

CASK

POWER SYSTEMS

PRODUCT CATALOGUE 2026
A DIVISION OF CASK ELECTRIC

SUBSTATION BUSBAR SYSTEMS

ALUMINIUM TUBULAR BUSBAR

Seamless extruded tubes in EN AW-6101B, 6063, 6061 and 6082,
OD 20 to 250 mm, in any length up to 15 m, with clamps, couplers,
expansion joints and end caps.



Substations



Railways



Power stations

CATALOGUE 2026

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Tubular busbar by CASK

Rigid aluminium bus for outdoor and indoor switchyards.

CASK Power Systems supplies seamless extruded aluminium tubes and the matching fittings for rigid busbar systems. A tube carries high current with low losses, keeps its shape under short-circuit forces and spans long distances between post insulators, so the switchyard needs fewer supports and less steel.

Substations

Main and transfer bus, bay connections and equipment links in AIS switchyards, 33 kV to 400 kV.

Railways

Traction substations and feeder stations for main-line, metro and light rail power supply.

Power stations

Generator and transformer connections, switchyard bus and auxiliary supply in thermal, hydro and renewable plants.



Substations

SUPPLIED PROJECTS

CASK Power Systems has supplied aluminium tubular busbar to several substation projects, including 120 × 12 mm tubes in alloy 6101B in 6 m lengths, cut, packed in closed wooden crates and numbered by bay for site erection.

Why tubular busbar

- High current per kilogram: up to 7,800 A outdoors in one tube
- Round shape: low corona and even electric field at high voltage
- High section modulus: long spans and high short-circuit strength
- Low maintenance: no strand corrosion, no sag adjustment

What we supply

- Tubes OD 20 to 250 mm, metric and IPS sizes
- Alloys EN AW-6101B, 6063, 6061 and 6082
- Any length up to 15 m, cut to order
- Clamps, couplers, expansion joints, terminals and end caps

Part numbers and alloys

Every CASK tube part number gives the product, the size and the alloy. Fittings carry the tube outer diameter they fit, so the ERP, offers and this catalogue always use the same number.

CPS-TB001	-	120-12	-	6101
Product base number		Size OD - wall, mm		Alloy 6101, 6063, 6061 or 6082

Metric tubes OD and wall in millimetres: CPS-TB001-100-8-6101 is a 100 × 8 mm tube in 6101B.	IPS tubes Nominal size and schedule: CPS-TB011-4IN-S40-6063 is a 4 in schedule 40 tube in 6063.	Fittings Base number, tube OD and material: CPS-TF001-120-AL is a fixed clamp for 120 mm tube.
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Alloys

CODE	ALLOY AND TEMPER	CONDUCTIVITY	RM MIN	RPO.2 MIN	USE
-6101	EN AW-6101B T6	55 % IACS (31.9 MS/m)	215 MPa	160 MPa	Standard busbar alloy: best conductivity with good strength
-6101	EN AW-6101B T7	57 % IACS (33.1 MS/m)	Agreed per order		On request, for the highest current per size
-6063	EN AW-6063 T6	53 % IACS (30.7 MS/m)	215 MPa	170 MPa	General busbar use, good balance of current and strength
-6061	EN AW-6061 T6	43 % IACS (24.9 MS/m)	260 MPa	240 MPa	Long spans and high short-circuit forces
-6082	EN AW-6082 T6	45 % IACS (26.1 MS/m)	310 MPa	260 MPa	Highest strength: very long spans, seismic areas

Conductivity at 20 °C. Mechanical values are minimums for the wall thicknesses in this catalogue. Mill certificates to EN 10204 3.1 with every delivery.

Standards

STANDARD	SUBJECT	STANDARD	SUBJECT
EN 573-3	Chemical composition of the alloys	IEC 60865-1	Short-circuit forces on rigid conductors
EN 755-2	Mechanical properties of extruded tubes	IEEE 605	Design of rigid bus structures
EN 755-7	Seamless tubes: tolerances on form and size	IEC 61284	Requirements and tests for fittings
ASTM B241 / B317	Seamless pipe, IPS sizes; 6101 bus conductor	IEC 60273	Post insulator fixing dimensions

Supply and packing

Lengths Any length up to 15 m, for example 10.5 m, cut to order. Ends cut square and deburred, each length marked with its part number.	Packing Ends capped, tubes wrapped and packed in closed wooden crates on skids, numbered by bay or by drawing.	Documents Mill certificate EN 10204 3.1, packing list per crate, dimensional and conductivity test results.
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Metric tubes

Seamless extruded tubes, OD 20 to 250 mm, in any length up to 15 m. 31 sizes in 4 alloys: 124 part numbers.

