PRODUCT CATALOGUE

CONTENTS

1

STANDARD MODELS

2

TEHOMET POLES

LAYOUT: Aalto Oy, Mikkeli · **PRINTING:** Kariteam, Jyväskylä, Finland · Edition 1 500 pieces

TEHOMET OY

Tehomet is the Nordic countries' largest manufacturer of metal and wooden special lighting poles and structures. The company was established in Kangasniemi, Eastern Finland, in 1979. Besides Kangasniemi, the company has two other operating locations: in Kiiu, Estonia, since 2005 and in Parikkala, Finland, since 2008. Tehomet Baltic in Kiiu was founded primarily to serve customers in the Baltic countries. Parikkala has up-to-date premises in which the product development, testing and production of decorative wooden columns takes place. Tehomet's special expertise can be summed up in its mission statement: the objective is to design and manufacture individual, high quality products according to customers' wishes in an agreed schedule and investing in product development. We are well aware of the constantly changing needs of our customers. The market area consists of the Nordic countries, the Baltic countries, Russia and the whole World through Valmont Industries' subsidiaries.

Kangasniemi

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Business ID EE 100974586

Kangasniemi, Finland

Parikkala, Finland

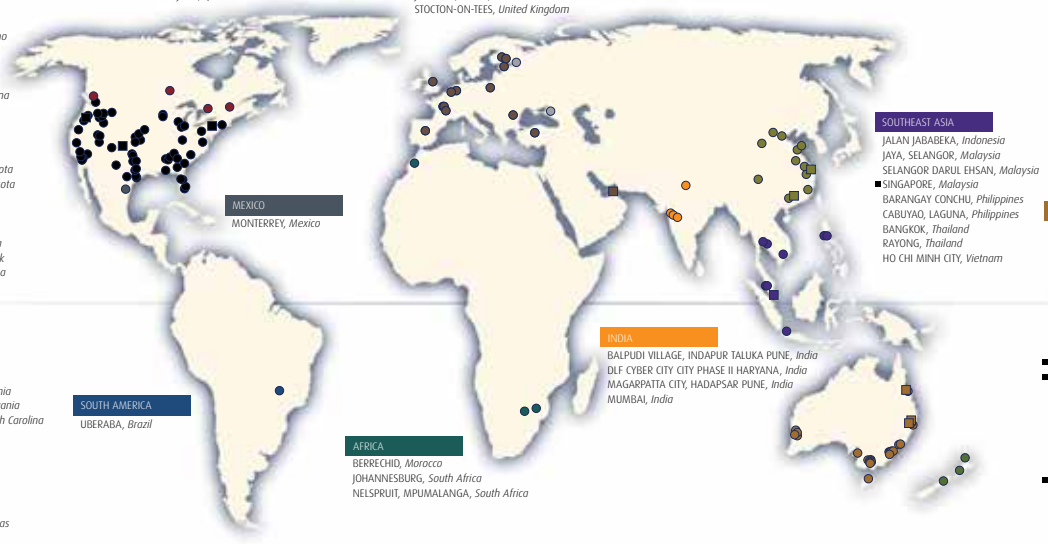
Kiiu, Estonia

Bernheze, Netherlands

Clermont-Ferrand, France

VALMONT INDUSTRIES

Tehomet and Valmont Industries joined forces in Spring 2007. Through this development, Tehomet is now part of the market leader in lighting poles worldwide. The product range also grew: aluminium poles as well as IT and utility structures were added to the range. Moreover, a global distribution channel for Tehomet's decorative products opened up: Valmont has over 100 locations worldwide.



● LOCATION
■ MULTIPLE LOCATIONS

U.S.A.
BAY MINETTE, *Alabama*
BIRMINGHAM, *Alabama*
STEELE, *Alabama*
TUSCALOOSA, *Alabama*
BARSTOW, *California*
LONG BEACH, *California*
LOS ANGELES, *California*
SANTA FE SPRINGS, *California*
AURORA, *Colorado*
BARTOW, *Florida*
MIAMI, *Florida*
TAMPA, *Florida*
ATLANTA, *Georgia*
CLAXTON, *Georgia*
TIFTON, *Georgia*
AMERICAN FALLS, *Idaho*
POCATELLO, *Idaho*
CHIGAGO, *Illinois*
ELKHART, *Indiana*
JEFFERSONVILLE, *Indiana*
PLYMOUTH, *Indiana*
SIOUX CITY, *Iowa*
EL DORADO, *Kansas*
SALINA, *Kansas*
FARMINGTON, *Minnesota*
MINNEAPOLIS, *Minnesota*
■ McCOOK, *Nebraska*
OMAHA, *Nebraska*
VALLEY, *Nebraska*
WEST POINT, *Nebraska*
HAUPPAUGE, *New York*
CLAREMORE, *Oklahoma*
TULSA, *Oklahoma*
ALBANY, *Oregon*
GRANTS PASS, *Oregon*
HERMISTON, *Oregon*
LaGRANDE, *Oregon*
■ SALEM, *Oregon*
TUALATIN, *Oregon*
■ HAZLETON, *Pennsylvania*
PITTSBURGH, *Pennsylvania*
WEST COLUMBIA, *South Carolina*
JASPER, *Tennesee*
CARROLLTON, *Texas*
BELLVILLE, *Texas*
LUBBOCK, *Texas*
MANSFIELD, *Texas*
SAN ANTONIO, *Texas*
SOUTH BRENHAM, *Texas*
LINDON, *Utah*
PETERSBURG, *Virginia*
FERNDALE, *Washington*
MESA, *Washington*
PASCO, *Washington*
SUNNYSIDE, *Washington*

CANADA
DELTA, *British Columbia*
WINNIPEG, *Manitoba*
BARRIE, *Ontario*
SAINTE-JULIE, *Quebec*

MEXICO
MONTERREY, *Mexico*

SOUTH AMERICA
UBERABA, *Brazil*

EUROPE & MIDDLE EAST
KIIU, *Estonia*
KANGASNIEMI, *Finland*
PARIKKALA, *Finland*
CHARMEIL, *France*
CREUZIER LE NEUF, *France*
RIVE-DE-GIER, *France*
GELSENKIRCHEN, *Germany*
MAARHEEZE, *The Netherlands*
SIEDLCE, *Poland*
BUCARESTI, *Romania*
MADRID, *Spain*
ANKARA, *Turkey*
■ JABEL ALI, DUBAI, *United Arab Emirates*
STOCTON-ON-TEES, *United Kingdom*

AFRICA
BERRECHID, *Morocco*
JOHANNESBURG, *South Africa*
NELSPRUIT, MPUMALANGA, *South Africa*

RUSSIA
KRASNODAR KRAI, *Russia*
SAINT-PETERSBURG, *Russia*

INDIA
BALPUDI VILLAGE, INDAPUR TALUKA PUNE, *India*
DLF CYBER CITY CITY PHASE II HARYANA, *India*
MAGARPATTA CITY, HADAPSAR PUNE, *India*
MUMBAI, *India*

CHINA
BEIJING, *China*
CHENGDU, SICHUAN, *China*
FUZHOU CITY, *China*
GUANGZHOU, *China*
HAIYANG, *China*
KUNSHAN CITY, JIANGSU P.C. *China*
QINGDAO, *China*
SHANDONG, *China*
■ SHANGHAI, *China*
TAIYUAN SHANXI, *China*
TIANJIN, *China*
VUXI, JIANGSU P.C., *China*
YAYAO, HESHAN CITY, *China*

SOUTHEAST ASIA
JALAN JABABEKA, *Indonesia*
JAYA, SELANGOR, *Malaysia*
SELANGOR DARUL EHSAN, *Malaysia*
■ SINGAPORE, *Malaysia*
BARANGAY CONCHU, *Philippines*
CABUYAO, LAGUNA, *Philippines*
BANGKOK, *Thailand*
RAYONG, *Thailand*
HO CHI MINH CITY, *Vietnam*

NEW ZELAND
AUCKLAND, *New Zeland*
PALMERSTON NORTH, *New Zeland*
CHRISTCHURCH, *New Zeland*

AUSTRALIA
GIRRAWEEN, *New South Wales*
HEXHAM, *New South Wales*
MACQUARIE PARK, *New South Wales*
MAYFIELD, *New South Wales*
MINTO, *New South Wales*
MONA VALE, *New South Wales*
PORT KEMBLA, *New South Wales*
SILVERWATER, *New South Wales*
ACACIA RIDGE, *Queensland*
■ BOHLE, TOWNSVILLE, *Queensland*
■ CAROLE PARK, *Queensland*
EIGHT MILE PLAINS, *Queensland*
MOUNT ST JOHN, *Queensland*
PINKENBA, *Queensland*
PINKENBA, *Queensland*
UNDERWOOD, *Queensland*
WINGFIELD, *South Australia*
■ BROEADMEADOWS, *Victoria*
CAMBELLFIELD, *Victoria*
CLAYTON SOUTH, *Victoria*
NOTTING HILL, *Victoria*
THOMASTOWN, *Victoria*
PROSPECT VALE, *Tasmania*
BASSADEAN, *Western Australia*
MADDINGTON, *Western Australia*
SPEARWOOD, *Western Australia*
WELSHPOOL, *Western Australia*

Tampere, Finland

LIGHT AND SHADOW

Light and shadow shape our surroundings everywhere. Light enhances our sense of security, helps us to orientate ourselves and creates ambiance. For over 30 years, Tehomet has been involved in implementing numerous lighting projects in unique locations.

