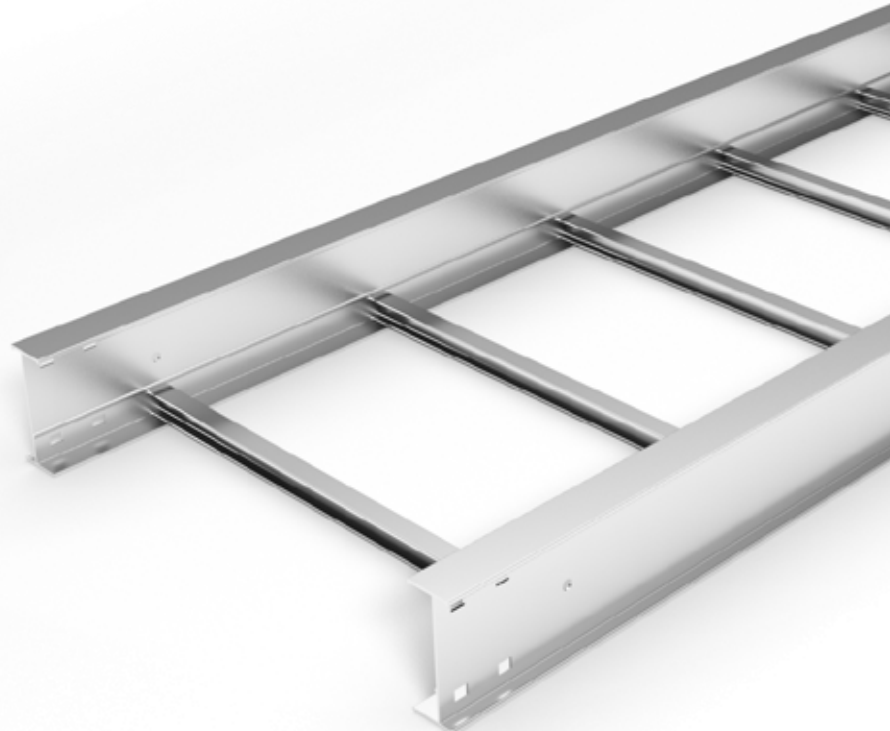


IEC		DIMENSIONS					
		HEIGHT		WIDTH		LENGTH	RUNG
CODE	DESCRIPTION	Side Rail Height	Loading Depth	Internal Width (W)	Overall Width (W1)	Standard Length	Standard Rung Spacing
		mm (inch.)		mm (inch.)			m (ft.)
3128202	100 KCA AL 150 / L	100 (4")	75 (3")	150 (6")	190 (7,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128203	100 KCA AL 200 / L	100 (4")	75 (3")	200 (8")	240 (9,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128204	100 KCA AL 300 / L	100 (4")	75 (3")	300 (12")	340 (13,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128205	100 KCA AL 400 / L	100 (4")	75 (3")	400 (16")	440 (17,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128206	100 KCA AL 450 / L	100 (4")	75 (3")	450 (18")	490 (19,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128207	100 KCA AL 500 / L	100 (4")	75 (3")	500 (20")	540 (21,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128208	100 KCA AL 600 / L	100 (4")	75 (3")	600 (24")	640 (25,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128209	100 KCA AL 750 / L	100 (4")	75 (3")	750 (30")	790 (31,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128210	100 KCA AL 900 / L	100 (4")	75 (3")	900 (36")	940 (37,6")	3m / 6m (10 ft./20ft.)	300 (12")

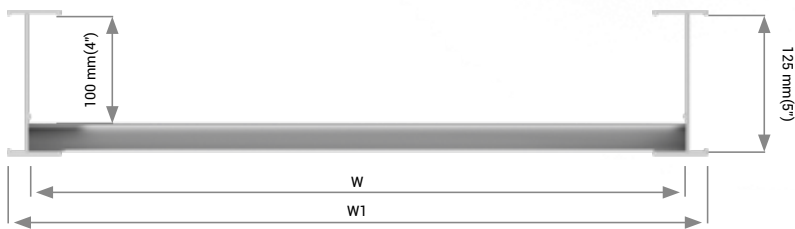
Standard manufacturing lengths are in metric system. Dimensions given in the parenthesis imperial and only for information. Please check page 47-48 for cover selection.

125 KCA AL IEC Series ALUMINIUM Cable Ladder

- Side Rail Height (H) :125mm (Loading depth: 100mm)
- Internal Widths (W) :150mm, 200mm, 300mm, 400mm, 450mm, 500mm, 600mm, 750mm, 900mm
- Overall Widths (W1) :W+40
- Standard Rung Spacing :300mm
- Standard Lengths (L) :3 m/6 m



Safe working load values are based on continuous beam test according to IEC 61537 standard.

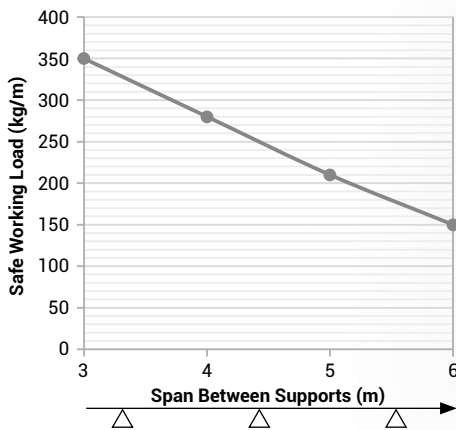
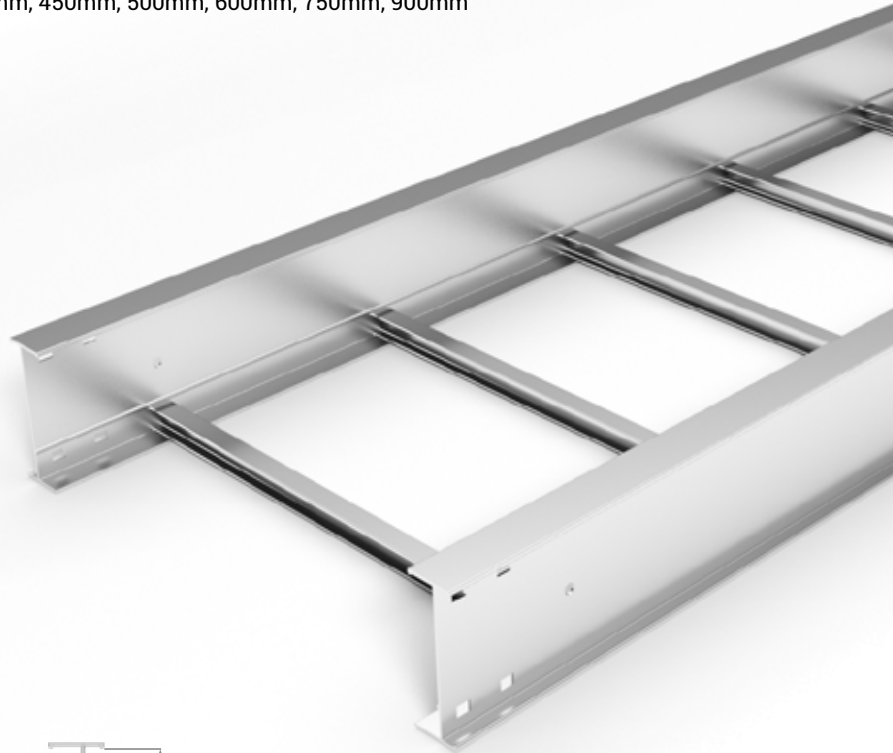


IEC		DIMENSIONS					
		HEIGHT		WIDTH		LENGTH	RUNG
CODE	DESCRIPTION	Side Rail Height	Loading Depth	Internal Width (W)	Overall Width (W1)	Standard Length	Standard Rung Spacing
		mm (inch.)		mm (inch.)			m (ft.)
3128211	125 KCA AL 150 / L	125 (5")	100 (4")	150 (6")	190 (7,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128212	125 KCA AL 200 / L	125 (5")	100 (4")	200 (8")	240 (9,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128213	125 KCA AL 300 / L	125 (5")	100 (4")	300 (12")	340 (13,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128214	125 KCA AL 400 / L	125 (5")	100 (4")	400 (16")	440 (17,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128215	125 KCA AL 450 / L	125 (5")	100 (4")	450 (18")	490 (19,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128216	125 KCA AL 500 / L	125 (5")	100 (4")	500 (20")	540 (21,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128217	125 KCA AL 600 / L	125 (5")	100 (4")	600 (24")	640 (25,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128218	125 KCA AL 750 / L	125 (5")	100 (4")	750 (30")	790 (31,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128219	125 KCA AL 900 / L	125 (5")	100 (4")	900 (36")	940 (37,6")	3m / 6m (10 ft./20ft.)	300 (12")

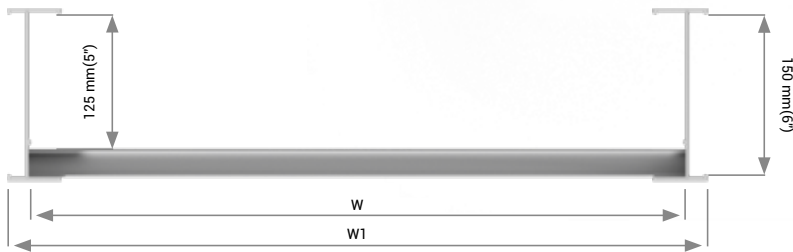
Standard manufacturing lengths are in metric system. Dimensions given in the parenthesis imperial and only for information. Please check page 47-48 for cover selection.

150 KCA AL IEC Series ALUMINIUM Cable Ladder

- Side Rail Height (H)** :150mm (Loading depth: 125mm)
- Internal Widths (W)** :150mm, 200mm, 300mm, 400mm, 450mm, 500mm, 600mm, 750mm, 900mm
- Overall Widths (W1)** :W+40
- Standard Rung Spacing** :300mm
- Standard Lengths (L)** :3 m/6 m



Safe working load values are based on continuous beam test according to IEC 61537 standard.

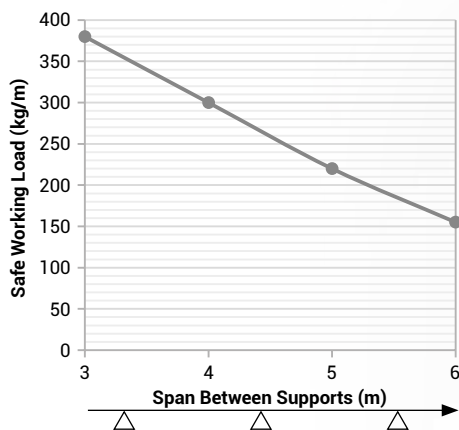


IEC		DIMENSIONS					
		HEIGHT		WIDTH		LENGTH	RUNG
CODE	DESCRIPTION	Side Rail Height	Loading Depth	Internal Width (W)	Overall Width (W1)	Standard Length	Standard Rung Spacing
		mm (inch.)		mm (inch.)			m (ft.)
3128220	150 KCA AL 150 / L	150 (6")	125 (5")	150 (6")	190 (7,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128221	150 KCA AL 200 / L	150 (6")	125 (5")	200 (8")	240 (9,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128222	150 KCA AL 300 / L	150 (6")	125 (5")	300 (12")	340 (13,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128223	150 KCA AL 400 / L	150 (6")	125 (5")	400 (16")	440 (17,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128224	150 KCA AL 450 / L	150 (6")	125 (5")	450 (18")	490 (19,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128225	150 KCA AL 500 / L	150 (6")	125 (5")	500 (20")	540 (21,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128226	150 KCA AL 600 / L	150 (6")	125 (5")	600 (24")	640 (25,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128227	150 KCA AL 750 / L	150 (6")	125 (5")	750 (30")	790 (31,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128228	150 KCA AL 900 / L	150 (6")	125 (5")	900 (36")	940 (37,6")	3m / 6m (10 ft./20ft.)	300 (12")

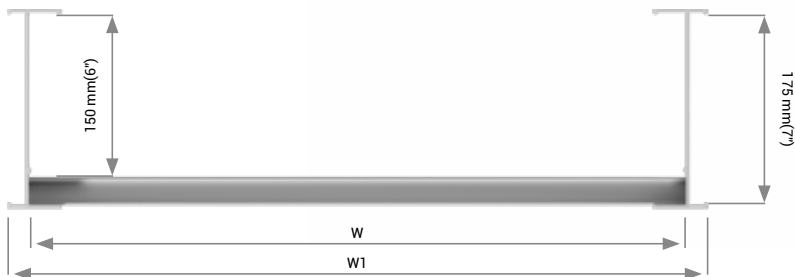
Standard manufacturing lengths are in metric system. Dimensions given in the parenthesis imperial and only for information. Please check page 47-48 for cover selection.

175 KCA AL IEC Series ALUMINIUM Cable Ladder

- Side Rail Height (H) :175mm (Loading depth: 150mm)
- Internal Widths (W) :200mm, 300mm, 400mm, 450mm, 500mm, 600mm, 750mm, 900mm
- Overall Widths (W1) :W+40
- Standard Rung Spacing :300mm
- Standard Lengths (L) :3 m/6 m



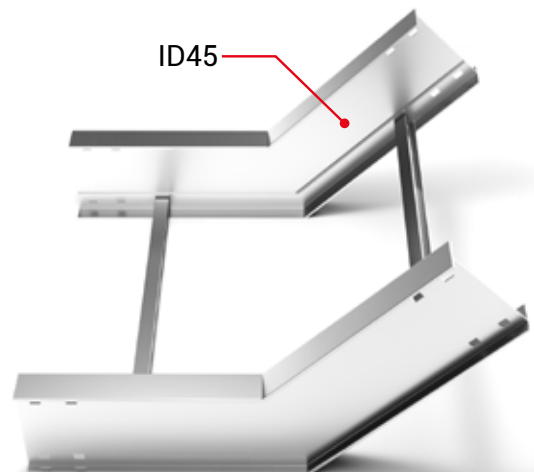
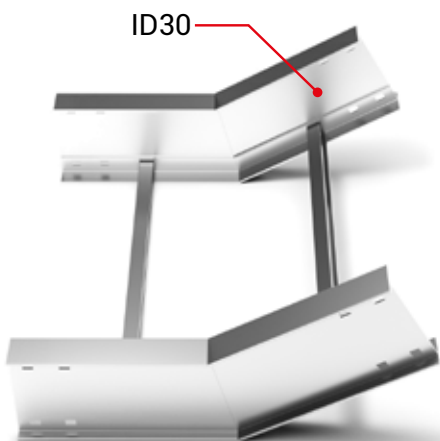
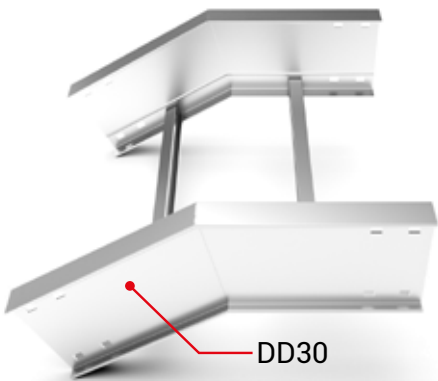
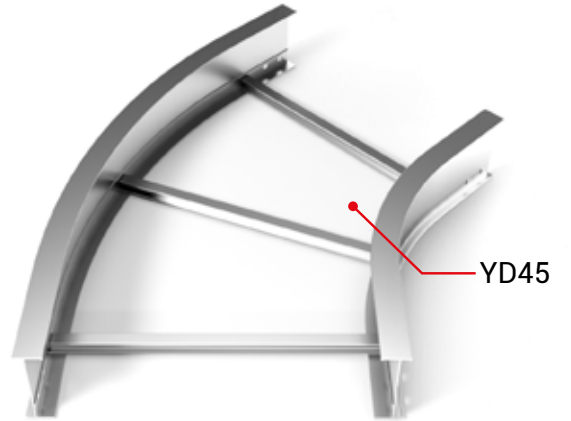
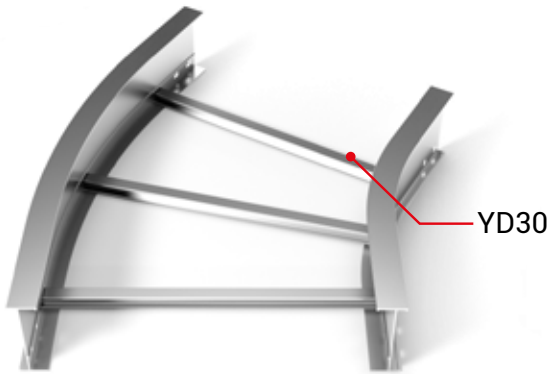
Safe working load values are based on continuous beam test according to IEC 61537 standard.

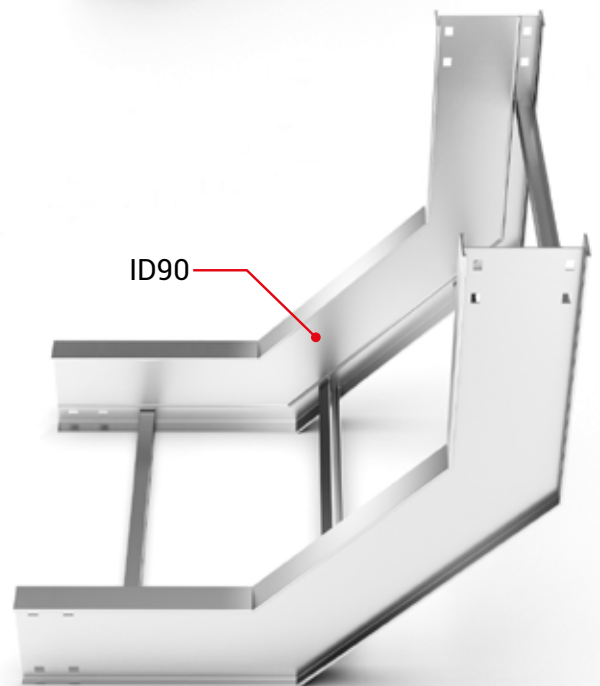
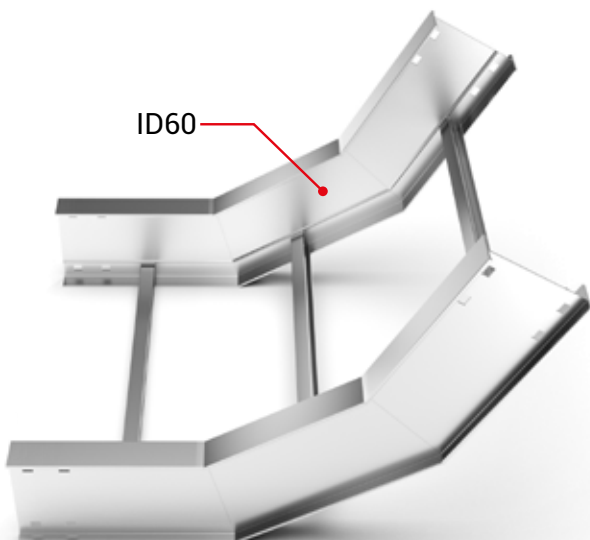
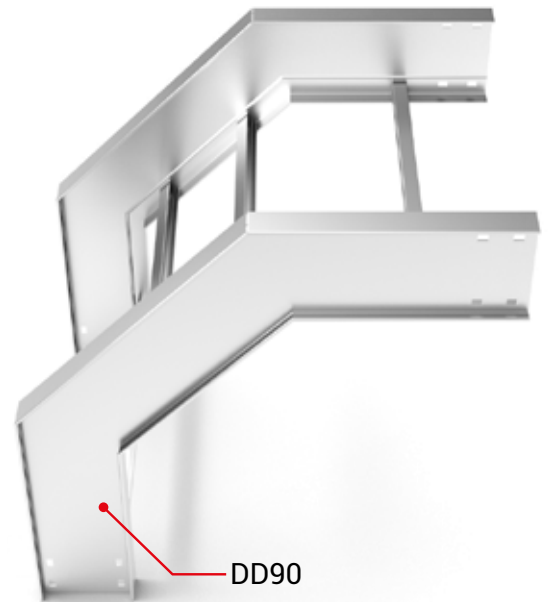
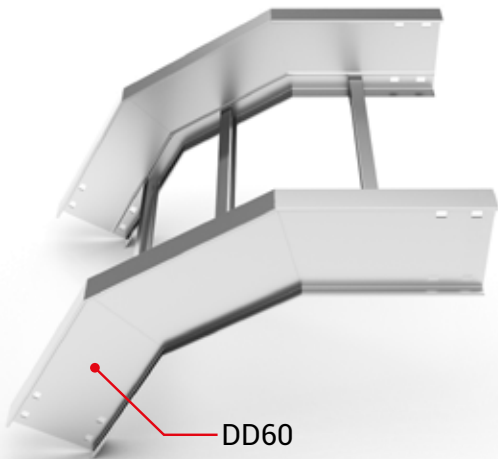
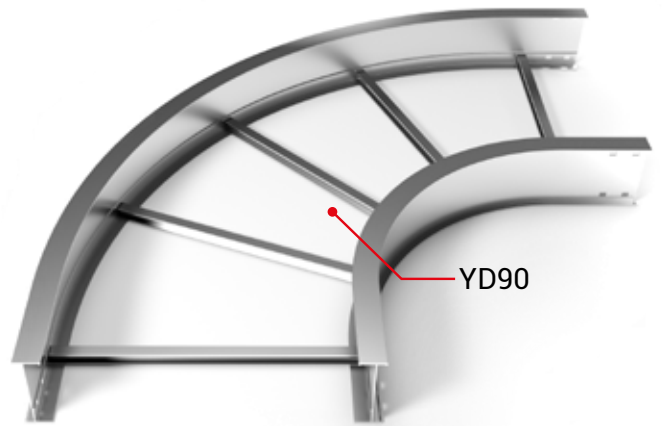
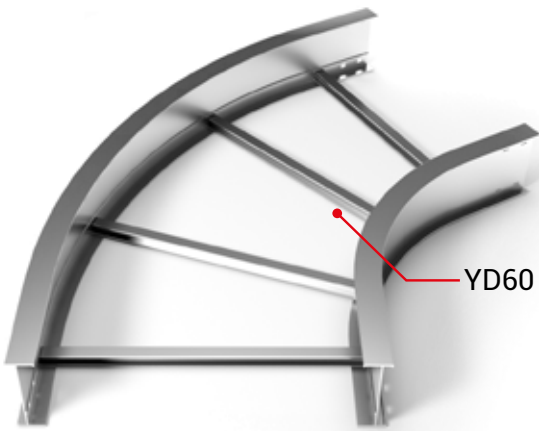


IEC		DIMENSIONS					
		HEIGHT		WIDTH		LENGTH	RUNG
CODE	DESCRIPTION	Side Rail Height	Loading Depth	Internal Width (W)	Overall Width (W1)	Standard Length	Standard Rung Spacing
		mm (inch.)	mm (inch.)	mm (inch.)	mm (inch.)		m (ft.)
3128229	175 KCA AL 200 / L	175 (7")	150 (6")	200 (8")	240 (9,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128230	175 KCA AL 300 / L	175 (7")	150 (6")	300 (12")	340 (13,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128231	175 KCA AL 400 / L	175 (7")	150 (6")	400 (16")	440 (17,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128232	175 KCA AL 450 / L	175 (7")	150 (6")	450 (18")	490 (19,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128233	175 KCA AL 500 / L	175 (7")	150 (6")	500 (20")	540 (21,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128234	175 KCA AL 600 / L	175 (7")	150 (6")	600 (24")	640 (25,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128235	175 KCA AL 750 / L	175 (7")	150 (6")	750 (30")	790 (31,6")	3m / 6m (10 ft./20ft.)	300 (12")
3128236	175 KCA AL 900 / L	175 (7")	150 (6")	900 (36")	940 (37,6")	3m / 6m (10 ft./20ft.)	300 (12")

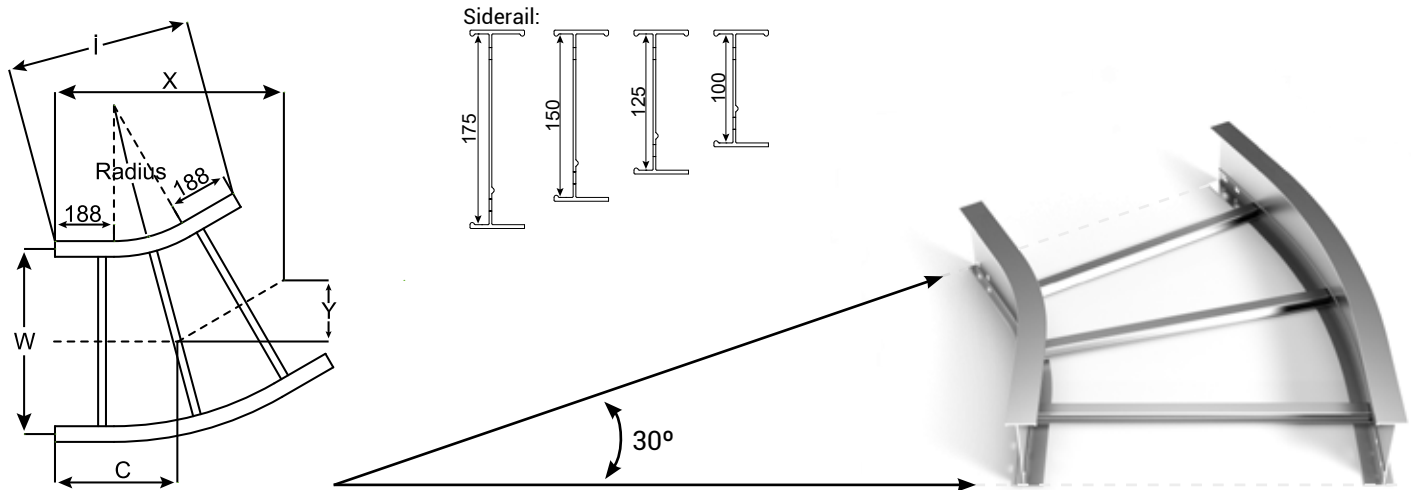
Standard manufacturing lengths are in metric system. Dimensions given in the parenthesis imperial and only for information. Please check page 47-48 for cover selection.

KCA AL Vertical Elbows are available in widths from 150mm to 900mm and angles at 30, 45, 60 and 90 degree as standard. The standard Radius are 300mm, 450mm, 600mm and 900mm.





►► **Fittings - YD30 Horizontal Elbow**



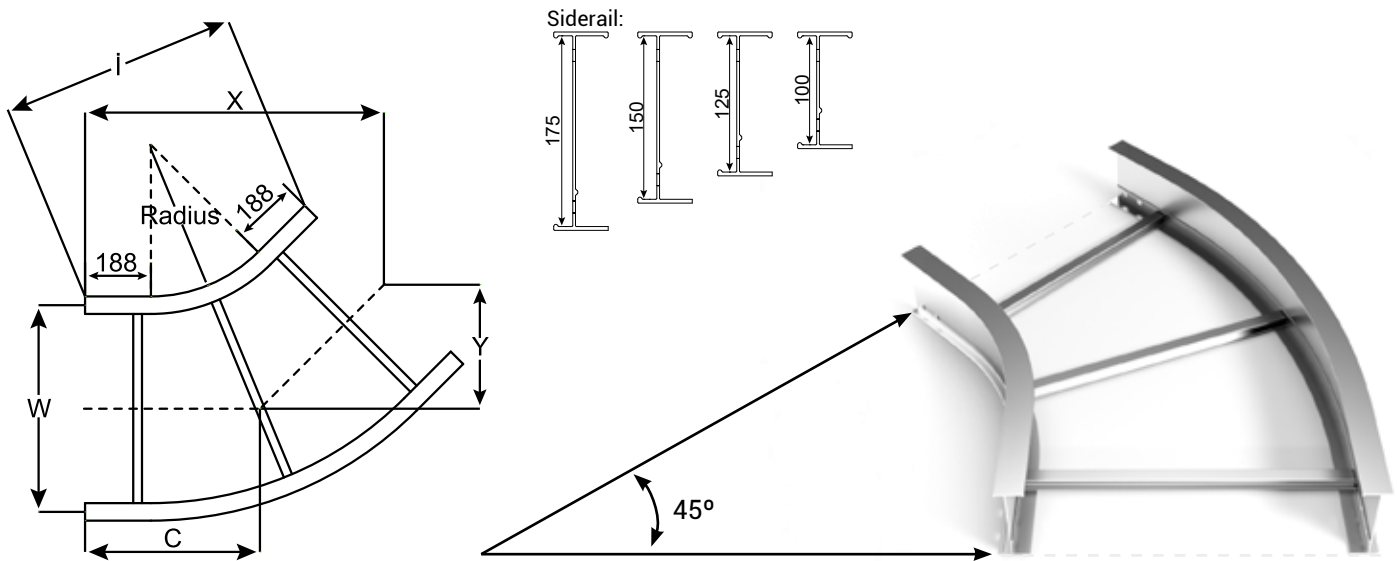
Width (mm)	Radius (mm)	Description	Code				Dimensions (mm)			
			↑ 100	↑ 125	↑ 150	↑ 175	X	Y	i	C
150	R300	↑ KCA AL 150 YD30 R300	3131169	3131205	3131241	3131277	539	144	518	289
	R450	↑ KCA AL 150 YD30 R450	3131170	3131206	3131242	3131278	614	165	596	329
	R600	↑ KCA AL 150 YD30 R600	3131171	3131207	3131243	3131279	689	185	673	369
	R900	↑ KCA AL 150 YD30 R900	3131172	3131208	3131244	3131280	839	225	829	449
200	R300	↑ KCA AL 200 YD30 R300	3131173	3131209	3131245	3131281	552	148	518	296
	R450	↑ KCA AL 200 YD30 R450	3131174	3131210	3131246	3131282	626	168	596	335
	R600	↑ KCA AL 200 YD30 R600	3131175	3131211	3131247	3131283	701	188	673	375
	R900	↑ KCA AL 200 YD30 R900	3131176	3131212	3131248	3131284	864	232	829	462
300	R300	↑ KCA AL 300 YD30 R300	3131177	3131213	3131249	3131285	577	155	518	309
	R450	↑ KCA AL 300 YD30 R450	3131178	3131214	3131250	3131286	651	175	596	349
	R600	↑ KCA AL 300 YD30 R600	3131179	3131215	3131251	3131287	726	195	673	389
	R900	↑ KCA AL 300 YD30 R900	3131180	3131216	3131252	3131288	889	238	829	476
400	R300	↑ KCA AL 400 YD30 R300	3131181	3131217	3131253	3131289	602	161	518	323
	R450	↑ KCA AL 400 YD30 R450	3131182	3131218	3131254	3131290	677	181	596	363
	R600	↑ KCA AL 400 YD30 R600	3131183	3131219	3131255	3131291	752	201	673	403
	R900	↑ KCA AL 400 YD30 R900	3131184	3131220	3131256	3131292	902	242	829	483
450	R300	↑ KCA AL 450 YD30 R300	3131185	3131221	3131257	3131293	614	165	518	329
	R450	↑ KCA AL 450 YD30 R450	3131186	3131222	3131258	3131294	689	185	596	369
	R600	↑ KCA AL 450 YD30 R600	3131187	3131223	3131259	3131295	764	205	673	409
	R900	↑ KCA AL 450 YD30 R900	3131188	3131224	3131260	3131296	926	248	829	496
500	R300	↑ KCA AL 500 YD30 R300	3131189	3131225	3131261	3131297	627	168	518	336
	R450	↑ KCA AL 500 YD30 R450	3131190	3131226	3131262	3131298	702	188	596	376
	R600	↑ KCA AL 500 YD30 R600	3131191	3131227	3131263	3131299	777	208	673	416
	R900	↑ KCA AL 500 YD30 R900	3131192	3131228	3131264	3131300	927	248	829	497
600	R300	↑ KCA AL 600 YD30 R300	3131193	3131229	3131265	3131301	651	175	518	349
	R450	↑ KCA AL 600 YD30 R450	3131194	3131230	3131266	3131302	728	196	596	389
	R600	↑ KCA AL 600 YD30 R600	3131195	3131231	3131267	3131303	801	215	673	429
	R900	↑ KCA AL 600 YD30 R900	3131196	3131232	3131268	3131304	964	258	829	516
750	R300	↑ KCA AL 750 YD30 R300	3131197	3131233	3131269	3131305	689	185	518	369
	R450	↑ KCA AL 750 YD30 R450	3131198	3131234	3131270	3131306	766	206	596	409
	R600	↑ KCA AL 750 YD30 R600	3131199	3131235	3131271	3131307	838	225	673	449
	R900	↑ KCA AL 750 YD30 R900	3131200	3131236	3131272	3131308	1001	268	829	536
900	R300	↑ KCA AL 900 YD30 R300	3131201	3131237	3131273	3131309	726	195	518	389
	R450	↑ KCA AL 900 YD30 R450	3131202	3131238	3131274	3131310	803	216	596	429
	R600	↑ KCA AL 900 YD30 R600	3131203	3131239	3131275	3131311	876	235	673	469
	R900	↑ KCA AL 900 YD30 R900	3131204	3131240	3131276	3131312	1039	278	829	556



X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 50 for cover selection.

►► **Fittings - YD45 Horizontal Elbow**



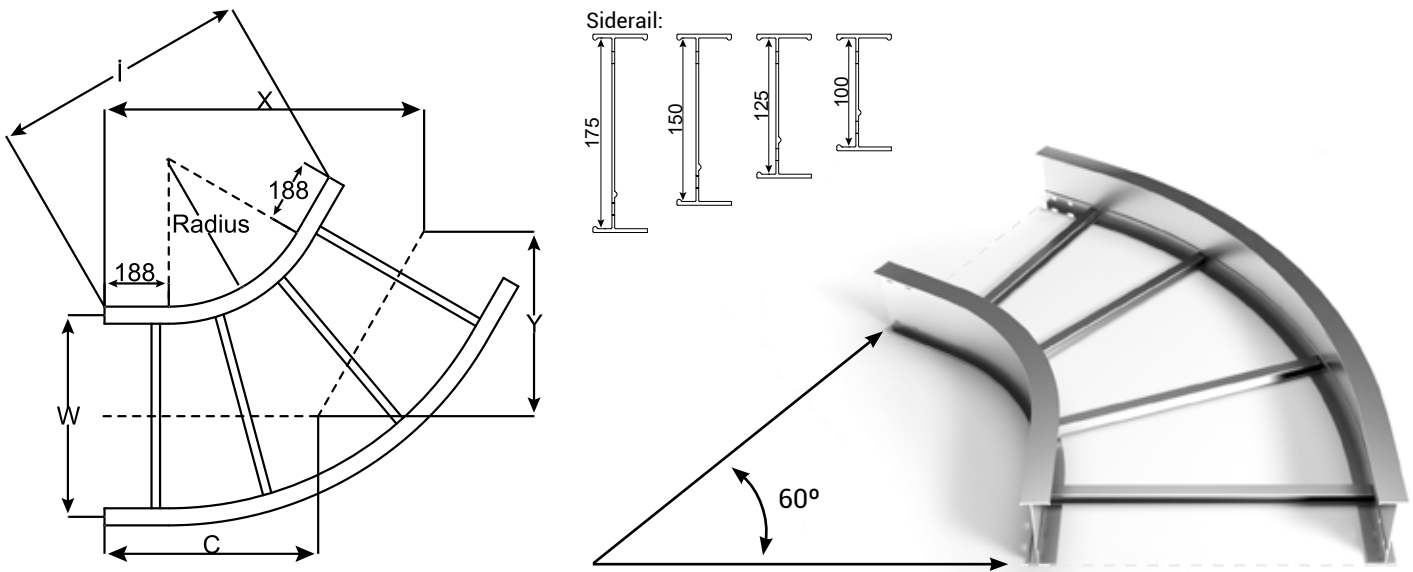
Width (mm)	Radius (mm)	Description	Code				Dimensions (mm)			
			↑ 100	↑ 125	↑ 150	↑ 175	X	Y	i	C
150	R300	↑ KCA AL 150 YD45 R300	3131313	3131349	3131385	3131421	587	244	576	344
	R450	↑ KCA AL 150 YD45 R450	3131314	3131350	3131386	3131422	693	288	691	406
	R600	↑ KCA AL 150 YD45 R600	3131315	3131351	3131387	3131423	800	332	807	468
	R900	↑ KCA AL 150 YD45 R900	3131316	3131352	3131388	3131424	1012	419	1036	592
200	R300	↑ KCA AL 200 YD45 R300	3131317	3131353	3131389	3131425	604	251	576	354
	R450	↑ KCA AL 200 YD45 R450	3131318	3131354	3131390	3131426	711	295	691	416
	R600	↑ KCA AL 200 YD45 R600	3131319	3131355	3131391	3131427	817	339	807	478
	R900	↑ KCA AL 200 YD45 R900	3131320	3131356	3131392	3131428	1029	426	1036	602
300	R300	↑ KCA AL 300 YD45 R300	3131321	3131357	3131393	3131429	640	266	576	375
	R450	↑ KCA AL 300 YD45 R450	3131322	3131358	3131394	3131430	746	310	691	437
	R600	↑ KCA AL 300 YD45 R600	3131323	3131359	3131395	3131431	852	353	807	499
	R900	↑ KCA AL 300 YD45 R900	3131324	3131360	3131396	3131432	1064	440	1036	623
400	R300	↑ KCA AL 400 YD45 R300	3131325	3131361	3131397	3131433	676	280	576	396
	R450	↑ KCA AL 400 YD45 R450	3131326	3131362	3131398	3131434	782	324	691	458
	R600	↑ KCA AL 400 YD45 R600	3131327	3131363	3131399	3131435	888	368	807	520
	R900	↑ KCA AL 400 YD45 R900	3131328	3131364	3131400	3131436	1100	456	1036	645
450	R300	↑ KCA AL 450 YD45 R300	3131329	3131365	3131401	3131437	693	288	576	406
	R450	↑ KCA AL 450 YD45 R450	3131330	3131366	3131402	3131438	799	332	691	468
	R600	↑ KCA AL 450 YD45 R600	3131331	3131367	3131403	3131439	905	375	807	530
	R900	↑ KCA AL 450 YD45 R900	3131332	3131368	3131404	3131440	1118	462	1036	654
500	R300	↑ KCA AL 500 YD45 R300	3131333	3131369	3131405	3131441	712	295	576	417
	R450	↑ KCA AL 500 YD45 R450	3131334	3131370	3131406	3131442	818	339	691	479
	R600	↑ KCA AL 500 YD45 R600	3131335	3131371	3131407	3131443	924	383	807	541
	R900	↑ KCA AL 500 YD45 R900	3131336	3131372	3131408	3131444	1136	470	1036	665
600	R300	↑ KCA AL 600 YD45 R300	3131337	3131373	3131409	3131445	747	310	576	437
	R450	↑ KCA AL 600 YD45 R450	3131338	3131374	3131410	3131446	853	355	691	499
	R600	↑ KCA AL 600 YD45 R600	3131339	3131375	3131411	3131447	957	397	807	561
	R900	↑ KCA AL 600 YD45 R900	3131340	3131376	3131412	3131448	1170	484	1036	685
750	R300	↑ KCA AL 750 YD45 R300	3131341	3131377	3131413	3131449	800	333	576	469
	R450	↑ KCA AL 750 YD45 R450	3131342	3131378	3131414	3131450	906	377	691	530
	R600	↑ KCA AL 750 YD45 R600	3131343	3131379	3131415	3131451	1010	418	807	592
	R900	↑ KCA AL 750 YD45 R900	3131344	3131380	3131416	3131452	1224	506	1036	716
900	R300	↑ KCA AL 900 YD45 R300	3131345	3131381	3131417	3131453	853	355	576	499
	R450	↑ KCA AL 900 YD45 R450	3131346	3131382	3131418	3131454	960	399	691	561
	R600	↑ KCA AL 900 YD45 R600	3131347	3131383	3131419	3131455	1063	439	807	623
	R900	↑ KCA AL 900 YD45 R900	3131348	3131384	3131420	3131456	1277	528	1036	747



X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 51 for cover selection.