LENGTHS			CUT LENGTH TOLERANCE			ALLOYS			TOLERANCES		
Any length up to 15 m			±5 mm			6101B, 6063, 6061, 6082			EN 755-7, seamless		
OD mm	Wall mm	ID mm	Area mm ²	Weight kg/m	Length m	I cm ⁴	W cm ³	R 20 °C μΩ/m	Current A, outdoor	Part number alloy 6101B	
20	2	16	113	0.31	up to 15	0.5	0.5	277.2	410	CPS-TB001-20-2-6101	
20	3	14	160	0.43	up to 15	0.6	0.6	195.6	490	CPS-TB001-20-3-6101	
25	3	19	207	0.56	up to 15	1.3	1.0	151.2	590	CPS-TB001-25-3-6101	
32	3	26	273	0.74	up to 15	2.9	1.8	114.7	730	CPS-TB001-32-3-6101	
32	4	24	352	0.95	up to 15	3.5	2.2	89.1	820	CPS-TB001-32-4-6101	
40	3	34	349	0.94	up to 15	6.0	3.0	89.9	870	CPS-TB001-40-3-6101	
40	4	32	452	1.22	up to 15	7.4	3.7	69.3	990	CPS-TB001-40-4-6101	
40	5	30	550	1.48	up to 15	8.6	4.3	57.0	1,090	CPS-TB001-40-5-6101	
50	4	42	578	1.56	up to 15	15.4	6.2	54.2	1,190	CPS-TB001-50-4-6101	
50	5	40	707	1.91	up to 15	18.1	7.2	44.3	1,320	CPS-TB001-50-5-6101	
50	6	38	829	2.24	up to 15	20.4	8.2	37.8	1,430	CPS-TB001-50-6-6101	
63	5	53	911	2.46	up to 15	38.6	12.3	34.4	1,600	CPS-TB001-63-5-6101	
63	6	51	1,074	2.90	up to 15	44.1	14.0	29.2	1,740	CPS-TB001-63-6-6101	
63	8	47	1,382	3.73	up to 15	53.4	16.9	22.7	1,970	CPS-TB001-63-8-6101	
80	5	70	1,178	3.18	up to 15	83.2	20.8	26.6	1,970	CPS-TB001-80-5-6101	
80	6	68	1,395	3.77	up to 15	96.1	24.0	22.5	2,140	CPS-TB001-80-6-6101	
80	8	64	1,810	4.89	up to 15	119	29.7	17.3	2,440	CPS-TB001-80-8-6101	
100	6	88	1,772	4.78	up to 15	196	39.3	17.7	2,590	CPS-TB001-100-6-6101	
100	8	84	2,312	6.24	up to 15	246	49.3	13.6	2,960	CPS-TB001-100-8-6101	
100	10	80	2,827	7.63	up to 15	290	58.0	11.1	3,270	CPS-TB001-100-10-6101	
120	8	104	2,815	7.60	up to 15	444	73.9	11.1	3,460	CPS-TB001-120-8-6101	
120	10	100	3,456	9.33	up to 15	527	87.8	9.1	3,840	CPS-TB001-120-10-6101	
120	12	96	4,072	10.99	up to 15	601	100	7.7	4,160	CPS-TB001-120-12-6101	
140	10	120	4,084	11.03	up to 15	868	124	7.7	4,380	CPS-TB001-140-10-6101	
140	12	116	4,825	13.03	up to 15	997	142	6.5	4,770	CPS-TB001-140-12-6101	
160	8	144	3,820	10.31	up to 15	1,106	138	8.2	4,430	CPS-TB001-160-8-6101	
160	10	140	4,712	12.72	up to 15	1,331	166	6.7	4,920	CPS-TB001-160-10-6101	
160	12	136	5,579	15.06	up to 15	1,538	192	5.6	5,350	CPS-TB001-160-12-6101	
200	10	180	5,969	16.12	up to 15	2,701	270	5.3	5,950	CPS-TB001-200-10-6101	
200	12	176	7,087	19.14	up to 15	3,144	314	4.4	6,490	CPS-TB001-200-12-6101	
250	12	226	8,972	24.23	up to 15	6,369	510	3.5	7,850	CPS-TB001-250-12-6101	

Other alloys: replace -6101 at the end of the part number with -6063, -6061 or -6082, for example CPS-TB001-120-12-6063. The length is written on the order, for example 10.5 m. I = moment of inertia, W = section modulus, R = DC resistance at 20 °C for 6101B T6. Current = indicative continuous rating per tube for 6101B T6 at 50 Hz, ambient 35 °C, conductor 85 °C, wind 0.6 m/s, full sun, absorptivity and emissivity 0.5. For other alloys multiply the current by 0.98 (6063), 0.90 (6082) or 0.88 (6061), and R by 1.04, 1.22 or 1.28. Ratings for the site conditions and short-circuit checks to IEC 60865-1 are given with each offer.

Support clamps, couplers and fittings

Cast and machined aluminium fittings for every tube in this catalogue.