A lighting pole is not only a part of the city infrastructure; it also a visible part of urban culture. At its best, well implemented outdoor lighting tells a story of the milieu, its history and culture. Whether conventional street lighting or an individual lighting installation is needed, Tehomet and its professional team is a reliable partner to carry out the implementation. Our long experience in diverse metal working strengthens our position as the leading pole manufacturer of our market area.

In the following pages you will find our extensive standard product range as well as examples of numerous lighting solutions we have implemented. Our professionals - designers and skilled workers - are ready to help you with your projects whenever you need a trustworthy partner and Light All the Way.

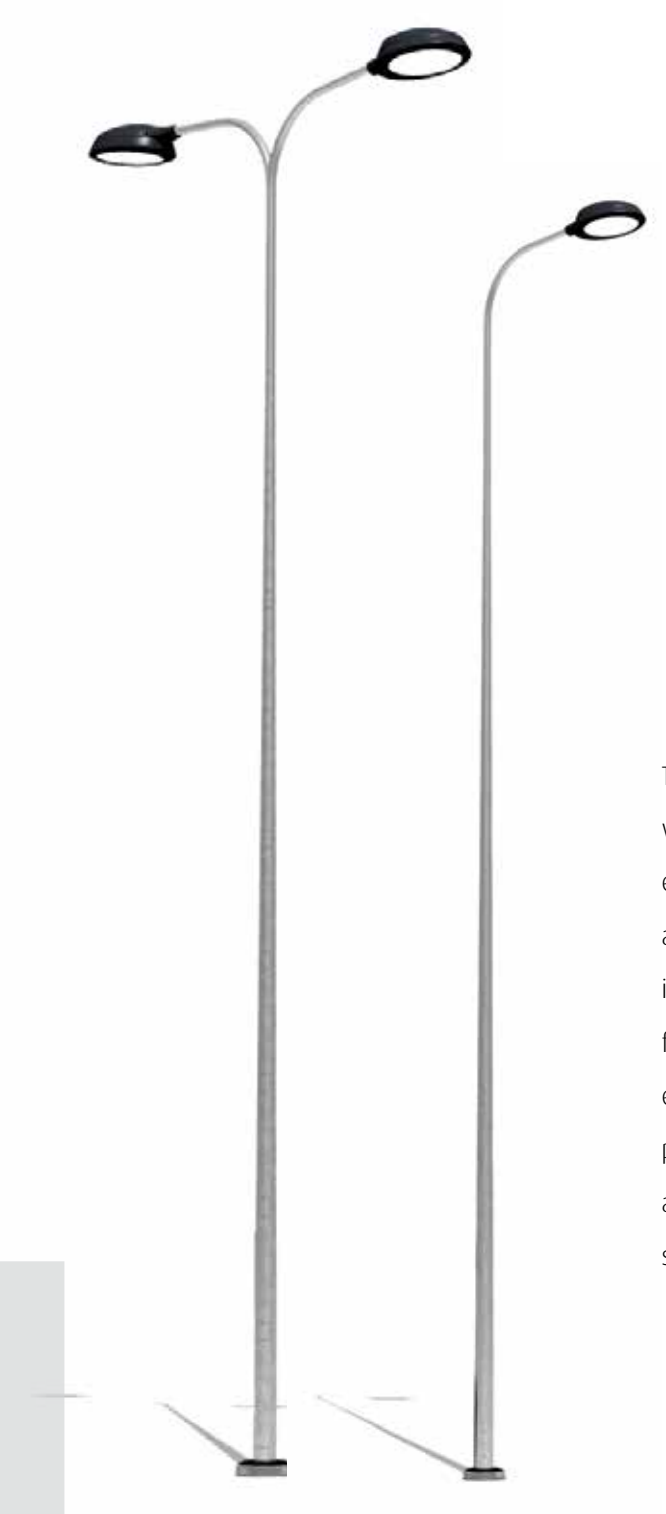
1

STANDARD RANGE

Our standard product series offers a comprehensive range of standard products for all kinds of park, street, public or area lighting needs. Arms are available in different sizes: single or double arm configurations and outreaches of up to four metres. As an option, poles can be supplied equipped, for example, with a safety-enhancing slip flange, a standard flange (e.g. parking facility ceiling covers, bedrock installations) and a power socket installation plate (festive light installations etc.). It is also possible to obtain most poles equipped with two hand holes.

The products are dimensioned, designed and manufactured according to the international EN 40 standard, taking into consideration local wind and terrain conditions. Poles and arms are manufactured using high-quality low-silicon steel (Si + P ≤ 0.04%), which ensures a bright and uniform galvanized surface. The poles can be painted according to the customer's wishes in our up-to-date premises using either powder coating or two-component wet paints. This not only enhances the appearance, but also improves the hot dip galvanized steel structure's capacity to withstand extensive environmental stresses (air impurities, moisture etc.). Poles exposed to significant stress can be coated with a thermoplastic Plascoat coating. The Plascoat coating gives first-class protection against corrosion and it facilitates cleaning; graffiti and stickers, for example, are easy to remove. Besides this, the coating is solvent free, environmentally friendly and highly suitable for locations such as day-care centres and playgrounds due its low thermal conductivity.

Oulu, Finland



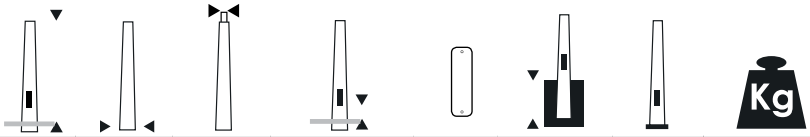
Tehomet offers modern street and road lighting with its conical poles. The conical shape of poles ensures an ideal relationship between stress and appearance. The base chamfer eases the installation and centering of a pole into a pre-fabricated concrete foundation and transmits load evenly from steel to concrete. Seamless conical poles are visually flawless. Several variations are available by combining this simple, elegant pole shaft with different kinds of arms and brackets.

1.1 CONICAL POLES

Turku, Finland

1.1 STRAIGHT CONICAL POLES

TECHNICAL DETAILS

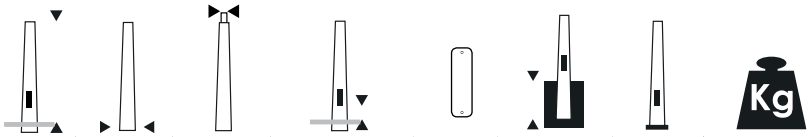


Type	Height (m)	Base diameter (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
						Embedding (mm)	Flange	kg
A203SK	3	108	60	500	A1	500	L1	20
A204SK	4	114			A2		L1	
A205SK	5	125			A3		L1	
A106SK	6	138			A3		L1	
B108SK	8	163		950	A4	600	L2	
B110SK	10	188			A4		L3	
B112SK	12	211			A5		L3	

*see p.148 Space for coupling

1.1 CONICAL POLES WITH UPRIGHT ARM

TECHNICAL DETAILS



Type	Height (m)	Base diameter (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
						Embedding (mm)	Flange	kg
S100B108K	8	145	60	950	B3	600	L2	15
S100B110K	10	168			B4	600	L2	15
S200B210K	10	185			B4	600	L3	30
S200B112K	12	208			B5	600	L3	30
S200C212K	12	222			B5	600	L4	30
S200C312K	12	222			B5	600	L4	30
S200C215K	15	263			B6	1000	L5	30
S200C315K	15	263			B6	1000	L5	30