►► **Fittings - YD60 Horizontal Elbow**



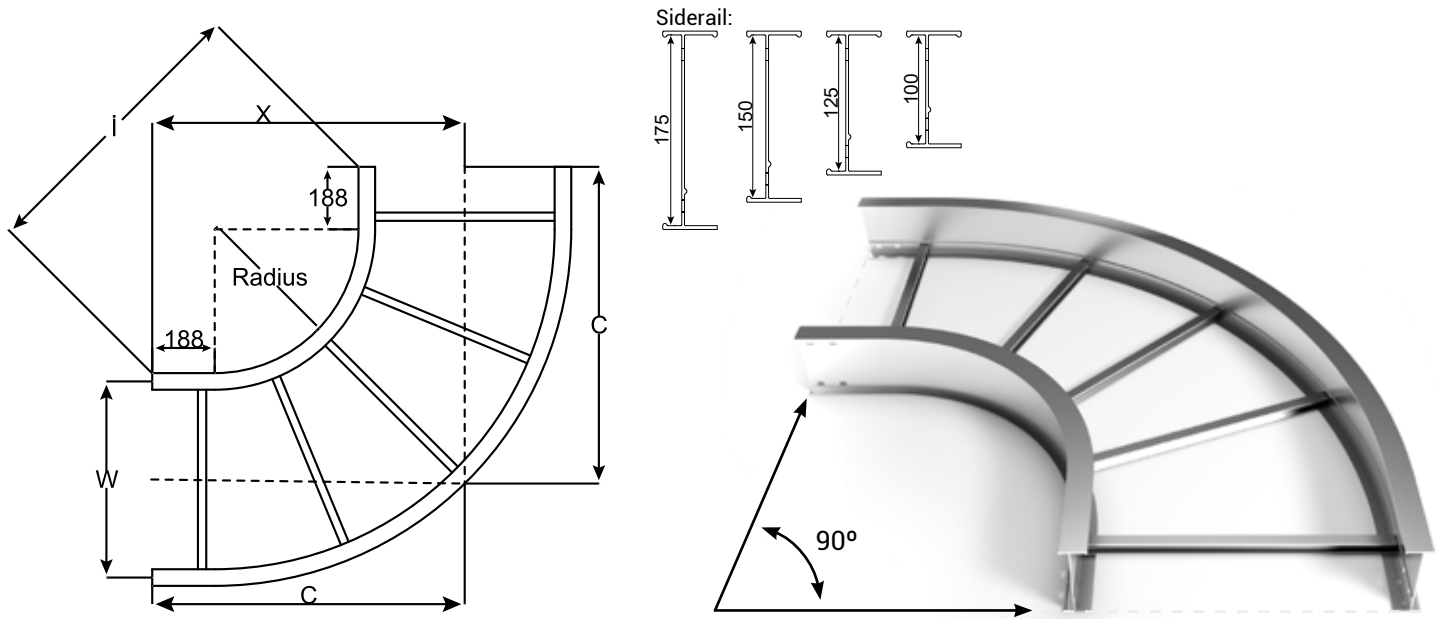
Width (mm)	Radius (mm)	Description	Code				Dimensions (mm)			
			↑ 100	↑ 125	↑ 150	↑ 175	X	Y	İ	C
150	R300	↑ KCA AL 150 YD60 R300	3131457	3131493	3131529	3131565	608	351	625	405
	R450	↑ KCA AL 150 YD60 R450	3131458	3131494	3131530	3131566	738	426	715	492
	R600	↑ KCA AL 150 YD60 R600	3131459	3131495	3131531	3131567	868	502	952	579
	R900	↑ KCA AL 150 YD60 R900	3131460	3131496	3131532	3131568	1128	651	1125	752
200	R300	↑ KCA AL 200 YD60 R300	3131461	3131497	3131533	3131569	629	363	625	419
	R450	↑ KCA AL 200 YD60 R450	3131462	3131498	3131534	3131570	759	438	715	506
	R600	↑ KCA AL 200 YD60 R600	3131463	3131499	3131535	3131571	889	514	952	593
	R900	↑ KCA AL 200 YD60 R900	3131464	3131500	3131536	3131572	1149	663	1125	766
300	R300	↑ KCA AL 300 YD60 R300	3131465	3131501	3131537	3131573	672	388	625	448
	R450	↑ KCA AL 300 YD60 R450	3131466	3131502	3131538	3131574	802	463	715	535
	R600	↑ KCA AL 300 YD60 R600	3131467	3131503	3131539	3131575	933	539	952	622
	R900	↑ KCA AL 300 YD60 R900	3131468	3131504	3131540	3131576	1193	688	1125	795
400	R300	↑ KCA AL 400 YD60 R300	3131469	3131505	3131541	3131577	717	414	625	478
	R450	↑ KCA AL 400 YD60 R450	3131470	3131506	3131542	3131578	847	489	715	565
	R600	↑ KCA AL 400 YD60 R600	3131471	3131507	3131543	3131579	977	564	952	651
	R900	↑ KCA AL 400 YD60 R900	3131472	3131508	3131544	3131580	1238	714	1125	824
450	R300	↑ KCA AL 450 YD60 R300	3131473	3131509	3131545	3131581	737	425	625	491
	R450	↑ KCA AL 450 YD60 R450	3131474	3131510	3131546	3131582	867	500	715	578
	R600	↑ KCA AL 450 YD60 R600	3131475	3131511	3131547	3131583	998	577	952	665
	R900	↑ KCA AL 450 YD60 R900	3131476	3131512	3131548	3131584	1258	726	1125	838
500	R300	↑ KCA AL 500 YD60 R300	3131477	3131513	3131549	3131585	760	439	625	507
	R450	↑ KCA AL 500 YD60 R450	3131478	3131514	3131550	3131586	890	514	715	593
	R600	↑ KCA AL 500 YD60 R600	3131479	3131515	3131551	3131587	1020	589	952	680
	R900	↑ KCA AL 500 YD60 R900	3131480	3131516	3131552	3131588	1280	739	1125	853
600	R300	↑ KCA AL 600 YD60 R300	3131481	3131517	3131553	3131589	802	463	625	534
	R450	↑ KCA AL 600 YD60 R450	3131482	3131518	3131554	3131590	932	537	715	621
	R600	↑ KCA AL 600 YD60 R600	3131483	3131519	3131555	3131591	1063	614	952	709
	R900	↑ KCA AL 600 YD60 R900	3131484	3131520	3131556	3131592	1323	763	1125	881
750	R300	↑ KCA AL 750 YD60 R300	3131485	3131521	3131557	3131593	867	500	625	578
	R450	↑ KCA AL 750 YD60 R450	3131486	3131522	3131558	3131594	997	574	715	665
	R600	↑ KCA AL 750 YD60 R600	3131487	3131523	3131559	3131595	1128	652	952	752
	R900	↑ KCA AL 750 YD60 R900	3131488	3131524	3131560	3131596	1388	801	1125	925
900	R300	↑ KCA AL 900 YD60 R300	3131489	3131525	3131561	3131597	932	538	625	621
	R450	↑ KCA AL 900 YD60 R450	3131490	3131526	3131562	3131598	1061	611	715	708
	R600	↑ KCA AL 900 YD60 R600	3131491	3131527	3131563	3131599	1193	690	952	795
	R900	↑ KCA AL 900 YD60 R900	3131492	3131528	3131564	3131600	1453	839	1125	968



X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 52 for cover selection.

►► **Fittings - YD90 Horizontal Elbow**



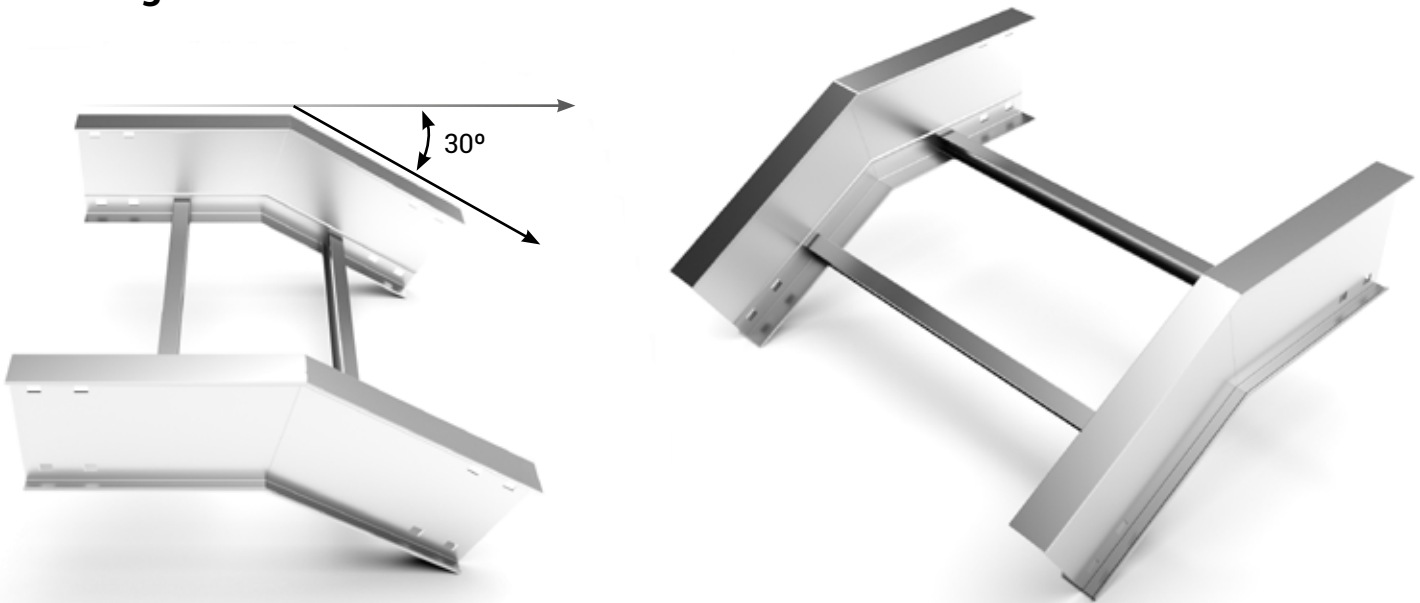
Width (mm)	Radius (mm)	Description	Code				Dimensions (mm)			
			↑ 100	↑ 125	↑ 150	↑ 175	X	Y	I	C
150	R300	↑ KCA AL 150 YD90 R300	3131601	3131637	3131673	3131709	565	565	690	565
	R450	↑ KCA AL 150 YD90 R450	3131602	3131638	3131674	3131710	715	715	902	715
	R600	↑ KCA AL 150 YD90 R600	3131603	3131639	3131675	3131711	865	865	1114	865
	R900	↑ KCA AL 150 YD90 R900	3131604	3131640	3131676	3131712	1165	1165	1538	1165
200	R300	↑ KCA AL 200 YD90 R300	3131605	3131641	3131677	3131713	590	590	690	590
	R450	↑ KCA AL 200 YD90 R450	3131606	3131642	3131678	3131714	740	740	902	740
	R600	↑ KCA AL 200 YD90 R600	3131607	3131643	3131679	3131715	890	890	1114	890
	R900	↑ KCA AL 200 YD90 R900	3131608	3131644	3131680	3131716	1190	1190	1538	1190
300	R300	↑ KCA AL 300 YD90 R300	3131609	3131645	3131681	3131717	640	640	690	640
	R450	↑ KCA AL 300 YD90 R450	3131610	3131646	3131682	3131718	790	790	902	790
	R600	↑ KCA AL 300 YD90 R600	3131611	3131647	3131683	3131719	940	940	1114	940
	R900	↑ KCA AL 300 YD90 R900	3131612	3131648	3131684	3131720	1240	1240	1538	1240
400	R300	↑ KCA AL 400 YD90 R300	3131613	3131649	3131685	3131721	690	690	690	690
	R450	↑ KCA AL 400 YD90 R450	3131614	3131650	3131686	3131722	840	840	902	840
	R600	↑ KCA AL 400 YD90 R600	3131615	3131651	3131687	3131723	990	990	1114	990
	R900	↑ KCA AL 400 YD90 R900	3131616	3131652	3131688	3131724	1290	1290	1538	1290
450	R300	↑ KCA AL 450 YD90 R300	3131617	3131653	3131689	3131725	715	715	690	715
	R450	↑ KCA AL 450 YD90 R450	3131618	3131654	3131690	3131726	865	865	902	865
	R600	↑ KCA AL 450 YD90 R600	3131619	3131655	3131691	3131727	1015	1015	1114	1015
	R900	↑ KCA AL 450 YD90 R900	3131620	3131656	3131692	3131728	1315	1315	1538	1315
500	R300	↑ KCA AL 500 YD90 R300	3131621	3131657	3131693	3131729	740	740	690	740
	R450	↑ KCA AL 500 YD90 R450	3131622	3131658	3131694	3131730	890	890	902	890
	R600	↑ KCA AL 500 YD90 R600	3131623	3131659	3131695	3131731	1040	1040	1114	1040
	R900	↑ KCA AL 500 YD90 R900	3131624	3131660	3131696	3131732	1340	1340	1538	1340
600	R300	↑ KCA AL 600 YD90 R300	3131625	3131661	3131697	3131733	790	790	690	1465
	R450	↑ KCA AL 600 YD90 R450	3131626	3131662	3131698	3131734	940	940	902	1660
	R600	↑ KCA AL 600 YD90 R600	3131627	3131663	3131699	3131735	1090	1090	1114	1855
	R900	↑ KCA AL 600 YD90 R900	3131628	3131664	3131700	3131736	1390	1390	1538	2050
750	R300	↑ KCA AL 750 YD90 R300	3131629	3131665	3131701	3131737	865	865	690	865
	R450	↑ KCA AL 750 YD90 R450	3131630	3131666	3131702	3131738	1015	1015	902	1015
	R600	↑ KCA AL 750 YD90 R600	3131631	3131667	3131703	3131739	1165	1165	1114	1165
	R900	↑ KCA AL 750 YD90 R900	3131632	3131668	3131704	3131740	1465	1465	1538	1465
900	R300	↑ KCA AL 900 YD90 R300	3131633	3131669	3131705	3131741	940	940	690	940
	R450	↑ KCA AL 900 YD90 R450	3131634	3131670	3131706	3131742	1090	1090	902	1090
	R600	↑ KCA AL 900 YD90 R600	3131635	3131671	3131707	3131743	1240	1240	1114	1240
	R900	↑ KCA AL 900 YD90 R900	3131636	3131672	3131708	3131744	1540	1540	1538	1540



X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 53 for cover selection.

►►Fittings - DD30 Vertical Outside Elbow



Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↑KCA AL 150 DD30 R300	3129108	3129144	3129180	3129216
	R450	↑KCA AL 150 DD30 R450	3129109	3129145	3129181	3129217
	R600	↑KCA AL 150 DD30 R600	3129110	3129146	3129182	3129218
	R900	↑KCA AL 150 DD30 R900	3129111	3129147	3129183	3129219
200	R300	↑KCA AL 200 DD30 R300	3129112	3129148	3129184	3129220
	R450	↑KCA AL 200 DD30 R450	3129113	3129149	3129185	3129221
	R600	↑KCA AL 200 DD30 R600	3129114	3129150	3129186	3129222
	R900	↑KCA AL 200 DD30 R900	3129115	3129151	3129187	3129223
300	R300	↑KCA AL 300 DD30 R300	3129116	3129152	3129188	3129224
	R450	↑KCA AL 300 DD30 R450	3129117	3129153	3129189	3129225
	R600	↑KCA AL 300 DD30 R600	3129118	3129154	3129190	3129226
	R900	↑KCA AL 300 DD30 R900	3129119	3129155	3129191	3129227
400	R300	↑KCA AL 400 DD30 R300	3129120	3129156	3129192	3129228
	R450	↑KCA AL 400 DD30 R450	3129121	3129157	3129193	3129229
	R600	↑KCA AL 400 DD30 R600	3129122	3129158	3129194	3129230
	R900	↑KCA AL 400 DD30 R900	3129123	3129159	3129195	3129231
450	R300	↑KCA AL 450 DD30 R300	3129124	3129160	3129196	3129232
	R450	↑KCA AL 450 DD30 R450	3129125	3129161	3129197	3129233
	R600	↑KCA AL 450 DD30 R600	3129126	3129162	3129198	3129234
	R900	↑KCA AL 450 DD30 R900	3129127	3129163	3129199	3129235
500	R300	↑KCA AL 500 DD30 R300	3129128	3129164	3129200	3129236
	R450	↑KCA AL 500 DD30 R450	3129129	3129165	3129201	3129237
	R600	↑KCA AL 500 DD30 R600	3129130	3129166	3129202	3129238
	R900	↑KCA AL 500 DD30 R900	3129131	3129167	3129203	3129239
600	R300	↑KCA AL 600 DD30 R300	3129132	3129168	3129204	3129240
	R450	↑KCA AL 600 DD30 R450	3129133	3129169	3129205	3129241
	R600	↑KCA AL 600 DD30 R600	3129134	3129170	3129206	3129242
	R900	↑KCA AL 600 DD30 R900	3129135	3129171	3129207	3129243
750	R300	↑KCA AL 750 DD30 R300	3129136	3129172	3129208	3129244
	R450	↑KCA AL 750 DD30 R450	3129137	3129173	3129209	3129245
	R600	↑KCA AL 750 DD30 R600	3129138	3129174	3129210	3129246
	R900	↑KCA AL 750 DD30 R900	3129139	3129175	3129211	3129247
900	R300	↑KCA AL 900 DD30 R300	3129140	3129176	3129212	3129248
	R450	↑KCA AL 900 DD30 R450	3129141	3129177	3129213	3129249
	R600	↑KCA AL 900 DD30 R600	3129142	3129178	3129214	3129250
	R900	↑KCA AL 900 DD30 R900	3129143	3129179	3129215	3129251

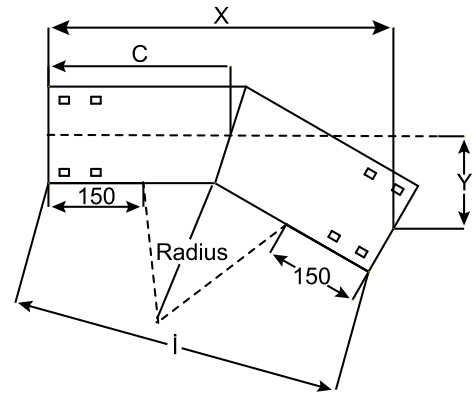
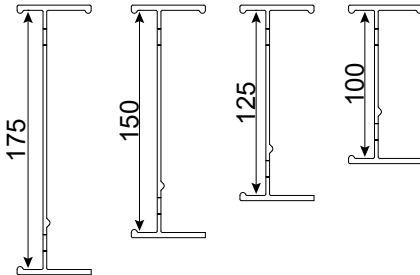


X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 54 for cover selection.

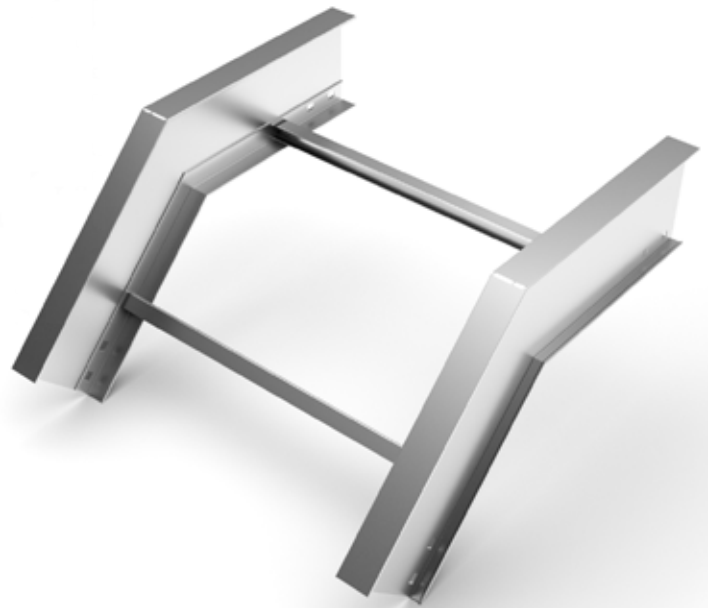
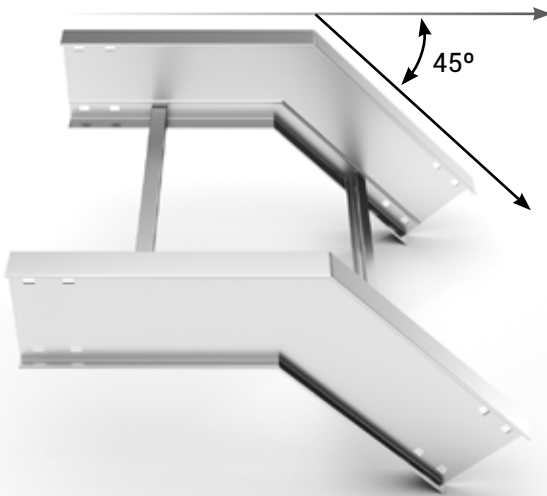
►►Fittings - DD30 Vertical Outside Elbow

Siderail:



DIMENSIONS															
H100				H125				H150				H175			
X	Y	i	C	X	Y	i	C	X	Y	i	C	X	Y	i	C
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416

►►Fittings - DD45 Vertical Outside Elbow



Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↑KCA AL 150 DD45 R300	3129252	3129288	3129324	3129360
	R450	↑KCA AL 150 DD45 R450	3129253	3129289	3129325	3129361
	R600	↑KCA AL 150 DD45 R600	3129254	3129290	3129326	3129362
	R900	↑KCA AL 150 DD45 R900	3129255	3129291	3129327	3129363
200	R300	↑KCA AL 200 DD45 R300	3129256	3129292	3129328	3129364
	R450	↑KCA AL 200 DD45 R450	3129257	3129293	3129329	3129365
	R600	↑KCA AL 200 DD45 R600	3129258	3129294	3129330	3129366
	R900	↑KCA AL 200 DD45 R900	3129259	3129295	3129331	3129367
300	R300	↑KCA AL 300 DD45 R300	3129260	3129296	3129332	3129368
	R450	↑KCA AL 300 DD45 R450	3129261	3129297	3129333	3129369
	R600	↑KCA AL 300 DD45 R600	3129262	3129298	3129334	3129370
	R900	↑KCA AL 300 DD45 R900	3129263	3129299	3129335	3129371
400	R300	↑KCA AL 400 DD45 R300	3129264	3129300	3129336	3129372
	R450	↑KCA AL 400 DD45 R450	3129265	3129301	3129337	3129373
	R600	↑KCA AL 400 DD45 R600	3129266	3129302	3129338	3129374
	R900	↑KCA AL 400 DD45 R900	3129267	3129303	3129339	3129375
450	R300	↑KCA AL 450 DD45 R300	3129268	3129304	3129340	3129376
	R450	↑KCA AL 450 DD45 R450	3129269	3129305	3129341	3129377
	R600	↑KCA AL 450 DD45 R600	3129270	3129306	3129342	3129378
	R900	↑KCA AL 450 DD45 R900	3129271	3129307	3129343	3129379
500	R300	↑KCA AL 500 DD45 R300	3129272	3129308	3129344	3129380
	R450	↑KCA AL 500 DD45 R450	3129273	3129309	3129345	3129381
	R600	↑KCA AL 500 DD45 R600	3129274	3129310	3129346	3129382
	R900	↑KCA AL 500 DD45 R900	3129275	3129311	3129347	3129383
600	R300	↑KCA AL 600 DD45 R300	3129276	3129312	3129348	3129384
	R450	↑KCA AL 600 DD45 R450	3129277	3129313	3129349	3129385
	R600	↑KCA AL 600 DD45 R600	3129278	3129314	3129350	3129386
	R900	↑KCA AL 600 DD45 R900	3129279	3129315	3129351	3129387
750	R300	↑KCA AL 750 DD45 R300	3129280	3129316	3129352	3129388
	R450	↑KCA AL 750 DD45 R450	3129281	3129317	3129353	3129389
	R600	↑KCA AL 750 DD45 R600	3129282	3129318	3129354	3129390
	R900	↑KCA AL 750 DD45 R900	3129283	3129319	3129355	3129391
900	R300	↑KCA AL 900 DD45 R300	3129284	3129320	3129356	3129392
	R450	↑KCA AL 900 DD45 R450	3129285	3129321	3129357	3129393
	R600	↑KCA AL 900 DD45 R600	3129286	3129322	3129358	3129394
	R900	↑KCA AL 900 DD45 R900	3129287	3129323	3129359	3129395

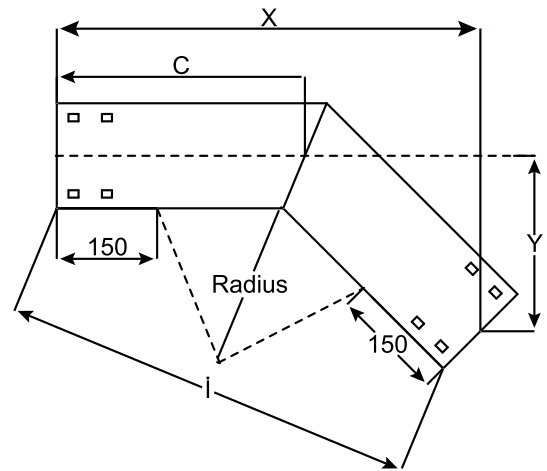
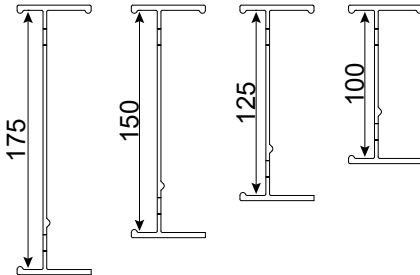


X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 55 for cover selection.

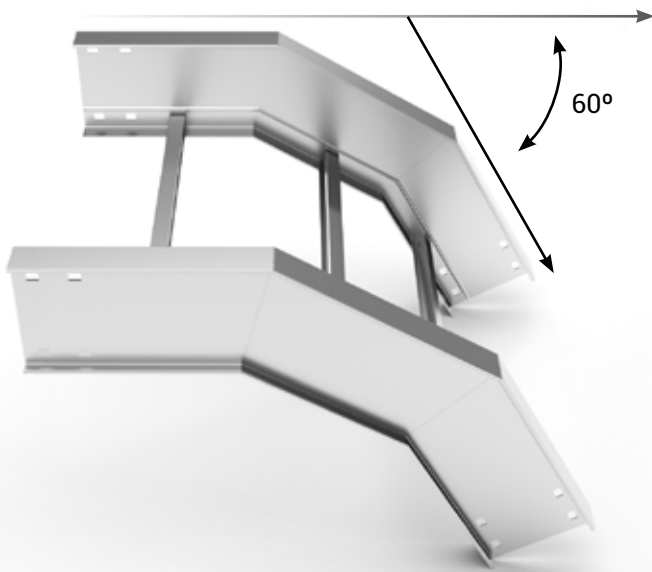
►►Fittings - DD45 Vertical Outside Elbow

Siderail:



DIMENSIONS															
H100				H125				H150				H175			
X	Y	i	C	X	Y	i	C	X	Y	i	C	X	Y	i	C
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563

►►Fittings - DD60 Vertical Outside Elbow



Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↓KCA AL 150 DD60 R300	3129396	3129432	3129468	3129504
	R450	↓KCA AL 150 DD60 R450	3129397	3129433	3129469	3129505
	R600	↓KCA AL 150 DD60 R600	3129398	3129434	3129470	3129506
	R900	↓KCA AL 150 DD60 R900	3129399	3129435	3129471	3129507
200	R300	↓KCA AL 200 DD60 R300	3129400	3129436	3129472	3129508
	R450	↓KCA AL 200 DD60 R450	3129401	3129437	3129473	3129509
	R600	↓KCA AL 200 DD60 R600	3129402	3129438	3129474	3129510
	R900	↓KCA AL 200 DD60 R900	3129403	3129439	3129475	3129511
300	R300	↓KCA AL 300 DD60 R300	3129404	3129440	3129476	3129512
	R450	↓KCA AL 300 DD60 R450	3129405	3129441	3129477	3129513
	R600	↓KCA AL 300 DD60 R600	3129406	3129442	3129478	3129514
	R900	↓KCA AL 300 DD60 R900	3129407	3129443	3129479	3129515
400	R300	↓KCA AL 400 DD60 R300	3129408	3129444	3129480	3129516
	R450	↓KCA AL 400 DD60 R450	3129409	3129445	3129481	3129517
	R600	↓KCA AL 400 DD60 R600	3129410	3129446	3129482	3129518
	R900	↓KCA AL 400 DD60 R900	3129411	3129447	3129483	3129519
450	R300	↓KCA AL 450 DD60 R300	3129412	3129448	3129484	3129520
	R450	↓KCA AL 450 DD60 R450	3129413	3129449	3129485	3129521
	R600	↓KCA AL 450 DD60 R600	3129414	3129450	3129486	3129522
	R900	↓KCA AL 450 DD60 R900	3129415	3129451	3129487	3129523
500	R300	↓KCA AL 500 DD60 R300	3129416	3129452	3129488	3129524
	R450	↓KCA AL 500 DD60 R450	3129417	3129453	3129489	3129525
	R600	↓KCA AL 500 DD60 R600	3129418	3129454	3129490	3129526
	R900	↓KCA AL 500 DD60 R900	3129419	3129455	3129491	3129527
600	R300	↓KCA AL 500 DD60 R300	3129420	3129456	3129492	3129528
	R450	↓KCA AL 600 DD60 R450	3129421	3129457	3129493	3129529
	R600	↓KCA AL 600 DD60 R600	3129422	3129458	3129494	3129530
	R900	↓KCA AL 600 DD60 R900	3129423	3129459	3129495	3129531
750	R300	↓KCA AL 750 DD60 R300	3129424	3129460	3129496	3129532
	R450	↓KCA AL 750 DD60 R450	3129425	3129461	3129497	3129533
	R600	↓KCA AL 750 DD60 R600	3129426	3129462	3129498	3129534
	R900	↓KCA AL 750 DD60 R900	3129427	3129463	3129499	3129535
900	R300	↓KCA AL 900 DD60 R300	3129428	3129464	3129500	3129536
	R450	↓KCA AL 900 DD60 R450	3129429	3129465	3129501	3129537
	R600	↓KCA AL 900 DD60 R600	3129430	3129466	3129502	3129538
	R900	↓KCA AL 900 DD60 R900	3129431	3129467	3129503	3129539

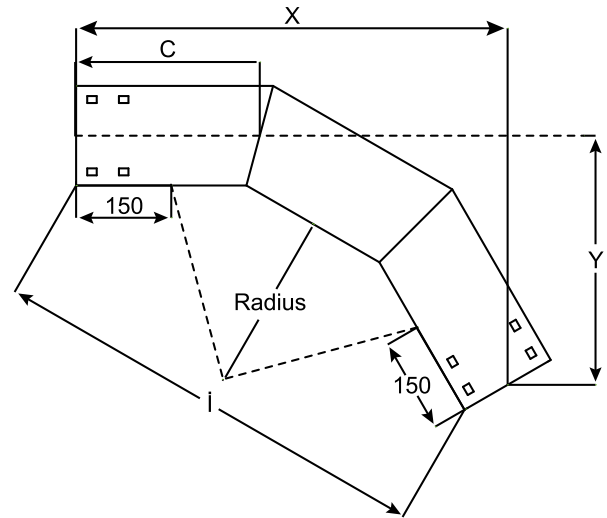
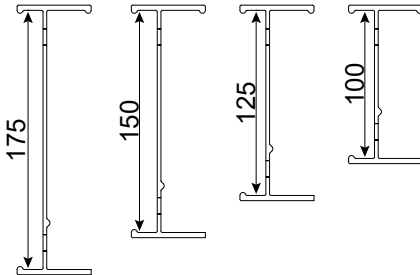


X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 56 for cover selection.

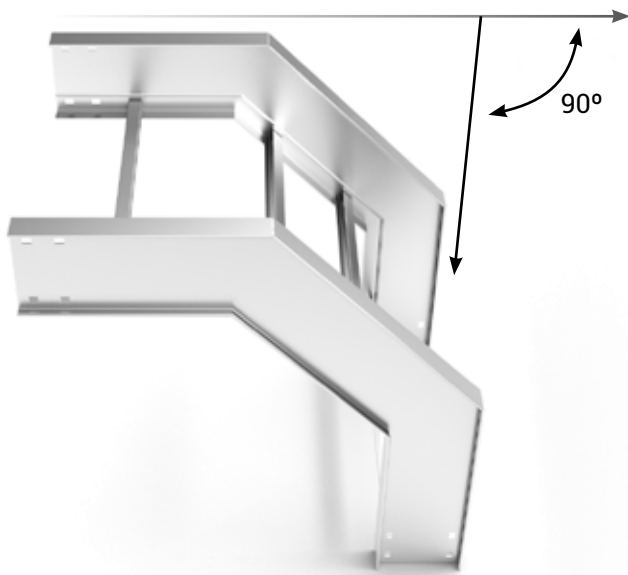
►►Fittings - DD60 Vertical Outside Elbow

Siderail:



DIMENSIONS															
H100				H125				H150				H175			
X	Y	i	C	X	Y	i	C	X	Y	i	C	X	Y	i	C
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416

►► **Fittings - DD90 Vertical Outside Elbow**



Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↓KCA AL 150 DD90 R300	3129540	3129576	3129612	3129648
	R450	↓KCA AL 150 DD90 R450	3129541	3129577	3129613	3129649
	R600	↓KCA AL 150 DD90 R600	3129542	3129578	3129614	3129650
	R900	↓KCA AL 150 DD90 R900	3129543	3129579	3129615	3129651
200	R300	↓KCA AL 200 DD90 R300	3129544	3129580	3129616	3129652
	R450	↓KCA AL 200 DD90 R450	3129545	3129581	3129617	3129653
	R600	↓KCA AL 200 DD90 R600	3129546	3129582	3129618	3129654
	R900	↓KCA AL 200 DD90 R900	3129547	3129583	3129619	3129655
300	R300	↓KCA AL 300 DD90 R300	3129548	3129584	3129620	3129656
	R450	↓KCA AL 300 DD90 R450	3129549	3129585	3129621	3129657
	R600	↓KCA AL 300 DD90 R600	3129550	3129586	3129622	3129658
	R900	↓KCA AL 300 DD90 R900	3129551	3129587	3129623	3129659
400	R300	↓KCA AL 400 DD90 R300	3129552	3129588	3129624	3129660
	R450	↓KCA AL 400 DD90 R450	3129553	3129589	3129625	3129661
	R600	↓KCA AL 400 DD90 R600	3129554	3129590	3129626	3129662
	R900	↓KCA AL 400 DD90 R900	3129555	3129591	3129627	3129663
450	R300	↓KCA AL 450 DD90 R300	3129556	3129592	3129628	3129664
	R450	↓KCA AL 450 DD90 R450	3129557	3129593	3129629	3129665
	R600	↓KCA AL 450 DD90 R600	3129558	3129594	3129630	3129666
	R900	↓KCA AL 450 DD90 R900	3129559	3129595	3129631	3129667
500	R300	↓KCA AL 500 DD90 R300	3129560	3129596	3129632	3129668
	R450	↓KCA AL 500 DD90 R450	3129561	3129597	3129633	3129669
	R600	↓KCA AL 500 DD90 R600	3129562	3129598	3129634	3129670
	R900	↓KCA AL 500 DD90 R900	3129563	3129599	3129635	3129671
600	R300	↓KCA AL 600 DD90 R300	3129564	3129600	3129636	3129672
	R450	↓KCA AL 600 DD90 R450	3129565	3129601	3129637	3129673
	R600	↓KCA AL 600 DD90 R600	3129566	3129602	3129638	3129674
	R900	↓KCA AL 600 DD90 R900	3129567	3129603	3129639	3129675
750	R300	↓KCA AL 750 DD90 R300	3129568	3129604	3129640	3129676
	R450	↓KCA AL 750 DD90 R450	3129569	3129605	3129641	3129677
	R600	↓KCA AL 750 DD90 R600	3129570	3129606	3129642	3129678
	R900	↓KCA AL 750 DD90 R900	3129571	3129607	3129643	3129679
900	R300	↓KCA AL 900 DD90 R300	3129572	3129608	3129644	3129680
	R450	↓KCA AL 900 DD90 R450	3129573	3129609	3129645	3129681
	R600	↓KCA AL 900 DD90 R600	3129574	3129610	3129646	3129682
	R900	↓KCA AL 900 DD90 R900	3129575	3129611	3129647	3129683

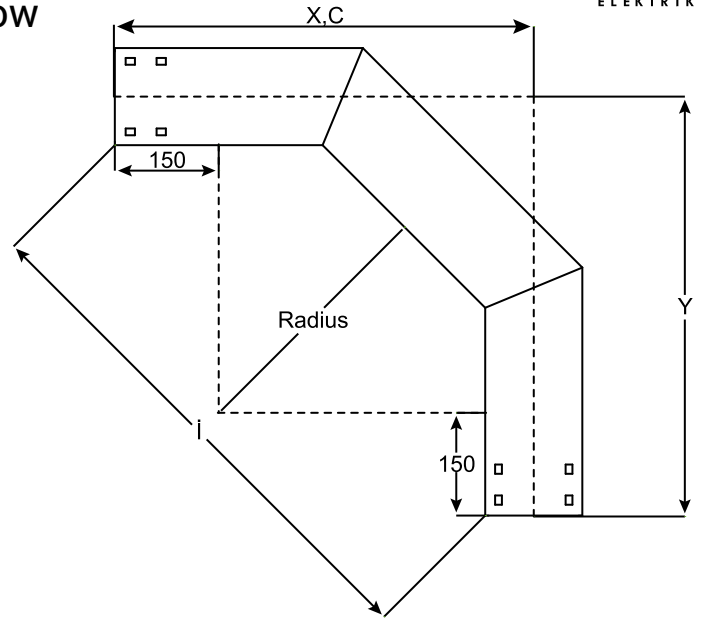
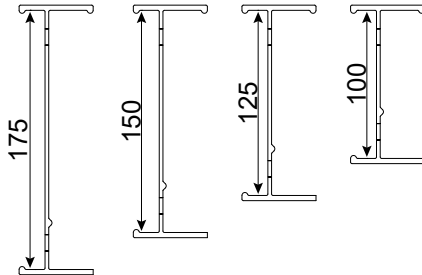


X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 57 for cover selection.