BODY

Cast Al alloy EN AC-42100 / 6082 T6

BOLTS

Stainless steel A2-70, or HDG

INSULATOR FIXING

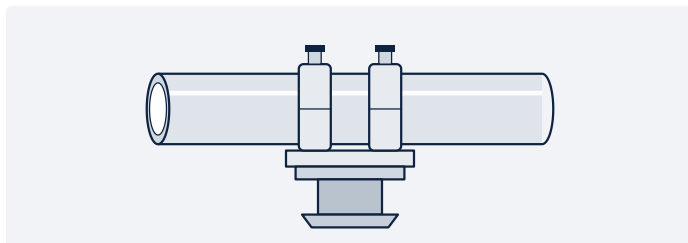
PCD 127 mm, 4 × M16 (IEC 60273)

DESIGN

IEC 61284, corona-free shapes

Fixed support clamp

CPS-TF001

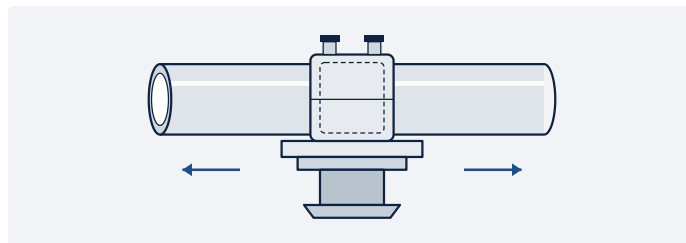


- Holds the tube fixed on the post insulator
- Two-saddle clamp with bolted caps
- Takes the short-circuit and wind forces

Tube OD	Part number	Tube OD	Part number
40	CPS-TF001-40-AL	120	CPS-TF001-120-AL
50	CPS-TF001-50-AL	140	CPS-TF001-140-AL
63	CPS-TF001-63-AL	160	CPS-TF001-160-AL
80	CPS-TF001-80-AL	200	CPS-TF001-200-AL
100	CPS-TF001-100-AL	250	CPS-TF001-250-AL

Sliding support clamp

CPS-TF002

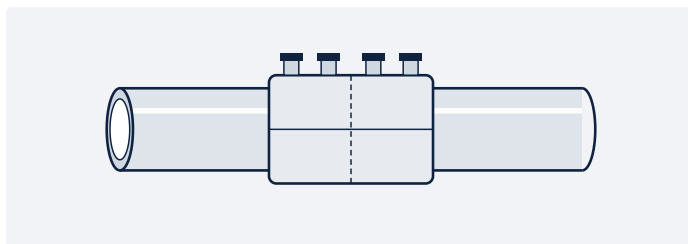


- Lets the tube move with thermal expansion
- Low-friction liner, tube free to slide axially
- Use between fixed points on long runs

Tube OD	Part number	Tube OD	Part number
40	CPS-TF002-40-AL	120	CPS-TF002-120-AL
50	CPS-TF002-50-AL	140	CPS-TF002-140-AL
63	CPS-TF002-63-AL	160	CPS-TF002-160-AL
80	CPS-TF002-80-AL	200	CPS-TF002-200-AL
100	CPS-TF002-100-AL	250	CPS-TF002-250-AL

Straight coupler, bolted

CPS-TF011

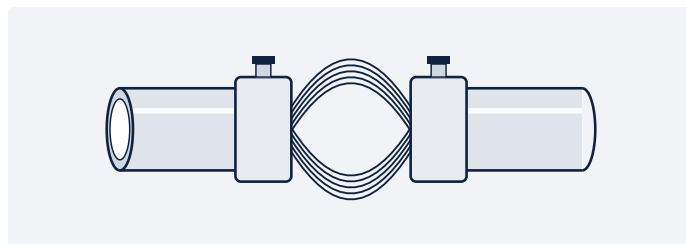


- Joins two tubes of the same size on site
- Full current rating across the joint
- Contact faces brushed and greased at works

Tube OD	Part number	Tube OD	Part number
40	CPS-TF011-40-AL	120	CPS-TF011-120-AL
50	CPS-TF011-50-AL	140	CPS-TF011-140-AL
63	CPS-TF011-63-AL	160	CPS-TF011-160-AL
80	CPS-TF011-80-AL	200	CPS-TF011-200-AL
100	CPS-TF011-100-AL	250	CPS-TF011-250-AL

Expansion joint, flexible

CPS-TF021



- Laminated aluminium straps take up length changes
- Fits between tube ends or tube and equipment
- Also isolates vibration from the equipment

Tube OD	Part number	Tube OD	Part number
40	CPS-TF021-40-AL	120	CPS-TF021-120-AL
50	CPS-TF021-50-AL	140	CPS-TF021-140-AL
63	CPS-TF021-63-AL	160	CPS-TF021-160-AL
80	CPS-TF021-80-AL	200	CPS-TF021-200-AL
100	CPS-TF021-100-AL	250	CPS-TF021-250-AL

Corona-free end caps CPS-TF041 are made for every tube OD from 40 to 250 mm. T-connectors, tube-to-flat terminals, tube-to-conductor clamps, damping conductor, other insulator PCDs and fittings for IPS tubes on request.

PRODUCT CATALOGUE 2026

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