*see p.148 Space for coupling

Conical pole

Conical pole with upright arm

Heinola, Finland

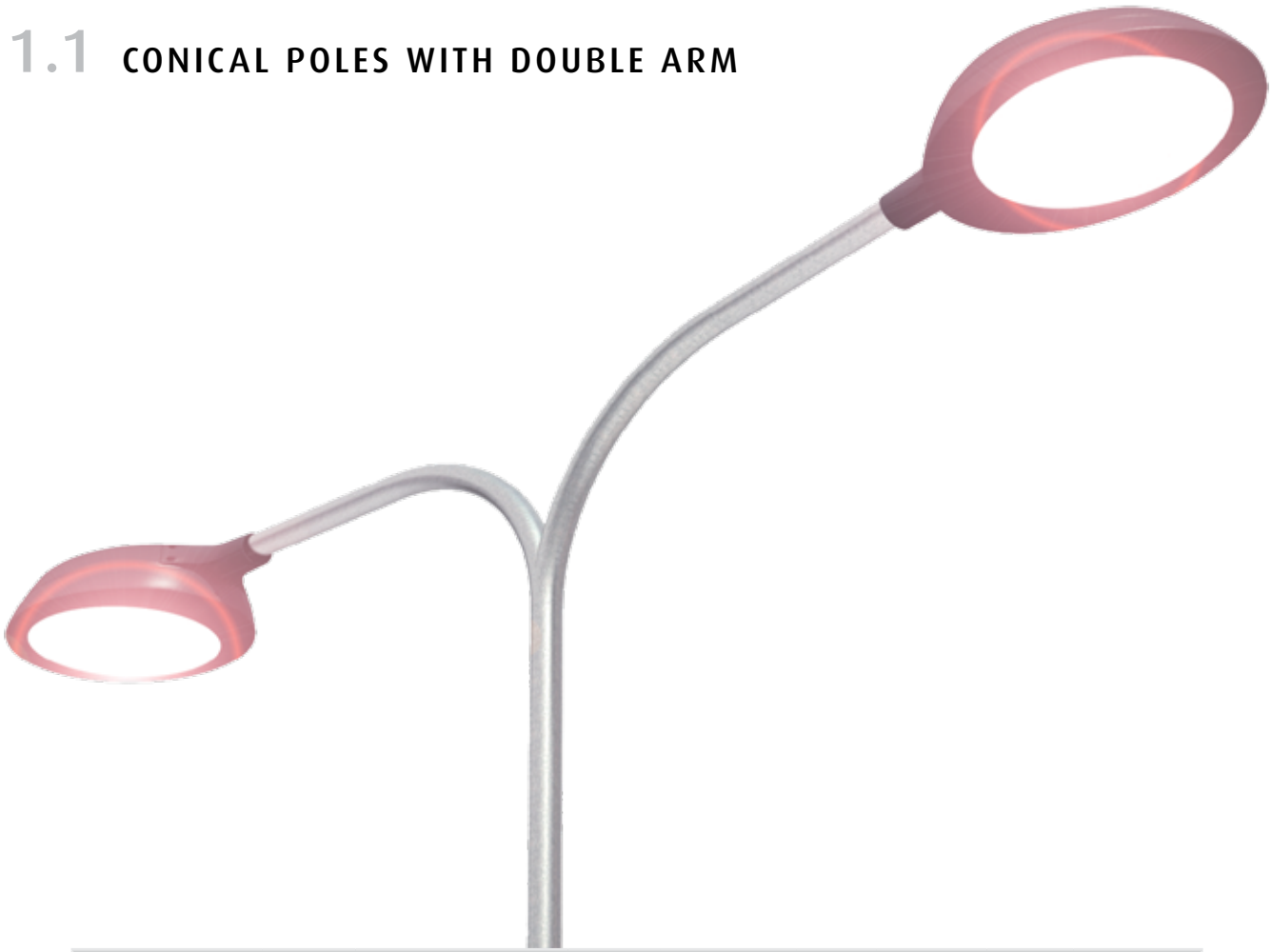
Orivesi, Finland

1.1 CONICAL POLES WITH SINGLE ARM

TECHNICAL DETAILS										
Type	Height (m)	Base diameter (mm)	Arm reach (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
							Embedding (mm)	Flange	kg
P110B108K	8	145	1000	60	950	B3	600	L2	15
P125B108K	8	145	2500	60		B3		L2	15
P210B208K	8	161	1000	76		B4		L2	30
P110B110K	10	168	1000	60		B4		L2	15
P125B110K	10	168	2500	60		B4		L2	15
P210B210K	10	185	1000	76		B4		L3	30
P225B210K	10	185	2500	76		B4		L3	30
P210B112K	12	208	1000	76		B5		L3	30
P225B112K	12	208	2500	76		B5		L3	30
P225C212K	12	222	2500	89		B5		L4	30
P140C212K	12	222	4000	89		B5		L4	15
P225C215K	15	263	2500	89		B6	1000	L5	30

*see p.148 Space for coupling

1.1 CONICAL POLES WITH DOUBLE ARM



TECHNICAL DETAILS

Type	Height (m)	Base diameter (mm)	Arm reach (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
							Embedding (mm)	Flange	kg
T110B108K	8	145	1000	60	950	B3	600	L2	15
T210B208K	8	161	1000			B4		L2	30
T110B110K	10	168	1000			B4		L2	15
T210B210K	10	185	1000			B4		L3	30
T225B210K	10	185	2500			B4		L3	15
T325B310K	10	198	2500			B5		L3	30
T210B112K	12	208	1000			B5		L4	30
T310B212K	12	222	1000			B5		L4	30
T325B212K	12	222	2500			B5		L4	15
T225C312K	12	222	2500			B5		L4	30
T140C312K	12	222	4000			B5		L4	15
T225C215K	15	263	2500			B6		L5	15
T225C315K	15	263	2500			B6	1000	L5	30
T140C315K	15	263	4000			B6		L5	15

*see p.148 Space for coupling

Emäkoski,
Finland

Levi, Finland

Kotka, Finland

1.1 TECHNICAL DETAILS

Product sizing: standard EN 40-3-3

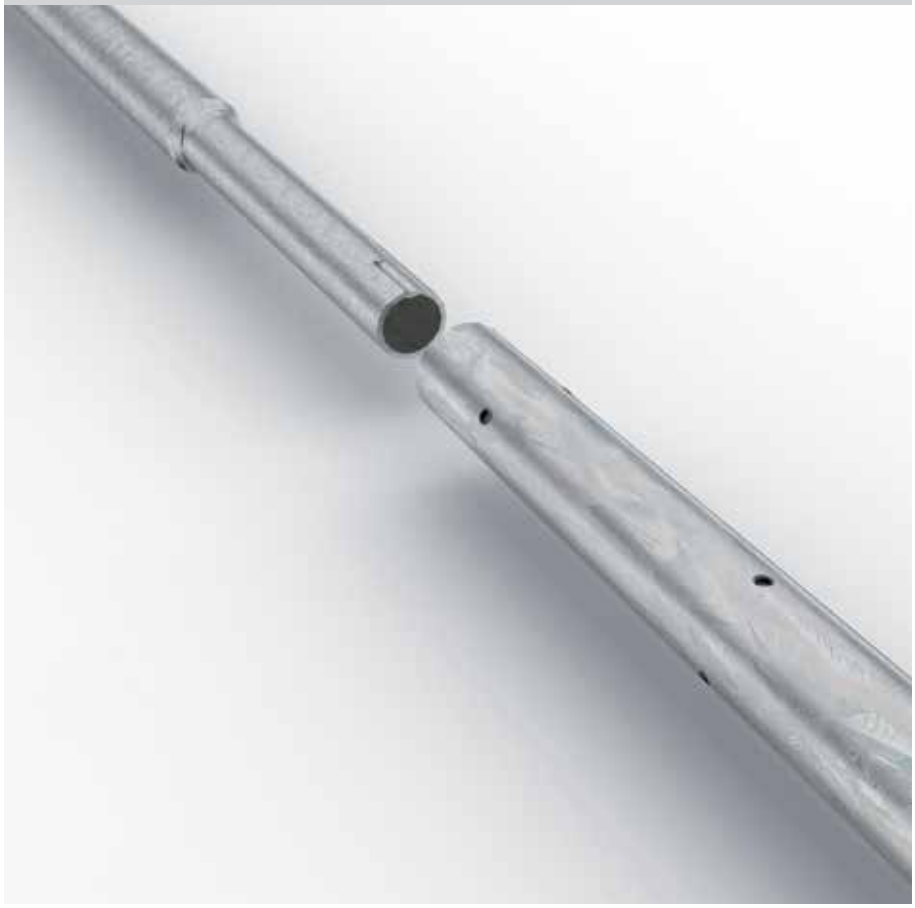
Product manufacturing: standard EN 40-5

Raw material: low-silicon steel (Si + P ≤ 0.04%)

Zinc coating: international standard EN ISO 1461 (layer thickness typically <90 µm)

Spigot: diameter 60 mm and length 100 mm

Attachment of the arm: There are two sets of screws with 3 x 120° division at the top of the pole (not in straight conical poles) to attach the arm easily and securely.