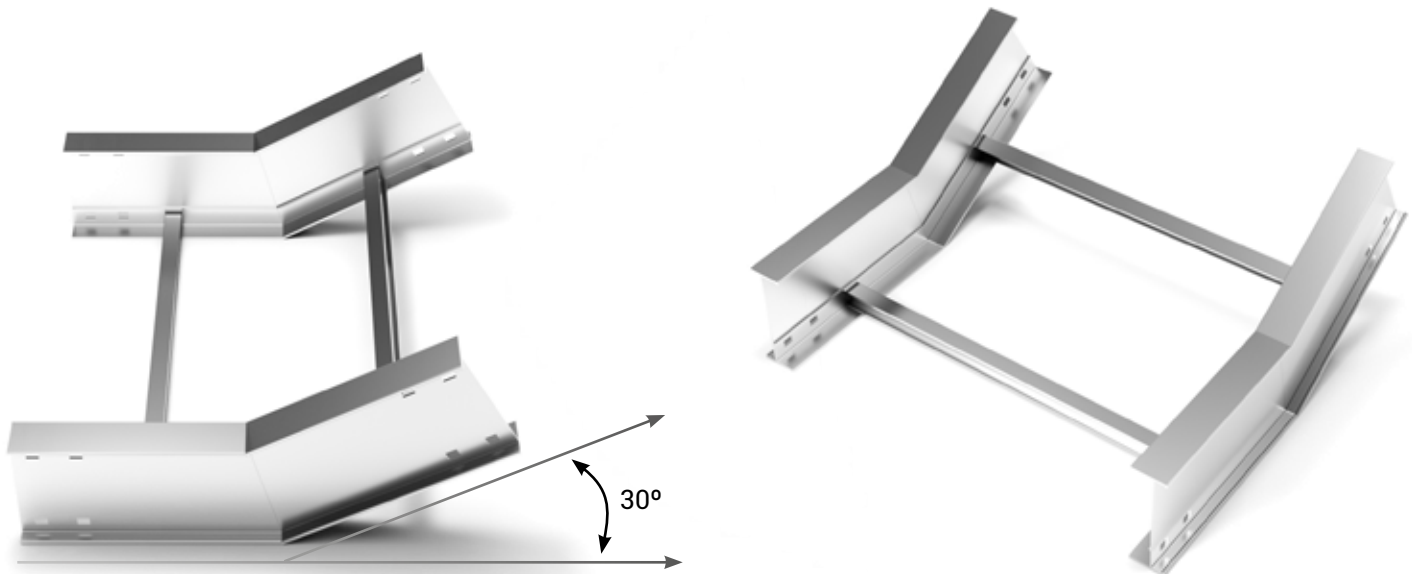
►►Fittings - DD90 Vertical Outside Elbow

Siderail:



DIMENSIONS															
H100				H125				H150				H175			
X	Y	i	C	X	Y	i	C	X	Y	i	C	X	Y	i	C
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563

►►Fittings - ID30 Vertical Inside Elbow



Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↓ KCA AL 150 ID30 R300	3129832	3129868	3129904	3129940
	R450	↓ KCA AL 150 ID30 R450	3129833	3129869	3129905	3129941
	R600	↓ KCA AL 150 ID30 R600	3129834	3129870	3129906	3129942
	R900	↓ KCA AL 150 ID30 R900	3129835	3129871	3129907	3129943
200	R300	↓ KCA AL 200 ID30 R300	3129836	3129872	3129908	3129944
	R450	↓ KCA AL 200 ID30 R450	3129837	3129873	3129909	3129945
	R600	↓ KCA AL 200 ID30 R600	3129838	3129874	3129910	3129946
	R900	↓ KCA AL 200 ID30 R900	3129839	3129875	3129911	3129947
300	R300	↓ KCA AL 300 ID30 R300	3129840	3129876	3129912	3129948
	R450	↓ KCA AL 300 ID30 R450	3129841	3129877	3129913	3129949
	R600	↓ KCA AL 300 ID30 R600	3129842	3129878	3129914	3129950
	R900	↓ KCA AL 300 ID30 R900	3129843	3129879	3129915	3129951
400	R300	↓ KCA AL 400 ID30 R300	3129844	3129880	3129916	3129952
	R450	↓ KCA AL 400 ID30 R450	3129845	3129881	3129917	3129953
	R600	↓ KCA AL 400 ID30 R600	3129846	3129882	3129918	3129954
	R900	↓ KCA AL 400 ID30 R900	3129847	3129883	3129919	3129955
450	R300	↓ KCA AL 450 ID30 R300	3129848	3129884	3129920	3129956
	R450	↓ KCA AL 450 ID30 R450	3129849	3129885	3129921	3129957
	R600	↓ KCA AL 450 ID30 R600	3129850	3129886	3129922	3129958
	R900	↓ KCA AL 450 ID30 R900	3129851	3129887	3129923	3129959
500	R300	↓ KCA AL 500 ID30 R300	3129852	3129888	3129924	3129960
	R450	↓ KCA AL 500 ID30 R450	3129853	3129889	3129925	3129961
	R600	↓ KCA AL 500 ID30 R600	3129854	3129890	3129926	3129962
	R900	↓ KCA AL 500 ID30 R900	3129855	3129891	3129927	3129963
600	R300	↓ KCA AL 600 ID30 R300	3129856	3129892	3129928	3129964
	R450	↓ KCA AL 600 ID30 R450	3129857	3129893	3129929	3129965
	R600	↓ KCA AL 600 ID30 R600	3129858	3129894	3129930	3129966
	R900	↓ KCA AL 600 ID30 R900	3129859	3129895	3129931	3129967
750	R300	↓ KCA AL 750 ID30 R300	3129860	3129896	3129932	3129968
	R450	↓ KCA AL 750 ID30 R450	3129861	3129897	3129933	3129969
	R600	↓ KCA AL 750 ID30 R600	3129862	3129898	3129934	3129970
	R900	↓ KCA AL 750 ID30 R900	3129863	3129899	3129935	3129971
900	R300	↓ KCA AL 900 ID30 R300	3129864	3129900	3129936	3129972
	R450	↓ KCA AL 900 ID30 R450	3129865	3129901	3129937	3129973
	R600	↓ KCA AL 900 ID30 R600	3129866	3129902	3129938	3129974
	R900	↓ KCA AL 900 ID30 R900	3129867	3129903	3129939	3129975

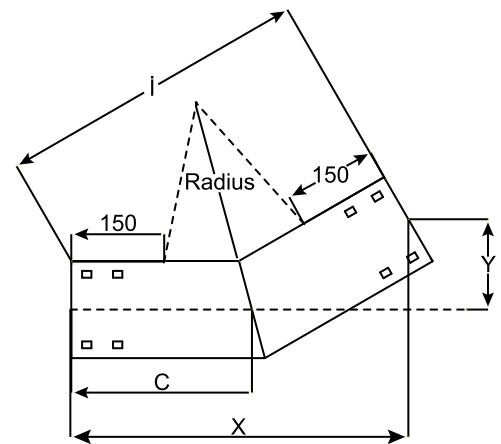
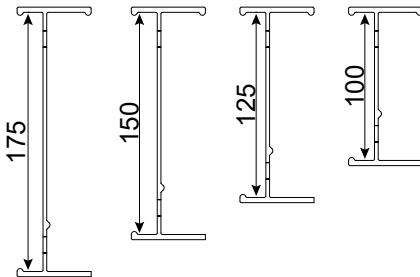


X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 58 for cover selection.

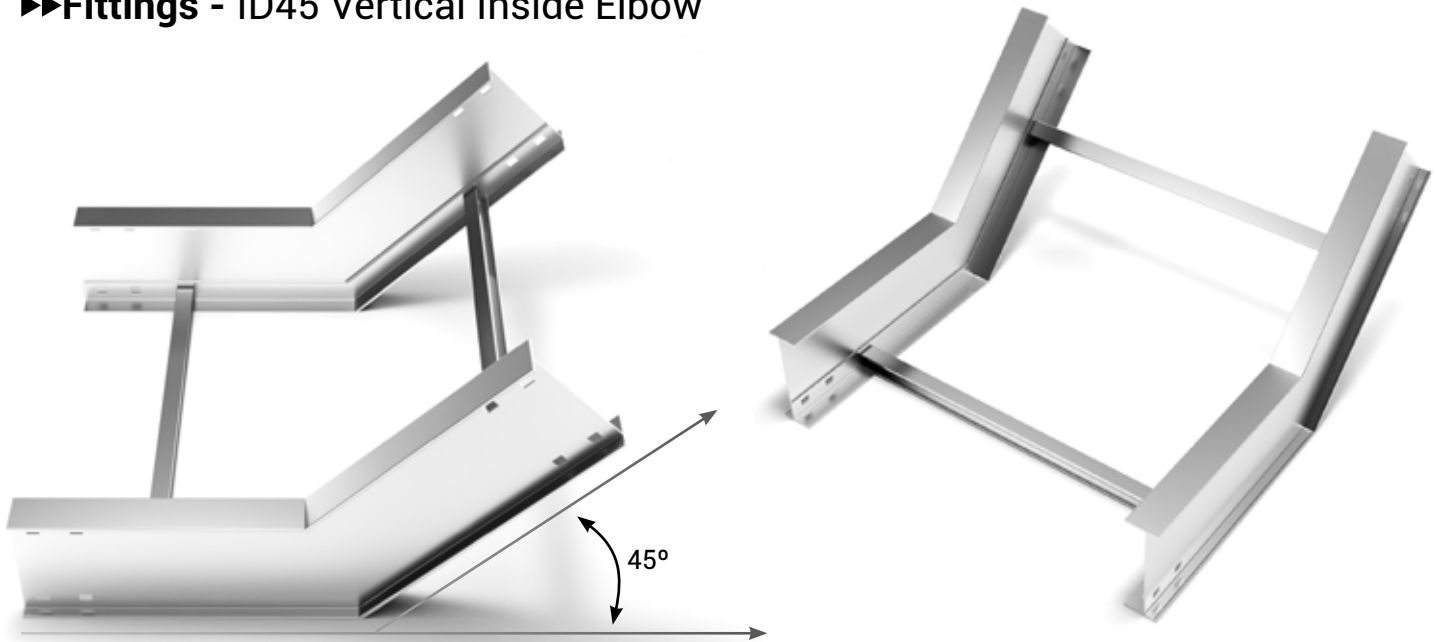
►►Fittings - ID30 Vertical Inside Elbow

Siderail:



DIMENSIONS															
H100				H125				H150				H175			
X	Y	i	C	X	Y	i	C	X	Y	i	C	X	Y	i	C
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416
459	123	448	246	462	124	445	247	470	126	446	252	478	128	448	256
534	143	525	286	537	144	522	287	545	146	524	291	552	148	525	296
608	163	603	326	612	164	600	328	619	166	601	332	627	168	602	336
758	203	757	406	765	205	759	410	768	206	755	412	776	208	757	416

►►Fittings - ID45 Vertical Inside Elbow



Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↓ KCA AL 150 ID45 R300	3129976	3130012	3130048	3130084
	R450	↓ KCA AL 150 ID45 R450	3129977	3130013	3130049	3130085
	R600	↓ KCA AL 150 ID45 R600	3129978	3130014	3130050	3130086
	R900	↓ KCA AL 150 ID45 R900	3129979	3130015	3130051	3130087
200	R300	↓ KCA AL 200 ID45 R300	3129980	3130016	3130052	3130088
	R450	↓ KCA AL 200 ID45 R450	3129981	3130017	3130053	3130089
	R600	↓ KCA AL 200 ID45 R600	3129982	3130018	3130054	3130090
	R900	↓ KCA AL 200 ID45 R900	3129983	3130019	3130055	3130091
300	R300	↓ KCA AL 300 ID45 R300	3129984	3130020	3130056	3130092
	R450	↓ KCA AL 300 ID45 R450	3129985	3130021	3130057	3130093
	R600	↓ KCA AL 300 ID45 R600	3129986	3130022	3130058	3130094
	R900	↓ KCA AL 300 ID45 R900	3129987	3130023	3130059	3130095
400	R300	↓ KCA AL 400 ID45 R300	3129988	3130024	3130060	3130096
	R450	↓ KCA AL 400 ID45 R450	3129989	3130025	3130061	3130097
	R600	↓ KCA AL 400 ID45 R600	3129990	3130026	3130062	3130098
	R900	↓ KCA AL 400 ID45 R900	3129991	3130027	3130063	3130099
450	R300	↓ KCA AL 450 ID45 R300	3129992	3130028	3130064	3130100
	R450	↓ KCA AL 450 ID45 R450	3129993	3130029	3130065	3130101
	R600	↓ KCA AL 450 ID45 R600	3129994	3130030	3130066	3130102
	R900	↓ KCA AL 450 ID45 R900	3129995	3130031	3130067	3130103
500	R300	↓ KCA AL 500 ID45 R300	3129996	3130032	3130068	3130104
	R450	↓ KCA AL 500 ID45 R450	3129997	3130033	3130069	3130105
	R600	↓ KCA AL 500 ID45 R600	3129998	3130034	3130070	3130106
	R900	↓ KCA AL 500 ID45 R900	3129999	3130035	3130071	3130107
600	R300	↓ KCA AL 600 ID45 R300	3130000	3130036	3130072	3130108
	R450	↓ KCA AL 600 ID45 R450	3130001	3130037	3130073	3130109
	R600	↓ KCA AL 600 ID45 R600	3130002	3130038	3130074	3130110
	R900	↓ KCA AL 600 ID45 R900	3130003	3130039	3130075	3130111
750	R300	↓ KCA AL 750 ID45 R300	3130004	3130040	3130076	3130112
	R450	↓ KCA AL 750 ID45 R450	3130005	3130041	3130077	3130113
	R600	↓ KCA AL 750 ID45 R600	3130006	3130042	3130078	3130114
	R900	↓ KCA AL 750 ID45 R900	3130007	3130043	3130079	3130115
900	R300	↓ KCA AL 900 ID45 R300	3130008	3130044	3130080	3130116
	R450	↓ KCA AL 900 ID45 R450	3130009	3130045	3130081	3130117
	R600	↓ KCA AL 900 ID45 R600	3130010	3130046	3130082	3130118
	R900	↓ KCA AL 900 ID45 R900	3130011	3130047	3130083	3130119

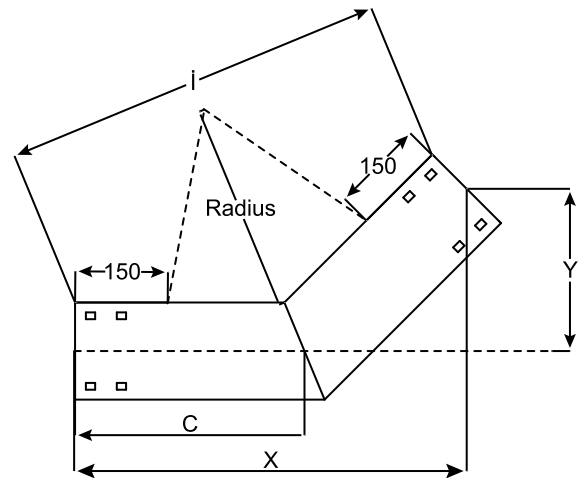
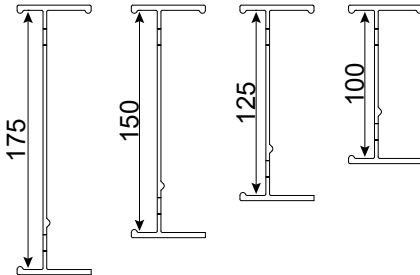


X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 59 for cover selection.

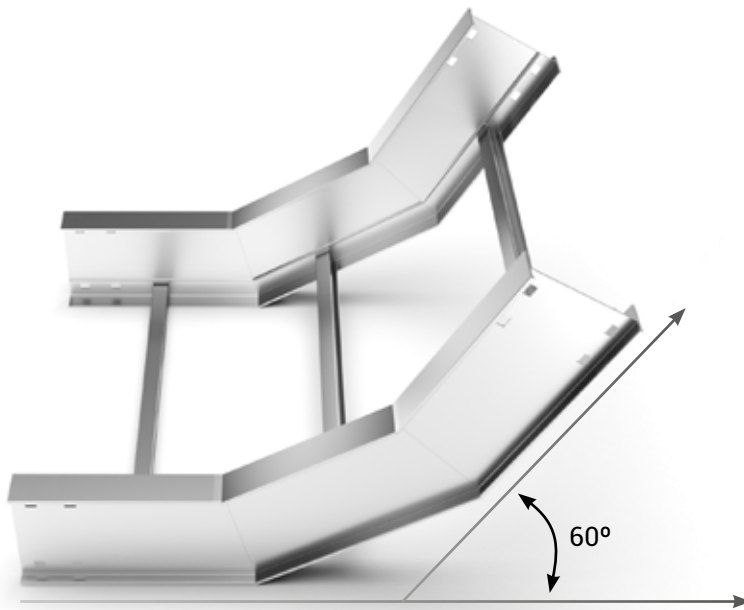
►►Fittings - ID45 Vertical Inside Elbow

Siderail:



DIMENSIONS															
H100				H125				H150				H175			
X	Y	i	C	X	Y	i	C	X	Y	i	C	X	Y	i	C
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563
505	210	507	296	518	214	511	303	526	218	510	308	534	221	509	313
612	253	622	358	620	257	621	363	633	262	625	370	641	265	625	375
719	298	738	421	727	301	737	426	735	304	736	430	748	310	740	438
932	386	969	546	940	390	968	551	948	393	967	555	961	398	971	563

►►Fittings - ID60 Vertical Inside Elbow



Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↓ KCA AL 150 ID60 R300	3130120	3130156	3130192	3130228
	R450	↓ KCA AL 150 ID60 R450	3130121	3130157	3130193	3130229
	R600	↓ KCA AL 150 ID60 R600	3130122	3130158	3130194	3130230
	R900	↓ KCA AL 150 ID60 R900	3130123	3130159	3130195	3130231
200	R300	↓ KCA AL 200 ID60 R300	3130124	3130160	3130196	3130232
	R450	↓ KCA AL 200 ID60 R450	3130125	3130161	3130197	3130233
	R600	↓ KCA AL 200 ID60 R600	3130126	3130162	3130198	3130234
	R900	↓ KCA AL 200 ID60 R900	3130127	3130163	3130199	3130235
300	R300	↓ KCA AL 300 ID60 R300	3130128	3130164	3130200	3130236
	R450	↓ KCA AL 300 ID60 R450	3130129	3130165	3130201	3130237
	R600	↓ KCA AL 300 ID60 R600	3130130	3130166	3130202	3130238
	R900	↓ KCA AL 300 ID60 R900	3130131	3130167	3130203	3130239
400	R300	↓ KCA AL 400 ID60 R300	3130132	3130168	3130204	3130240
	R450	↓ KCA AL 400 ID60 R450	3130133	3130169	3130205	3130241
	R600	↓ KCA AL 400 ID60 R600	3130134	3130170	3130206	3130242
	R900	↓ KCA AL 400 ID60 R900	3130135	3130171	3130207	3130243
450	R300	↓ KCA AL 450 ID60 R300	3130136	3130172	3130208	3130244
	R450	↓ KCA AL 450 ID60 R450	3130137	3130173	3130209	3130245
	R600	↓ KCA AL 450 ID60 R600	3130138	3130174	3130210	3130246
	R900	↓ KCA AL 450 ID60 R900	3130139	3130175	3130211	3130247
500	R300	↓ KCA AL 500 ID60 R300	3130140	3130176	3130212	3130248
	R450	↓ KCA AL 500 ID60 R450	3130141	3130177	3130213	3130249
	R600	↓ KCA AL 500 ID60 R600	3130142	3130178	3130214	3130250
	R900	↓ KCA AL 500 ID60 R900	3130143	3130179	3130215	3130251
600	R300	↓ KCA AL 600 ID60 R300	3130144	3130180	3130216	3130252
	R450	↓ KCA AL 600 ID60 R450	3130145	3130181	3130217	3130253
	R600	↓ KCA AL 600 ID60 R600	3130146	3130182	3130218	3130254
	R900	↓ KCA AL 600 ID60 R900	3130147	3130183	3130219	3130255
750	R300	↓ KCA AL 750 ID60 R300	3130148	3130184	3130220	3130256
	R450	↓ KCA AL 750 ID60 R450	3130149	3130185	3130221	3130257
	R600	↓ KCA AL 750 ID60 R600	3130150	3130186	3130222	3130258
	R900	↓ KCA AL 750 ID60 R900	3130151	3130187	3130223	3130259
900	R300	↓ KCA AL 900 ID60 R300	3130152	3130188	3130224	3130260
	R450	↓ KCA AL 900 ID60 R450	3130153	3130189	3130225	3130261
	R600	↓ KCA AL 900 ID60 R600	3130154	3130190	3130226	3130262
	R900	↓ KCA AL 900 ID60 R900	3130155	3130191	3130227	3130263

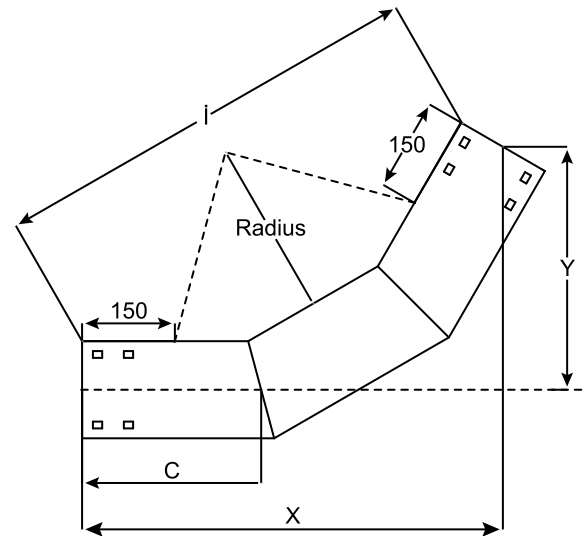
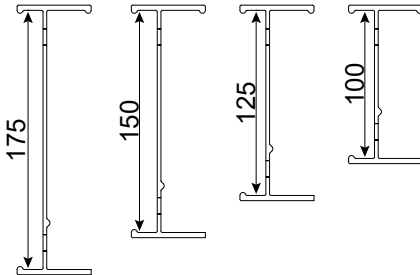


X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 60 for cover selection.

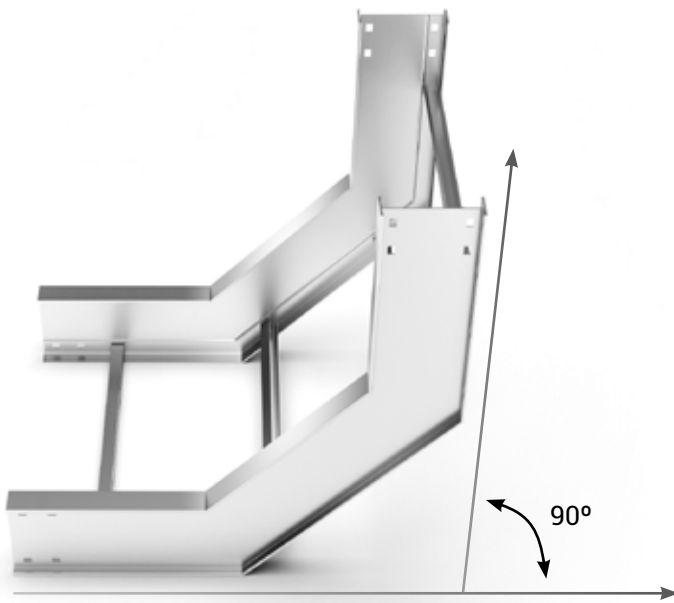
►►Fittings - ID60 Vertical Inside Elbow

Siderail:



DIMENSIONS															
H100				H125				H150				H175			
X	Y	i	C	X	Y	i	C	X	Y	i	C	X	Y	i	C
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416
531	307	560	246	542	313	560	247	554	319	561	254	564	325	560	256
661	381	710	286	671	387	709	287	680	392	707	289	690	398	706	291
790	456	860	326	801	462	860	322	805	465	852	329	819	473	855	331
1044	603	1153	406	1057	610	1155	412	1072	619	1160	390	1076	621	1152	416

►►Fittings - ID90 Vertical Inside Elbow



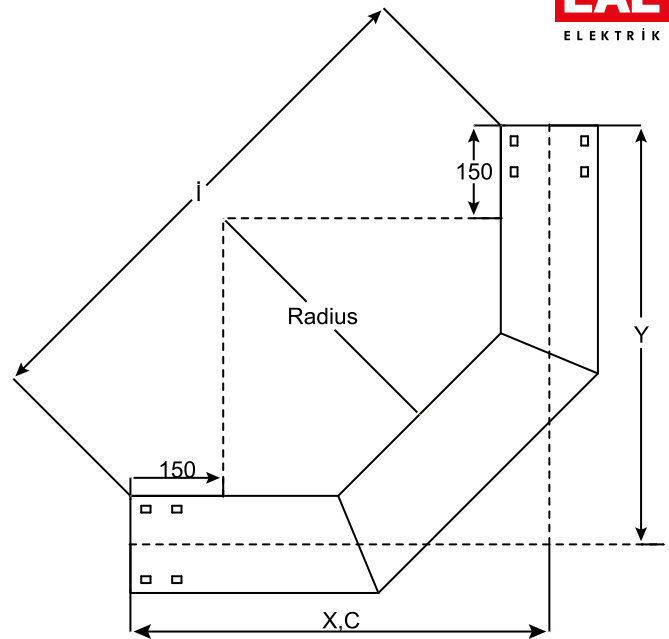
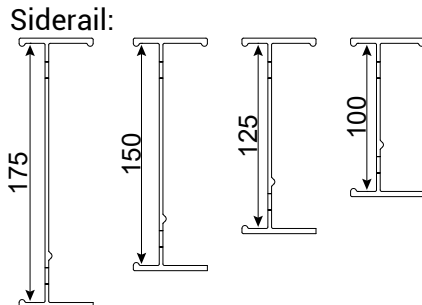
Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↓ KCA AL 150 ID90 R300	3130264	3130300	3130336	3130372
	R450	↓ KCA AL 150 ID90 R450	3130265	3130301	3130337	3130373
	R600	↓ KCA AL 150 ID90 R600	3130266	3130302	3130338	3130374
	R900	↓ KCA AL 150 ID90 R900	3130267	3130303	3130339	3130375
200	R300	↓ KCA AL 200 ID90 R300	3130268	3130304	3130340	3130376
	R450	↓ KCA AL 200 ID90 R450	3130269	3130305	3130341	3130377
	R600	↓ KCA AL 200 ID90 R600	3130270	3130306	3130342	3130378
	R900	↓ KCA AL 200 ID90 R900	3130271	3130307	3130343	3130379
300	R300	↓ KCA AL 300 ID90 R300	3130272	3130308	3130344	3130380
	R450	↓ KCA AL 300 ID90 R450	3130273	3130309	3130345	3130381
	R600	↓ KCA AL 300 ID90 R600	3130274	3130310	3130346	3130382
	R900	↓ KCA AL 300 ID90 R900	3130275	3130311	3130347	3130383
400	R300	↓ KCA AL 400 ID90 R300	3130276	3130312	3130348	3130384
	R450	↓ KCA AL 400 ID90 R450	3130277	3130313	3130349	3130385
	R600	↓ KCA AL 400 ID90 R600	3130278	3130314	3130350	3130386
	R900	↓ KCA AL 400 ID90 R900	3130279	3130315	3130351	3130387
450	R300	↓ KCA AL 450 ID90 R300	3130280	3130316	3130352	3130388
	R450	↓ KCA AL 450 ID90 R450	3130281	3130317	3130353	3130389
	R600	↓ KCA AL 450 ID90 R600	3130282	3130318	3130354	3130390
	R900	↓ KCA AL 450 ID90 R900	3130283	3130319	3130355	3130391
500	R300	↓ KCA AL 500 ID90 R300	3130284	3130320	3130356	3130392
	R450	↓ KCA AL 500 ID90 R450	3130285	3130321	3130357	3130393
	R600	↓ KCA AL 500 ID90 R600	3130286	3130322	3130358	3130394
	R900	↓ KCA AL 500 ID90 R900	3130287	3130323	3130359	3130395
600	R300	↓ KCA AL 600 ID90 R300	3130288	3130324	3130360	3130396
	R450	↓ KCA AL 600 ID90 R450	3130289	3130325	3130361	3130397
	R600	↓ KCA AL 600 ID90 R600	3130290	3130326	3130362	3130398
	R900	↓ KCA AL 600 ID90 R900	3130291	3130327	3130363	3130399
750	R300	↓ KCA AL 750 ID90 R300	3130292	3130328	3130364	3130400
	R450	↓ KCA AL 750 ID90 R450	3130293	3130329	3130365	3130401
	R600	↓ KCA AL 750 ID90 R600	3130294	3130330	3130366	3130402
	R900	↓ KCA AL 750 ID90 R900	3130295	3130331	3130367	3130403
900	R300	↓ KCA AL 900 ID90 R300	3130296	3130332	3130368	3130404
	R450	↓ KCA AL 900 ID90 R450	3130297	3130333	3130369	3130405
	R600	↓ KCA AL 900 ID90 R600	3130298	3130334	3130370	3130406
	R900	↓ KCA AL 900 ID90 R900	3130299	3130335	3130371	3130407



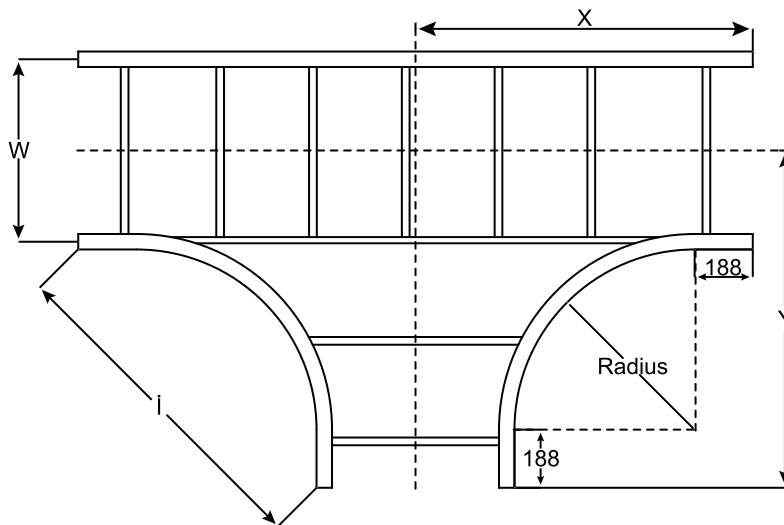
X 32 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 61 for cover selection.

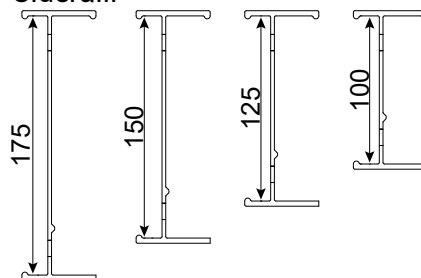
►►Fittings - ID90 Vertical Inside Elbow



DIMENSIONS															
H100				H125				H150				H175			
X	Y	i	C	X	Y	i	C	X	Y	i	C	X	Y	i	C
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563
502	502	635	299	512	512	634	303	529	529	637	308	537	537	631	313
654	654	850	359	665	665	849	364	678	678	847	368	689	689	846	373
799	799	1055	419	810	810	1053	424	822	822	1052	428	834	834	1051	433
1105	1105	1488	549	1117	1117	1487	554	1129	1129	1486	558	1140	1140	1485	563



Siderail:

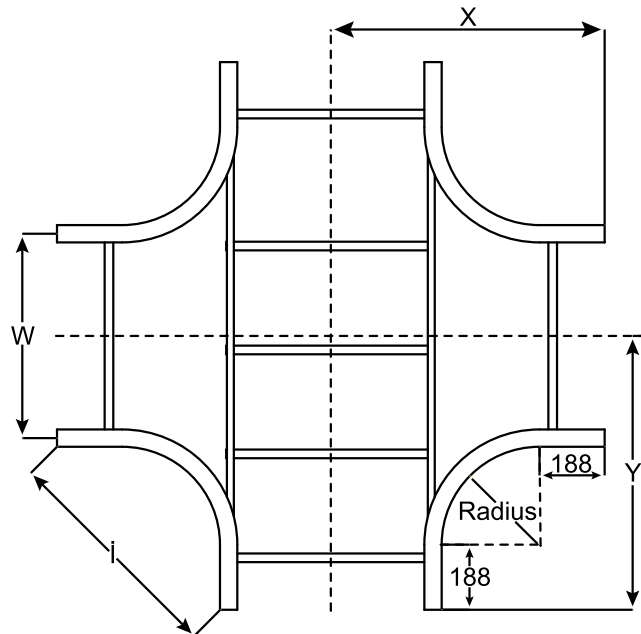
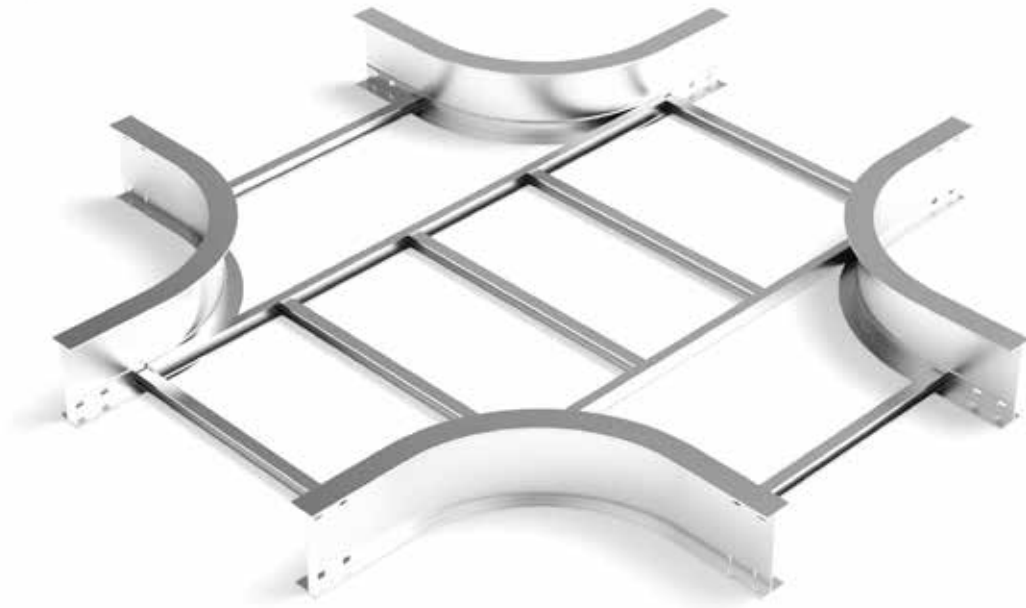


X 48 pcs M10X20 bolt set should be ordered. Please check page 79.

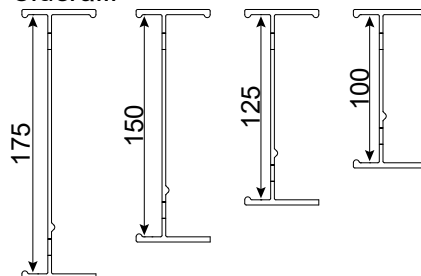
Please check page 62 for cover selection.