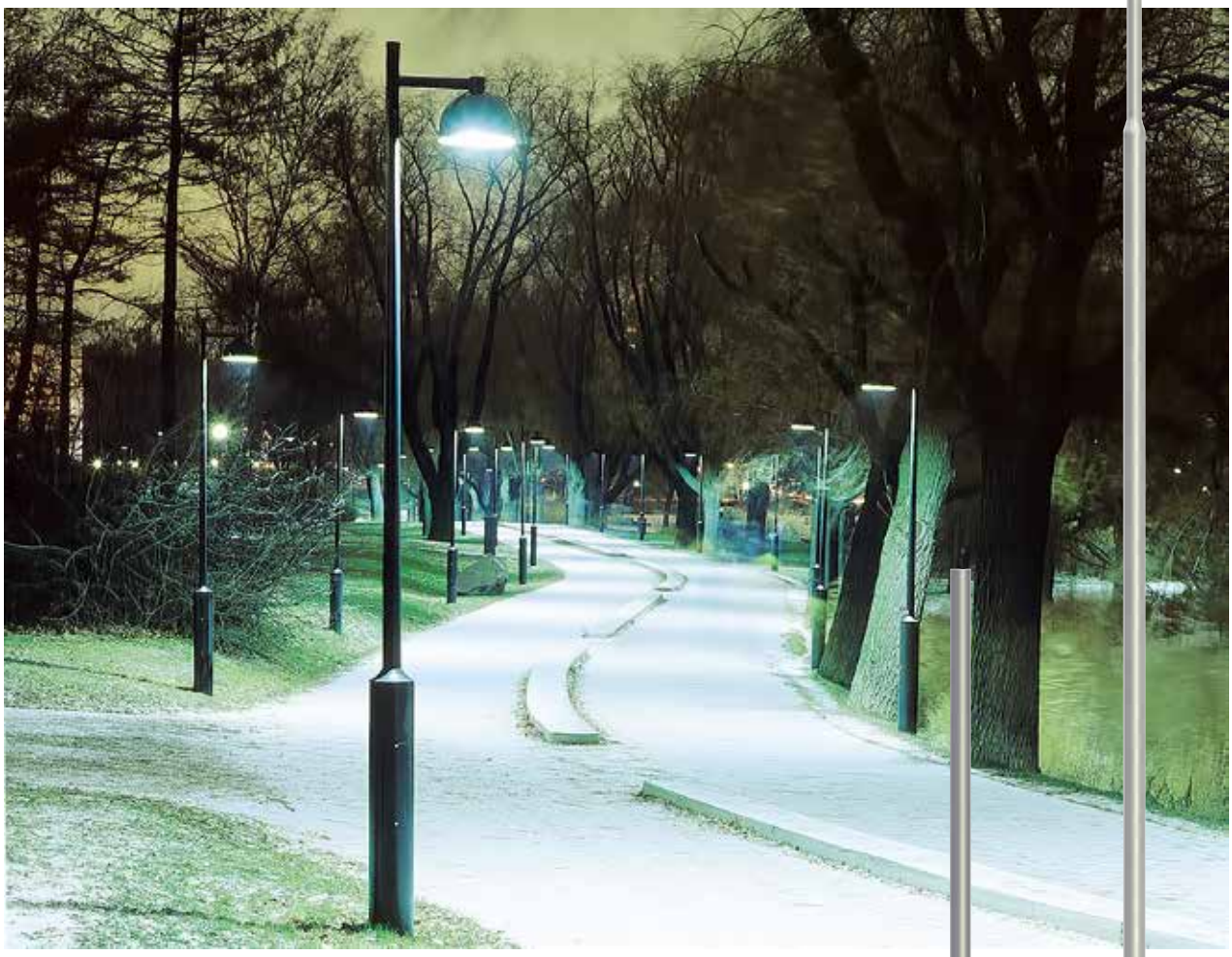


Inari, Saariselkä, Finland

1.2 STEPPED POLES

Tehomet stepped poles are manufactured from high quality low-silicon steel, using an environmentally friendly cold forming technology in step joints.
This ensures concentricity between different sized tubes and minimal environmental loading due to the low energy consumption in the manufacturing.

Kemi, Finland



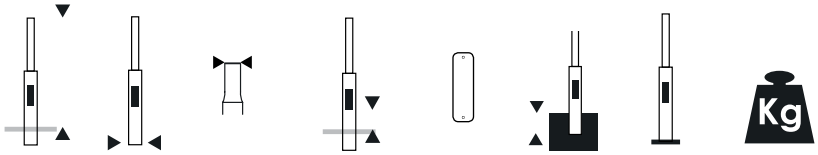
Helsinki, Finland

Stepped pole

Stepped pole
with upright arm

1.2 STRAIGHT STEPPED POLES

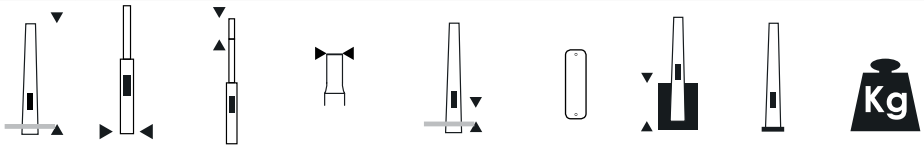
TECHNICAL DETAILS



Type	Height (m)	Base diameter (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
						Embedding (mm)	Flange	kg
A203SO	3	114	60	500	A1	500	L1	30
A204SO	4				A1			
A205SO	5				A1			
A106SO	6			950	A1			

*see p.148 Space for coupling

TECHNICAL DETAILS

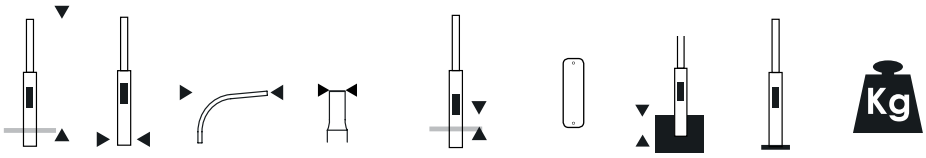


Type	Height (m)	Base diameter (mm)	Arm length (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
							Embedding (mm)	Flange	kg
S100B108O	8	139	1500	60	950	B2	600	L2	30
S100B110O	10	168	1500			B3		L3	15
S200B210O	10	168	1500			B3		L3	30
S200B112O	12	168	1500			B3		L3	30
S200C212O	12	219	1500			B4		L4	30
S200C312O	12	219	1500			B4		L4	30
S200C215O	15	219	1500			B4	1000	L4	30
S200C315O	15	273	1500			B5		L5	30

*see p.148 Space for coupling

1.2 STEPPED POLES WITH SINGLE ARM

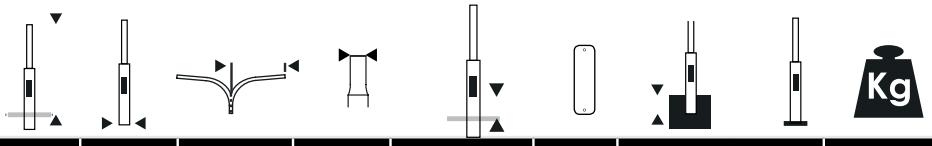
TECHNICAL DETAILS



Type	Height (m)	Base diameter (mm)	Arm reach (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
							Embedding (mm)	Flange	kg
P110B108K	8	145	1000	60	950	B3	600	L2	15
P125B108K	8	145	2500	60		B3		L2	15
P210B208K	8	161	1000	76		B4		L2	30
P110B110K	10	168	1000	60		B4		L2	15
P125B110K	10	168	2500	60		B4		L2	15
P210B210K	10	185	1000	76		B4		L3	30
P225B210K	10	185	2500	76		B4		L3	30
P210B112K	12	208	1000	76		B5		L3	30
P225B112K	12	208	2500	76		B5		L3	30
P225C212K	12	222	2500	89		B5		L4	30
P140C212K	12	222	4000	89		B5		L4	15
P225C215K	15	263	2500	89		B6	1000	L5	30

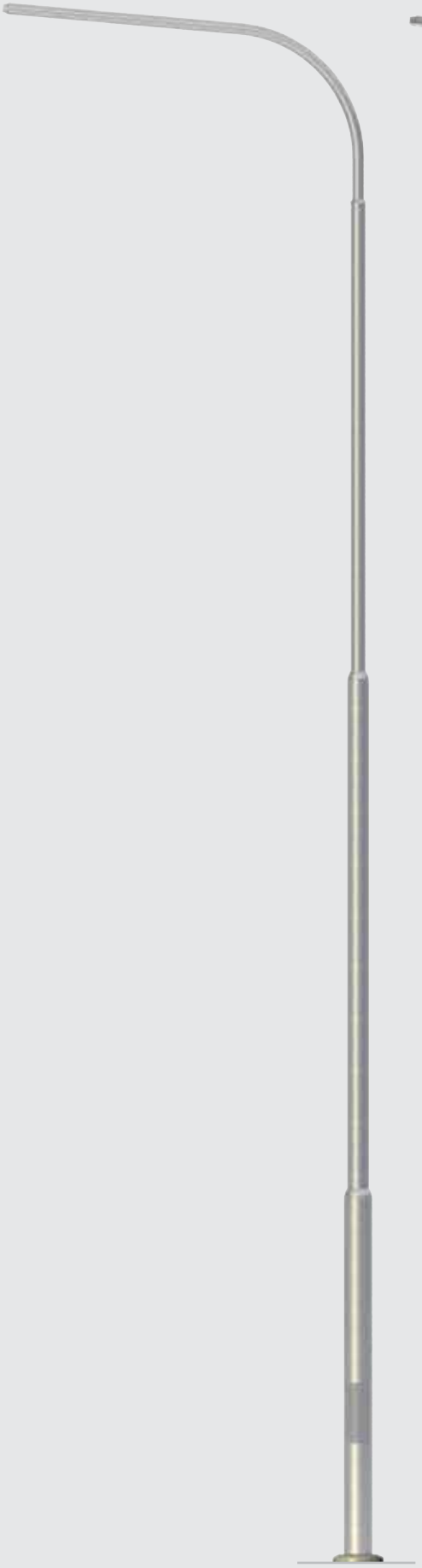
1.2 STEPPED POLES WITH DOUBLE ARM

TECHNICAL DETAILS



Type	Height (m)	Base diameter (mm)	Arm reach (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
							Embedding (mm)	Flange	kg
P110B108K	8	145	1000	60	950	B3	600	L2	15
P125B108K	8	145	2500	60		B3		L2	15
P210B208K	8	161	1000	76		B4		L2	30
P110B110K	10	168	1000	60		B4		L2	15
P125B110K	10	168	2500	60		B4		L2	15
P210B210K	10	185	1000	76		B4		L3	30
P225B210K	10	185	2500	76		B4		L3	30
P210B112K	12	208	1000	76		B5		L3	30
P225B112K	12	208	2500	76		B5		L3	30
P225C212K	12	222	2500	89		B5		L4	30
P140C212K	12	222	4000	89		B5		L4	15
P225C215K	15	263	2500	89		B6	1000	L5	30

*see p.148 Space for coupling



Stepped pole with single arm

Stepped pole with double arm

Jyväskylä, Finland

Joutseno, Finland

1.2 TECHNICAL DETAILS

Product sizing: standard EN 40-3-3

Product manufacturing: standard EN 40-5

Raw material: low-silicon steel (Si + P ≤ 0.04%)

Zinc coating: international standard EN ISO 1461 (layer thickness typically <90 µm)