►►Fittings - YT Horizontal Tee

Width (mm)	Radius (mm)	Description	Code				Dimensions (mm)			
			↑ 100	↑ 125	↑ 150	↑ 175	X	Y	i	C
150	R300	↓KCA AL 150 YT R300	3131781	3131817	3131853	3131889	565	565	665	565
	R450	↓KCA AL 150 YT R450	3131782	3131818	3131854	3131890	715	715	877	715
	R600	↓KCA AL 150 YT R600	3131783	3131819	3131855	3131891	865	865	1089	865
	R900	↓KCA AL 150 YT R900	3131784	3131820	3131856	3131892	1165	1165	1514	1165
200	R300	↓KCA AL 200 YT R300	3131785	3131821	3131857	3131893	590	590	665	590
	R450	↓KCA AL 200 YT R450	3131786	3131822	3131858	3131894	740	740	877	740
	R600	↓KCA AL 200 YT R600	3131787	3131823	3131859	3131895	890	890	1089	890
	R900	↓KCA AL 200 YT R900	3131788	3131824	3131860	3131896	1190	1190	1514	1190
300	R300	↓KCA AL 300 YT R300	3131789	3131825	3131861	3131897	640	640	665	640
	R450	↓KCA AL 300 YT R450	3131790	3131826	3131862	3131898	790	790	877	790
	R600	↓KCA AL 300 YT R600	3131791	3131827	3131863	3131899	940	940	1089	940
	R900	↓KCA AL 300 YT R900	3131792	3131828	3131864	3131900	1240	1240	1514	1240
400	R300	↓KCA AL 400 YT R300	3131793	3131829	3131865	3131901	690	690	665	690
	R450	↓KCA AL 400 YT R450	3131794	3131830	3131866	3131902	840	840	877	840
	R600	↓KCA AL 400 YT R600	3131795	3131831	3131867	3131903	990	990	1089	990
	R900	↓KCA AL 400 YT R900	3131796	3131832	3131868	3131904	1290	1290	1514	1290
450	R300	↓KCA AL 450 YT R300	3131797	3131833	3131869	3131905	715	715	665	715
	R450	↓KCA AL 450 YT R450	3131798	3131834	3131870	3131906	865	865	877	865
	R600	↓KCA AL 450 YT R600	3131799	3131835	3131871	3131907	1015	1015	1089	1015
	R900	↓KCA AL 450 YT R900	3131800	3131836	3131872	3131908	1315	1315	1514	1315
500	R300	↓KCA AL 500 YT R300	3131801	3131837	3131873	3131909	740	740	665	740
	R450	↓KCA AL 500 YT R450	3131802	3131838	3131874	3131910	890	890	877	890
	R600	↓KCA AL 500 YT R600	3131803	3131839	3131875	3131911	1040	1040	1089	1040
	R900	↓KCA AL 500 YT R900	3131804	3131840	3131876	3131912	1340	1340	1514	1340
600	R300	↓KCA AL 600 YT R300	3131805	3131841	3131877	3131913	790	790	665	790
	R450	↓KCA AL 600 YT R450	3131806	3131842	3131878	3131914	940	940	877	940
	R600	↓KCA AL 600 YT R600	3131807	3131843	3131879	3131915	1090	1090	1089	1090
	R900	↓KCA AL 600 YT R900	3131808	3131844	3131880	3131916	1390	1390	1514	1390
750	R300	↓KCA AL 750 YT R300	3131809	3131845	3131881	3131917	865	865	665	865
	R450	↓KCA AL 750 YT R450	3131810	3131846	3131882	3131918	1015	1015	877	1015
	R600	↓KCA AL 750 YT R600	3131811	3131847	3131883	3131919	1165	1165	1089	1165
	R900	↓KCA AL 750 YT R900	3131812	3131848	3131884	3131920	1465	1465	1514	1465
900	R300	↓KCA AL 900 YT R300	3131813	3131849	3131885	3131921	940	940	665	940
	R450	↓KCA AL 900 YT R450	3131814	3131850	3131886	3131922	1090	1090	877	1090
	R600	↓KCA AL 900 YT R600	3131815	3131851	3131887	3131923	1240	1240	1089	1240
	R900	↓KCA AL 900 YT R900	3131816	3131852	3131888	3131924	1540	1540	1514	1540



Siderail:



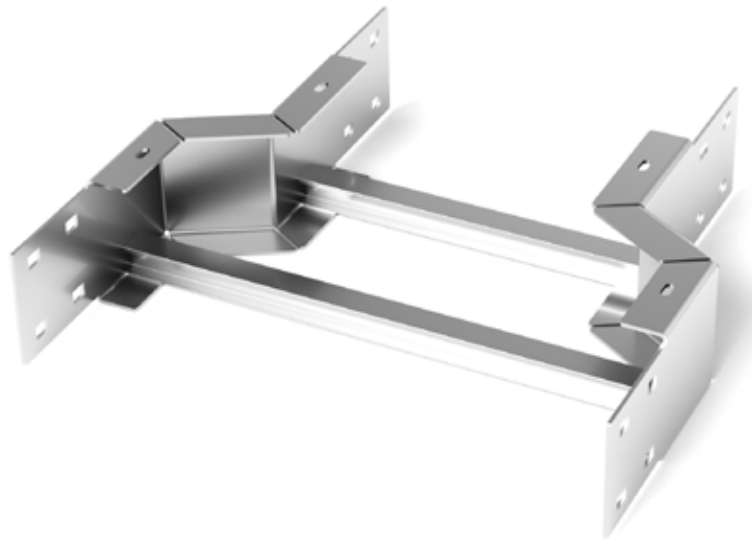
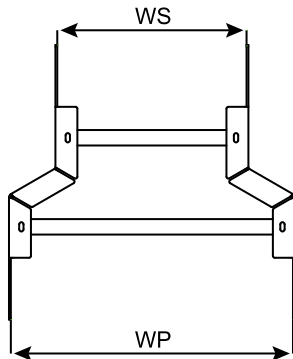
X 64 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 63 for cover selection.

►►Fittings - AD Horizontal Cross

Width (mm)	Radius (mm)	Description	Code				Dimensions (mm)			
			↑ 100	↑ 125	↑ 150	↑ 175	X	Y	i	C
150	R300	↓KCA AL 150 AD R300	3128327	3128363	3128399	3128435	565	565	665	565
	R450	↓KCA AL 150 AD R450	3128328	3128364	3128400	3128436	715	715	877	715
	R600	↓KCA AL 150 AD R600	3128329	3128365	3128401	3128437	865	865	1089	865
	R900	↓KCA AL 150 AD R900	3128330	3128366	3128402	3128438	1165	1165	1514	1165
200	R300	↓KCA AL 200 AD R300	3128331	3128367	3128403	3128439	590	590	665	590
	R450	↓KCA AL 200 AD R450	3128332	3128368	3128404	3128440	740	740	877	740
	R600	↓KCA AL 200 AD R600	3128333	3128369	3128405	3128441	890	890	1089	890
	R900	↓KCA AL 200 AD R900	3128334	3128370	3128406	3128442	1190	1190	1514	1190
300	R300	↓KCA AL 300 AD R300	3128335	3128371	3128407	3128443	640	640	665	640
	R450	↓KCA AL 300 AD R450	3128336	3128372	3128408	3128444	790	790	877	790
	R600	↓KCA AL 300 AD R600	3128337	3128373	3128409	3128445	940	940	1089	940
	R900	↓KCA AL 300 AD R900	3128338	3128374	3128410	3128446	1240	1240	1514	1240
400	R300	↓KCA AL 400 AD R300	3128339	3128375	3128411	3128447	690	690	665	690
	R450	↓KCA AL 400 AD R450	3128340	3128376	3128412	3128448	840	840	877	840
	R600	↓KCA AL 400 AD R600	3128341	3128377	3128413	3128449	990	990	1089	990
	R900	↓KCA AL 400 AD R900	3128342	3128378	3128414	3128450	1290	1290	1514	1290
450	R300	↓KCA AL 450 AD R300	3128343	3128379	3128415	3128451	715	715	665	715
	R450	↓KCA AL 450 AD R450	3128344	3128380	3128416	3128452	865	865	877	865
	R600	↓KCA AL 450 AD R600	3128345	3128381	3128417	3128453	1015	1015	1089	1015
	R900	↓KCA AL 450 AD R900	3128346	3128382	3128418	3128454	1315	1315	1514	1315
500	R300	↓KCA AL 500 AD R300	3128347	3128383	3128419	3128455	740	740	665	740
	R450	↓KCA AL 500 AD R450	3128348	3128384	3128420	3128456	890	890	877	890
	R600	↓KCA AL 500 AD R600	3128349	3128385	3128421	3128457	1040	1040	1089	1040
	R900	↓KCA AL 500 AD R900	3128350	3128386	3128422	3128458	1340	1340	1514	1340
600	R300	↓KCA AL 600 AD R300	3128351	3128387	3128423	3128459	790	790	665	790
	R450	↓KCA AL 600 AD R450	3128352	3128388	3128424	3128460	940	940	877	940
	R600	↓KCA AL 600 AD R600	3128353	3128389	3128425	3128461	1090	1090	1089	1090
	R900	↓KCA AL 600 AD R900	3128354	3128390	3128426	3128462	1390	1390	1514	1390
750	R300	↓KCA AL 750 AD R300	3128355	3128391	3128427	3128463	865	865	665	865
	R450	↓KCA AL 750 AD R450	3128356	3128392	3128428	3128464	1015	1015	877	1015
	R600	↓KCA AL 750 AD R600	3128357	3128393	3128429	3128465	1165	1165	1089	1165
	R900	↓KCA AL 750 AD R900	3128358	3128394	3128430	3128466	1465	1465	1514	1465
900	R300	↓KCA AL 900 AD R300	3128359	3128395	3128431	3128467	940	940	665	940
	R450	↓KCA AL 900 AD R450	3128360	3128396	3128432	3128468	1090	1090	877	1090
	R600	↓KCA AL 900 AD R600	3128361	3128397	3128433	3128469	1240	1240	1089	1240
	R900	↓KCA AL 900 AD R900	3128362	3128398	3128434	3128470	1540	1540	1514	1540

►► **Fittings - MR Middle Reduction**



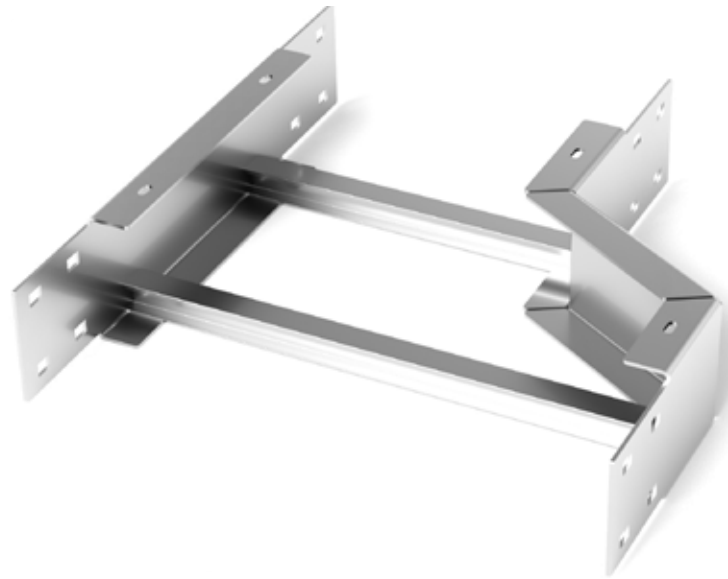
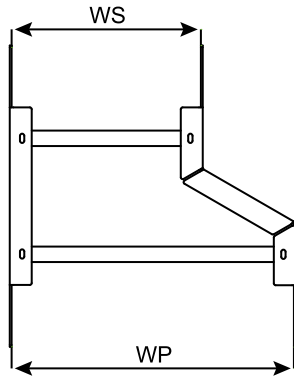
Ws (mm)	Wp (mm)	Description	Code			
			↓ 100	↓ 125	↓ 150	↓ 175
150	200	↓ KCA AL 150/200/MR	3130516	3130552	3130588	3130624
	300	↓ KCA AL 150/300/MR	3130517	3130553	3130589	3130625
	400	↓ KCA AL 150/400/MR	3130518	3130554	3130590	3130626
	450	↓ KCA AL 150/450/MR	3130519	3130555	3130591	3130627
	500	↓ KCA AL 150/500/MR	3130520	3130556	3130592	3130628
	600	↓ KCA AL 150/600/MR	3130521	3130557	3130593	3130629
	750	↓ KCA AL 150/750/MR	3130522	3130558	3130594	3130630
	900	↓ KCA AL 150/900/MR	3130523	3130559	3130595	3130631
200	300	↓ KCA AL 200/300/MR	3130524	3130560	3130596	3130632
	400	↓ KCA AL 200/400/MR	3130525	3130561	3130597	3130633
	450	↓ KCA AL 200/450/MR	3130526	3130562	3130598	3130634
	500	↓ KCA AL 200/500/MR	3130527	3130563	3130599	3130635
	600	↓ KCA AL 200/600/MR	3130528	3130564	3130600	3130636
	750	↓ KCA AL 200/750/MR	3130529	3130565	3130601	3130637
	900	↓ KCA AL 200/900/MR	3130530	3130566	3130602	3130638
300	400	↓ KCA AL 300/400/MR	3130531	3130567	3130603	3130639
	450	↓ KCA AL 300/450/MR	3130532	3130568	3130604	3130640
	500	↓ KCA AL 300/500/MR	3130533	3130569	3130605	3130641
	600	↓ KCA AL 300/600/MR	3130534	3130570	3130606	3130642
	750	↓ KCA AL 300/750/MR	3130535	3130571	3130607	3130643
	900	↓ KCA AL 300/900/MR	3130536	3130572	3130608	3130644
400	450	↓ KCA AL 400/450/MR	3130537	3130573	3130609	3130645
	500	↓ KCA AL 400/500/MR	3130538	3130574	3130610	3130646
	600	↓ KCA AL 400/600/MR	3130539	3130575	3130611	3130647
	750	↓ KCA AL 400/750/MR	3130540	3130576	3130612	3130648
	900	↓ KCA AL 400/900/MR	3130541	3130577	3130613	3130649
450	500	↓ KCA AL 450/500/MR	3130542	3130578	3130614	3130650
	600	↓ KCA AL 450/600/MR	3130543	3130579	3130615	3130651
	750	↓ KCA AL 450/750/MR	3130544	3130580	3130616	3130652
	900	↓ KCA AL 450/900/MR	3130545	3130581	3130617	3130653
500	600	↓ KCA AL 500/600/MR	3130546	3130582	3130618	3130654
	750	↓ KCA AL 500/750/MR	3130547	3130583	3130619	3130655
	900	↓ KCA AL 500/900/MR	3130548	3130584	3130620	3130656
600	750	↓ KCA AL 600/750/MR	3130549	3130585	3130621	3130657
	900	↓ KCA AL 600/900/MR	3130550	3130586	3130622	3130658
750	900	↓ KCA AL 750/900/MR	3130551	3130587	3130623	3130659



X 16 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 64 for cover selection.

►►Fittings - LR Left Side Reduction



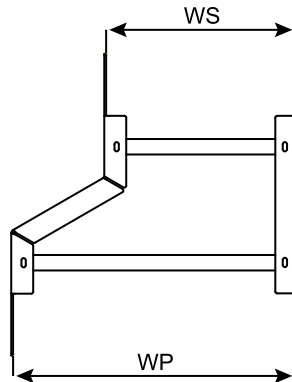
Ws (mm)	Wp (mm)	Description	Code			
			↓ 100	↓ 125	↓ 150	↓ 175
150	200	↓ KCA AL 150/200/LR	3130660	3130696	3130732	3130768
	300	↓ KCA AL 150/300/LR	3130661	3130697	3130733	3130769
	400	↓ KCA AL 150/400/LR	3130662	3130698	3130734	3130770
	450	↓ KCA AL 150/450/LR	3130663	3130699	3130735	3130771
	500	↓ KCA AL 150/500/LR	3130664	3130700	3130736	3130772
	600	↓ KCA AL 150/600/LR	3130665	3130701	3130737	3130773
	750	↓ KCA AL 150/750/LR	3130666	3130702	3130738	3130774
	900	↓ KCA AL 150/900/LR	3130667	3130703	3130739	3130775
200	300	↓ KCA AL 200/300/LR	3130668	3130704	3130740	3130776
	400	↓ KCA AL 200/400/LR	3130669	3130705	3130741	3130777
	450	↓ KCA AL 200/450/LR	3130670	3130706	3130742	3130778
	500	↓ KCA AL 200/500/LR	3130671	3130707	3130743	3130779
	600	↓ KCA AL 200/600/LR	3130672	3130708	3130744	3130780
	750	↓ KCA AL 200/750/LR	3130673	3130709	3130745	3130781
	900	↓ KCA AL 200/900/LR	3130674	3130710	3130746	3130782
300	400	↓ KCA AL 300/400/LR	3130675	3130711	3130747	3130783
	450	↓ KCA AL 300/450/LR	3130676	3130712	3130748	3130784
	500	↓ KCA AL 300/500/LR	3130677	3130713	3130749	3130785
	600	↓ KCA AL 300/600/LR	3130678	3130714	3130750	3130786
	750	↓ KCA AL 300/750/LR	3130679	3130715	3130751	3130787
400	900	↓ KCA AL 300/900/LR	3130680	3130716	3130752	3130788
	450	↓ KCA AL 400/450/LR	3130681	3130717	3130753	3130789
	500	↓ KCA AL 400/500/LR	3130682	3130718	3130754	3130790
	600	↓ KCA AL 400/600/LR	3130683	3130719	3130755	3130791
	750	↓ KCA AL 400/750/LR	3130684	3130720	3130756	3130792
450	900	↓ KCA AL 400/900/LR	3130685	3130721	3130757	3130793
	500	↓ KCA AL 450/500/LR	3130686	3130722	3130758	3130794
	600	↓ KCA AL 450/600/LR	3130687	3130723	3130759	3130795
	750	↓ KCA AL 450/750/LR	3130688	3130724	3130760	3130796
500	900	↓ KCA AL 450/900/LR	3130689	3130725	3130761	3130797
	600	↓ KCA AL 500/600/LR	3130690	3130726	3130762	3130798
	750	↓ KCA AL 500/750/LR	3130691	3130727	3130763	3130799
600	900	↓ KCA AL 500/900/LR	3130692	3130728	3130764	3130800
	750	↓ KCA AL 600/750/LR	3130693	3130729	3130765	3130801
750	900	↓ KCA AL 600/900/LR	3130694	3130730	3130766	3130802
	900	↓ KCA AL 750/900/LR	3130695	3130731	3130767	3130803



X 16 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 65 for cover selection.

►►Fittings - RR Right Side Reduction



Ws (mm)	Wp (mm)	Description	Code			
			↓ 100	↓ 125	↓ 150	↓ 175
150	200	↓ KCA AL 150/200/RR	3130804	3130840	3130876	3130912
	300	↓ KCA AL 150/300/RR	3130805	3130841	3130877	3130913
	400	↓ KCA AL 150/400/RR	3130806	3130842	3130878	3130914
	450	↓ KCA AL 150/450/RR	3130807	3130843	3130879	3130915
	500	↓ KCA AL 150/500/RR	3130808	3130844	3130880	3130916
	600	↓ KCA AL 150/600/RR	3130809	3130845	3130881	3130917
	750	↓ KCA AL 150/750/RR	3130810	3130846	3130882	3130918
	900	↓ KCA AL 150/900/RR	3130811	3130847	3130883	3130919
200	300	↓ KCA AL 200/300/RR	3130812	3130848	3130884	3130920
	400	↓ KCA AL 200/400/RR	3130813	3130849	3130885	3130921
	450	↓ KCA AL 200/450/RR	3130814	3130850	3130886	3130922
	500	↓ KCA AL 200/500/RR	3130815	3130851	3130887	3130923
	600	↓ KCA AL 200/600/RR	3130816	3130852	3130888	3130924
	750	↓ KCA AL 200/750/RR	3130817	3130853	3130889	3130925
	900	↓ KCA AL 200/900/RR	3130818	3130854	3130890	3130926
300	400	↓ KCA AL 300/400/RR	3130819	3130855	3130891	3130927
	450	↓ KCA AL 300/450/RR	3130820	3130856	3130892	3130928
	500	↓ KCA AL 300/500/RR	3130821	3130857	3130893	3130929
	600	↓ KCA AL 300/600/RR	3130822	3130858	3130894	3130930
	750	↓ KCA AL 300/750/RR	3130823	3130859	3130895	3130931
	900	↓ KCA AL 300/900/RR	3130824	3130860	3130896	3130932
400	450	↓ KCA AL 400/450/RR	3130825	3130861	3130897	3130933
	500	↓ KCA AL 400/500/RR	3130826	3130862	3130898	3130934
	600	↓ KCA AL 400/600/RR	3130827	3130863	3130899	3130935
	750	↓ KCA AL 400/750/RR	3130828	3130864	3130900	3130936
	900	↓ KCA AL 400/900/RR	3130829	3130865	3130901	3130937
450	500	↓ KCA AL 450/500/RR	3130830	3130866	3130902	3130938
	600	↓ KCA AL 450/600/RR	3130831	3130867	3130903	3130939
	750	↓ KCA AL 450/750/RR	3130832	3130868	3130904	3130940
	900	↓ KCA AL 450/900/RR	3130833	3130869	3130905	3130941
500	600	↓ KCA AL 500/600/RR	3130834	3130870	3130906	3130942
	750	↓ KCA AL 500/750/RR	3130835	3130871	3130907	3130943
	900	↓ KCA AL 500/900/RR	3130836	3130872	3130908	3130944
600	750	↓ KCA AL 600/750/RR	3130837	3130873	3130909	3130945
	900	↓ KCA AL 600/900/RR	3130838	3130874	3130910	3130946
750	900	↓ KCA AL 750/900/RR	3130839	3130875	3130911	3130947

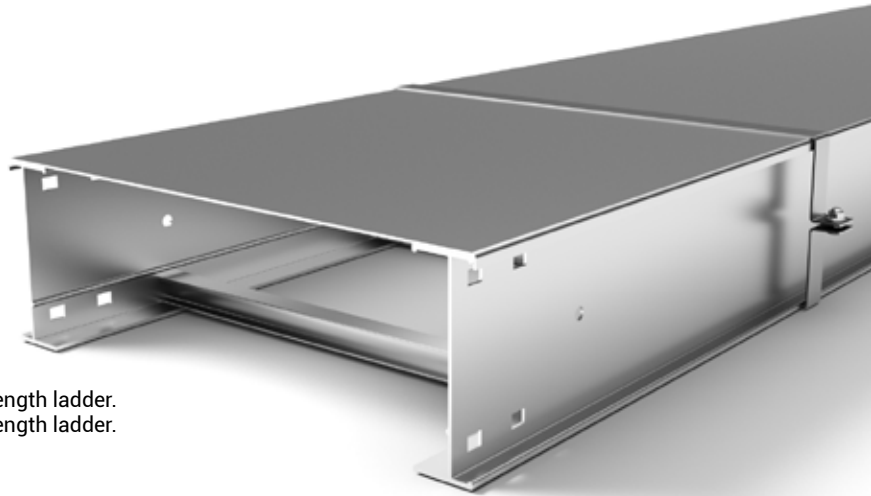


X 16 pcs M10X20 bolt set should be ordered. Please check page 79.

Please check page 66 for cover selection.

►►Cover - Straight Cover

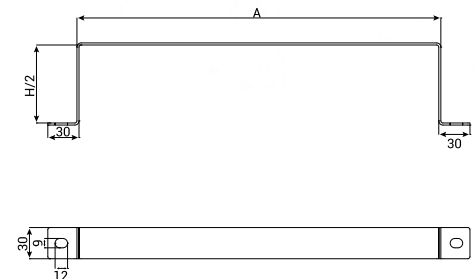
Code	Description	A (mm)
3128272	KCA ALK 150/L3	190
3128273	KCA ALK 200/L3	240
3128274	KCA ALK 300/L3	340
3128275	KCA ALK 400/L3	440
3128276	KCA ALK 450/L3	490
3128277	KCA ALK 500/L3	540
3128278	KCA ALK 600/L3	640
3128279	KCA ALK 750/L3	790
3128280	KCA ALK 900/L3	940



2 sets of omega straight cover clamp should be ordered for 3m length ladder.
4 sets of omega straight cover clamp should be ordered for 6m length ladder.

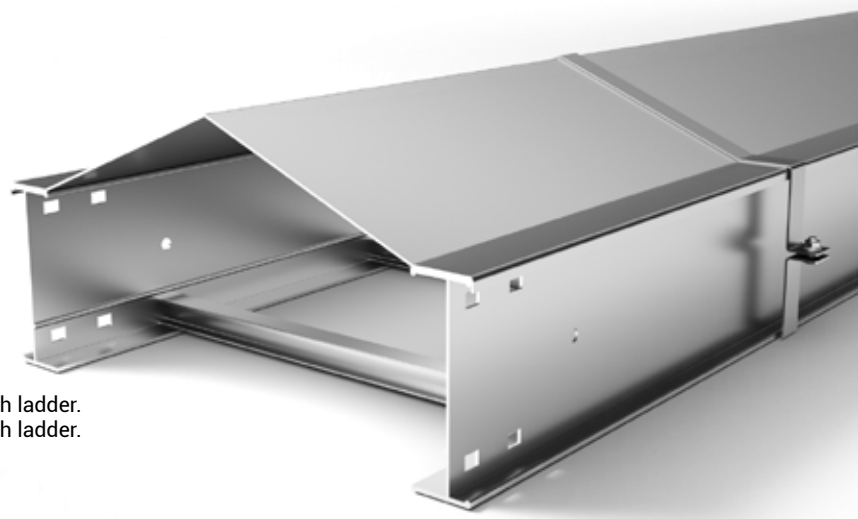
Omega Straight Cover Clamp

Description	A (mm)	Code
100 KCA AL /OMEGA STRAIGHT COVER CLAMP/150	200	3128237
100 KCA AL /OMEGA STRAIGHT COVER CLAMP/200	250	3128238
100 KCA AL /OMEGA STRAIGHT COVER CLAMP/300	350	3128239
100 KCA AL /OMEGA STRAIGHT COVER CLAMP/400	450	3128240
100 KCA AL /OMEGA STRAIGHT COVER CLAMP/450	500	3128241
100 KCA AL /OMEGA STRAIGHT COVER CLAMP/500	550	3128242
100 KCA AL /OMEGA STRAIGHT COVER CLAMP/600	650	3128243
100 KCA AL /OMEGA STRAIGHT COVER CLAMP/750	800	3128244
100 KCA AL /OMEGA STRAIGHT COVER CLAMP/900	950	3128245
125 KCA AL /OMEGA STRAIGHT COVER CLAMP/150	200	3128246
125 KCA AL /OMEGA STRAIGHT COVER CLAMP/200	250	3128247
125 KCA AL /OMEGA STRAIGHT COVER CLAMP/300	350	3128248
125 KCA AL /OMEGA STRAIGHT COVER CLAMP/400	450	3128249
125 KCA AL /OMEGA STRAIGHT COVER CLAMP/450	500	3128250
125 KCA AL /OMEGA STRAIGHT COVER CLAMP/500	550	3128251
125 KCA AL /OMEGA STRAIGHT COVER CLAMP/600	650	3128252
125 KCA AL /OMEGA STRAIGHT COVER CLAMP/750	800	3128253
125 KCA AL /OMEGA STRAIGHT COVER CLAMP/900	950	3128254
150 KCA AL /OMEGA STRAIGHT COVER CLAMP/150	200	3128255
150 KCA AL /OMEGA STRAIGHT COVER CLAMP/200	250	3128256
150 KCA AL /OMEGA STRAIGHT COVER CLAMP/300	350	3128257
150 KCA AL /OMEGA STRAIGHT COVER CLAMP/400	450	3128258
150 KCA AL /OMEGA STRAIGHT COVER CLAMP/450	500	3128259
150 KCA AL /OMEGA STRAIGHT COVER CLAMP/500	550	3128260
150 KCA AL /OMEGA STRAIGHT COVER CLAMP/600	650	3128261
150 KCA AL /OMEGA STRAIGHT COVER CLAMP/750	800	3128262
150 KCA AL /OMEGA STRAIGHT COVER CLAMP/900	950	3128263
175 KCA AL /OMEGA STRAIGHT COVER CLAMP/150	200	3128264
175 KCA AL /OMEGA STRAIGHT COVER CLAMP/200	250	3128265
175 KCA AL /OMEGA STRAIGHT COVER CLAMP/300	350	3128266
175 KCA AL /OMEGA STRAIGHT COVER CLAMP/400	450	3128267
175 KCA AL /OMEGA STRAIGHT COVER CLAMP/450	500	3128268
175 KCA AL /OMEGA STRAIGHT COVER CLAMP/500	550	3128269
175 KCA AL /OMEGA STRAIGHT COVER CLAMP/600	650	3128270
175 KCA AL /OMEGA STRAIGHT COVER CLAMP/750	800	3128271
175 KCA AL /OMEGA STRAIGHT COVER CLAMP/900	950	3128272



►►Cover - Slope Bracket

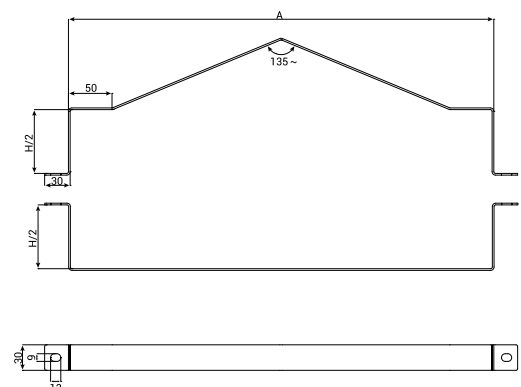
Code	Description	A (mm)
3128281	KCA ALK 150/L3/Slope COVER	190
3128282	KCA ALK 200/L3/Slope COVER	240
3128283	KCA ALK 300/L3/Slope COVER	340
3128284	KCA ALK 400/L3/Slope COVER	440
3128285	KCA ALK 450/L3/Slope COVER	490
3128286	KCA ALK 500/L3/Slope COVER	540
3128287	KCA ALK 600/L3/Slope COVER	640
3128288	KCA ALK 750/L3/Slope COVER	790
3128289	KCA ALK 900/L3/Slope COVER	940

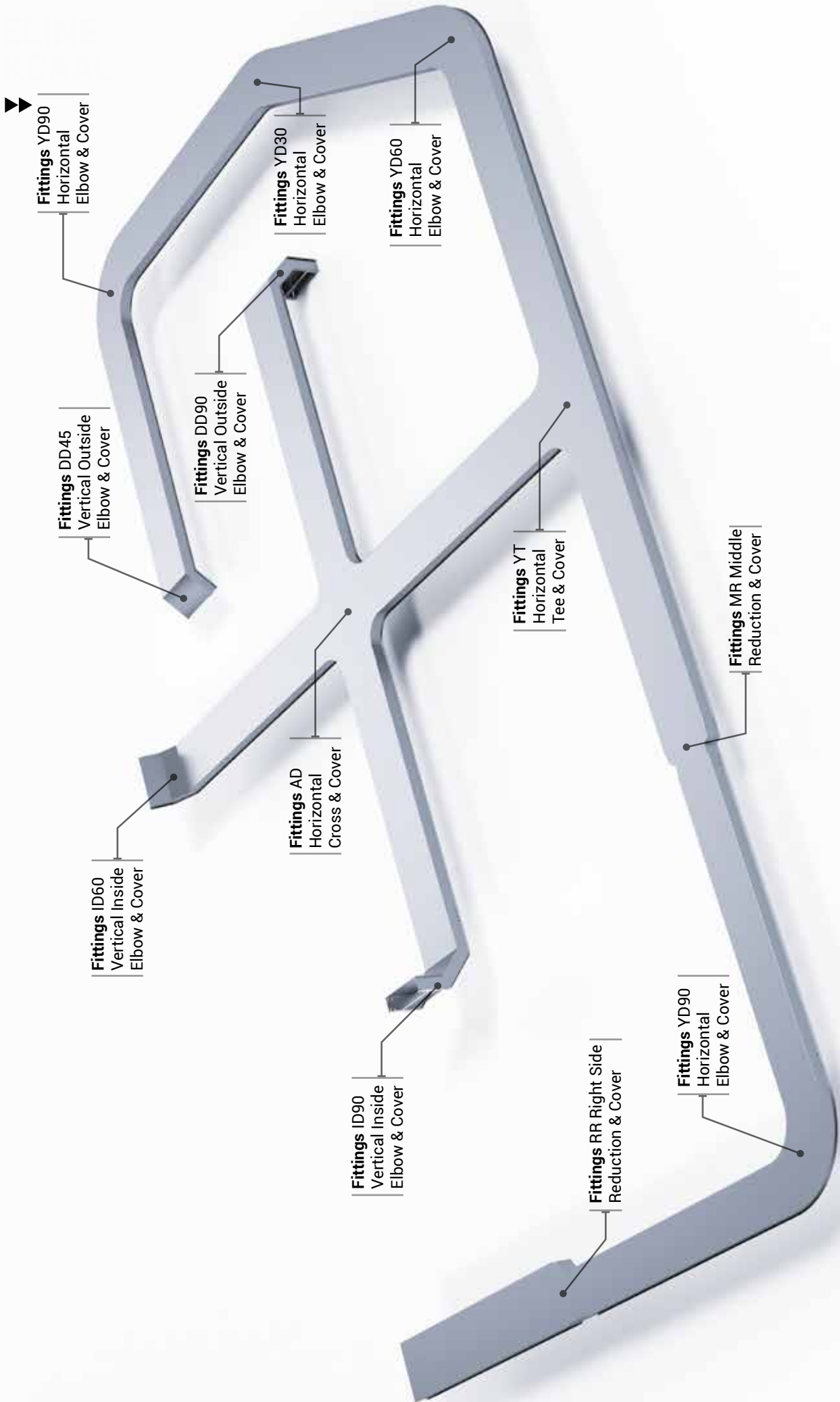


2 sets of omega slope cover clamp should be ordered for 3m length ladder.
4 sets of omega slope cover clamp should be ordered for 6m length ladder.

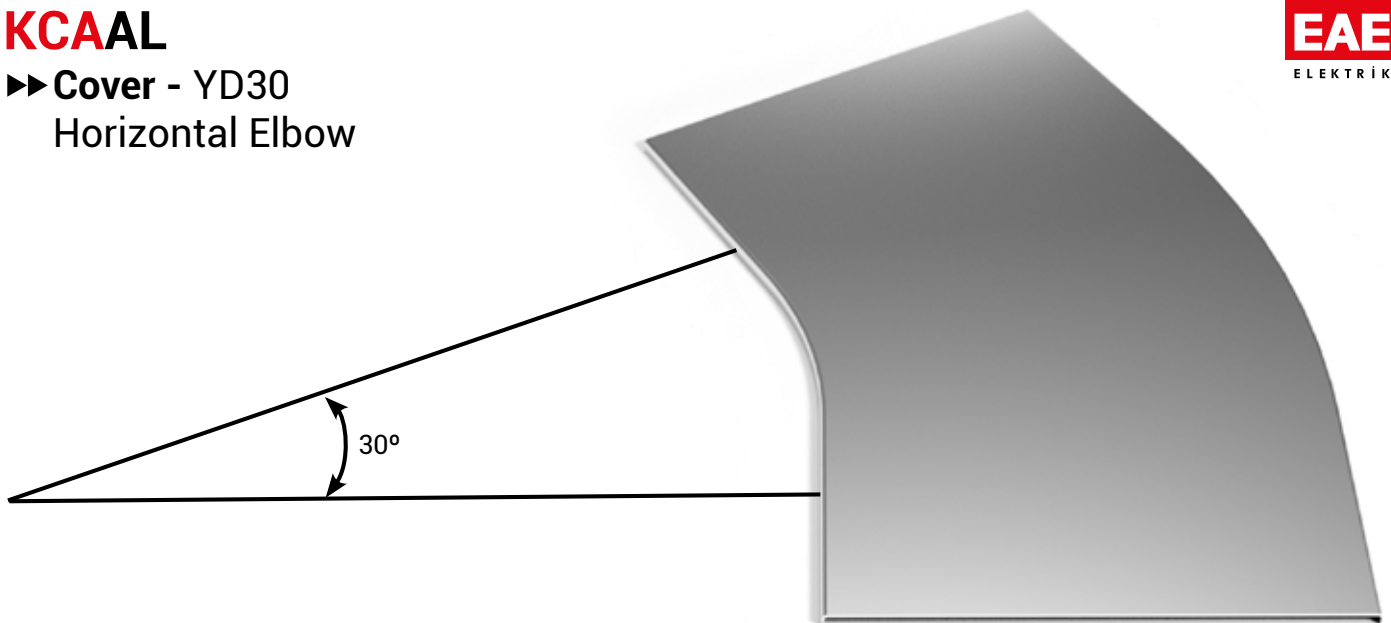
Omega Slope Cover Clamp

Description	A (mm)	Code
100 KCA AL /OMEGA SLOPE COVER CLAMP/150	200	3132691
100 KCA AL /OMEGA SLOPE COVER CLAMP/200	250	3132692
100 KCA AL /OMEGA SLOPE COVER CLAMP/300	350	3132693
100 KCA AL /OMEGA SLOPE COVER CLAMP/400	450	3132728
100 KCA AL /OMEGA SLOPE COVER CLAMP/450	500	3132729
100 KCA AL /OMEGA SLOPE COVER CLAMP/500	550	3132730
100 KCA AL /OMEGA SLOPE COVER CLAMP/600	650	3132731
100 KCA AL /OMEGA SLOPE COVER CLAMP/750	800	3132732
100 KCA AL /OMEGA SLOPE COVER CLAMP/900	950	3132733
125 KCA AL /OMEGA SLOPE COVER CLAMP/150	200	3132734
125 KCA AL /OMEGA SLOPE COVER CLAMP/200	250	3132735
125 KCA AL /OMEGA SLOPE COVER CLAMP/300	350	3132736
125 KCA AL /OMEGA SLOPE COVER CLAMP/400	450	3132737
125 KCA AL /OMEGA SLOPE COVER CLAMP/450	500	3132738
125 KCA AL /OMEGA SLOPE COVER CLAMP/500	550	3132739
125 KCA AL /OMEGA SLOPE COVER CLAMP/600	650	3132740
125 KCA AL /OMEGA SLOPE COVER CLAMP/750	800	3132741
125 KCA AL /OMEGA SLOPE COVER CLAMP/900	950	3132742
150 KCA AL /OMEGA SLOPE COVER CLAMP/150	200	3132743
150 KCA AL /OMEGA SLOPE COVER CLAMP/200	250	3132744
150 KCA AL /OMEGA SLOPE COVER CLAMP/300	350	3132745
150 KCA AL /OMEGA SLOPE COVER CLAMP/400	450	3132746
150 KCA AL /OMEGA SLOPE COVER CLAMP/450	500	3132747
150 KCA AL /OMEGA SLOPE COVER CLAMP/500	550	3132748
150 KCA AL /OMEGA SLOPE COVER CLAMP/600	650	3132749
150 KCA AL /OMEGA SLOPE COVER CLAMP/750	800	3132750
150 KCA AL /OMEGA SLOPE COVER CLAMP/900	950	3132751
175 KCA AL /OMEGA SLOPE COVER CLAMP/150	200	3132752
175 KCA AL /OMEGA SLOPE COVER CLAMP/200	250	3132753
175 KCA AL /OMEGA SLOPE COVER CLAMP/300	350	3132754
175 KCA AL /OMEGA SLOPE COVER CLAMP/400	450	3132755
175 KCA AL /OMEGA SLOPE COVER CLAMP/450	500	3132756
175 KCA AL /OMEGA SLOPE COVER CLAMP/500	550	3132757
175 KCA AL /OMEGA SLOPE COVER CLAMP/600	650	3132758
175 KCA AL /OMEGA SLOPE COVER CLAMP/750	800	3132759
175 KCA AL /OMEGA SLOPE COVER CLAMP/900	950	3132760





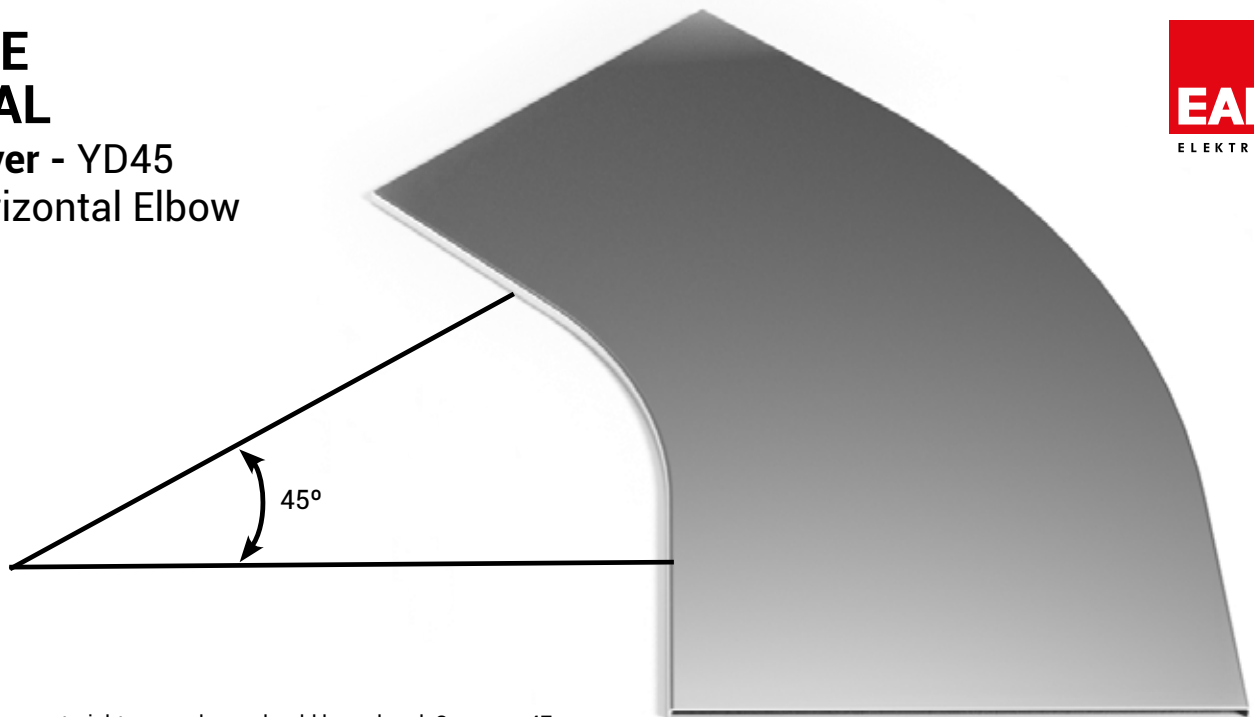
►► **Cover - YD30**
Horizontal Elbow



2 sets of omega straight cover clamp should be ordered. See page 47.

Width (mm)	Radius (mm)	Description	Code	Dimensions (mm)			
				X	Y	i	C
150	R300	↓ KCA ALK 150 YD30 R300	3131025	539	144	518	289
	R450	↓ KCA ALK 150 YD30 R450	3131026	614	165	596	329
	R600	↓ KCA ALK 150 YD30 R600	3131027	689	185	673	369
	R900	↓ KCA ALK 150 YD30 R900	3131028	839	225	829	449
200	R300	↓ KCA ALK 200 YD30 R300	3131029	552	148	518	296
	R450	↓ KCA ALK 200 YD30 R450	3131030	626	168	596	335
	R600	↓ KCA ALK 200 YD30 R600	3131031	701	188	673	375
	R900	↓ KCA ALK 200 YD30 R900	3131032	864	232	829	462
300	R300	↓ KCA ALK 300 YD30 R300	3131033	577	155	518	309
	R450	↓ KCA ALK 300 YD30 R450	3131034	651	175	596	349
	R600	↓ KCA ALK 300 YD30 R600	3131035	726	195	673	389
	R900	↓ KCA ALK 300 YD30 R900	3131036	889	238	829	476
400	R300	↓ KCA ALK 400 YD30 R300	3131037	602	161	518	323
	R450	↓ KCA ALK 400 YD30 R450	3131038	677	181	596	363
	R600	↓ KCA ALK 400 YD30 R600	3131039	752	201	673	403
	R900	↓ KCA ALK 400 YD30 R900	3131040	902	242	829	483
450	R300	↓ KCA ALK 450 YD30 R300	3131041	614	165	518	329
	R450	↓ KCA ALK 450 YD30 R450	3131042	689	185	596	369
	R600	↓ KCA ALK 450 YD30 R600	3131043	764	205	673	409
	R900	↓ KCA ALK 450 YD30 R900	3131044	926	248	829	496
500	R300	↓ KCA ALK 500 YD30 R300	3131045	627	168	518	336
	R450	↓ KCA ALK 500 YD30 R450	3131046	702	188	596	376
	R600	↓ KCA ALK 500 YD30 R600	3131047	777	208	673	416
	R900	↓ KCA ALK 500 YD30 R900	3131048	927	248	829	497
600	R300	↓ KCA ALK 600 YD30 R300	3131049	651	175	518	349
	R450	↓ KCA ALK 600 YD30 R450	3131050	728	196	596	389
	R600	↓ KCA ALK 600 YD30 R600	3131051	801	215	673	429
	R900	↓ KCA ALK 600 YD30 R900	3131052	964	258	829	516
750	R300	↓ KCA ALK 750 YD30 R300	3131053	689	185	518	369
	R450	↓ KCA ALK 750 YD30 R450	3131054	766	206	596	409
	R600	↓ KCA ALK 750 YD30 R600	3131055	838	225	673	449
	R900	↓ KCA ALK 750 YD30 R900	3131056	1001	268	829	536
900	R300	↓ KCA ALK 900 YD30 R300	3131057	726	195	518	389
	R450	↓ KCA ALK 900 YD30 R450	3131058	803	216	596	429
	R600	↓ KCA ALK 900 YD30 R600	3131059	876	235	673	469
	R900	↓ KCA ALK 900 YD30 R900	3131060	1039	278	829	556

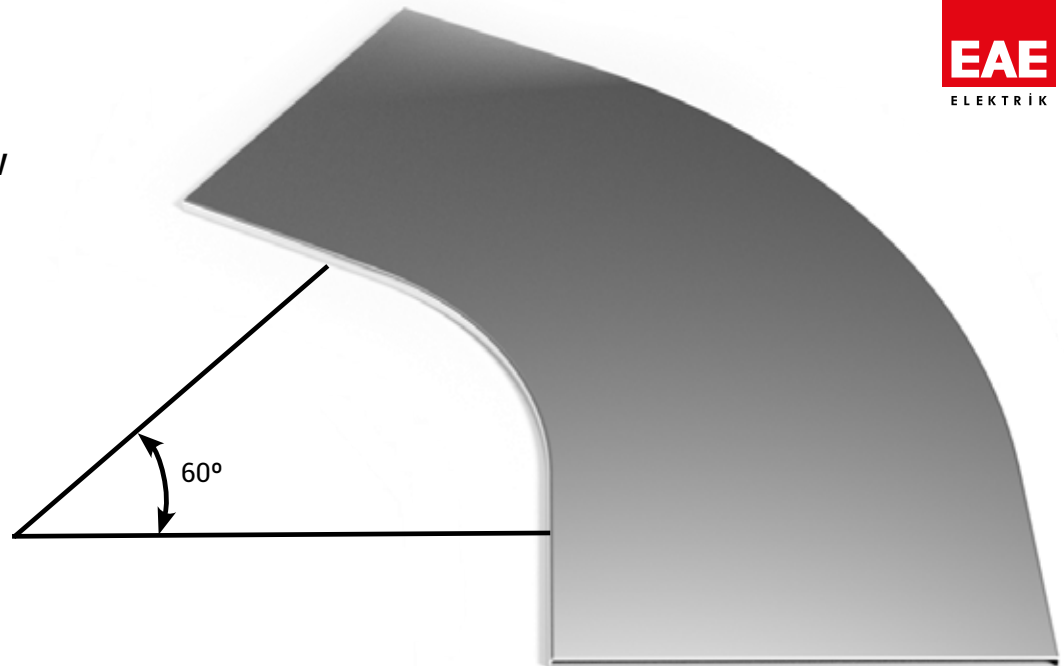
►► **Cover - YD45**
Horizontal Elbow



2 sets of omega straight cover clamp should be ordered. See page 47.

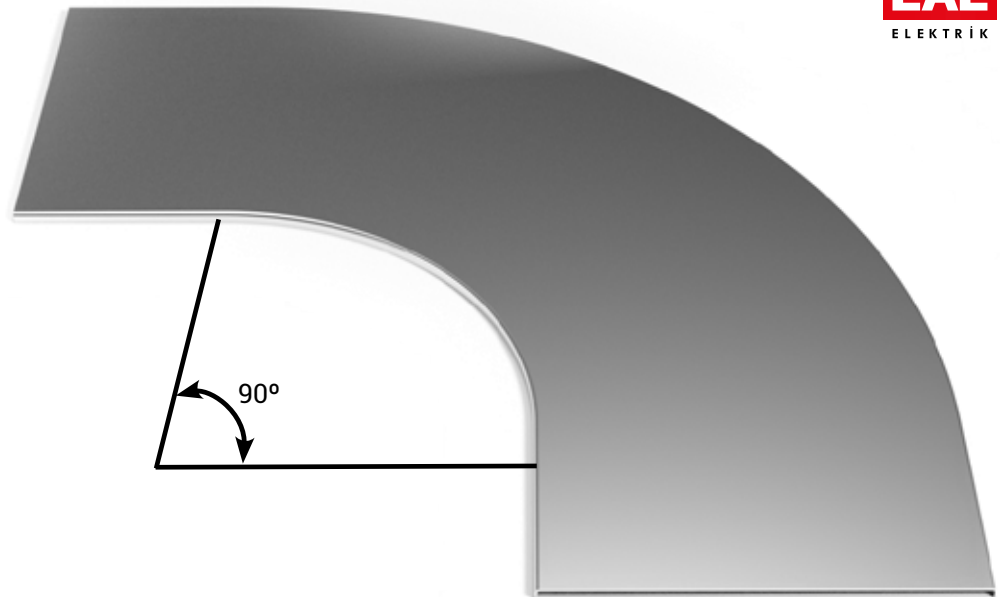
Width (mm)	Radius (mm)	Description	Code	Dimensions (mm)			
				X	Y	i	C
150	R300	↓ KCA ALK 150 YD45 R300	3131061	587	244	576	344
	R450	↓ KCA ALK 150 YD45 R450	3131062	693	288	691	406
	R600	↓ KCA ALK 150 YD45 R600	3131063	800	332	807	468
	R900	↓ KCA ALK 150 YD45 R900	3131064	1012	419	1036	592
200	R300	↓ KCA ALK 200 YD45 R300	3131065	604	251	576	354
	R450	↓ KCA ALK 200 YD45 R450	3131066	711	295	691	416
	R600	↓ KCA ALK 200 YD45 R600	3131067	817	339	807	478
	R900	↓ KCA ALK 200 YD45 R900	3131068	1029	426	1036	602
300	R300	↓ KCA ALK 300 YD45 R300	3131069	640	266	576	375
	R450	↓ KCA ALK 300 YD45 R450	3131070	746	310	691	437
	R600	↓ KCA ALK 300 YD45 R600	3131071	852	353	807	499
	R900	↓ KCA ALK 300 YD45 R900	3131072	1064	440	1036	623
400	R300	↓ KCA ALK 400 YD45 R300	3131073	676	280	576	396
	R450	↓ KCA ALK 400 YD45 R450	3131074	782	324	691	458
	R600	↓ KCA ALK 400 YD45 R600	3131075	888	768	807	520
	R900	↓ KCA ALK 400 YD45 R900	3131076	1100	456	1036	645
450	R300	↓ KCA ALK 450 YD45 R300	3131077	693	288	576	406
	R450	↓ KCA ALK 450 YD45 R450	3131078	799	332	691	468
	R600	↓ KCA ALK 450 YD45 R600	3131079	905	375	807	530
	R900	↓ KCA ALK 450 YD45 R900	3131080	1118	462	1036	654
500	R300	↓ KCA ALK 500 YD45 R300	3131081	712	295	576	417
	R450	↓ KCA ALK 500 YD45 R450	3131082	818	339	691	479
	R600	↓ KCA ALK 500 YD45 R600	3131083	924	383	807	541
	R900	↓ KCA ALK 500 YD45 R900	3131084	1136	470	1036	665
600	R300	↓ KCA ALK 600 YD45 R300	3131085	747	310	576	437
	R450	↓ KCA ALK 600 YD45 R450	3131086	853	355	691	499
	R600	↓ KCA ALK 600 YD45 R600	3131087	957	397	807	561
	R900	↓ KCA ALK 600 YD45 R900	3131088	1170	484	1036	685
750	R300	↓ KCA ALK 750 YD45 R300	3131089	800	333	576	469
	R450	↓ KCA ALK 750 YD45 R450	3131090	906	377	691	530
	R600	↓ KCA ALK 750 YD45 R600	3131091	1010	418	807	592
	R900	↓ KCA ALK 750 YD45 R900	3131092	1224	506	1036	716
900	R300	↓ KCA ALK 900 YD45 R300	3131093	853	355	576	499
	R450	↓ KCA ALK 900 YD45 R450	3131094	960	399	691	561
	R600	↓ KCA ALK 900 YD45 R600	3131095	1063	439	807	623
	R900	↓ KCA ALK 900 YD45 R900	3131096	1277	528	1036	747

►►Cover - YD60
Horizontal Elbow



2 sets of omega straight cover clamp should be ordered. See page 47.

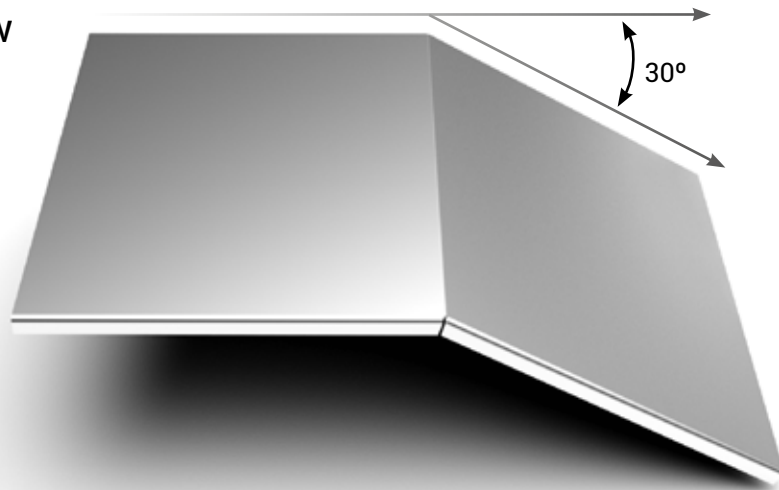
Width (mm)	Radius (mm)	Description	Code	Dimensions (mm)			
				X	Y	i	C
150	R300	↓ KCA ALK 150 YD60 R300	3131097	608	351	625	405
	R450	↓ KCA ALK 150 YD60 R450	3131098	738	426	715	492
	R600	↓ KCA ALK 150 YD60 R600	3131099	868	502	952	579
	R900	↓ KCA ALK 150 YD60 R900	3131100	1128	651	1125	752
200	R300	↓ KCA ALK 200 YD60 R300	3131101	629	363	625	419
	R450	↓ KCA ALK 200 YD60 R450	3131102	759	438	715	506
	R600	↓ KCA ALK 200 YD60 R600	3131103	889	514	952	593
	R900	↓ KCA ALK 200 YD60 R900	3131104	1149	663	1125	766
300	R300	↓ KCA ALK 300 YD60 R300	3131105	672	388	625	448
	R450	↓ KCA ALK 300 YD60 R450	3131106	802	463	715	535
	R600	↓ KCA ALK 300 YD60 R600	3131107	933	539	952	622
	R900	↓ KCA ALK 300 YD60 R900	3131108	1193	688	1125	795
400	R300	↓ KCA ALK 400 YD60 R300	3131109	717	414	625	478
	R450	↓ KCA ALK 400 YD60 R450	3131110	847	489	715	565
	R600	↓ KCA ALK 400 YD60 R600	3131111	977	564	952	651
	R900	↓ KCA ALK 400 YD60 R900	3131112	1238	714	1125	824
450	R300	↓ KCA ALK 450 YD60 R300	3131113	737	425	625	491
	R450	↓ KCA ALK 450 YD60 R450	3131114	867	500	715	578
	R600	↓ KCA ALK 450 YD60 R600	3131115	998	577	952	665
	R900	↓ KCA ALK 450 YD60 R900	3131116	1258	726	1125	838
500	R300	↓ KCA ALK 500 YD60 R300	3131117	760	439	625	507
	R450	↓ KCA ALK 500 YD60 R450	3131118	890	514	715	593
	R600	↓ KCA ALK 500 YD60 R600	3131119	1020	589	952	680
	R900	↓ KCA ALK 500 YD60 R900	3131120	1280	739	1125	853
600	R300	↓ KCA ALK 600 YD60 R300	3131121	802	463	625	534
	R450	↓ KCA ALK 600 YD60 R450	3131122	932	537	715	621
	R600	↓ KCA ALK 600 YD60 R600	3131123	1063	614	952	709
	R900	↓ KCA ALK 600 YD60 R900	3131124	1323	763	1125	881
750	R300	↓ KCA ALK 750 YD60 R300	3131125	867	500	625	578
	R450	↓ KCA ALK 750 YD60 R450	3131126	997	574	715	665
	R600	↓ KCA ALK 750 YD60 R600	3131127	1128	652	952	752
	R900	↓ KCA ALK 750 YD60 R900	3131128	1388	801	1125	925
900	R300	↓ KCA ALK 900 YD60 R300	3131129	932	538	625	621
	R450	↓ KCA ALK 900 YD60 R450	3131130	1061	611	715	708
	R600	↓ KCA ALK 900 YD60 R600	3131131	1193	690	952	795
	R900	↓ KCA ALK 900 YD60 R900	3131132	1453	839	1125	968



2 sets of omega straight cover clamp should be ordered. See page 47.

Width (mm)	Radius (mm)	Description	Code	Dimensions (mm)			
				X	Y	i	C
150	R300	↓ KCA ALK 150 YD90 R300	3131133	565	565	690	565
	R450	↓ KCA ALK 150 YD90 R450	3131134	715	715	902	715
	R600	↓ KCA ALK 150 YD90 R600	3131135	865	865	1114	865
	R900	↓ KCA ALK 150 YD90 R900	3131136	1165	1165	1538	1165
200	R300	↓ KCA ALK 200 YD90 R300	3131137	590	590	690	590
	R450	↓ KCA ALK 200 YD90 R450	3131138	740	740	902	740
	R600	↓ KCA ALK 200 YD90 R600	3131139	890	890	1114	890
	R900	↓ KCA ALK 200 YD90 R900	3131140	1190	1190	1538	1190
300	R300	↓ KCA ALK 300 YD90 R300	3131141	640	640	690	640
	R450	↓ KCA ALK 300 YD90 R450	3131142	790	790	902	790
	R600	↓ KCA ALK 300 YD90 R600	3131143	940	940	1114	940
	R900	↓ KCA ALK 300 YD90 R900	3131144	1240	1240	1538	1240
400	R300	↓ KCA ALK 400 YD90 R300	3131145	690	690	690	690
	R450	↓ KCA ALK 400 YD90 R450	3131146	840	840	902	840
	R600	↓ KCA ALK 400 YD90 R600	3131147	990	990	1114	990
	R900	↓ KCA ALK 400 YD90 R900	3131148	1290	1290	1538	1290
450	R300	↓ KCA ALK 450 YD90 R300	3131149	715	715	690	715
	R450	↓ KCA ALK 450 YD90 R450	3131150	865	865	902	865
	R600	↓ KCA ALK 450 YD90 R600	3131151	1015	1015	1114	1015
	R900	↓ KCA ALK 450 YD90 R900	3131152	1315	1315	1538	1315
500	R300	↓ KCA ALK 500 YD90 R300	3131153	740	740	690	740
	R450	↓ KCA ALK 500 YD90 R450	3131154	890	890	902	890
	R600	↓ KCA ALK 500 YD90 R600	3131155	1040	1040	1114	1040
	R900	↓ KCA ALK 500 YD90 R900	3131156	1340	1340	1538	1340
600	R300	↓ KCA ALK 600 YD90 R300	3131157	790	790	690	1465
	R450	↓ KCA ALK 600 YD90 R450	3131158	940	940	902	1660
	R600	↓ KCA ALK 600 YD90 R600	3131159	1090	1090	1114	1855
	R900	↓ KCA ALK 600 YD90 R900	3131160	1390	1390	1538	2050
750	R300	↓ KCA ALK 750 YD90 R300	3131161	865	865	690	865
	R450	↓ KCA ALK 750 YD90 R450	3131162	1015	1015	902	1015
	R600	↓ KCA ALK 750 YD90 R600	3131163	1165	1165	1114	1165
	R900	↓ KCA ALK 750 YD90 R900	3131164	1465	1465	1538	1465
900	R300	↓ KCA ALK 900 YD90 R300	3131165	940	940	690	940
	R450	↓ KCA ALK 900 YD90 R450	3131166	1090	1090	902	1090
	R600	↓ KCA ALK 900 YD90 R600	3131167	1240	1240	1114	1240
	R900	↓ KCA ALK 900 YD90 R900	3131168	1540	1540	1538	1540

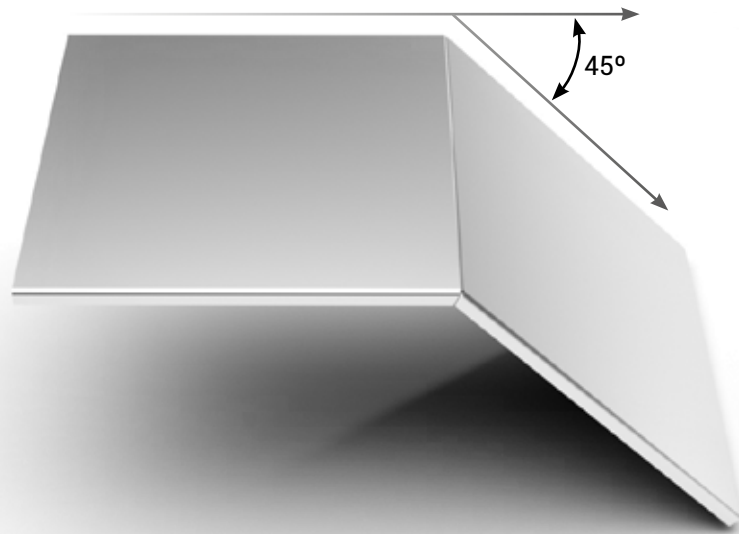
►►Cover - DD30
Vertical Outside Elbow



2 sets of omega straight cover clamp should be ordered. See page 47.

Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↓ KCA ALK 150 DD30 R300	3128505	3128541	3128577	3128613
	R450	↓ KCA ALK 150 DD30 R450	3128506	3128542	3128578	3128614
	R600	↓ KCA ALK 150 DD30 R600	3128507	3128543	3128579	3128615
	R900	↓ KCA ALK 150 DD30 R900	3128508	3128544	3128580	3128616
200	R300	↓ KCA ALK 200 DD30 R300	3128509	3128545	3128581	3128617
	R450	↓ KCA ALK 200 DD30 R450	3128510	3128546	3128582	3128618
	R600	↓ KCA ALK 200 DD30 R600	3128511	3128547	3128583	3128619
	R900	↓ KCA ALK 200 DD30 R900	3128512	3128548	3128584	3128620
300	R300	↓ KCA ALK 300 DD30 R300	3128513	3128549	3128585	3128621
	R450	↓ KCA ALK 300 DD30 R450	3128514	3128550	3128586	3128622
	R600	↓ KCA ALK 300 DD30 R600	3128515	3128551	3128587	3128623
	R900	↓ KCA ALK 300 DD30 R900	3128516	3128552	3128588	3128624
400	R300	↓ KCA ALK 400 DD30 R300	3128517	3128553	3128589	3128625
	R450	↓ KCA ALK 400 DD30 R450	3128518	3128554	3128590	3128626
	R600	↓ KCA ALK 400 DD30 R600	3128519	3128555	3128591	3128627
	R900	↓ KCA ALK 400 DD30 R900	3128520	3128556	3128592	3128628
450	R300	↓ KCA ALK 450 DD30 R300	3128521	3128557	3128593	3128629
	R450	↓ KCA ALK 450 DD30 R450	3128522	3128558	3128594	3128630
	R600	↓ KCA ALK 450 DD30 R600	3128523	3128559	3128595	3128631
	R900	↓ KCA ALK 450 DD30 R900	3128524	3128560	3128596	3128632
500	R300	↓ KCA ALK 500 DD30 R300	3128525	3128561	3128597	3128633
	R450	↓ KCA ALK 500 DD30 R450	3128526	3128562	3128598	3128634
	R600	↓ KCA ALK 500 DD30 R600	3128527	3128563	3128599	3128635
	R900	↓ KCA ALK 500 DD30 R900	3128528	3128564	3128600	3128636
600	R300	↓ KCA ALK 600 DD30 R300	3128529	3128565	3128601	3128637
	R450	↓ KCA ALK 600 DD30 R450	3128530	3128566	3128602	3128638
	R600	↓ KCA ALK 600 DD30 R600	3128531	3128567	3128603	3128639
	R900	↓ KCA ALK 600 DD30 R900	3128532	3128568	3128604	3128640
750	R300	↓ KCA ALK 750 DD30 R300	3128533	3128569	3128605	3128641
	R450	↓ KCA ALK 750 DD30 R450	3128534	3128570	3128606	3128642
	R600	↓ KCA ALK 750 DD30 R600	3128535	3128571	3128607	3128643
	R900	↓ KCA ALK 750 DD30 R900	3128536	3128572	3128608	3128644
900	R300	↓ KCA ALK 900 DD30 R300	3128537	3128573	3128609	3128645
	R450	↓ KCA ALK 900 DD30 R450	3128538	3128574	3128610	3128646
	R600	↓ KCA ALK 900 DD30 R600	3128539	3128575	3128611	3128647
	R900	↓ KCA ALK 900 DD30 R900	3128540	3128576	3128612	3128648

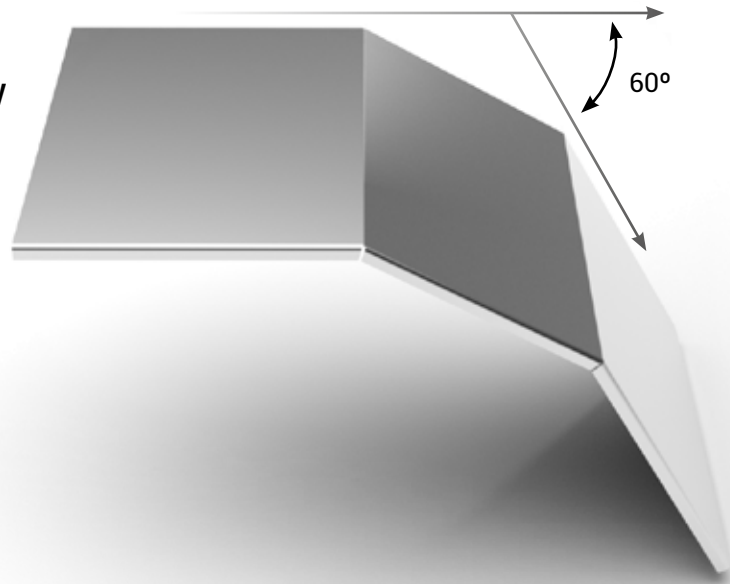
►►Cover - DD45
Vertical Outside Elbow



2 sets of omega straight cover clamp should be ordered. See page 47.

Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↓ KCA ALK 150 DD45 R300	3128676	3128712	3128748	3128784
	R450	↓ KCA ALK 150 DD45 R450	3128677	3128713	3128749	3128785
	R600	↓ KCA ALK 150 DD45 R600	3128678	3128714	3128750	3128786
	R900	↓ KCA ALK 150 DD45 R900	3128679	3128715	3128751	3128787
200	R300	↓ KCA ALK 200 DD45 R300	3128680	3128716	3128752	3128788
	R450	↓ KCA ALK 200 DD45 R450	3128681	3128717	3128753	3128789
	R600	↓ KCA ALK 200 DD45 R600	3128682	3128718	3128754	3128790
	R900	↓ KCA ALK 200 DD45 R900	3128683	3128719	3128755	3128791
300	R300	↓ KCA ALK 300 DD45 R300	3128684	3128720	3128756	3128792
	R450	↓ KCA ALK 300 DD45 R450	3128685	3128721	3128757	3128793
	R600	↓ KCA ALK 300 DD45 R600	3128686	3128722	3128758	3128794
	R900	↓ KCA ALK 300 DD45 R900	3128687	3128723	3128759	3128795
400	R300	↓ KCA ALK 400 DD45 R300	3128688	3128724	3128760	3128796
	R450	↓ KCA ALK 400 DD45 R450	3128689	3128725	3128761	3128797
	R600	↓ KCA ALK 400 DD45 R600	3128690	3128726	3128762	3128798
	R900	↓ KCA ALK 400 DD45 R900	3128691	3128727	3128763	3128799
450	R300	↓ KCA ALK 450 DD45 R300	3128692	3128728	3128764	3128800
	R450	↓ KCA ALK 450 DD45 R450	3128693	3128729	3128765	3128801
	R600	↓ KCA ALK 450 DD45 R600	3128694	3128730	3128766	3128802
	R900	↓ KCA ALK 450 DD45 R900	3128695	3128731	3128767	3128803
500	R300	↓ KCA ALK 500 DD45 R300	3128696	3128732	3128768	3128804
	R450	↓ KCA ALK 500 DD45 R450	3128697	3128733	3128769	3128805
	R600	↓ KCA ALK 500 DD45 R600	3128698	3128734	3128770	3128806
	R900	↓ KCA ALK 500 DD45 R900	3128699	3128735	3128771	3128807
600	R300	↓ KCA ALK 600 DD45 R300	3128700	3128736	3128772	3128808
	R450	↓ KCA ALK 600 DD45 R450	3128701	3128737	3128773	3128809
	R600	↓ KCA ALK 600 DD45 R600	3128702	3128738	3128774	3128810
	R900	↓ KCA ALK 600 DD45 R900	3128703	3128739	3128775	3128811
750	R300	↓ KCA ALK 750 DD45 R300	3128704	3128740	3128776	3128812
	R450	↓ KCA ALK 750 DD45 R450	3128705	3128741	3128777	3128813
	R600	↓ KCA ALK 750 DD45 R600	3128706	3128742	3128778	3128814
	R900	↓ KCA ALK 750 DD45 R900	3128707	3128743	3128779	3128815
900	R300	↓ KCA ALK 900 DD45 R300	3128708	3128744	3128780	3128816
	R450	↓ KCA ALK 900 DD45 R450	3128709	3128745	3128781	3128817
	R600	↓ KCA ALK 900 DD45 R600	3128710	3128746	3128782	3128818
	R900	↓ KCA ALK 900 DD45 R900	3128711	3128747	3128783	3128819

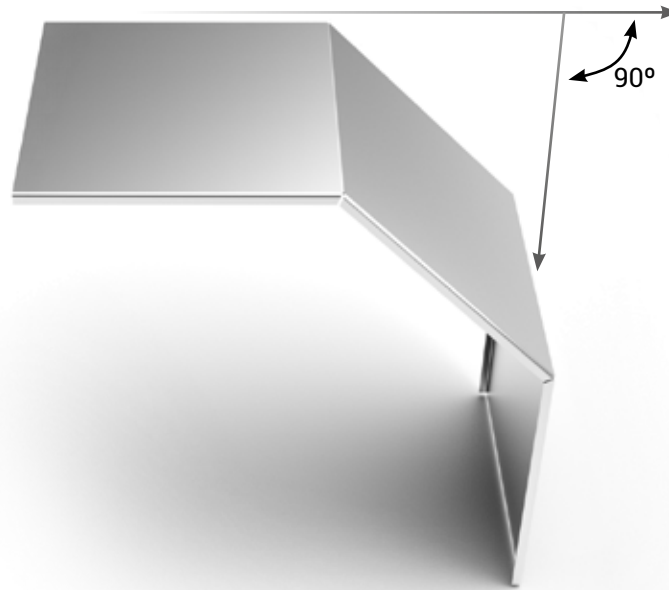
►►Cover - DD60
Vertical Outside Elbow



2 sets of omega straight cover clamp should be ordered. See page 47.

Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↓ KCA ALK 150 DD60 R300	3128820	3128856	3128892	3128928
	R450	↓ KCA ALK 150 DD60 R450	3128821	3128857	3128893	3128929
	R600	↓ KCA ALK 150 DD60 R600	3128822	3128858	3128894	3128930
	R900	↓ KCA ALK 150 DD60 R900	3128823	3128859	3128895	3128931
200	R300	↓ KCA ALK 200 DD60 R300	3128824	3128860	3128896	3128932
	R450	↓ KCA ALK 200 DD60 R450	3128825	3128861	3128897	3128933
	R600	↓ KCA ALK 200 DD60 R600	3128826	3128862	3128898	3128934
	R900	↓ KCA ALK 200 DD60 R900	3128827	3128863	3128899	3128935
300	R300	↓ KCA ALK 300 DD60 R300	3128828	3128864	3128900	3128936
	R450	↓ KCA ALK 300 DD60 R450	3128829	3128865	3128901	3128937
	R600	↓ KCA ALK 300 DD60 R600	3128830	3128866	3128902	3128938
	R900	↓ KCA ALK 300 DD60 R900	3128831	3128867	3128903	3128939
400	R300	↓ KCA ALK 400 DD60 R300	3128832	3128868	3128904	3128940
	R450	↓ KCA ALK 400 DD60 R450	3128833	3128869	3128905	3128941
	R600	↓ KCA ALK 400 DD60 R600	3128834	3128870	3128906	3128942
	R900	↓ KCA ALK 400 DD60 R900	3128835	3128871	3128907	3128943
450	R300	↓ KCA ALK 450 DD60 R300	3128836	3128872	3128908	3128944
	R450	↓ KCA ALK 450 DD60 R450	3128837	3128873	3128909	3128945
	R600	↓ KCA ALK 450 DD60 R600	3128838	3128874	3128910	3128946
	R900	↓ KCA ALK 450 DD60 R900	3128839	3128875	3128911	3128947
500	R300	↓ KCA ALK 500 DD60 R300	3128840	3128876	3128912	3128948
	R450	↓ KCA ALK 500 DD60 R450	3128841	3128877	3128913	3128949
	R600	↓ KCA ALK 500 DD60 R600	3128842	3128878	3128914	3128950
	R900	↓ KCA ALK 500 DD60 R900	3128843	3128879	3128915	3128951
600	R300	↓ KCA ALK 600 DD60 R300	3128844	3128880	3128916	3128952
	R450	↓ KCA ALK 600 DD60 R450	3128845	3128881	3128917	3128953
	R600	↓ KCA ALK 600 DD60 R600	3128846	3128882	3128918	3128954
	R900	↓ KCA ALK 600 DD60 R900	3128847	3128883	3128919	3128955
750	R300	↓ KCA ALK 750 DD60 R300	3128848	3128884	3128920	3128956
	R450	↓ KCA ALK 750 DD60 R450	3128849	3128885	3128921	3128957
	R600	↓ KCA ALK 750 DD60 R600	3128850	3128886	3128922	3128958
	R900	↓ KCA ALK 750 DD60 R900	3128851	3128887	3128923	3128959
900	R300	↓ KCA ALK 900 DD60 R300	3128852	3128888	3128924	3128960
	R450	↓ KCA ALK 900 DD60 R450	3128853	3128889	3128925	3128961
	R600	↓ KCA ALK 900 DD60 R600	3128854	3128890	3128926	3128962
	R900	↓ KCA ALK 900 DD60 R900	3128855	3128891	3128927	3128963

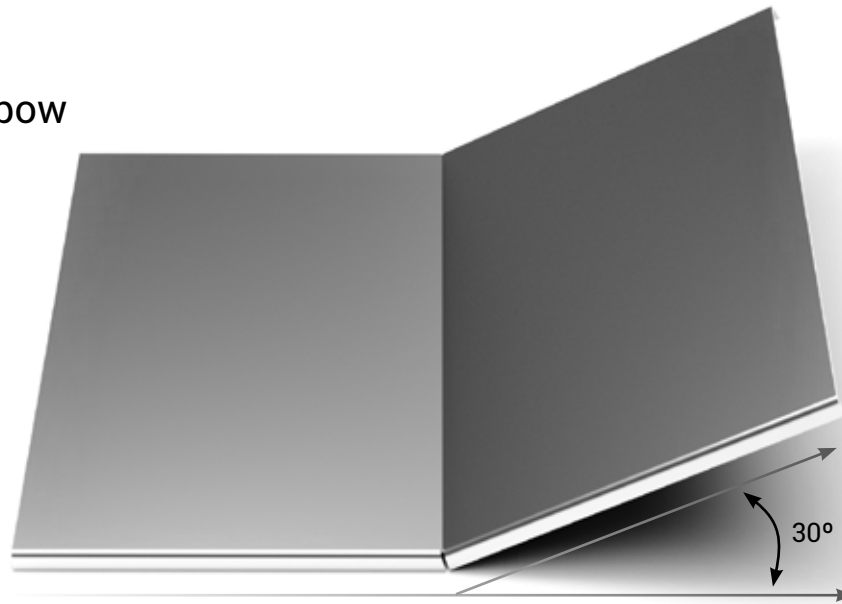
►►Cover - DD90
Vertical Outside Elbow



2 sets of omega straight cover clamp should be ordered. See page 47.