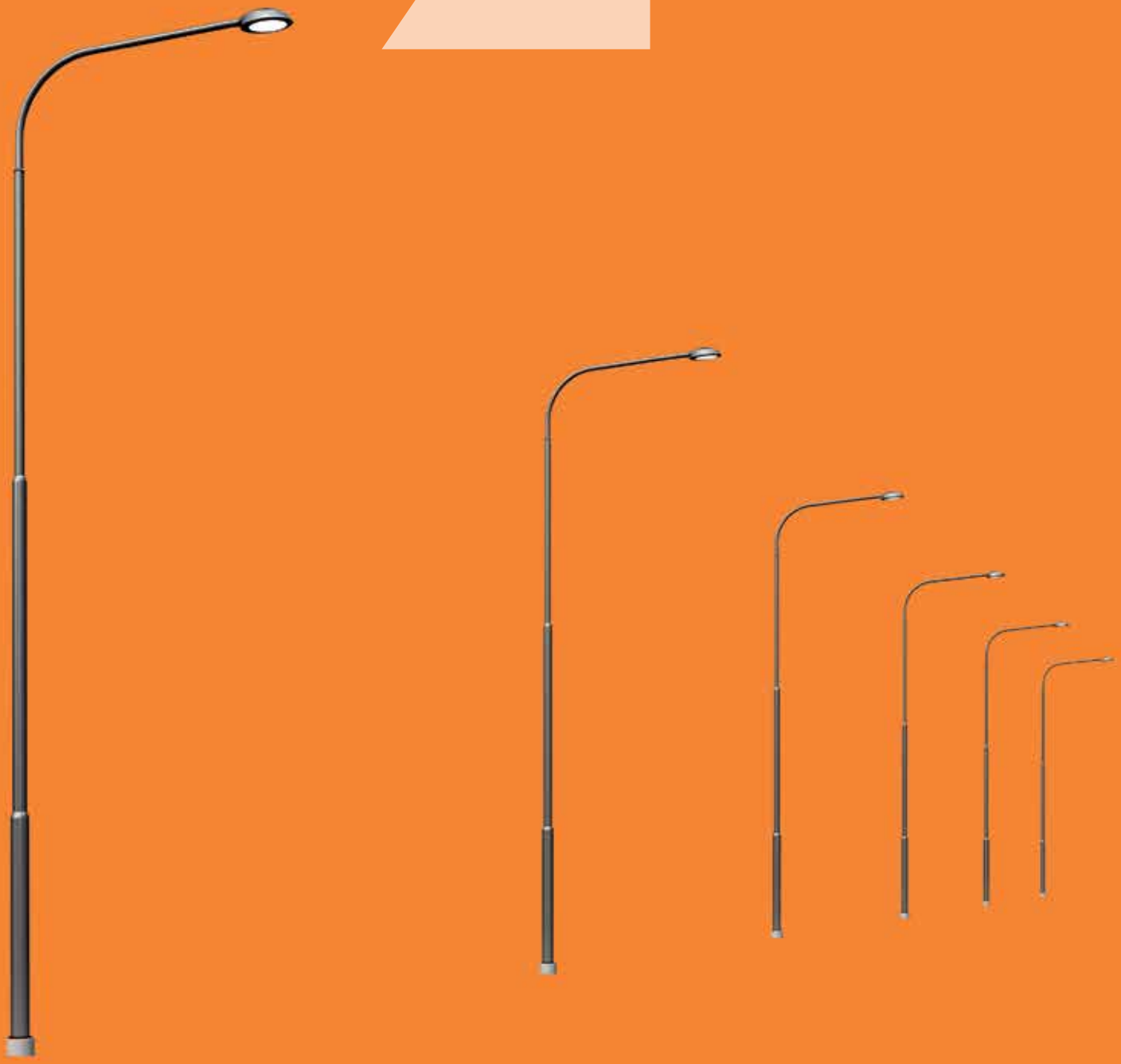
Spigot: diameter 60 mm and length 100 mm

Attachment of the arm: There are two sets of screws with 3 x 120° division at the top of the pole (not in straight stepped poles) to attach the arm easily and securely.

Hirvensalmi, Finland

Hännilänsalmi, Viitasaari, Finland

2



TEHOMET POLES

From the following pages you can find quality pole solutions for various destinations. Poles can be supplied as conical, stepped or cylindrical. Numerous distinctive configurations can be made by clever combination of arms and luminaires. Materials, such as steel, aluminium or wood, combined with various surface coatings, enable suitable lighting implementations for every surrounding and purpose.

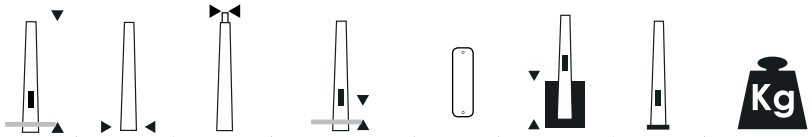
2.1 PARK LIGHTING

The Tehomet Park series offers options for effortless yet elegant park lighting. These poles are available not only in traditional hot dip galvanized steel, but also painted or plastic coated and, for example, made from aluminium.

Helsinki, Finland

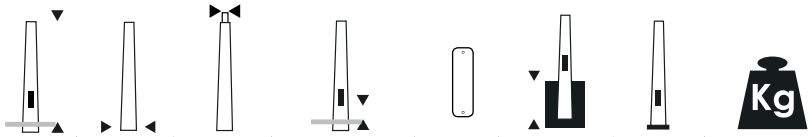
2.1 TEHOMET PARK POLES

TECHNICAL DETAILS



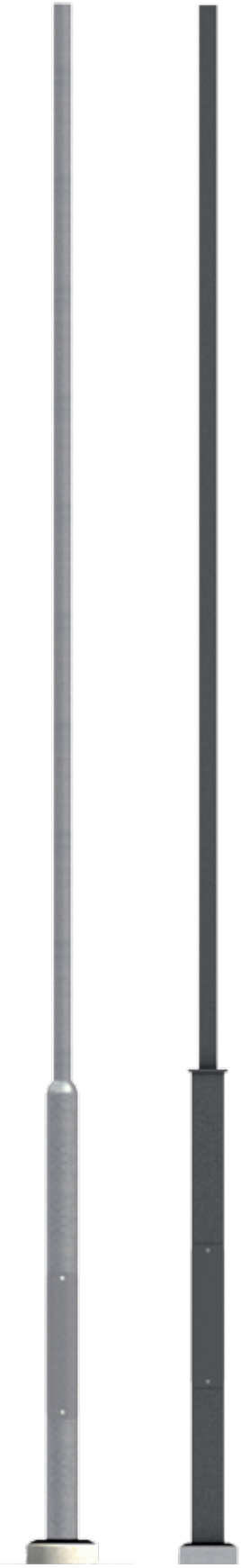
Type	Height (m)	Base diameter (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
						Embedding (mm)	Flange	kg
P3.0/108	2,5	108	60	500	A1	500	L1	30
P3.5/108	3				A1			30
P4.5/108	4				A1			30
P5.5/108	5				A1			15
P6.5/108	6				A1			15

TECHNICAL DETAILS



Type	Height (m)	Base diameter (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
						Embedding (mm)	Flange	kg
P3.0F/108	2,5	108	60	500	A1	500	L1	30
P3.5F/108	3				A1			30
P4.5F/108	4				A1			30
P5.5F/108	5				A1			15
P6.5F/108	6				A1			15

*see p.148 Space for coupling



P3.0/108
(Stepped)

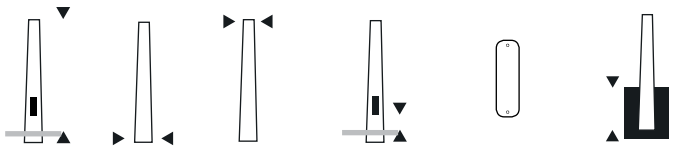
P3.0F/108
(Flanged)

Tampere, Finland

2.1 ALUMINIUM PARK POLES

The surface of aluminium poles is finished by brushing. 750mm of the base is painted with corrosion-protective paint which also protects the pole from grass cutters etc.

TECHNICAL DETAILS



Type	Height (m)	Base diameter (mm)	Top diameter (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS
						Embedding (mm)
AL3/120/60	3	120	60	400	A3	500
AL4/120/60	4					
AL5/120/60	5					
AL6/120/60	6					

*see p.148 Space for coupling

Annemasse, France

Turku, Finland

2.1 CYLINDRICAL POLES

TECHNICAL DETAILS								
Type	Height (m)	Base diameter (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
						Embedding (mm)	Flange	kg
CH4/114	4	114	60	500	A1	500	L1	30
CH5/114	5				A1			30
CH6/114	6				A1			30
CH8/139	8	139		950	A2	600	L2	30
CH10/168	10	168			A3		L3	30