Width (mm)	Radius (mm)	Description	Code			
			↑ 100	↑ 125	↑ 150	↑ 175
150	R300	↓ KCA ALK 150 DD90 R300	3128964	3129000	3129036	3129072
	R450	↓ KCA ALK 150 DD90 R450	3128965	3129001	3129037	3129073
	R600	↓ KCA ALK 150 DD90 R600	3128966	3129002	3129038	3129074
	R900	↓ KCA ALK 150 DD90 R900	3128967	3129003	3129039	3129075
200	R300	↓ KCA ALK 200 DD90 R300	3128968	3129004	3129040	3129076
	R450	↓ KCA ALK 200 DD90 R450	3128969	3129005	3129041	3129077
	R600	↓ KCA ALK 200 DD90 R600	3128970	3129006	3129042	3129078
	R900	↓ KCA ALK 200 DD90 R900	3128971	3129007	3129043	3129079
300	R300	↓ KCA ALK 300 DD90 R300	3128972	3129008	3129044	3129080
	R450	↓ KCA ALK 300 DD90 R450	3128973	3129009	3129045	3129081
	R600	↓ KCA ALK 300 DD90 R600	3128974	3129010	3129046	3129082
	R900	↓ KCA ALK 300 DD90 R900	3128975	3129011	3129047	3129083
400	R300	↓ KCA ALK 400 DD90 R300	3128976	3129012	3129048	3129084
	R450	↓ KCA ALK 400 DD90 R450	3128977	3129013	3129049	3129085
	R600	↓ KCA ALK 400 DD90 R600	3128978	3129014	3129050	3129086
	R900	↓ KCA ALK 400 DD90 R900	3128979	3129015	3129051	3129087
450	R300	↓ KCA ALK 450 DD90 R300	3128980	3129016	3129052	3129088
	R450	↓ KCA ALK 450 DD90 R450	3128981	3129017	3129053	3129089
	R600	↓ KCA ALK 450 DD90 R600	3128982	3129018	3129054	3129090
	R900	↓ KCA ALK 450 DD90 R900	3128983	3129019	3129055	3129091
500	R300	↓ KCA ALK 500 DD90 R300	3128984	3129020	3129056	3129092
	R450	↓ KCA ALK 500 DD90 R450	3128985	3129021	3129057	3129093
	R600	↓ KCA ALK 500 DD90 R600	3128986	3129022	3129058	3129094
	R900	↓ KCA ALK 500 DD90 R900	3128987	3129023	3129059	3129095
600	R300	↓ KCA ALK 600 DD90 R300	3128988	3129024	3129060	3129096
	R450	↓ KCA ALK 600 DD90 R450	3128989	3129025	3129061	3129097
	R600	↓ KCA ALK 600 DD90 R600	3128990	3129026	3129062	3129098
	R900	↓ KCA ALK 600 DD90 R900	3128991	3129027	3129063	3129099
750	R300	↓ KCA ALK 750 DD90 R300	3128992	3129028	3129064	3129100
	R450	↓ KCA ALK 750 DD90 R450	3128993	3129029	3129065	3129101
	R600	↓ KCA ALK 750 DD90 R600	3128994	3129030	3129066	3129102
	R900	↓ KCA ALK 750 DD90 R900	3128995	3129031	3129067	3129103
900	R300	↓ KCA ALK 900 DD90 R300	3128996	3129032	3129068	3129104
	R450	↓ KCA ALK 900 DD90 R450	3128997	3129033	3129069	3129105
	R600	↓ KCA ALK 900 DD90 R600	3128998	3129034	3129070	3129106
	R900	↓ KCA ALK 900 DD90 R900	3128999	3129035	3129071	3129107

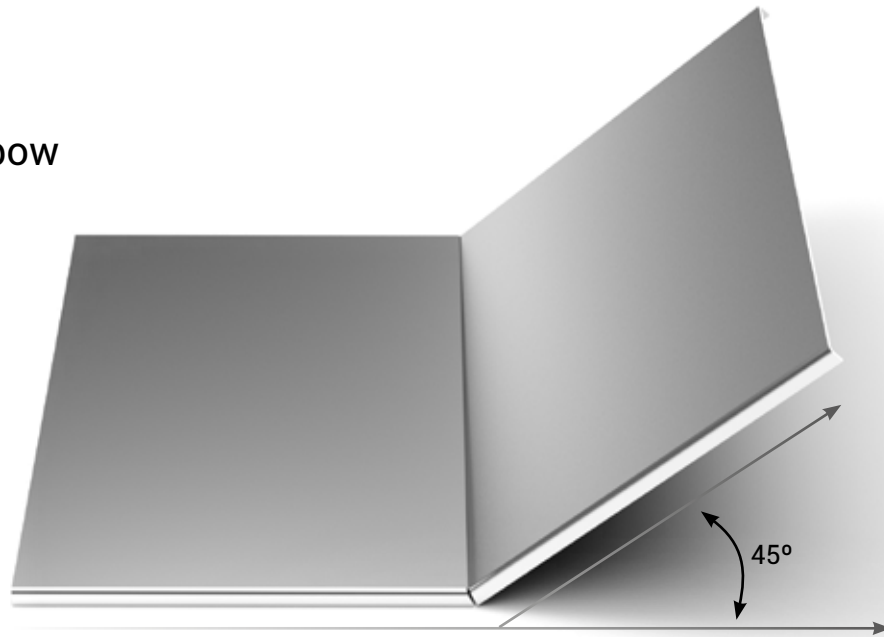
►► **Cover - ID30**
Vertical Inside Elbow



2 sets of omega straight cover clamp should be ordered. See page 47.

Width (mm)	Radius (mm)	Description	Code
150	R300	↓ KCA ALK 150 ID30 R300	3129688
	R450	↓ KCA ALK 150 ID30 R450	3129689
	R600	↓ KCA ALK 150 ID30 R600	3129690
	R900	↓ KCA ALK 150 ID30 R900	3129691
200	R300	↓ KCA ALK 200 ID30 R300	3129692
	R450	↓ KCA ALK 200 ID30 R450	3129693
	R600	↓ KCA ALK 200 ID30 R600	3129694
	R900	↓ KCA ALK 200 ID30 R900	3129695
300	R300	↓ KCA ALK 300 ID30 R300	3129696
	R450	↓ KCA ALK 300 ID30 R450	3129697
	R600	↓ KCA ALK 300 ID30 R600	3129698
	R900	↓ KCA ALK 300 ID30 R900	3129699
400	R300	↓ KCA ALK 400 ID30 R300	3129700
	R450	↓ KCA ALK 400 ID30 R450	3129701
	R600	↓ KCA ALK 400 ID30 R600	3129702
	R900	↓ KCA ALK 400 ID30 R900	3129703
450	R300	↓ KCA ALK 450 ID30 R300	3129704
	R450	↓ KCA ALK 450 ID30 R450	3129705
	R600	↓ KCA ALK 450 ID30 R600	3129706
	R900	↓ KCA ALK 450 ID30 R900	3129707
500	R300	↓ KCA ALK 500 ID30 R300	3129708
	R450	↓ KCA ALK 500 ID30 R450	3129709
	R600	↓ KCA ALK 500 ID30 R600	3129710
	R900	↓ KCA ALK 500 ID30 R900	3129711
600	R300	↓ KCA ALK 600 ID30 R300	3129712
	R450	↓ KCA ALK 600 ID30 R450	3129713
	R600	↓ KCA ALK 600 ID30 R600	3129714
	R900	↓ KCA ALK 600 ID30 R900	3129715
750	R300	↓ KCA ALK 750 ID30 R300	3129716
	R450	↓ KCA ALK 750 ID30 R450	3129717
	R600	↓ KCA ALK 750 ID30 R600	3129718
	R900	↓ KCA ALK 750 ID30 R900	3129719
900	R300	↓ KCA ALK 900 ID30 R300	3129720
	R450	↓ KCA ALK 900 ID30 R450	3129721
	R600	↓ KCA ALK 900 ID30 R600	3129722
	R900	↓ KCA ALK 900 ID30 R900	3129723

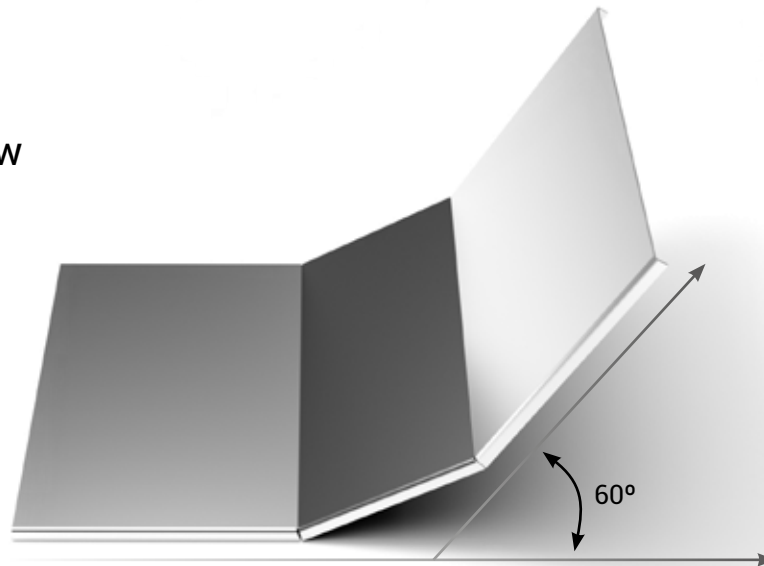
►► **Cover - ID45**
Vertical Inside Elbow



2 sets of omega straight cover clamp should be ordered. See page 47.

Width (mm)	Radius (mm)	Description	Code
150	R300	↓ KCA ALK 150 ID45 R300	3129724
	R450	↓ KCA ALK 150 ID45 R450	3129725
	R600	↓ KCA ALK 150 ID45 R600	3129726
	R900	↓ KCA ALK 150 ID45 R900	3129727
200	R300	↓ KCA ALK 200 ID45 R300	3129728
	R450	↓ KCA ALK 200 ID45 R450	3129729
	R600	↓ KCA ALK 200 ID45 R600	3129730
	R900	↓ KCA ALK 200 ID45 R900	3129731
300	R300	↓ KCA ALK 300 ID45 R300	3129732
	R450	↓ KCA ALK 300 ID45 R450	3129733
	R600	↓ KCA ALK 300 ID45 R600	3129734
	R900	↓ KCA ALK 300 ID45 R900	3129735
400	R300	↓ KCA ALK 400 ID45 R300	3129736
	R450	↓ KCA ALK 400 ID45 R450	3129737
	R600	↓ KCA ALK 400 ID45 R600	3129738
	R900	↓ KCA ALK 400 ID45 R900	3129739
450	R300	↓ KCA ALK 450 ID45 R300	3129740
	R450	↓ KCA ALK 450 ID45 R450	3129741
	R600	↓ KCA ALK 450 ID45 R600	3129742
	R900	↓ KCA ALK 450 ID45 R900	3129743
500	R300	↓ KCA ALK 500 ID45 R300	3129744
	R450	↓ KCA ALK 500 ID45 R450	3129745
	R600	↓ KCA ALK 500 ID45 R600	3129746
	R900	↓ KCA ALK 500 ID45 R900	3129747
600	R300	↓ KCA ALK 600 ID45 R300	3129748
	R450	↓ KCA ALK 600 ID45 R450	3129749
	R600	↓ KCA ALK 600 ID45 R600	3129750
	R900	↓ KCA ALK 600 ID45 R900	3129751
750	R300	↓ KCA ALK 750 ID45 R300	3129752
	R450	↓ KCA ALK 750 ID45 R450	3129753
	R600	↓ KCA ALK 750 ID45 R600	3129754
	R900	↓ KCA ALK 750 ID45 R900	3129755
900	R300	↓ KCA ALK 900 ID45 R300	3129756
	R450	↓ KCA ALK 900 ID45 R450	3129757
	R600	↓ KCA ALK 900 ID45 R600	3129758
	R900	↓ KCA ALK 900 ID45 R900	3129759

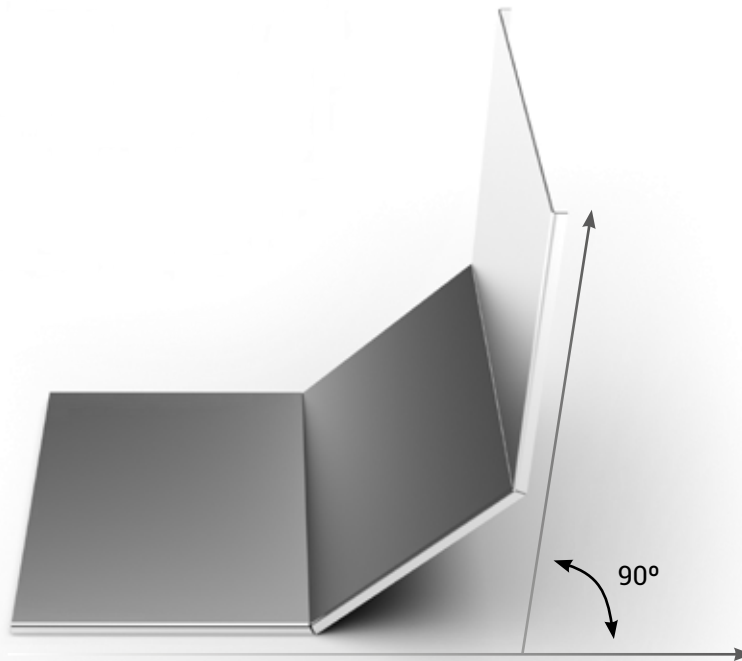
►►Cover - ID60
Vertical Inside Elbow



2 sets of omega straight cover clamp should be ordered. See page 47.

Width (mm)	Radius (mm)	Description	Code
150	R300	↓ KCA ALK 150 ID60 R300	3129760
	R450	↓ KCA ALK 150 ID60 R450	3129761
	R600	↓ KCA ALK 150 ID60 R600	3129762
	R900	↓ KCA ALK 150 ID60 R900	3129763
200	R300	↓ KCA ALK 200 ID60 R300	3129764
	R450	↓ KCA ALK 200 ID60 R450	3129765
	R600	↓ KCA ALK 200 ID60 R600	3129766
	R900	↓ KCA ALK 200 ID60 R900	3129767
300	R300	↓ KCA ALK 300 ID60 R300	3129768
	R450	↓ KCA ALK 300 ID60 R450	3129769
	R600	↓ KCA ALK 300 ID60 R600	3129770
	R900	↓ KCA ALK 300 ID60 R900	3129771
400	R300	↓ KCA ALK 400 ID60 R300	3129772
	R450	↓ KCA ALK 400 ID60 R450	3129773
	R600	↓ KCA ALK 400 ID60 R600	3129774
	R900	↓ KCA ALK 400 ID60 R900	3129775
450	R300	↓ KCA ALK 450 ID60 R300	3129776
	R450	↓ KCA ALK 450 ID60 R450	3129777
	R600	↓ KCA ALK 450 ID60 R600	3129778
	R900	↓ KCA ALK 450 ID60 R900	3129779
500	R300	↓ KCA ALK 500 ID60 R300	3129780
	R450	↓ KCA ALK 500 ID60 R450	3129781
	R600	↓ KCA ALK 500 ID60 R600	3129782
	R900	↓ KCA ALK 500 ID60 R900	3129783
600	R300	↓ KCA ALK 600 ID60 R300	3129784
	R450	↓ KCA ALK 600 ID60 R450	3129785
	R600	↓ KCA ALK 600 ID60 R600	3129786
	R900	↓ KCA ALK 600 ID60 R900	3129787
750	R300	↓ KCA ALK 750 ID60 R300	3129788
	R450	↓ KCA ALK 750 ID60 R450	3129789
	R600	↓ KCA ALK 750 ID60 R600	3129790
	R900	↓ KCA ALK 750 ID60 R900	3129791
900	R300	↓ KCA ALK 900 ID60 R300	3129792
	R450	↓ KCA ALK 900 ID60 R450	3129793
	R600	↓ KCA ALK 900 ID60 R600	3129794
	R900	↓ KCA ALK 900 ID60 R900	3129795

►► **Cover - ID90**
Vertical Inside Elbow



2 sets of omega straight cover clamp should be ordered. See page 47.

Width (mm)	Radius (mm)	Description	Code
150	R300	↓ KCA ALK 150 ID90 R300	3129796
	R450	↓ KCA ALK 150 ID90 R450	3129797
	R600	↓ KCA ALK 150 ID90 R600	3129798
	R900	↓ KCA ALK 150 ID90 R900	3129799
200	R300	↓ KCA ALK 200 ID90 R300	3129800
	R450	↓ KCA ALK 200 ID90 R450	3129801
	R600	↓ KCA ALK 200 ID90 R600	3129802
	R900	↓ KCA ALK 200 ID90 R900	3129803
300	R300	↓ KCA ALK 300 ID90 R300	3129804
	R450	↓ KCA ALK 300 ID90 R450	3129805
	R600	↓ KCA ALK 300 ID90 R600	3129806
	R900	↓ KCA ALK 300 ID90 R900	3129807
400	R300	↓ KCA ALK 400 ID90 R300	3129808
	R450	↓ KCA ALK 400 ID90 R450	3129809
	R600	↓ KCA ALK 400 ID90 R600	3129810
	R900	↓ KCA ALK 400 ID90 R900	3129811
450	R300	↓ KCA ALK 450 ID90 R300	3129812
	R450	↓ KCA ALK 450 ID90 R450	3129813
	R600	↓ KCA ALK 450 ID90 R600	3129814
	R900	↓ KCA ALK 450 ID90 R900	3129815
500	R300	↓ KCA ALK 500 ID90 R300	3129816
	R450	↓ KCA ALK 500 ID90 R450	3129817
	R600	↓ KCA ALK 500 ID90 R600	3129818
	R900	↓ KCA ALK 500 ID90 R900	3129819
600	R300	↓ KCA ALK 600 ID90 R300	3129820
	R450	↓ KCA ALK 600 ID90 R450	3129821
	R600	↓ KCA ALK 600 ID90 R600	3129822
	R900	↓ KCA ALK 600 ID90 R900	3129823
750	R300	↓ KCA ALK 750 ID90 R300	3129824
	R450	↓ KCA ALK 750 ID90 R450	3129825
	R600	↓ KCA ALK 750 ID90 R600	3129826
	R900	↓ KCA ALK 750 ID90 R900	3129827
900	R300	↓ KCA ALK 900 ID90 R300	3129828
	R450	↓ KCA ALK 900 ID90 R450	3129829
	R600	↓ KCA ALK 900 ID90 R600	3129830
	R900	↓ KCA ALK 900 ID90 R900	3129831



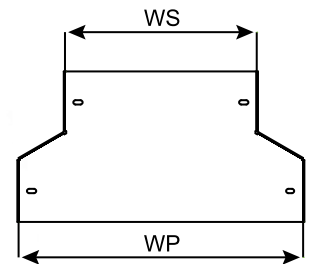
3 sets of omega straight cover clamp should be ordered. See page 47.

Width (mm)	Radius (mm)	Description	Code	Dimensions (mm)			
				X	Y	i	C
150	R300	↓ KCA ALK 150 YT R300	3131745	565	565	665	565
	R450	↓ KCA ALK 150 YT R450	3131746	715	715	877	715
	R600	↓ KCA ALK 150 YT R600	3131747	865	865	1089	865
	R900	↓ KCA ALK 150 YT R900	3131748	1165	1165	1514	1165
200	R300	↓ KCA ALK 200 YT R300	3131749	590	590	665	590
	R450	↓ KCA ALK 200 YT R450	3131750	740	740	877	740
	R600	↓ KCA ALK 200 YT R600	3131751	890	890	1089	890
	R900	↓ KCA ALK 200 YT R900	3131752	1190	1190	1514	1190
300	R300	↓ KCA ALK 300 YT R300	3131753	640	640	665	640
	R450	↓ KCA ALK 300 YT R450	3131754	790	790	877	790
	R600	↓ KCA ALK 300 YT R600	3131755	940	940	1089	940
	R900	↓ KCA ALK 300 YT R900	3131756	1240	1240	1514	1240
400	R300	↓ KCA ALK 400 YT R300	3131757	690	690	665	690
	R450	↓ KCA ALK 400 YT R450	3131758	840	840	877	840
	R600	↓ KCA ALK 400 YT R600	3131759	990	990	1089	990
	R900	↓ KCA ALK 400 YT R900	3131760	1290	1290	1514	1290
450	R300	↓ KCA ALK 450 YT R300	3131761	715	715	665	715
	R450	↓ KCA ALK 450 YT R450	3131762	865	865	877	865
	R600	↓ KCA ALK 450 YT R600	3131763	1015	1015	1089	1015
	R900	↓ KCA ALK 450 YT R900	3131764	1315	1315	1514	1315
500	R300	↓ KCA ALK 500 YT R300	3131765	740	740	665	740
	R450	↓ KCA ALK 500 YT R450	3131766	890	890	877	890
	R600	↓ KCA ALK 500 YT R600	3131767	1040	1040	1089	1040
	R900	↓ KCA ALK 500 YT R900	3131768	1340	1340	1514	1340
600	R300	↓ KCA ALK 600 YT R300	3131769	790	790	665	790
	R450	↓ KCA ALK 600 YT R450	3131770	940	940	877	940
	R600	↓ KCA ALK 600 YT R600	3131771	1090	1090	1089	1090
	R900	↓ KCA ALK 600 YT R900	3131772	1390	1390	1514	1390
750	R300	↓ KCA ALK 750 YT R300	3131773	865	865	665	865
	R450	↓ KCA ALK 750 YT R450	3131774	1015	1015	877	1015
	R600	↓ KCA ALK 750 YT R600	3131775	1165	1165	1089	1165
	R900	↓ KCA ALK 750 YT R900	3131776	1465	1465	1514	1465
900	R300	↓ KCA ALK 900 YT R300	3131777	940	940	665	940
	R450	↓ KCA ALK 900 YT R450	3131778	1090	1090	877	1090
	R600	↓ KCA ALK 900 YT R600	3131779	1240	1240	1089	1240
	R900	↓ KCA ALK 900 YT R900	3131780	1540	1540	1514	1540



4 sets of omega straight cover clamp should be ordered. See page 47.

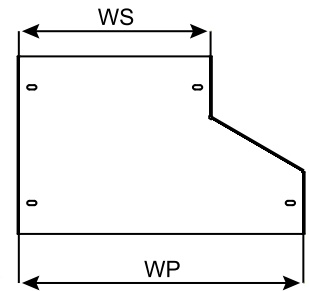
Width (mm)	Radius (mm)	Description	Code	Dimensions (mm)			
				X	Y	i	C
150	R300	↓ KCA ALK 150 AD R300	3128290	565	565	665	565
	R450	↓ KCA ALK 150 AD R450	3128291	715	715	877	715
	R600	↓ KCA ALK 150 AD R600	3128292	865	865	1089	865
	R900	↓ KCA ALK 150 AD R900	3128293	1165	1165	1514	1165
200	R300	↓ KCA ALK 200 AD R300	3128294	590	590	665	590
	R450	↓ KCA ALK 200 AD R450	3128295	740	740	877	740
	R600	↓ KCA ALK 200 AD R600	3128296	890	890	1089	890
	R900	↓ KCA ALK 200 AD R900	3128297	1190	1190	1514	1190
300	R300	↓ KCA ALK 300 AD R300	3128298	640	640	665	640
	R450	↓ KCA ALK 300 AD R450	3128299	790	790	877	790
	R600	↓ KCA ALK 300 AD R600	3128300	940	940	1089	940
	R900	↓ KCA ALK 300 AD R900	3128301	1240	1240	1514	1240
400	R300	↓ KCA ALK 400 AD R300	3128302	690	690	665	690
	R450	↓ KCA ALK 400 AD R450	3128303	840	840	877	840
	R600	↓ KCA ALK 400 AD R600	3128304	990	990	1089	990
	R900	↓ KCA ALK 400 AD R900	3128305	1290	1290	1514	1290
450	R300	↓ KCA ALK 450 AD R300	3128306	715	715	665	715
	R450	↓ KCA ALK 450 AD R450	3128307	865	865	877	865
	R600	↓ KCA ALK 450 AD R600	3128308	1015	1015	1089	1015
	R900	↓ KCA ALK 450 AD R900	3128309	1315	1315	1514	1315
500	R300	↓ KCA ALK 500 AD R300	3128310	740	740	665	740
	R450	↓ KCA ALK 500 AD R450	3128311	890	890	877	890
	R600	↓ KCA ALK 500 AD R600	3128312	1040	1040	1089	1040
	R900	↓ KCA ALK 500 AD R900	3128313	1340	1340	1514	1340
600	R300	↓ KCA ALK 600 AD R300	3128314	790	790	665	790
	R450	↓ KCA ALK 600 AD R450	3128315	940	940	877	940
	R600	↓ KCA ALK 600 AD R600	3128316	1090	1090	1089	1090
	R900	↓ KCA ALK 600 AD R900	3128317	1390	1390	1514	1390
750	R300	↓ KCA ALK 750 AD R300	3128318	865	865	665	865
	R450	↓ KCA ALK 750 AD R450	3128319	1015	1015	877	1015
	R600	↓ KCA ALK 750 AD R600	3128320	1165	1165	1089	1165
	R900	↓ KCA ALK 750 AD R900	3128321	1465	1465	1514	1465
900	R300	↓ KCA ALK 900 AD R300	3128322	940	940	665	940
	R450	↓ KCA ALK 900 AD R450	3128323	1090	1090	877	1090
	R600	↓ KCA ALK 900 AD R600	3128324	1240	1240	1089	1240
	R900	↓ KCA ALK 900 AD R900	3128325	1540	1540	1514	1540



2 sets of omega straight cover clamp should be ordered. See page 47.

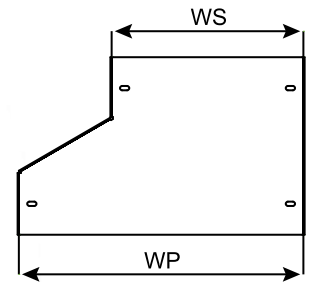
Ws (mm)	Wp (mm)	Description	Code
150	200	↓ KCA ALK 150/200/MR	3130408
	300	↓ KCA ALK 150/300/MR	3130409
	400	↓ KCA ALK 150/400/MR	3130410
	450	↓ KCA ALK 150/450/MR	3130411
	500	↓ KCA ALK 150/500/MR	3130412
	600	↓ KCA ALK 150/600/MR	3130413
	750	↓ KCA ALK 150/750/MR	3130414
	900	↓ KCA ALK 150/900/MR	3130415
200	300	↓ KCA ALK 200/300/MR	3130416
	400	↓ KCA ALK 200/400/MR	3130417
	450	↓ KCA ALK 200/450/MR	3130418
	500	↓ KCA ALK 200/500/MR	3130419
	600	↓ KCA ALK 200/600/MR	3130420
	750	↓ KCA ALK 200/750/MR	3130421
	900	↓ KCA ALK 200/900/MR	3130422
300	400	↓ KCA ALK 300/400/MR	3130423
	450	↓ KCA ALK 300/450/MR	3130424
	500	↓ KCA ALK 300/500/MR	3130425
	600	↓ KCA ALK 300/600/MR	3130426
	750	↓ KCA ALK 300/750/MR	3130427
	900	↓ KCA ALK 300/900/MR	3130428
400	450	↓ KCA ALK 400/450/MR	3130429
	500	↓ KCA ALK 400/500/MR	3130430
	600	↓ KCA ALK 400/600/MR	3130431
	750	↓ KCA ALK 400/750/MR	3130432
	900	↓ KCA ALK 400/900/MR	3130433
450	500	↓ KCA ALK 450/500/MR	3130434
	600	↓ KCA ALK 450/600/MR	3130435
	750	↓ KCA ALK 450/750/MR	3130436
	900	↓ KCA ALK 450/900/MR	3130437
500	600	↓ KCA ALK 500/600/MR	3130438
	750	↓ KCA ALK 500/750/MR	3130439
	900	↓ KCA ALK 500/900/MR	3130440
600	750	↓ KCA ALK 600/750/MR	3130441
	900	↓ KCA ALK 600/900/MR	3130442
750	900	↓ KCA ALK 750/900/MR	3130443

►►Cover - LR Left Side Reduction



2 sets of omega straight cover clamp should be ordered. See page 47.

Ws (mm)	Wp (mm)	Description	Code
150	200	↓ KCA ALK 150/200/LR	3130444
	300	↓ KCA ALK 150/300/LR	3130445
	400	↓ KCA ALK 150/400/LR	3130446
	450	↓ KCA ALK 150/450/LR	3130447
	500	↓ KCA ALK 150/500/LR	3130448
	600	↓ KCA ALK 150/600/LR	3130449
	750	↓ KCA ALK 150/750/LR	3130450
	900	↓ KCA ALK 150/900/LR	3130451
200	300	↓ KCA ALK 200/300/LR	3130452
	400	↓ KCA ALK 200/400/LR	3130453
	450	↓ KCA ALK 200/450/LR	3130454
	500	↓ KCA ALK 200/500/LR	3130455
	600	↓ KCA ALK 200/600/LR	3130456
	750	↓ KCA ALK 200/750/LR	3130457
	900	↓ KCA ALK 200/900/LR	3130458
300	400	↓ KCA ALK 300/400/LR	3130459
	450	↓ KCA ALK 300/450/LR	3130460
	500	↓ KCA ALK 300/500/LR	3130461
	600	↓ KCA ALK 300/600/LR	3130462
	750	↓ KCA ALK 300/750/LR	3130463
	900	↓ KCA ALK 300/900/LR	3130464
400	450	↓ KCA ALK 400/450/LR	3130465
	500	↓ KCA ALK 400/500/LR	3130466
	600	↓ KCA ALK 400/600/LR	3130467
	750	↓ KCA ALK 400/750/LR	3130468
	900	↓ KCA ALK 400/900/LR	3130469
450	500	↓ KCA ALK 450/500/LR	3130470
	600	↓ KCA ALK 450/600/LR	3130471
	750	↓ KCA ALK 450/750/LR	3130472
	900	↓ KCA ALK 450/900/LR	3130473
500	600	↓ KCA ALK 500/600/LR	3130474
	750	↓ KCA ALK 500/750/LR	3130475
	900	↓ KCA ALK 500/900/LR	3130476
600	750	↓ KCA ALK 600/750/LR	3130477
	900	↓ KCA ALK 600/900/LR	3130478
750	900	↓ KCA ALK 750/900/LR	3130479

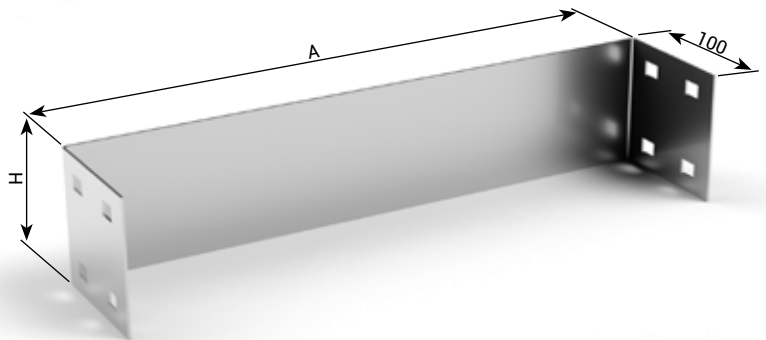


2 sets of omega straight cover clamp should be ordered. See page 47.

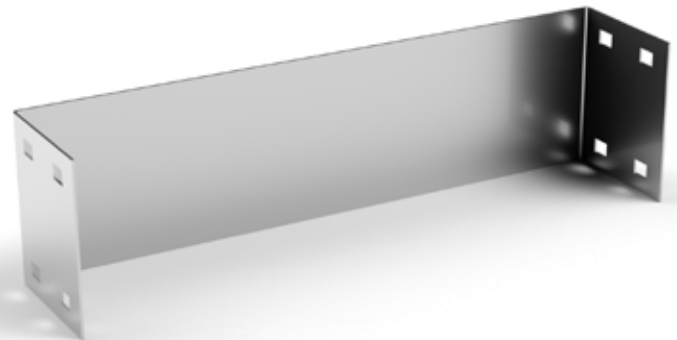
Ws (mm)	Wp (mm)	Description	Code
150	200	↓ KCA ALK 150/200/RR	3130480
	300	↓ KCA ALK 150/300/RR	3130481
	400	↓ KCA ALK 150/400/RR	3130482
	450	↓ KCA ALK 150/450/RR	3130483
	500	↓ KCA ALK 150/500/RR	3130484
	600	↓ KCA ALK 150/600/RR	3130485
	750	↓ KCA ALK 150/750/RR	3130486
	900	↓ KCA ALK 150/900/RR	3130487
200	300	↓ KCA ALK 200/300/RR	3130488
	400	↓ KCA ALK 200/400/RR	3130489
	450	↓ KCA ALK 200/450/RR	3130490
	500	↓ KCA ALK 200/500/RR	3130491
	600	↓ KCA ALK 200/600/RR	3130492
	750	↓ KCA ALK 200/750/RR	3130493
	900	↓ KCA ALK 200/900/RR	3130494
300	400	↓ KCA ALK 300/400/RR	3130495
	450	↓ KCA ALK 300/450/RR	3130496
	500	↓ KCA ALK 300/500/RR	3130497
	600	↓ KCA ALK 300/600/RR	3130498
	750	↓ KCA ALK 300/750/RR	3130499
	900	↓ KCA ALK 300/900/RR	3130500
400	450	↓ KCA ALK 400/450/RR	3130501
	500	↓ KCA ALK 400/500/RR	3130502
	600	↓ KCA ALK 400/600/RR	3130503
	750	↓ KCA ALK 400/750/RR	3130504
	900	↓ KCA ALK 400/900/RR	3130505
450	500	↓ KCA ALK 450/500/RR	3130506
	600	↓ KCA ALK 450/600/RR	3130507
	750	↓ KCA ALK 450/750/RR	3130508
	900	↓ KCA ALK 450/900/RR	3130509
500	600	↓ KCA ALK 500/600/RR	3130510
	750	↓ KCA ALK 500/750/RR	3130511
	900	↓ KCA ALK 500/900/RR	3130512
600	750	↓ KCA ALK 600/750/RR	3130513
	900	↓ KCA ALK 600/900/RR	3130514
750	900	↓ KCA ALK 750/900/RR	3130515

►► **Accessories - End Cover**

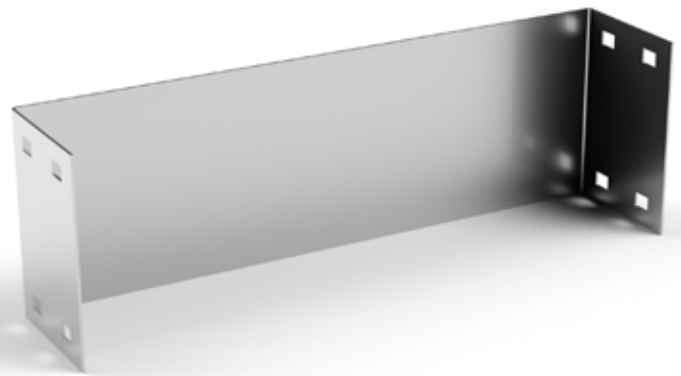
Description	A (mm)	Code
100 KCA AL /END/150	150	3130989
100 KCA AL /END/200	200	3130990
100 KCA AL /END/300	300	3130991
100 KCA AL /END/400	400	3130992
100 KCA AL /END/450	450	3130993
100 KCA AL /END/500	500	3130994
100 KCA AL /END/600	600	3130995
100 KCA AL /END/750	750	3130996
100 KCA AL /END/900	900	3130997



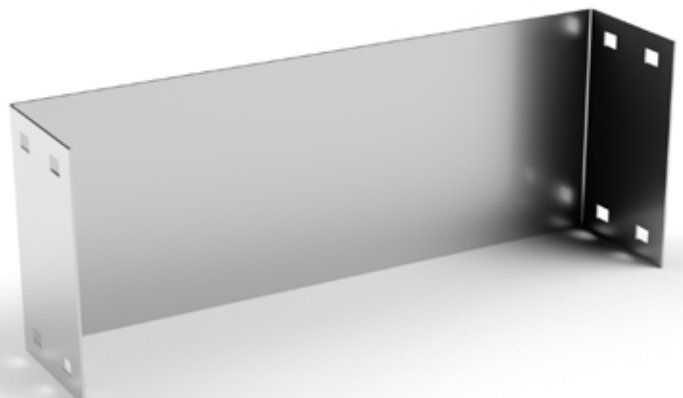
Description	A (mm)	Code
125 KCA AL /END/150	150	3130998
125 KCA AL /END/200	200	3130999
125 KCA AL /END/300	300	3131000
125 KCA AL /END/400	400	3131001
125 KCA AL /END/450	450	3131002
125 KCA AL /END/500	500	3131003
125 KCA AL /END/600	600	3131004
125 KCA AL /END/750	750	3131005
125 KCA AL /END/900	900	3131006



Description	A (mm)	Code
150 KCA AL /END/150	150	3131007
150 KCA AL /END/200	200	3131008
150 KCA AL /END/300	300	3131009
150 KCA AL /END/400	400	3131010
150 KCA AL /END/450	450	3131011
150 KCA AL /END/500	500	3131012
150 KCA AL /END/600	600	3131013
150 KCA AL /END/750	750	3131014
150 KCA AL /END/900	900	3131015



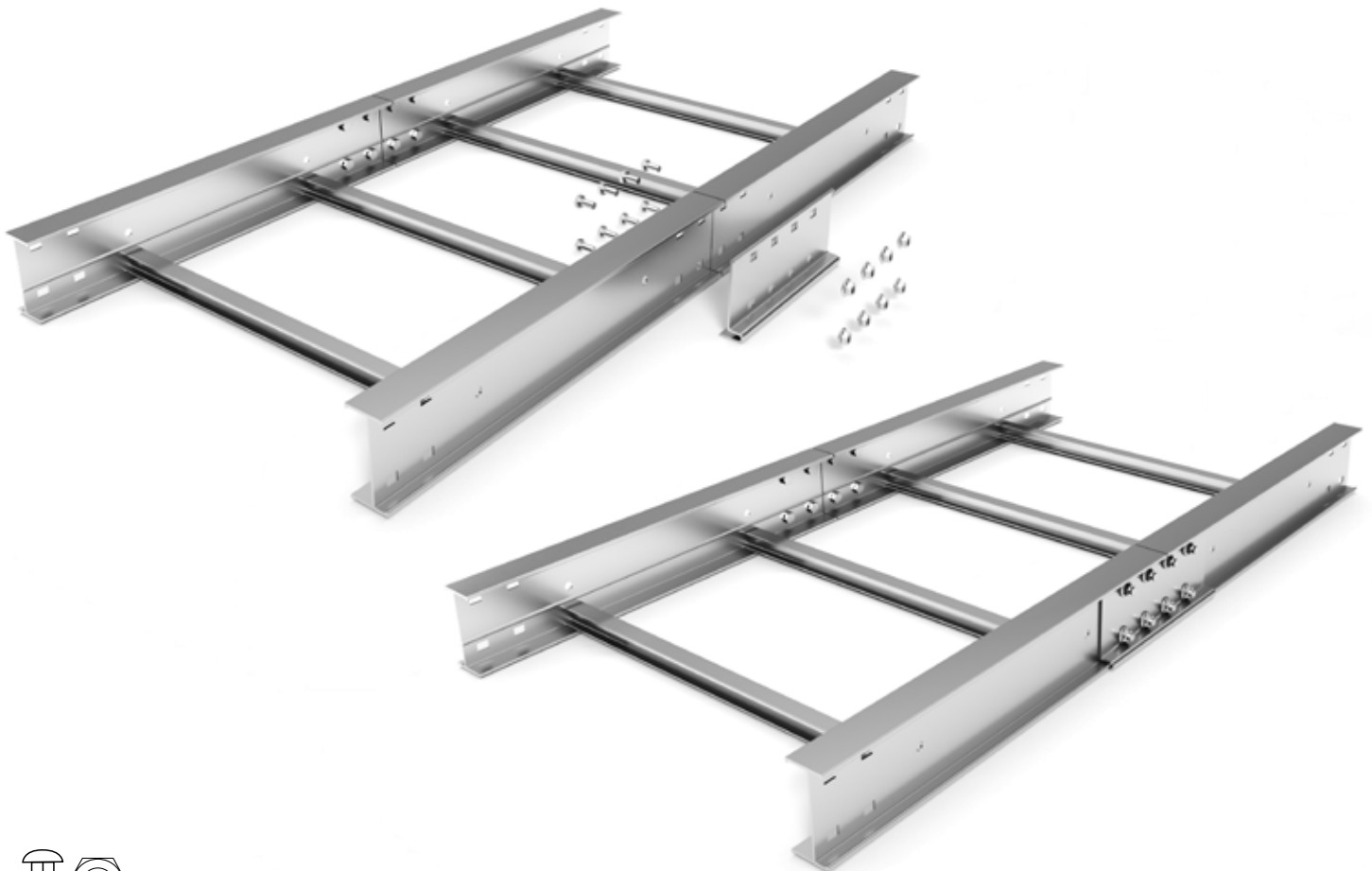
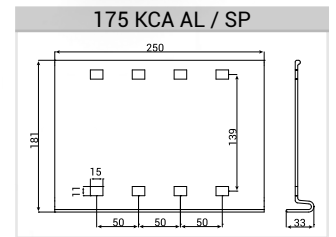
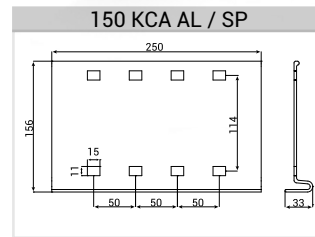
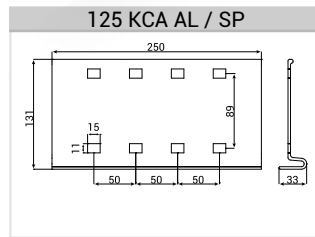
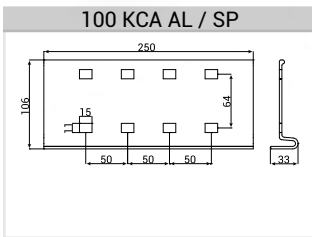
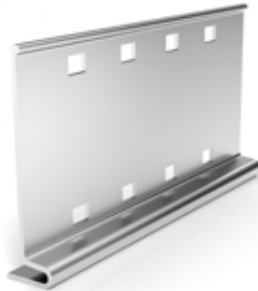
Description	A (mm)	Code
175 KCA AL /END/150	150	3131016
175 KCA AL /END/200	200	3131017
175 KCA AL /END/300	300	3131018
175 KCA AL /END/400	400	3131019
175 KCA AL /END/450	450	3131020
175 KCA AL /END/500	500	3131021
175 KCA AL /END/600	600	3131022
175 KCA AL /END/750	750	3131023
175 KCA AL /END/900	900	3131024



X 8 pcs M10X20 bolt set should be ordered. Please check page 79.