*see p.148 Space for coupling

2.1 SPOTLIGHT POLES

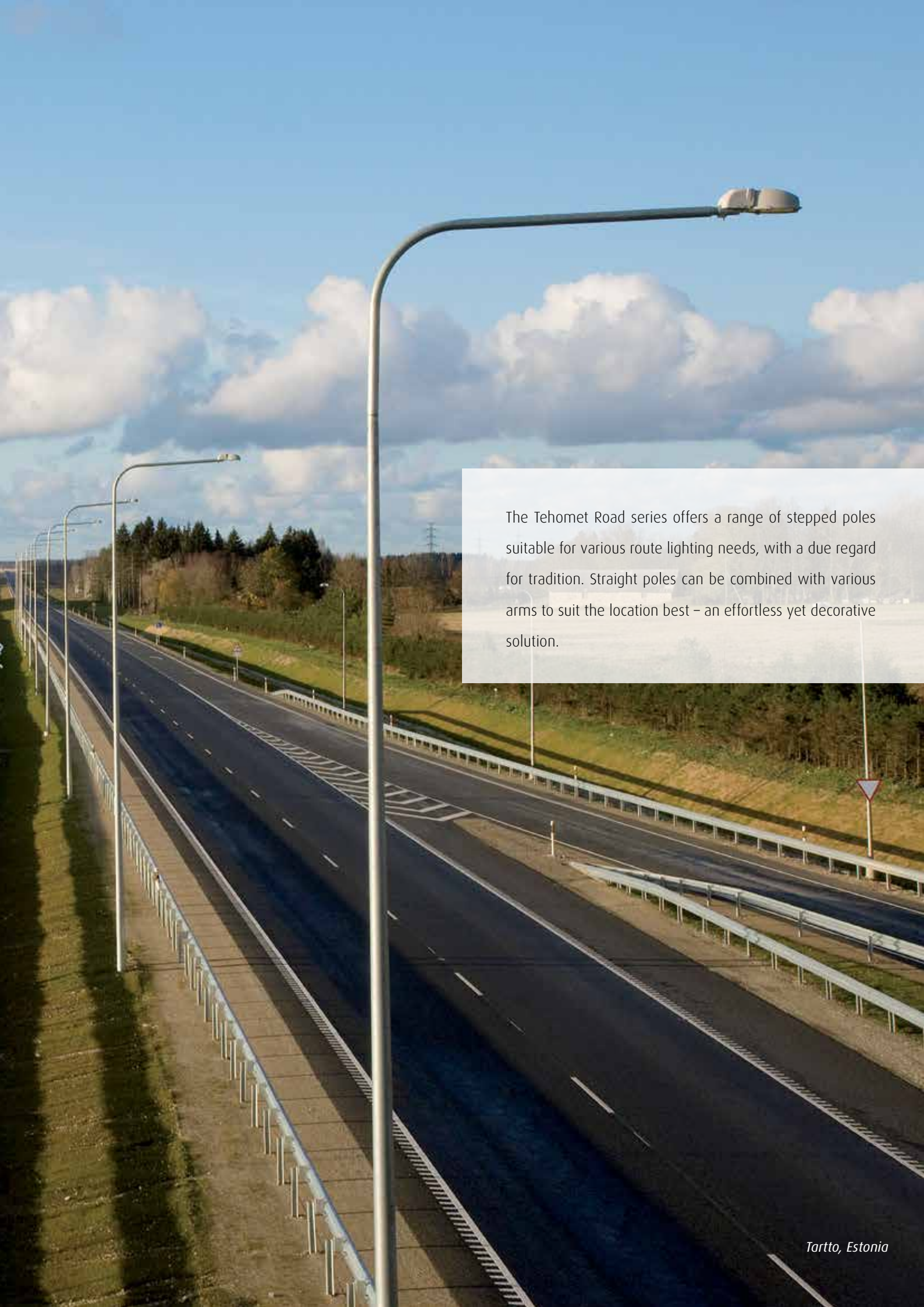
Spotlight poles are intended, for example, for architectural lighting, where the aim is to illuminate a façade or other objects from the ground. Poles are also available without a hand hole and equipped with a fixed cross arms.

TEKNISET TIEDOT									
Tyyppi	Height (m)	Base diam-eter (mm)	Top diameter (mm)	Cross arm width (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
							Embedding (mm)	Flange	kg
KVP1.0/300	1	108	60	300	300	A1	500	L1	500
KVP1.0/600	1			600					
KVP1.5/300	1,5			300					
KVP1.5/600	1,5			600					
KVP2.0/300	2			300					
KVP2.0/600	2			600					

*see p.148 Space for coupling

Helsinki, Finland

2.2 ROAD LIGHTING



The Tehomet Road series offers a range of stepped poles suitable for various route lighting needs, with a due regard for tradition. Straight poles can be combined with various arms to suit the location best – an effortless yet decorative solution.

Tartto, Estonia

Liminka, Finland

2.2 TEHOMET ROAD LIGHTING POLES

Mustasaari, Raippaluoto, Finland

TECHNICAL DETAILS								
Type	Height (m)	Base diameter (mm)	Spigot Ø (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
						Embedding (mm)	Flange	kg (max)
8S114	8	114	60	950	A1	600	L1	15
8S140	8	139			A2		L2	30
10S140	10	139			A2		L2	15
10S170	10	168			A3		L3	30
12S170	12	168			A3		L3	15
12S220	12	219		1350	A4		L4	30
14S220	14	219			A4		L4	30

*see p.148 Space for coupling

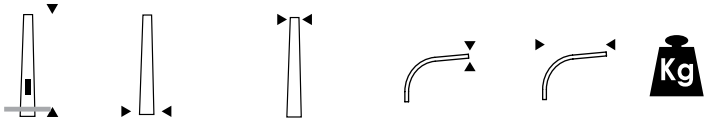
Seamless, round conical safety pole has been developed to roadside projects that have a demand of high energy absorption capabilities with occupant friendly crash behaviour. The triggered structure of Tehomet HE safety poles is constructed out of low silicon content high strength steel, providing tremendous static stability yet enabling low decelerations when high energy absorption is needed in a collision situation. Controlled crash behaviour will significantly diminish occupant injury risk.

Nokia, Finland

2.2 SAFETY POLES

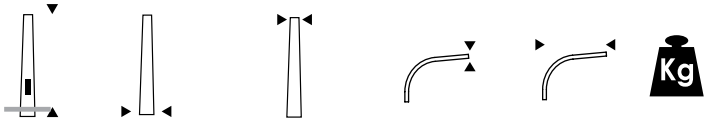
The new Tehomet HE Safety Pole raises passive roadside safety to a completely new level of appearance. Diligent product development has built up into a family of high energy absorbing safety poles (tested and approved according to EN 12767) that introduce high variety of different heights and arm/bracket configurations to match most of imaginable road and street lighting needs.

TECHNICAL DETAILS



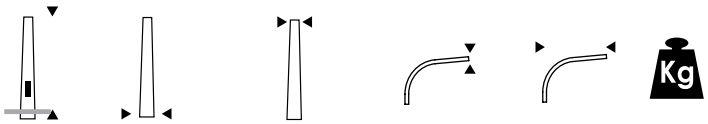
Pole type	Height (m)	Base tdiameter (mm)	Top diameter (mm)	Arm diameter (mm)	Arm outreach (m)	Weight (kg)	Safety Class (EN12767)
HE10S100	10	194	89	60	-	87	100, HE2
HE10P102					0,2	88	
HE10P110					1	90	
HE10P115					1,5	92	
HE10P120					2	93	
HE10P125					2,5	95	
HE10T102					0,2	89	
HE10T110					1	96	
HE10T115					1,5	100	
HE10T120					2	102	
HE10T125					2,5	108	

TECHNICAL DETAILS



Pole type	Height (m)	Base tdiameter (mm)	Top diameter (mm)	Arm diameter (mm)	Arm outreach (m)	Weight (kg)	Safety Class (EN12767)
HE12S100	12	219	89	60	-	111	100, HE2
HE12P102					0,2	112	
HE12P110					1	114	
HE12P115					1,5	116	
HE12P120					2	117	
HE12P125					2,5	119	
HE12T102					0,2	113	
HE12T110					1	120	
HE12T115					1,5	124	
HE12T120					2	126	
HE12T125					2,5	132	

TECHNICAL DETAILS



Pole type	Height (m)	Base tdiameter (mm)	Top diameter (mm)	Spigot Ø (mm)	Outreach (m)	Weight (kg)	Safety Class (EN12767)
HE15P102	15	244	100	60	0,2	140	100, HE2
HE15T102						141	

Tehomet Safety high energy absorbing safety poles (according to EN12767).
Partial safety class A, reference wind speed vref 21m/s. Product family will expand to cover 6 and 8 meter poles.

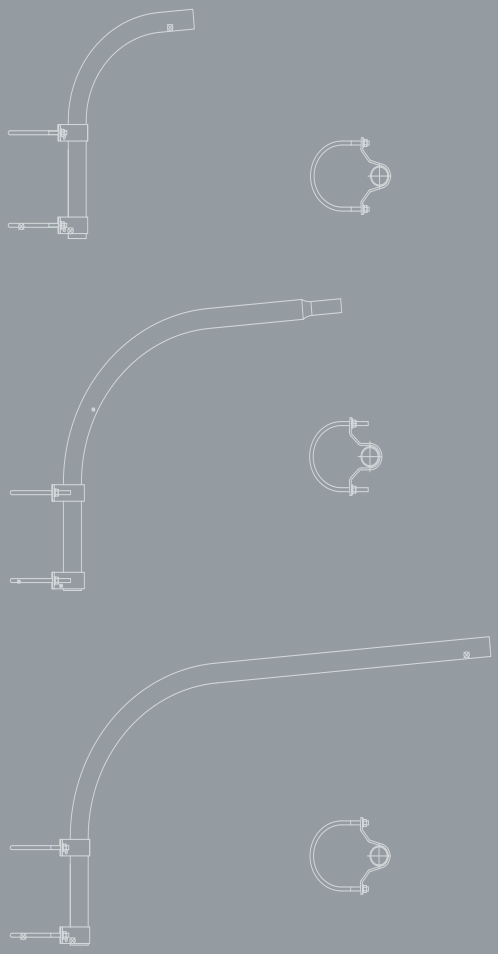
2.2 SAFETY POLES

Tehomet's crash-safe RELE safety pole is a versatile solution with its several pole shaft options. In the event of a crash, the lattice structure will absorb energy. It can be covered with a thin sheet metal cover, which makes the pole look like a traditional one. If desired, the lattice can also be left visible, thereby causing less visual obstruction. The alignment of the road can be highlighted with LED lighting, which at the same time creates a decorative lighting effect.