►►Accessories - Splice Plate

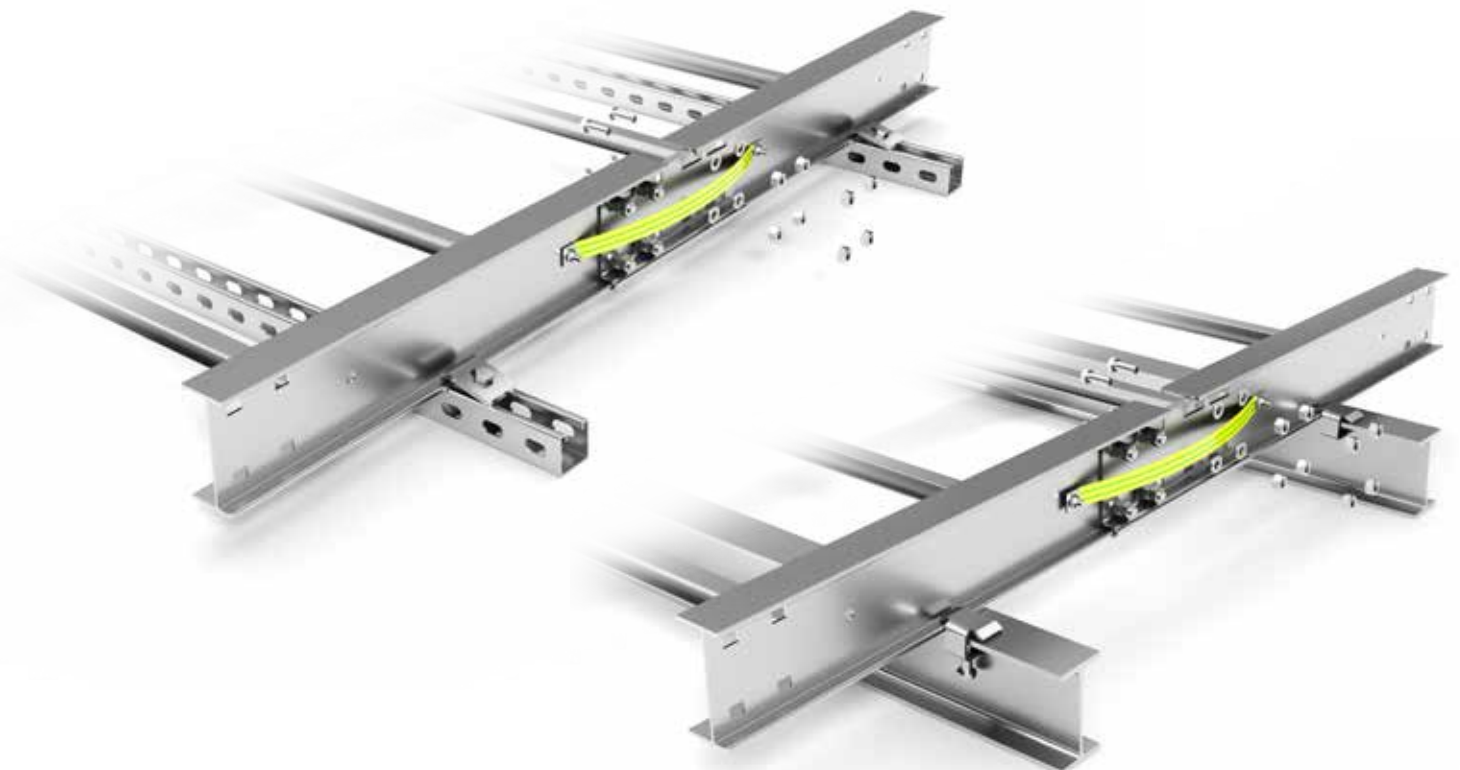
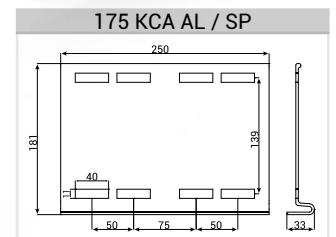
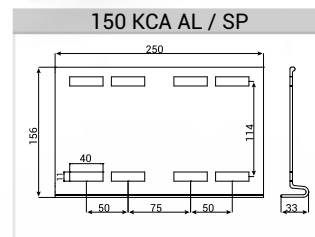
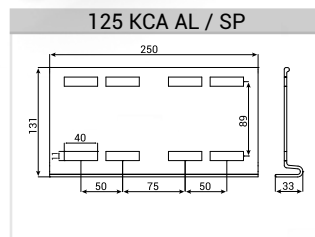
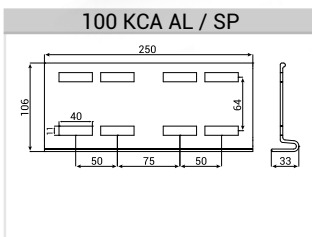
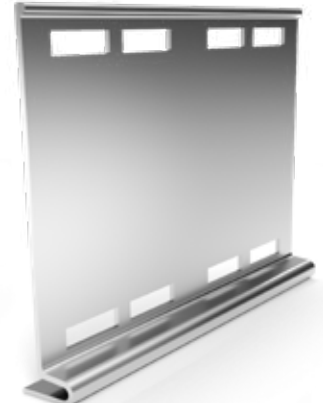
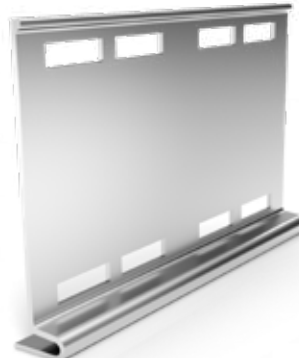
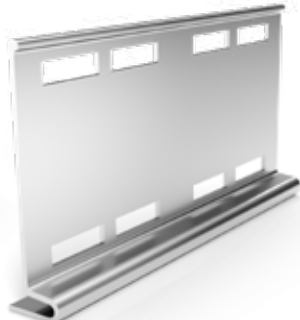
Description	Code
100 KCA AL / SP	3129684
125 KCA AL / SP	3129685
150 KCA AL / SP	3129686
175 KCA AL / SP	3129687



X 8 pcs M10X20 bolt set should be ordered. Please check page 79.

►► **Accessories - Expansion Splice Plate**

Description	Code
100 KCA AL / EXP	3133881
125 KCA AL / EXP	3133882
150 KCA AL / EXP	3133883
175 KCA AL / EXP	3133884



Bonding jumper should be used for electrical continuity. (See page 76)
Expansion splice plates should be supported within maximum 600mm from each sides. (See page 85)



X 8 pcs M10X30 bolt set should be ordered. Please check page 79.

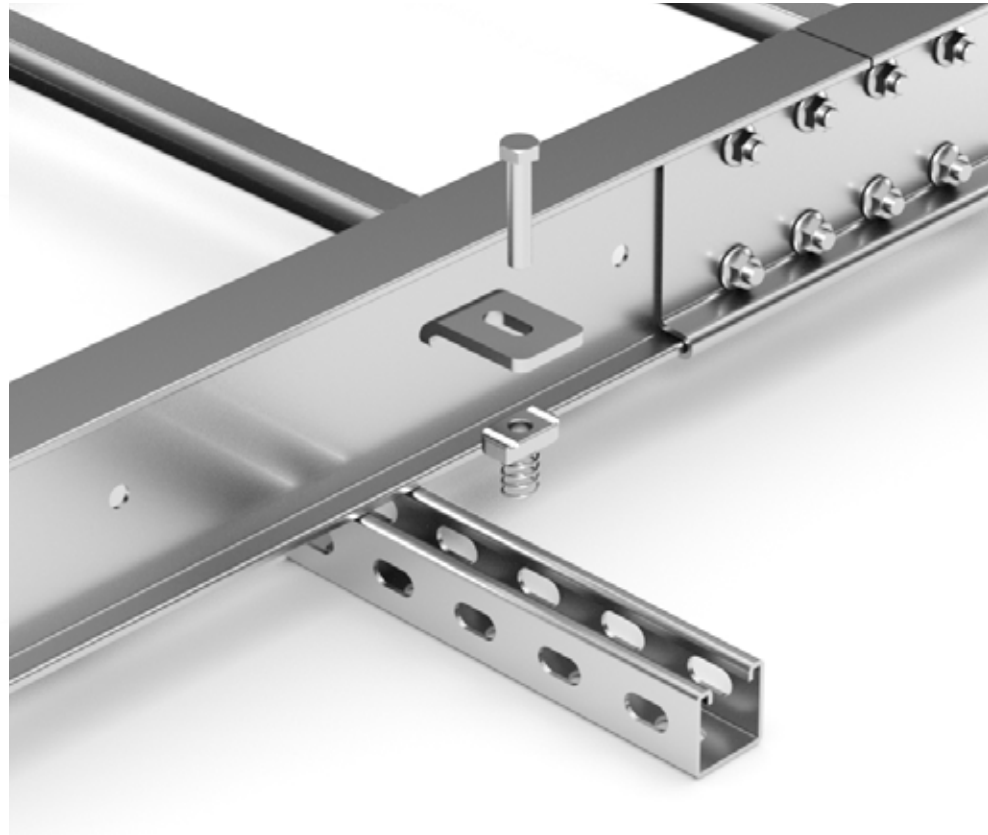
Please indicate order code in your orders. | Please contact us for special modules. | Material weights may vary by $\pm 10\%$

▶▶ **Horizontal Fixing Brackets - TP 2**

Description	Code
TP 2 Fixing Part (Horizontal)	3006350



Order code includes only TP2 steel clamp.
M10x50 bolt, spring nut, support strut profile should be ordered separately.



Horizontal Fixing Brackets - TP 3

Description	Code
TP 3 Fixing Part (Horizontal)	3133880



M10x40 bolt is included.



▶▶Vertical Fixing Brackets - Bracket - 1

Description	Code
KCA AL Bracket-1 (Vertical)	3133878



M10x20 bolt and nut set is included. (1 set)

**Vertical Fixing Brackets - Bracket - 2**

Description	Code
KCA AL Bracket-2 (Vertical)	3133879



M10x20 bolt and nut set is included. (2 set)



E-LINE CABLE SUPPORT SYSTEMS



Please check our latest version of full range catalogue from our website.
www.eae.com.tr

UKS-UKFE Pre-galvanized UKS-UKFE Cable Tray Systems

UKFG-C Pre-galvanized UKFG-C Cable Tray Systems

KM Pre-galvanized Foldable Cable Ladders

TKS Pre-galvanized - Hot Dip Galvanized Trunking Systems

KMH-KMA Hot Dip Galvanized After Fabrication
KMH-KMA Cable Ladder and Modules

CT Hot Dip Galvanized After Fabrication
CTHF-E-CTN-CTH-CTA Cable Tray Systems

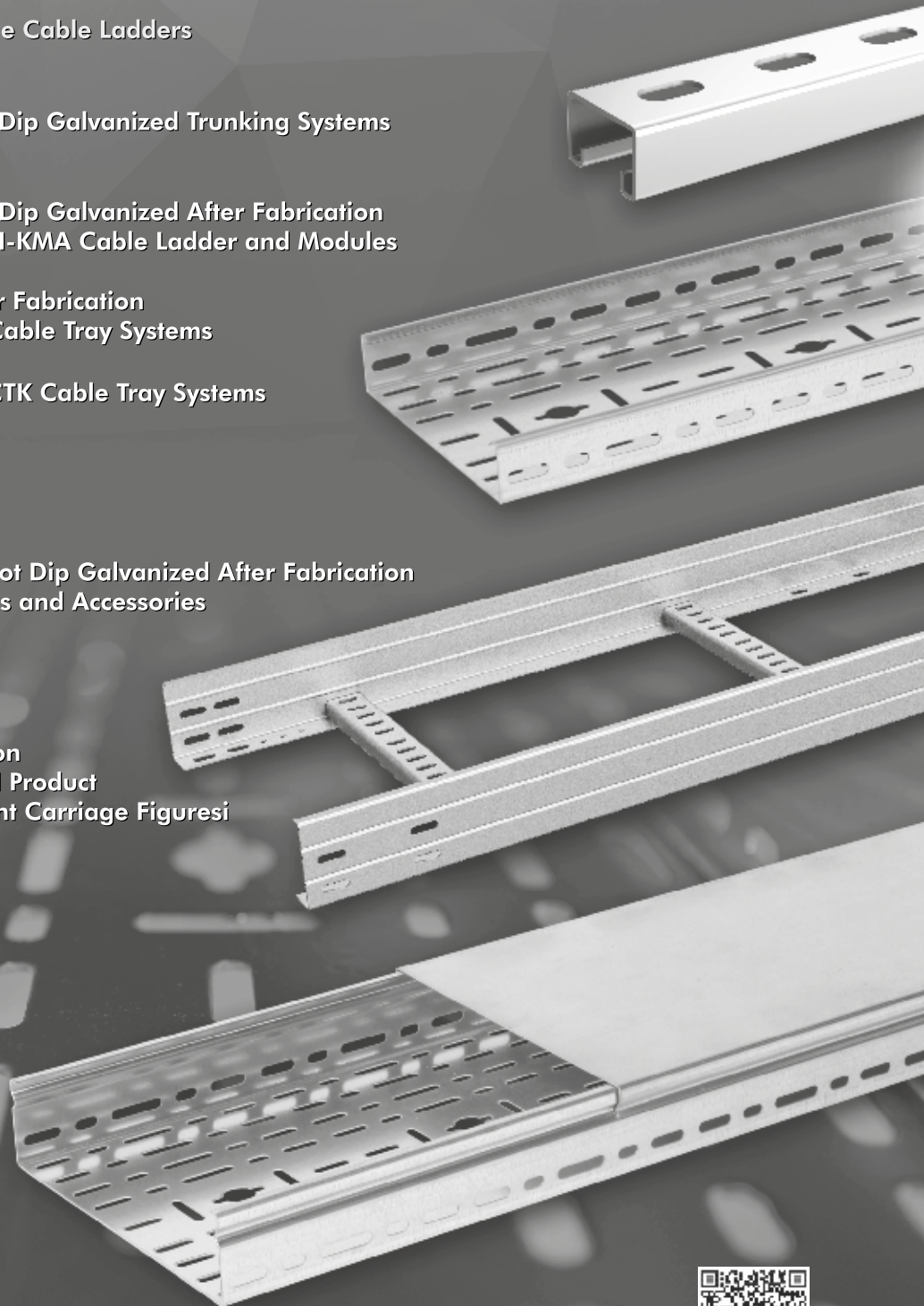
CTK Hot Dip Galvanized CTK Cable Tray Systems

TLS Cable Tray Systems

AA Pre-galvanized and Hot Dip Galvanized After Fabrication
Cable Support Systems and Accessories

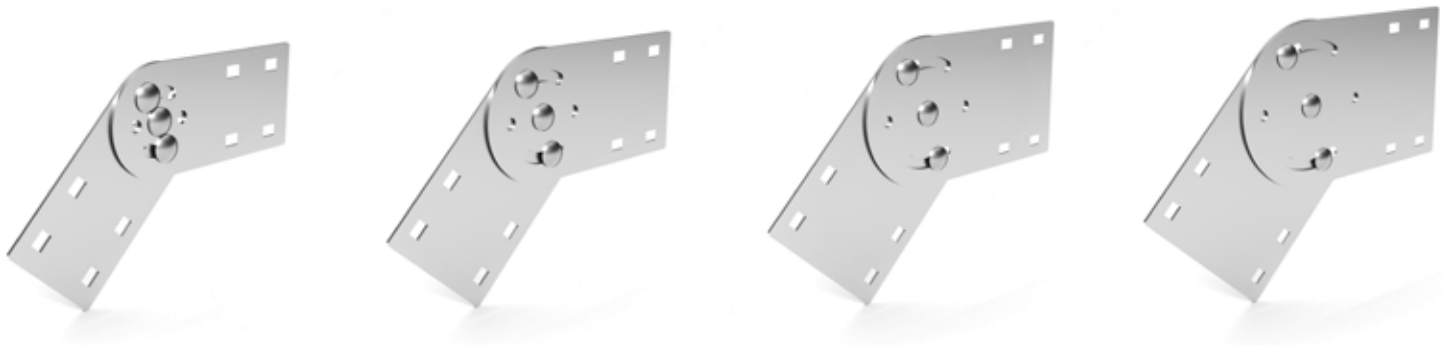
BR Binrak Support Systems

INFO Technical Information
Certificates General Product
Specifications Weight Carriage Figuresi



▶▶ **Accessories - Vertical Adjustable Couplers**

Description	Code
100 KCA AL / SDE	3130985
125 KCA AL / SDE	3130986
150 KCA AL / SDE	3130987
175 KCA AL / SDE	3130988



X 8 pcs M10X20 bolt set should be ordered. Please check page 79.

►►Accessories - Vertical Adjustable Fitting

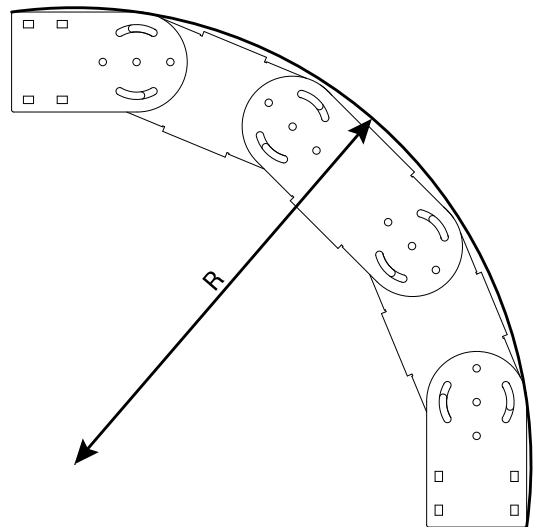
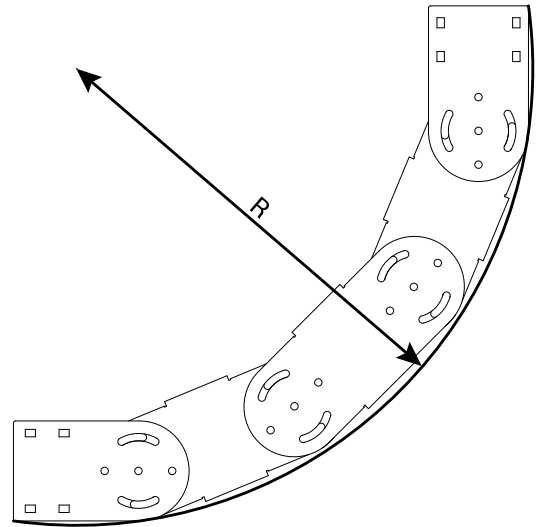
Code	Height	Width	No. of Sections	Description
3130950	100	150	3	100 KCA AL 150/ SDM
3130951		200	3	100 KCA AL 200/ SDM
3130952		300	3	100 KCA AL 300/ SDM
3130953		400	3	100 KCA AL 400/ SDM
3130954		450	3	100 KCA AL 450/ SDM
3130955		500	3	100 KCA AL 500/ SDM
3130956		600	3	100 KCA AL 600/ SDM
3130957		750	3	100 KCA AL 750/ SDM
3130958		900	3	100 KCA AL 900/ SDM
3130959		125	150	3
3130960	200		3	125 KCA AL 200/ SDM
3130961	300		3	125 KCA AL 300/ SDM
3130962	400		3	125 KCA AL 400/ SDM
3130963	450		3	125 KCA AL 450/ SDM
3130964	500		3	125 KCA AL 500/ SDM
3130965	600		3	125 KCA AL 600/ SDM
3130966	750		3	125 KCA AL 750/ SDM
3130967	900		3	125 KCA AL 900/ SDM
3130968	150	150	3	150 KCA AL 150/ SDM
3130969		200	3	150 KCA AL 200/ SDM
3130970		300	3	150 KCA AL 300/ SDM
3130971		400	3	150 KCA AL 400/ SDM
3130972		450	3	150 KCA AL 450/ SDM
3130973		500	3	150 KCA AL 500/ SDM
3130974		600	3	150 KCA AL 600/ SDM
3130975		750	3	150 KCA AL 750/ SDM
3130976		900	3	150 KCA AL 900/ SDM
3130977	175	200	3	175 KCA AL 200/ SDM
3130978		300	3	175 KCA AL 300/ SDM
3130979		400	3	175 KCA AL 400/ SDM
3130980		450	3	175 KCA AL 450/ SDM
3130981		500	3	175 KCA AL 500/ SDM
3130982		600	3	175 KCA AL 600/ SDM
3130983		750	3	175 KCA AL 750/ SDM
3130984		900	3	175 KCA AL 900/ SDM



X 16 pcs M10X20 bolt set should be ordered. Please check page 79.

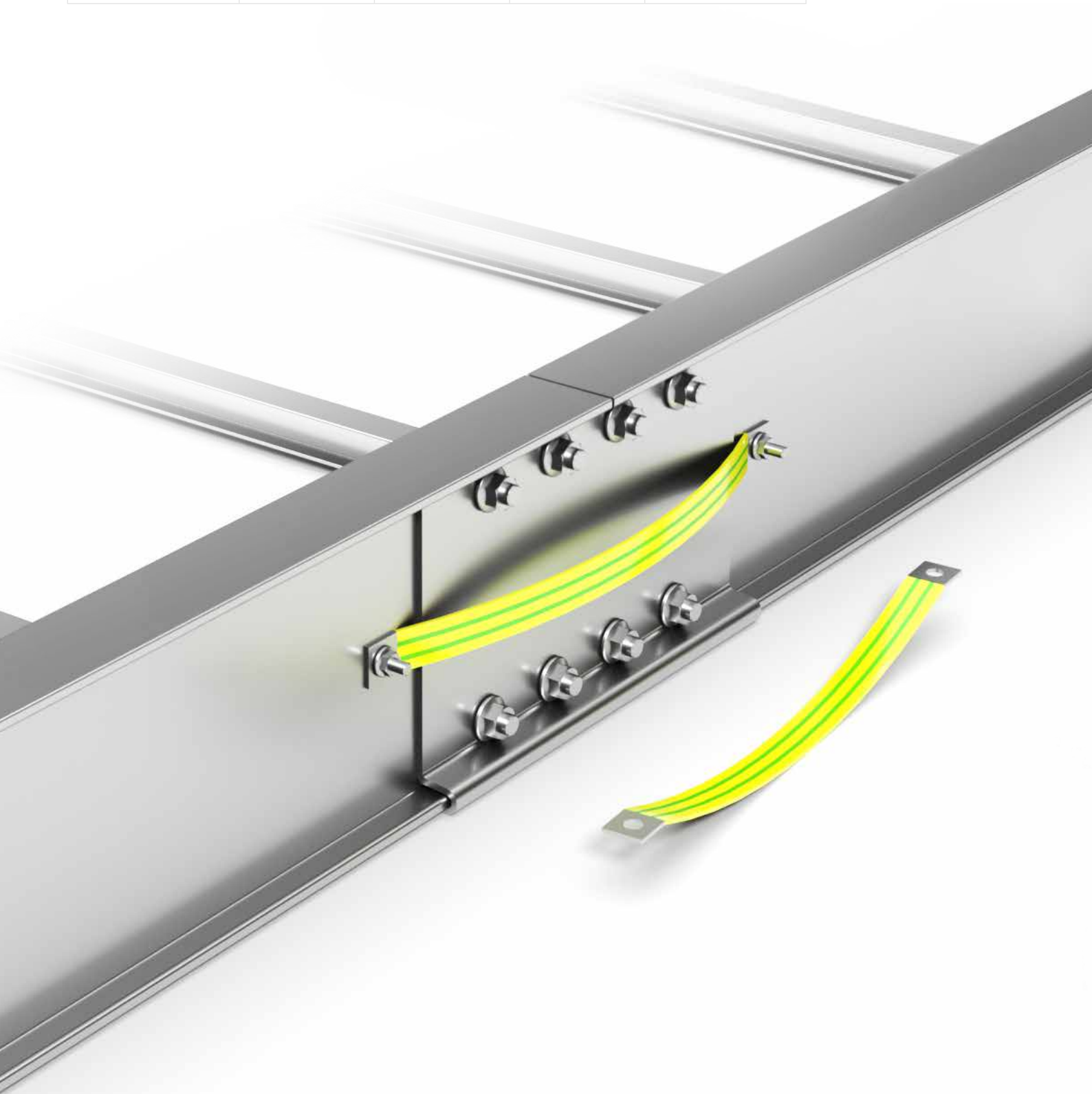
►► **Accessories - Vertical Adjustable Fitting**

Description	Angle	No. of Sections	Radius (mm)	
			ID	DD
↕ KCA AL ↔ / SDM / 1	30	1	800	700
↕ KCA AL ↔ / SDM / 2		2	1200	1100
↕ KCA AL ↔ / SDM / 3		3	1600	1500
↕ KCA AL ↔ / SDM / 1	45	1	550	500
↕ KCA AL ↔ / SDM / 2		2	800	1400
↕ KCA AL ↔ / SDM / 3		3	1100	1000
↕ KCA AL ↔ / SDM / 4		4	1350	1250
↕ KCA AL ↔ / SDM / 1	60	1	450	350
↕ KCA AL ↔ / SDM / 2		2	600	500
↕ KCA AL ↔ / SDM / 3		3	850	750
↕ KCA AL ↔ / SDM / 4		4	1000	900
↕ KCA AL ↔ / SDM / 5		5	1200	1100
↕ KCA AL ↔ / SDM / 6		6	1400	1300
↕ KCA AL ↔ / SDM / 1	90	1	300	200
↕ KCA AL ↔ / SDM / 2		2	425	325
↕ KCA AL ↔ / SDM / 3		3	575	500
↕ KCA AL ↔ / SDM / 4		4	700	600
↕ KCA AL ↔ / SDM / 5		5	800	700
↕ KCA AL ↔ / SDM / 6		6	1000	900
↕ KCA AL ↔ / SDM / 7		7	1075	975
↕ KCA AL ↔ / SDM / 8		8	1200	1100



►►Accessories - Bonding Jumper

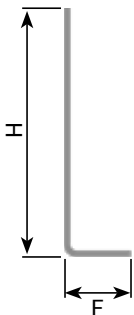
Description	Code	Length	Cross-Section	Fixing Set
Bonding Jumper	1020286	500 mm	35 mm ²	2 pcs M6x20 bolt set



X 2 pcs M6X20 bolt set should be ordered. Please check page 79.

►► **Accessories - Ladder Divider**

Description	Code	L (mm)	H (mm)	F (mm)
100 KCA AL / SPR / L3	3133416	3000	75	20
125 KCA AL / SPR / L3	3133417	3000	100	20
150 KCA AL / SPR / L3	3133418	3000	125	
175 KCA AL / SPR / L3	3133419	3000	150	20



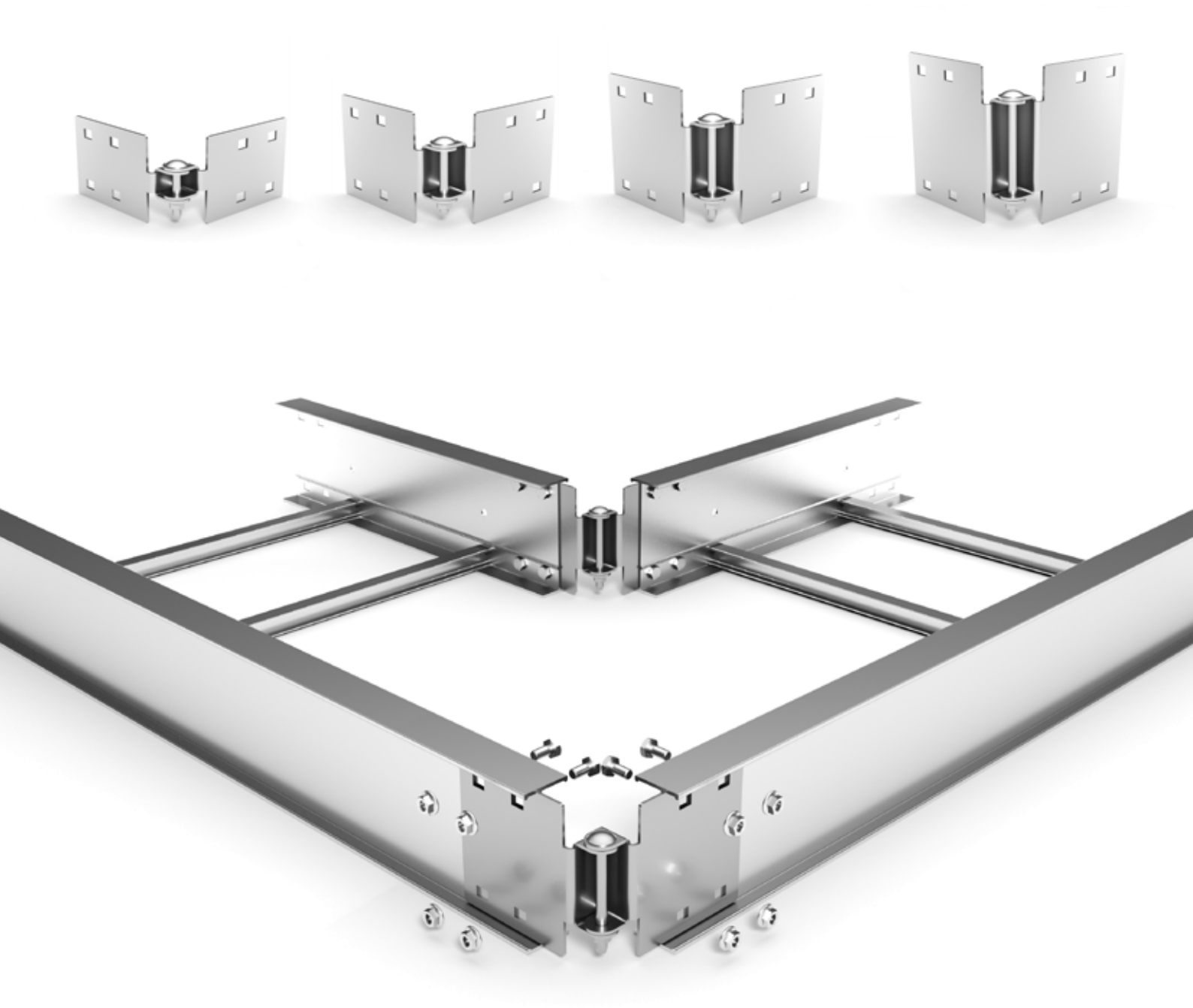
Accessories - SPR Clamp

Description	Code	Fixing set
KCA AL / SPR CLAMP	3133912	1 sets M6x12 (included)



►►Accessories - Horizontal Adjustable Couplers

Description	Code
100 KCA AL / ME	3131925
125 KCA AL / ME	3131926
150 KCA AL / ME	3131927
175 KCA AL / ME	3131928



Description	Code
M10x20 Joint Bolt Set (ELC)	1008164
M10x20 Joint Bolt Set (A4)	1015751
M10x20 Joint Bolt Set (A2)	1015752



M10x20 Mushroom head,
Square Neck Bolt



M10 Serrated Skirted Nut

Description	Code
M10x30 Expansion Bolt Set (ELC)	1015780
M10x30 Expansion Bolt Set (A4)	1015781
M10x30 Expansion Bolt Set (A2)	1015753



M10x30 Mushroom head,
Square Neck Bolt



2x M10 Nut



M10 Palin Washer

Description	Code
M6x12 Cover Fixing Bolt Set(Elc)	1008164
M6x12 Cover Fixing Bolt Set(A4)	1015751
M6x12 Cover Fixing Bolt Set(A2)	1015752



M10x30 Mushroom head,
Square Neck Bolt



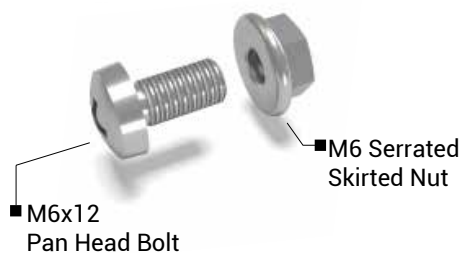
M10 Serrated Skirted Nut

Description	Code
M8 Spring Travers Nut	1001311
M10 Spring Travers Nut	1001312
M12 Spring Travers Nut	1001313



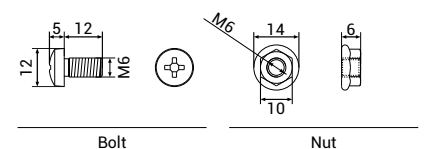
Spring Travers Nut

Description	Code
M6x12 Cover Fixing Bolt Set (ELC)	1008166
M6x12 Cover Fixing Bolt Set (A4)	1015754
M6x12 Cover Fixing Bolt Set (A2)	1015755



M6x12
Pan Head Bolt

M6 Serrated
Skirted Nut



►► Installation Recommendations

Loads:

A correctly designed and specified cable ladder installation should take into account the nature and extent of the loads which will be imposed on the cable ladder system. These loads comprise of dead loads including the selfweight of the cable ladder system, the weight of the cables and secondary equipment attached to the cable ladder, imposed loads which occur during installation of the cable ladder system and during cable pulling operations, and external loads such as wind, snow and ice.