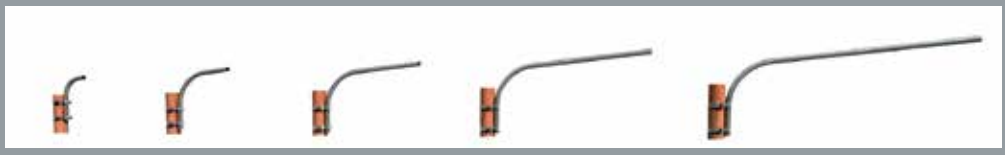
Salo, VT 1 (highway), Finland

Perniö, roundabout, Finland

2.2 WOODEN POLE ARMS



Anjalankoski, Finland



5TV30 *10TV30* *15TV30* *20TV30* *25TV30*

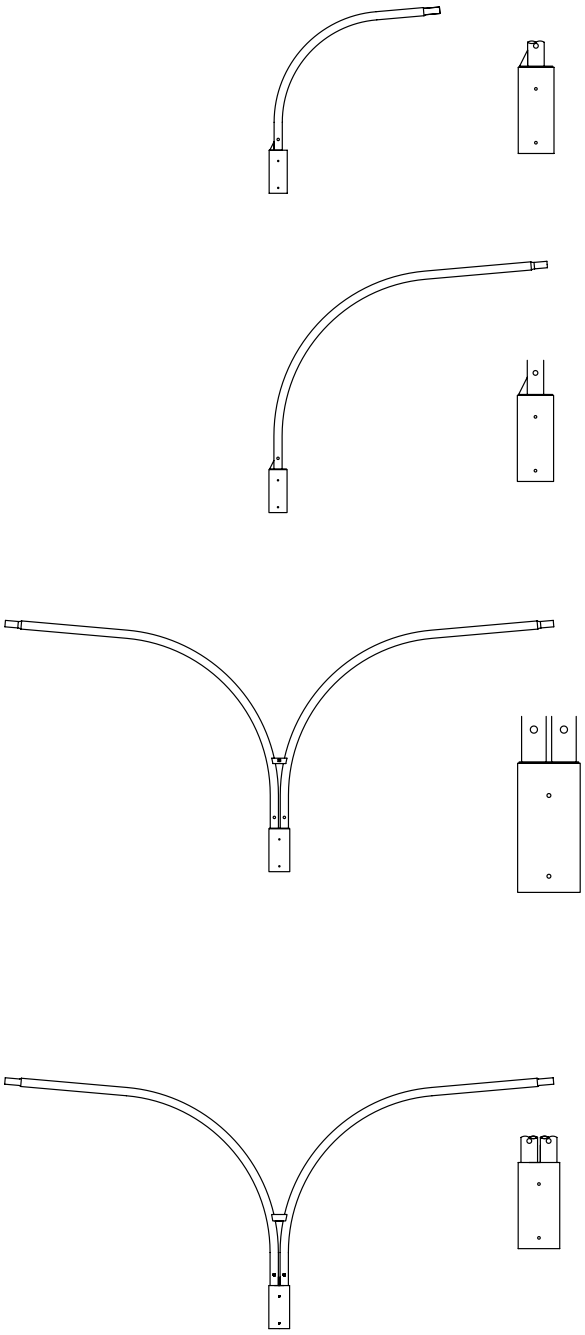
TECHNICAL DETAILS

Type	Arm reach (mm)	Arm diameter (mm)
5TV30	500	60
10TV30	1000	60
15TV30	1500	60
20TV15	2000	60
25TV15	2500	60

TECHNICAL DETAILS

Type	Arm reach (mm)	Arm diameter (mm)
11-60	600	34
11-100	1000	34
12-150	1500	34
12-200	2000	34
13-250	2500	42

2.2 WOODEN POLE ARMS



TECHNICAL DETAILS

Type	Arm reach (mm)	Arm diameter (mm)	Spigot Ø (mm)	Bush Ø
P210E/168	1000	76	60	Ø168
P215E/168	1500	76	60	Ø168
P220E/168	2000	76	60	Ø168
P225E/168	2500	76	60	Ø168
T210E/193	1000	76	60	Ø193
T220E/193	2000	76	60	Ø193
T225E/193	2500	76	60	Ø193

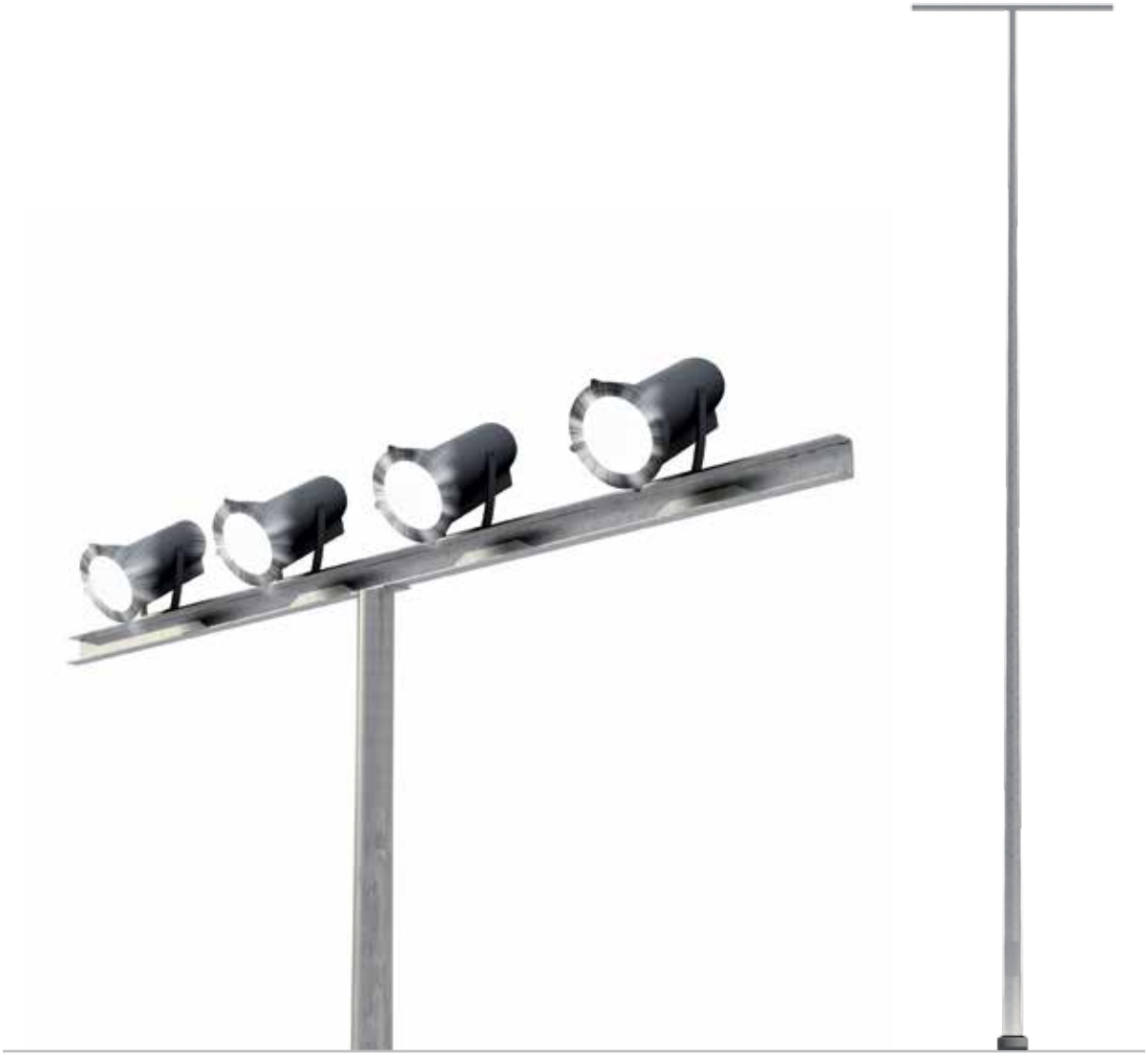
Iisalmi, Finland

2.3 AREA LIGHTING

Tampere, Finland

The sense of a safe and cosy environment can be created by using Tehomet Area lighting poles. Whether the lighting is for a small parking lot or an international sports arena or marina, we are able to supply products from 10 metres to 40 metres high.