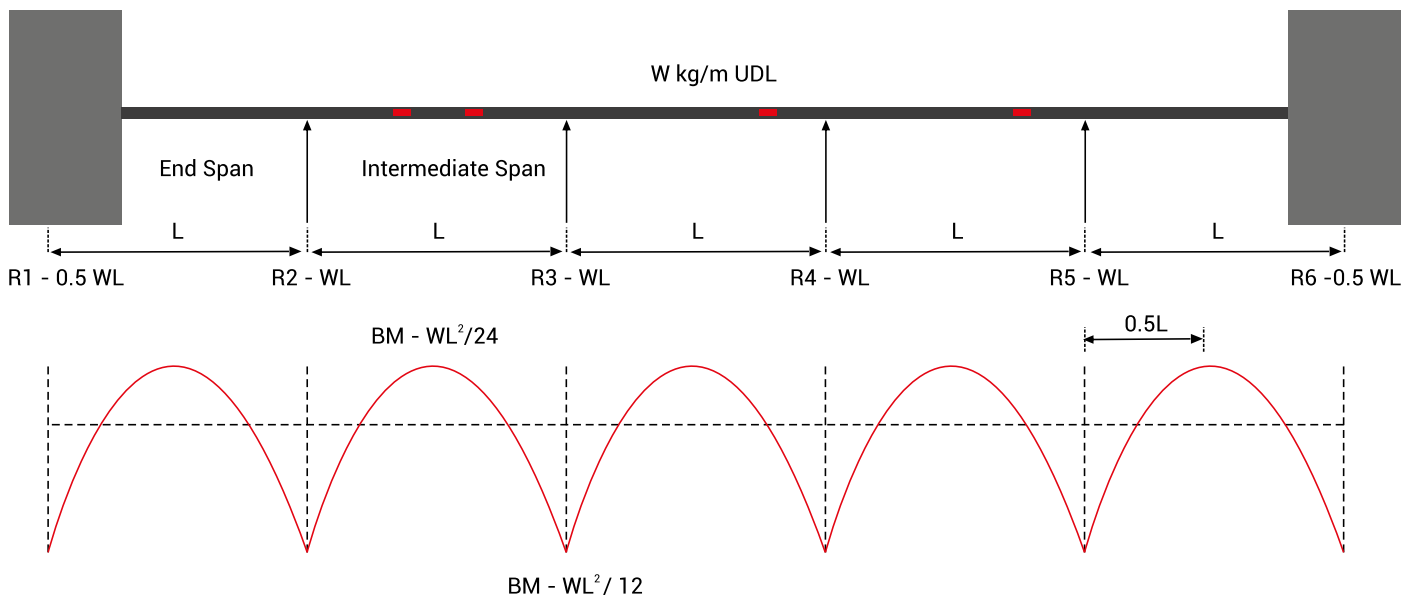
Cable ladders are often employed in locations where the wind speeds may cause considerable lateral loading and careful consideration must be given to design to ensure a satisfactory installation. An awareness of the worst possible climate conditions is necessary when specifying the correct cable ladder system. The load-deflection information is based on static loading of the cable ladder installation and does not take into account dynamic effects such as earthquake loading, etc. In designing a cable ladder installation it is good practice to allow at least a 20% excess capacity in a new installation for future expansion. Such a provision is of great economic advantage when there is a later need for additional cables.

Support Spacing:

The space between the supports of a cable ladder installation is referred to as the span. Supports for cable ladder should, as far as practicable, be spaced so as to create the most economical load/span ratio to suit the capacity of the cable ladder system. This will give the most advantageous solution when considering procurement and installation costs. As a general rule of thumb, the load-carrying capability of the Cable Ladder system increases as the span decreases, so a lighter duty cable ladder system can be specified for shorter spans. Conversely, a heavier duty Cable Ladder system will need to be specified for longer spans. When considering support positions it should be remembered that it is necessary to support accessories when a change of direction takes place i.e. bends, tees, risers etc. This is to ensure that undue 'corner' cantilever reaction is minimised. Recommendations for the location of supports for Cable Ladder fittings are given in below.

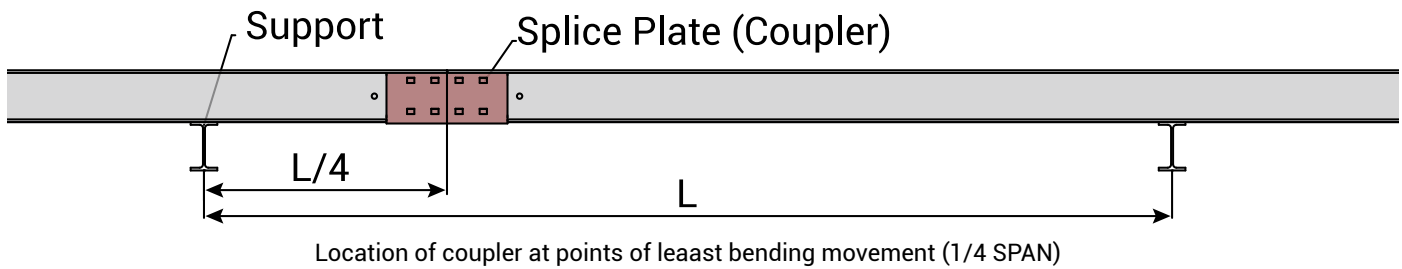
Location of Couplers:

The maximum bending moments acting on a cable ladder run occur in the cable ladder side members at the supports and at the mid span position. For this reason it is good practice to avoid locating couplers in a cable ladder run either directly on supports or at the mid span position. It is also good practice to avoid locating couplers in the end span of a continuous beam installation as the bending moments in the end span are, for simple end support installations, much higher than those found in the intermediate spans. These limitations cannot always be achieved in a cable ladder installation and are not a mandatory requirement for the coupling system where the loading information given in 3.3 is valid irrespective of the location of the couplers. The ideal positions to locate the connections in a cable ladder run are at approximately a quarter of a span from the supports where the bending moment, and hence the stress, are minimal. Positioning the couplers at the quarter span positions is of benefit during installation, assisting in alignment of the cable ladders and allowing unhindered securing of the cable ladder to the supports.



Bending Movement distribution for a continuous beam with fixed ends
(The Bending Movement for ends spans in a continuous beam with simple end supports will be higher than that shown)

L= Span
W=Load
UDL= Uniformly Distributed Load
R= Reaction at Support
BM= Bending Movement



Support Locations for Fittings:

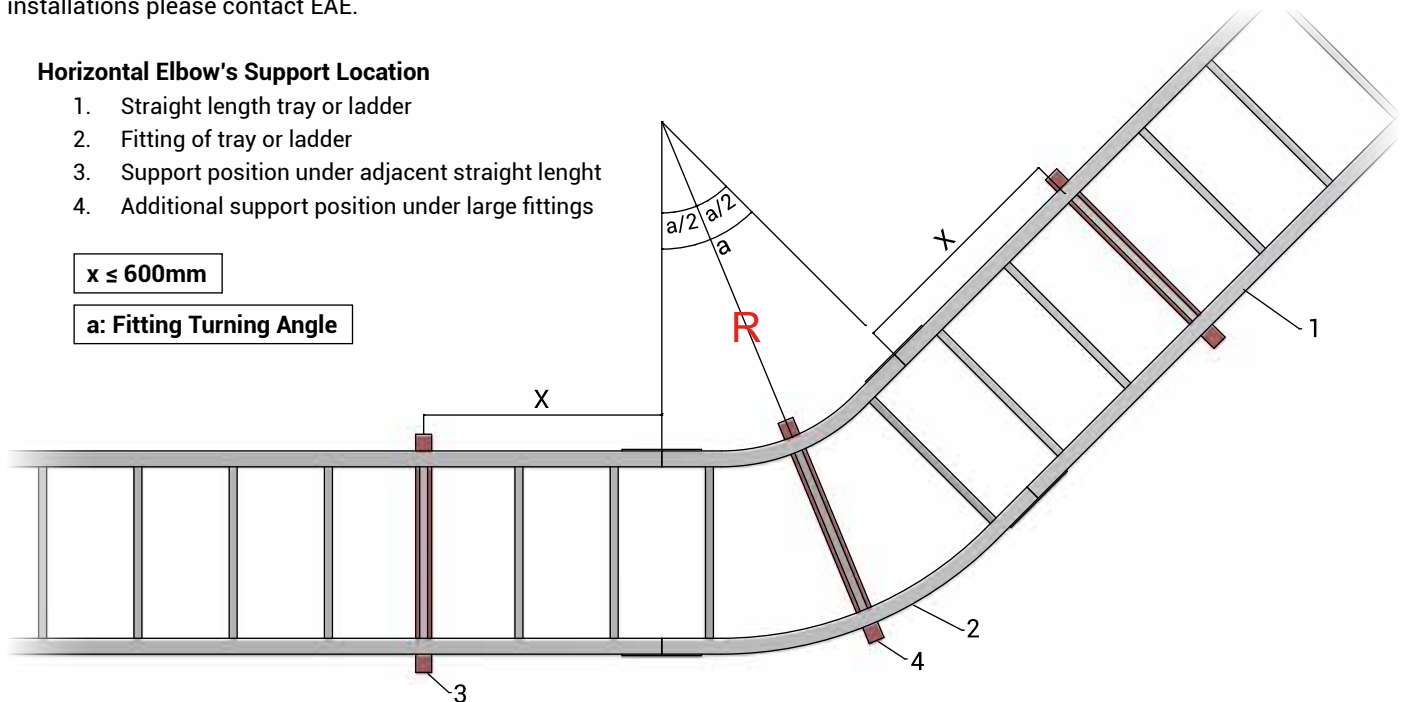
The following illustrations show the recommended support positions when installing cable ladder fittings. The supports should be fully fixed to provide maximum support for the cable ladder fitting. For more specific recommendations relating to particular site installations please contact EAE.

Horizontal Elbow's Support Location

1. Straight length tray or ladder
2. Fitting of tray or ladder
3. Support position under adjacent straight length
4. Additional support position under large fittings

$x \leq 600\text{mm}$

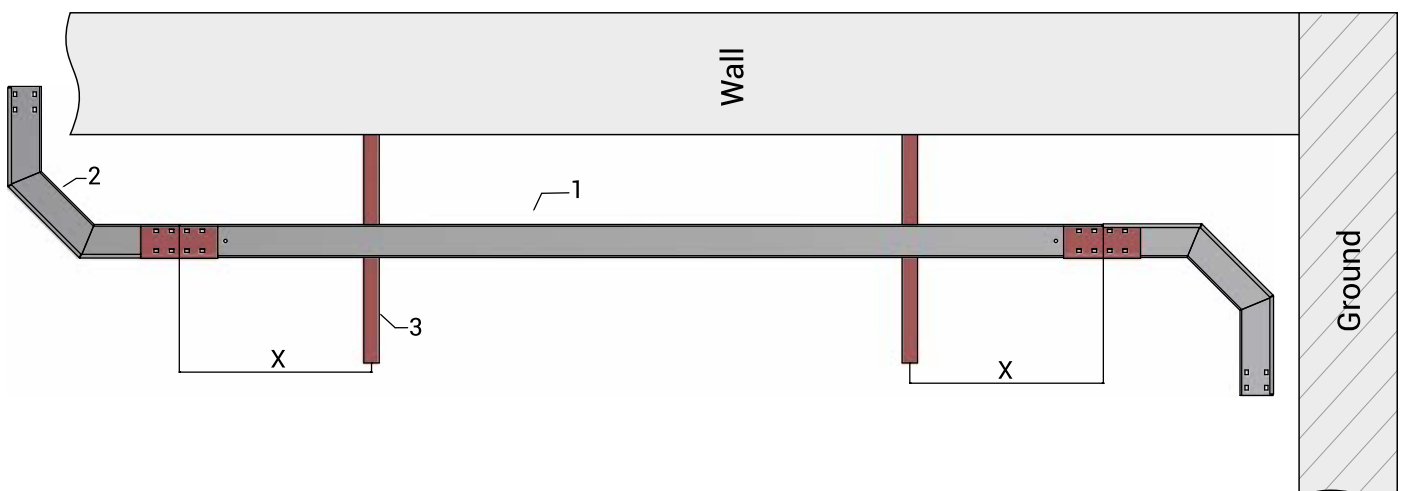
a: Fitting Turning Angle



Vertical Elbow's Support Location

1. Straight length tray or ladder
2. Fitting of tray or ladder
3. Support position under adjacent straight length

$x \leq 600\text{mm}$

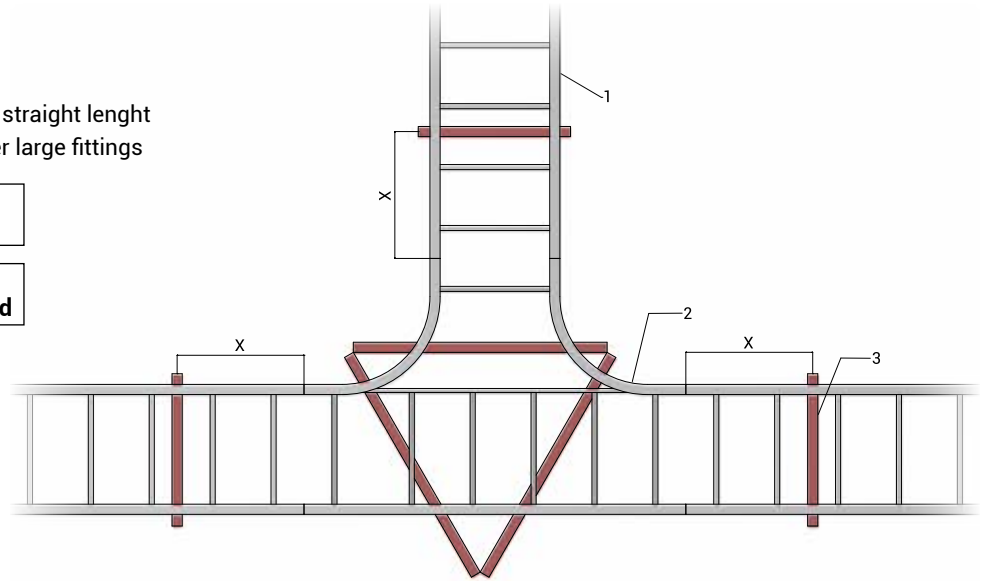


Horizontal Tee' s Support Location

1. Straight length tray or ladder
2. Fitting of tray or ladder
3. Support position under adjacent straight length
4. Additional support position under large fittings

**Radius $\leq 300\text{mm}$ \rightarrow $x \leq 300\text{mm}$
No need for 4**

**Radius $\leq 300\text{mm}$ \rightarrow $x \leq 600\text{mm}$
+ Triangle Support 4 recommended**

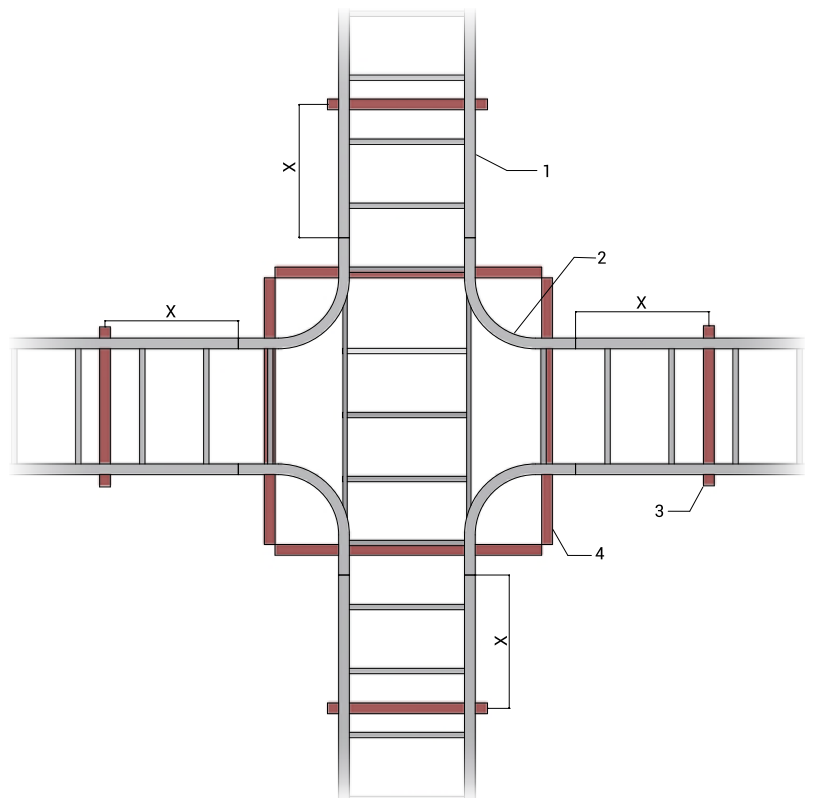


Horizontal Tee' s Support Location

1. Straight length tray or ladder
2. Fitting of tray or ladder
3. Support position under adjacent straight length
4. Additional support position under large fittings

**Radius $\leq 300\text{mm}$ \rightarrow $x \leq 300\text{mm}$
No need for 4**

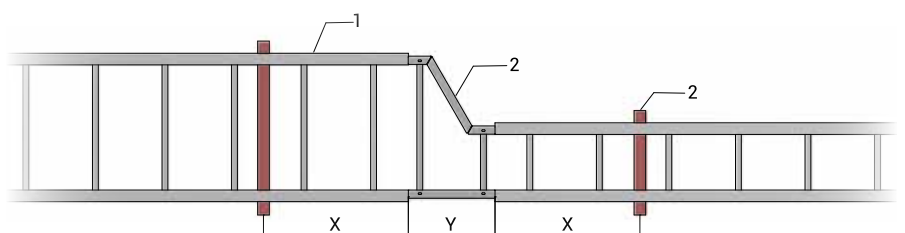
**Radius $\leq 300\text{mm}$ \rightarrow $x \leq 600\text{mm}$
+ Square Support 4 recommended**



Horizontal Reduction' s Support Location

1. Straight length tray or ladder
2. Fitting of tray or ladder
3. Support position under adjacent straight length

$y \leq 500\text{mm}$ \rightarrow $x \leq 600\text{mm}$



►► Installation Guide To Thermal Movements

Thermal Expansion & Contraction

Due to the seasonal temperature changes, it is important to consider thermal contraction and expansion during design and installation phase of cable tray/ladder systems. The length of the straight cable ladder run, type of material and the seasonal temperature differential determine the number of expansion splice plates required.

Following steps should be applied during design and installation when considering thermal movements:

1. Determination of maximum spacing between two expansion joints

The distance between expansion splice plates should be calculated either by given table below or the following formula under the table:

TEMPERATURE DIFFERENTIAL (between hottest and coldest day in a season)	MAXIMUM SPACING BETWEEN EXPANSION SPLICE PLATES (L)			
	Hot Dip Galvanized Carbon Steel	Stainless Steel		Aluminium
ΔT		316	304	
°C	m	m	m	m
10	217	161	148	115
20	108,5	80,5	74	57,5
30	72	53,5	49	38,5
40	54	40	37	29
50	43,5	32	29,5	23
60	36	27	24,5	19
70	31	23	21	16,5
80	27	20	18,5	14
90	24	18	16,5	13
100	22	16	15	11,5

Method 2: Determination by formula

$$L = \frac{C}{\Delta T}$$

L = Distance between two expansion splice plates (m)

ΔT = Temperature difference between the seasonal maximum temperature (Tmax) and minimum temperature (Tmin) at the installation site.

C = Coefficient

C = 2170 for hot dip galvanized steel

C = 1607 for 316 stainless steel

C = 1476 for 304 stainless steel

C = 1149 for Aluminium

For an example:

Maximum temperature = +40°C

Minimum temperature = -10°C

Temperature difference (ΔT) = 50°C

With using table, for the 50 °C temperature differential, based on the Hot Dip Galvanized Carbon Steel, expansion splice plates should be fitted at maximum every 43,5m which means that every 7th 6m cable ladder expansion splice plates (giving 42m spacing) should be fitted.

With using formula, $L = C / \Delta T = 2170 / 50 = 43,4m$

►► Installation Guide To Thermal Movements

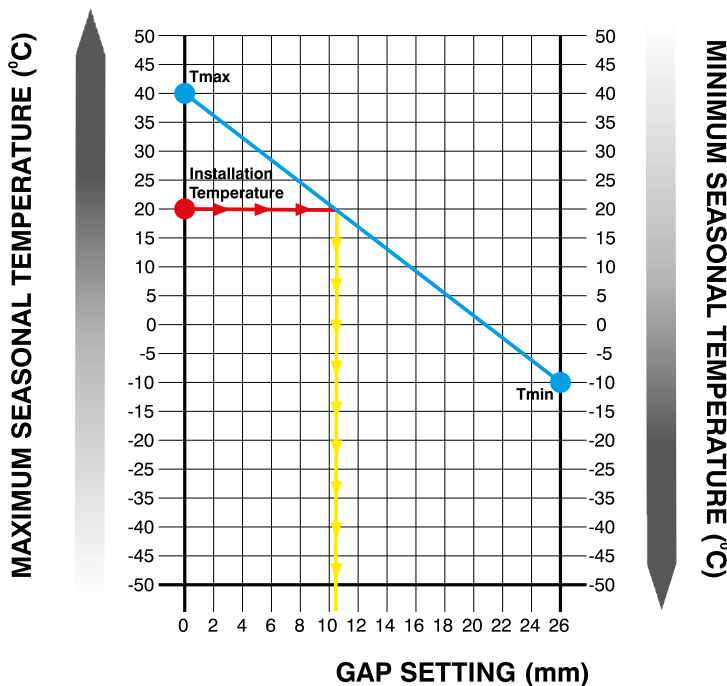
2. Setting Gap

Accurate gap setting at the moment of installation is necessary for proper operation of the expansion splice plates. The gap can be set according to either by given graph below or formula under the graph;

Method 1: Determination gap setting by table

Follow the below steps in order to set accurate gap setting;

- Plot the maximum expected temperature on the maximum temperature. (Example Value: +40 °C) upper left blue dot
- Plot the minimum expected temperature on the minimum temperature. (Example Value: -10 °C) lower right blue dot
- Draw a line between the maximum and minimum points. blue line
- Plot the temperature at the moment of installation to determine the gap setting (Example Value: 20 °C),
- Follow horizontal red line and continue with vertical yellow line. Example value: 10,1mm



Method 2: Determination gap setting by formula

Follow the below steps in order to set accurate gap setting;

$$S = 25,4 \text{ mm} \frac{T_{\max} - T}{T_{\max} - T_{\min}}$$

- Tmax = Maximum temperature in a season
- Tmin = Minimum temperature in a season
- T = Temperature at installation moment
- 25,4 is the maximum allowed gap (mm)
- S = Required gap (mm)

For an example:

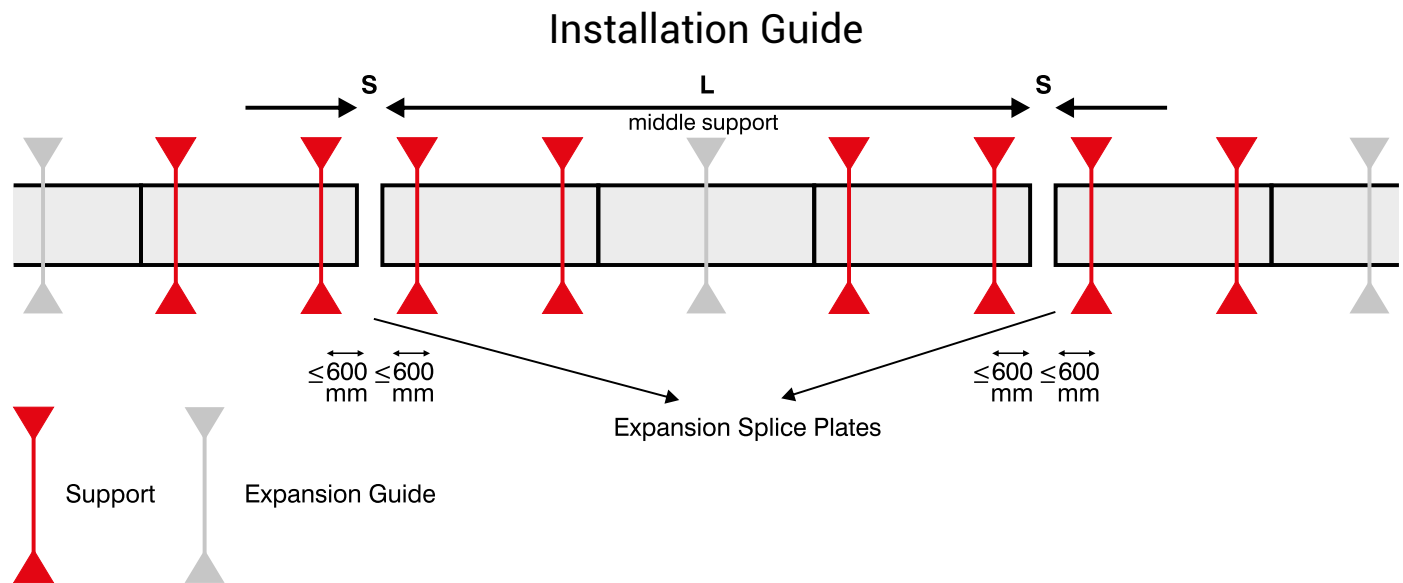
Maximum temperature = +40°C
 Minimum temperature = -10°C
 Temperature at installation moment = 20°C

$$S = 25,4 \text{ mm} \frac{T_{\max} - T}{T_{\max} - T_{\min}} = 25,4 \times \frac{40 - 20}{40 - (-10)} = 25,4 \times \frac{20}{50} = 10,1 \text{ mm}$$

►► Installation Guide To Thermal Movements

3. Support Installation

Supports should be located within 600 mm of each side of the expansion splice plates. The support in the middle of two expansion and guide supports close to expansion splice plates should allow ladder to slide during thermal movements. Special hardware such as hold down clamp and plastic stop nut is supplied with expansion splice plates. The nuts may have a stopping device (plastic stop nut). Important: For plastic stop nut designs, tighten hardware, then loosen 1/2 turn. EAE Cable Ladders are capable of carrying loads in between two supports close to expansion splice plates.



NOTE: Each pair of metal cable tray expansion joints require bonding jumper application for electrical continuity.

NEMA CLASS DESIGNATIONS

According to NEMA VE-1, standard class of cable ladders are classified according to load capacities associated with the support spacing as shown on "Table 1 Span/Load Class Designation-U.S.A" which is most commonly used.

NEMA VE-1 2017 Table 1: SPAN/LOAD CLASS DESIGNATION - USA					
Load, kg/m (lb./ft.)	Span, m (ft.)				
	1.5 (5)	2.4 (8)	3.0 (10)	3.7 (12)	6.0 (20)
37 (25)	5AA	8AA	10AA	12AA	20AA
74 (50)	5A	8A	10A	12A	20A
112 (75)	-	8B	-	12B	20B
149 (100)	-	8C	-	12C	20C

NEMA VE-1 2017 Table 2: SPAN/LOAD CLASS DESIGNATION - CANADA							
Load, kg/m (lb./ft.)	Span, m (ft.)						
	1.5 (5)	2.0	2.5	3.0(10)	4.0	5.0	6.0(20)
37 (25)				A			
45 (30)			A				
62 (42)		A					
67 (45)							D
82 (55)						D	
97 (65)				C			
99 (67)	A						
112 (75)							E
113 (76)					D		
119 (80)			C				
137 (92)						E	
164 (110)		C					
179 (120)				D			
189 (127)					E		
259 (174)	C						
299 (200)				E			

CHEMICAL CORROSION PROTECTION

Chemical	Galvanised	Aluminium	304	316	Plastic
Benzene	N/A	R	R	R	NR
Carbon Tetrachloride	N/A	C	R	R	C
Gasoline	R	R	R	R	C
Hydrochloric Acid 40%	NR	NR	NR	NR	C
Hydrochloric Acid 10%	NR	NR	NR	NR	R
Hydrochloric Acid 2%	NR	NR	NR	NR	R
Hydrogen Peroxide 30%	N/A	R	R	R	C
Hydrogen Peroxide 3%	N/A	R	R	R	C
Hydrogen Sulphide (Gas)	N/A	R	C	R	R
Mineral Spirits	N/A	R	N/A	N/A	NR
Motor Oil	R	R	R	R	R
Nitric Acid	N/A	C	R	R	C
Phosphoric Acid 2%	NR	C	R	R	R
Sodium Chloride 25%	C	C	R	R	R
Sulphuric Acid 2%	NR	C	NR	R	R
Water: Deionised	C	R	R	R	R
Water: Sea	C	C	R	R	R
Water: Tap	R	R	C	C	R

r = Recommended
C = Conditions dependant
nr = Not Recommended
n/a = Info not available

The above Corrosion Chart shows the likelihood of a particular material being suitable for an environment with a certain chemical present.

Used in conjunction with field tests and inspecting actual environmental conditions, the Corrosion Chart should assist in determining which materials and finishes can be selected to avoid high levels of corrosion.

However, information displayed in the chart can be used as a guide for comparison only, as subtle variables can influence the performance of these materials under certain conditions.

DISSIMILAR METAL'S CORROSION

When iron is extracted from its ore, a fundamental common tendency of nature is immediately reversed. Iron and steel unprotected will corrode in most environments, thus returning to their natural states.

- All metal surfaces exposed to the environment are affected by corrosion. Corrosion is the deterioration of metals by direct chemical or electrochemical attack. The three commonly recognised forms of corrosion are:
- Direct chemical attack which can best be handled by not allowing the chemical attack agent to come into contact with the metal (see chart for further information).
- Electrochemical attack or electrical current flow through the metal is a common form of cable tray corrosion. It occurs in the presence of a conducting agent, or electrolyte. Usually this electrolyte is made up of a combination of rain, orsprays mixed with an industrial residue and chemical deposits.
- A third form of corrosion is Bimetallic Electrochemical corrosion, commonly referred to as galvanic corrosion. Although not normally a problem with cable trays, it can become a problem when two dissimilar metals come in contact in the presence of an electrolyte. Corrosion is reasonably preventable. Through selection and use of the appropriate product, material and protective finishes, savings can be made in plant maintenance costs by deferring the longer term replacement of the cable support systems. This catalogue is designed to assist you in protecting your cable support products through the correct selection of materials based on the prevalent conditions. Information is provided outlining which metals are safe to put into contact with each other, and how various steel products react to the exposure of certain chemicals.

The Table of Dissimilar Metals groups metals that have little galvanic effect on each other and are therefore relatively safe to put into contact.

The groups have been arranged with the corroded (ANODIC) metals at the top, and the protected (CATHODIC) metals at the bottom.

Any metal in the group above would corrode when in contact with a metal in the group below. Avoid pairing metals from widely separated groups, as the risk of corrosion will be greater. By using this table as a guide and analysing the local conditions of each site, it is more likely that a wise decision concerning material and finish selection can be made to minimise direct chemical attack and electrochemical corrosion.



DESIGN & DEFLECTION

E-Line KCA AL aluminium cable ladder sections are designed and manufactured to achieve the loading requirements of the NEMA VE-1 and IEC 61537, and are available in various load and span performances.

A sample of each section has been tested and certified by a DEKRA approved facility, ensuring that we continue to provide the benchmark in product performance.

All reported results are based on uniformly distributed static loads, single-span configuration for NEMA VE-1 load test and multi-span configuration for IEC 61537.

100 mm and 125mm Height KCA AL ladders are suitable for NEMA 20B class and 150 mm and 175 mm Height KCA AL ladders are suitable for NEMA 20C class.

Whilst NEMA publication does not specify a limitation on deflection, a guide to deflection has been included for easy reference.

All cable support deflections, within this catalogue, pertain to continuous cable support systems and do not take into consideration simply supported or end bay sections.

It should be noted that the positioning of splice joints and loading techniques can significantly impact upon the actual deflection. Refer to Nema VE2 installation guidelines for further information.

Special consideration should always be given to live loads resulting from cable pulling to ensure this does not exceed the static cable support load limit.

All load results detailed in this section have been derived from testing 900mm wide sections of mild steel cable ladders in the various configurations.

SPECIFICATIONS FOR EAE CABLE LADDER E-LINE KCA AL Series Cable Ladder

1. Cable Ladder Design

- 1.1 Cable ladder shall be designed and manufactured by EAE ELEKTRIK A.S.
- 1.2 Ladder type cable tray is used to support cable distribution systems as indicated in the project constructions and shall be made of straight sections, fittings, and accessories as defined in the latest **NEMA VE-1** standard (U.S.A/Canada) and latest **IEC 61537** standard (International standard).
- 1.3 Specially designed and manufactured cable ladder allows easy installation of cables which shall be free from burrs, projections, sharp edges inside where cables can be damaged.
- 1.4 Special designed **Extruded I-beam Side Rails, Extruded I-beam Rungs and Extruded Splice Plates** shall be increase the strength of the cable ladder and allow support spacings up to **6 m**
- 1.5 **Rungs** shall be ease cable fixing via using cable cleats, cable ties etc.

2. Manufacture and Dimensions

- 2.1 **General.** Steel cable ladders are manufactured in metric SI units.
- 2.2 **Length.** Straight lengths shall be manufactured in 3-m and 6-m.
- 2.3 **Height.** Overall heights shall be 100mm, 125mm, 150mm and 175mm and fill depths, also called loading depths, shall be 75mm, 100mm, 125mm and 150mm, respectively)
- 2.4 **Width.** Internal clear widths shall be 150mm, 200mm, 300mm, 400mm, 450mm, 600mm, 750mm and 900mm, and Overall widths are 40mm wider than internal widths, 20mm each side due to the flange-out design)
- 2.5 **Rung spacing.** 300mm. Welded to the side-rail.
- 2.6 **Fittings.** Various types of fittings are available for supporting horizontal and vertical directional cable route/size changes:
 - Horizontal fittings: elbows, tee, cross, middle-left-right reducers
 - Vertical fittings: inside vertical elbow, outside vertical elbow
 - Standard Radius: R300, R450, R600 and R900 (300, 450, 600 and 900mm, respectively)
 - Standard angle for horizontal and vertical elbows: 300, 450, 600, 900

3. Material and Finish

- 3.1 **Aluminium 6063-T6.** Side rails, rungs and splice plate of the straight lengths and fittings are components of the ladder system that are constructed of marine grade, cooper-free, extruded aluminium alloy 6063-T6.

4. Covers

- 4.1 Covers shall be constructed from either coil or flat plate aluminium raw material with a minimum thickness 2mm.
- 4.2 Covers shall be supplied to protect tray cables where needed.
- 4.3 All range of manufactured straight lengths and fittings shall be supplied with their covers upon request.
- 4.4 Perforated and non-perforated type flat and slope covers can be manufactured.
- 4.5 Heavy duty omega type cover clamps shall be used for outdoor applications.

►►KCA AL Specification

5. Accessories

- 5.1 Accessories shall be furnished as required to protect, support and install the cable ladder system.
- 5.2 Splice plates, expansion splice plates, horizontal and vertical adjustable couplers, vertical adjustable fitting, dividers, junction box plates as well as fixing fasteners are standard manufactured and supplied accessories by EAE.

6. Splice plates.

- 6.1 Splice plates shall be fastened to the outside of the cable ladder side-rails.
- 6.2 Bolts and nuts shall be supplied with splice plates.
- 6.3 Electrical resistance across the joint shall not exceed 330 microohms as defined in NEMA VE-1

7. Rung.

- 7.1 I-beam rung shall be used (25x25 mm)
- 7.2 Rungs shall be welded to the side rail.

8. Loading Capabilities, Standards and Certification

- 8.1 Two main manufacturing standards exist for cable trays: IEC 61537 (international-based) and NEMA VE-1 (U.S.A/ Canada-based). EAE KCA AL extra heavy-duty cable ladders are tested according to both standards in trust with third party national and international standard-certification authorizations.
- 8.2 The ladder is manufactured, tested and certified according to IEC 61537 standard. Load tables, according to the standard, are published on related product pages in catalog.
- 8.3 The ladder is manufactured, tested and certified according to NEMA VE-1:2017 latest edition. Load tables, according to the standard, are published on related product pages in catalog.

PACKAGING

Standard Packing

Cable Trays&Ladders and Modules are packed using wooden pallets in order to ensure safe transportation to site. After being stacked on the wooden pallets the products are bound to the pallet using PVC strapping to prevent the goods sliding from the pallet. Wooden laths nailed on the sides and onto the palette ensure protection against forces that may possibly come from above and sides.

The specially designed wooden framework enables lifting of the pallet by fork lift vehicle from either side or one end only. It is also designed to prevent insertion of the forks between components which will cause damage.

Support and suspension equipment used in the installation of the cable tray is covered using shrink wrap. Packages do not contain more than a total weight of 25 kg of product to facilitate the ease of transport. Product amount within the package are stuck onto the package are arranged in 10 units or tenfold unit to facilitate counting. Labels containing the code, description, small technical drawing of the product and specifying the content and amount within the package are adhered onto the packages for easy product identification. Small product packages then are stacked onto wooden palette and wrapped against scattering and supported on the sides using PVC strapping.

Accessories such as joint components, screws, nuts, dowels etc, are packed within cardboard parcels. In order to prevent screws, nuts, washers and dowels from rusting., they firstly are put into nylon bags. All parcels are prepared not exceeding 25kg and are identified by labels indicating product information. Small product packages then are stacked onto wooden palette and wrapped against scattering and supported on the sides using PVC strapping.

All pallets are identified with labels indicating product information contained within. Palette labels also contain customer information and palette total weight.

Package type above is for large scale projects. It may differ for small deliveries and warehouses.

Item	Component List Component	Quantity	
			Company : Project : Project No :
			Name : Date : Signature :
			Prepared by
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