2.3 CONICAL POLES WITH CROSS ARM



TECHNICAL DETAILS

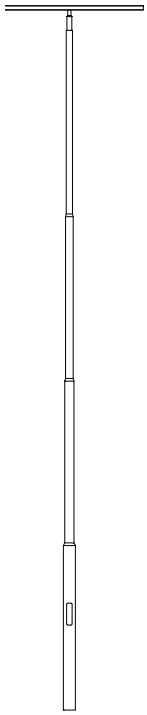
Type	Height (m)	Base diameter (mm)	Cross arm width (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
						Embedding (mm)	Flange	kg
KH10TO15/89	10	198	1500	950	B5	600	L3	60
KH12TO15/89	12	222	1500		B5		L4	60
KH12TO27/89	12	222	2700		B5		L4	100
KH14TO15/89	14	263	1500		B6	1000	L5	60
KH14TO27/89	14	263	2700		B6		L5	100
KH15TO15/89	15	263	1500		B6		L5	60
KH15TO27/89	15	263	2700		B6		L5	100

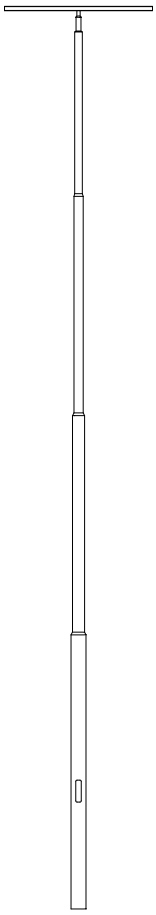
*see p.148 Space for coupling

Mikkeli, Finland

Joensuu, Finland

2.3 STEPPED POLES WITH CROSS ARM





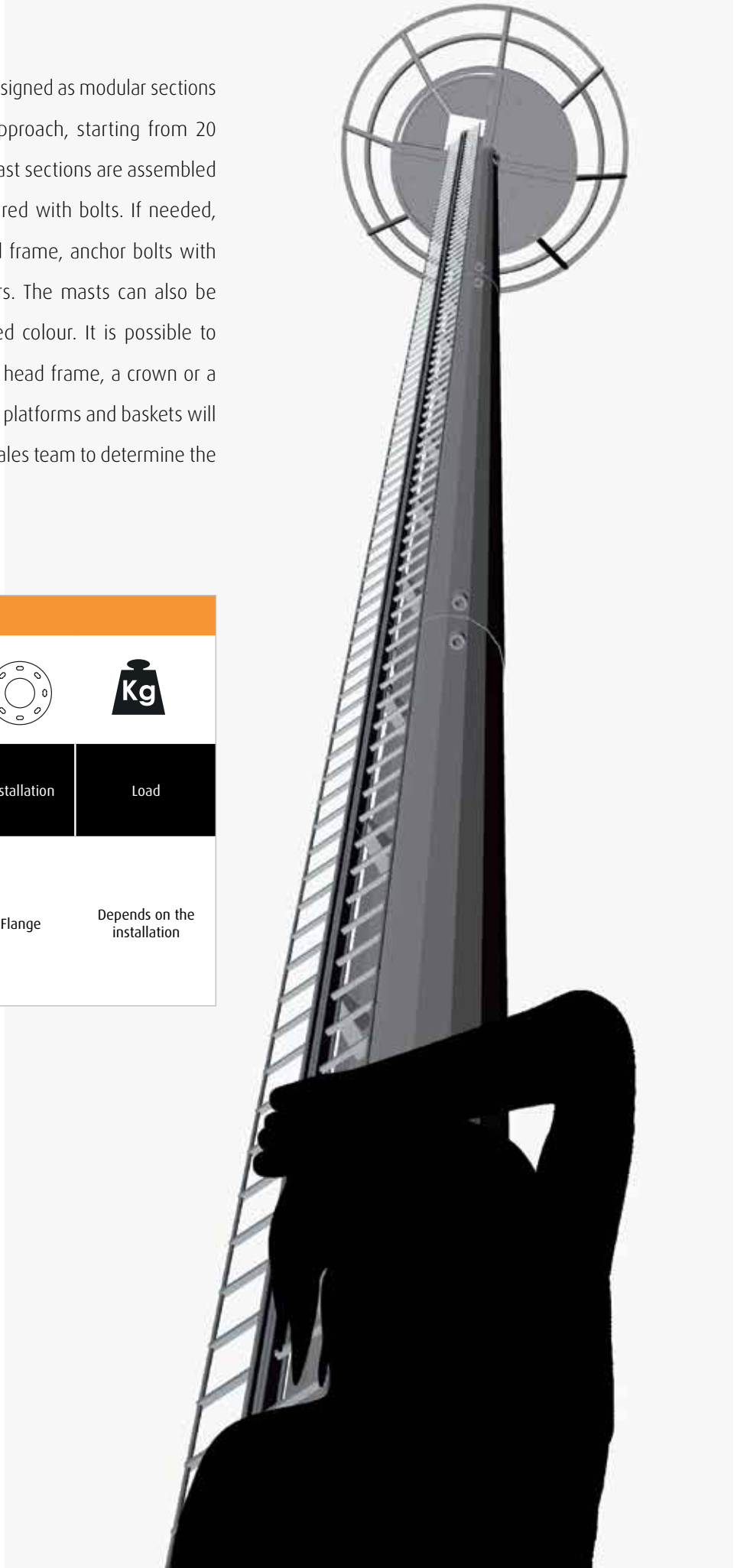
TECHNICAL DETAILS

Type	Height (m)	Base diameter (mm)	Cross arm width (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS		Max load
						Embedding (mm)	Flange	kg
H12TO15	12	219	1500	950	A4	600	L4	60
H12TO27	12	219	2700	950	A4	600	L4	100
H14TO15	14	273	1500	950	A5	1000	L5	60
H14TO27	14	273	2700	950	A5	1000	L5	100
H15TO15	15	273	1500	950	A5	1000	L5	60
H15TO27	15	273	2700	950	A5	1000	L5	100

*see p.148 Space for coupling

2.3 CONICAL HIGH MASTS

Tehomet conical masts are designed as modular sections with a customer-oriented approach, starting from 20 metres to over 40 metres. Mast sections are assembled on site using slip joints secured with bolts. If needed, the delivery includes a head frame, anchor bolts with templates and safety ladders. The masts can also be supplied painted in a desired colour. It is possible to equip the mast with a tilted head frame, a crown or a traditional cross arm. Service platforms and baskets will be tailor-made. Contact our sales team to determine the best suitable solution!



TECHNICAL DETAILS			
Type	Height (m)	Installation	Load
KH20	20	Flange	Depends on the installation
KH25	25		
KH30	30		
KH35	35		
KH40	40		

Vaasa, Finland

2.3 STEPPED HIGH MASTS

Kotka, Finland

Tehomet stepped masts are manufactured from round, high quality steel tube. Depending on the customer's needs, they can be made from 20 metres to over 40 metres high. The parts of the mast are connected by screw joints, which means that installation is quick and effortless. If needed, the delivery includes a head frame, anchor bolts with templates and safety ladders. The masts can also be supplied painted in a desired colour. It is possible to equip the mast with a crown or a traditional cross arm. Service platforms and baskets will be tailor-made. Contact our sales team to determine the best suitable solution!

TECHNICAL DETAILS			
Type	Height (m)	Installation	Load
OH20	20	Flange	Depends on the installation
OH25	25		
OH30	30		
OH35	35		
OH40	40		

Helsinki, Finland

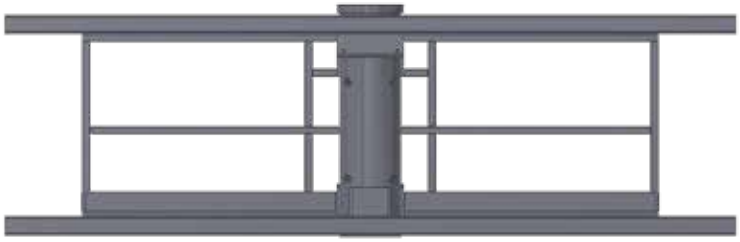
2.3 MAST ACCESSORIES - CROSS ARMS

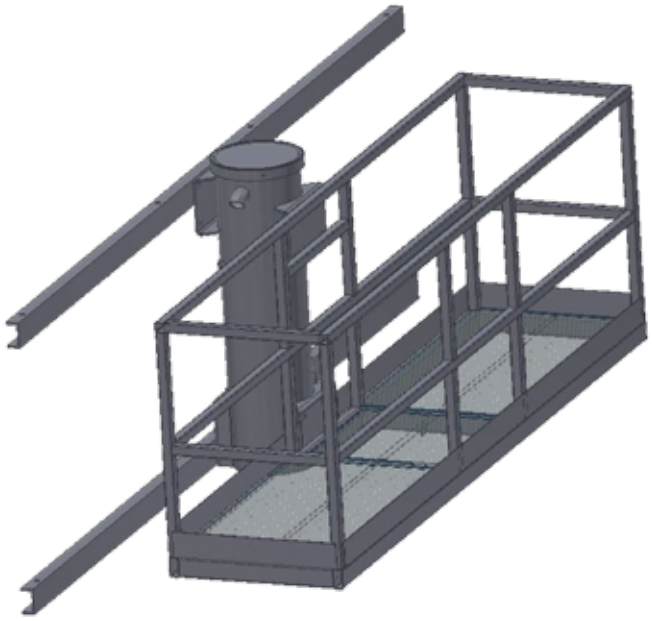
Ring arm

Multiple cross arms

2.3 MAST ACCESSORIES - SERVICE PLATFORM

A service platform facilitates service operations in locations where it is not possible to use lifting equipment.





2.3 MAST ACCESSORIES - SAFETY LADDERS

A safe way to service and maintain the floodlights is to use ladders with a fall arrest system combined with a service platform. It is possible to equip the ladders with, for example, an anti-climb device and a resting platform.

Kuopio, Finland

Kotka, Finland

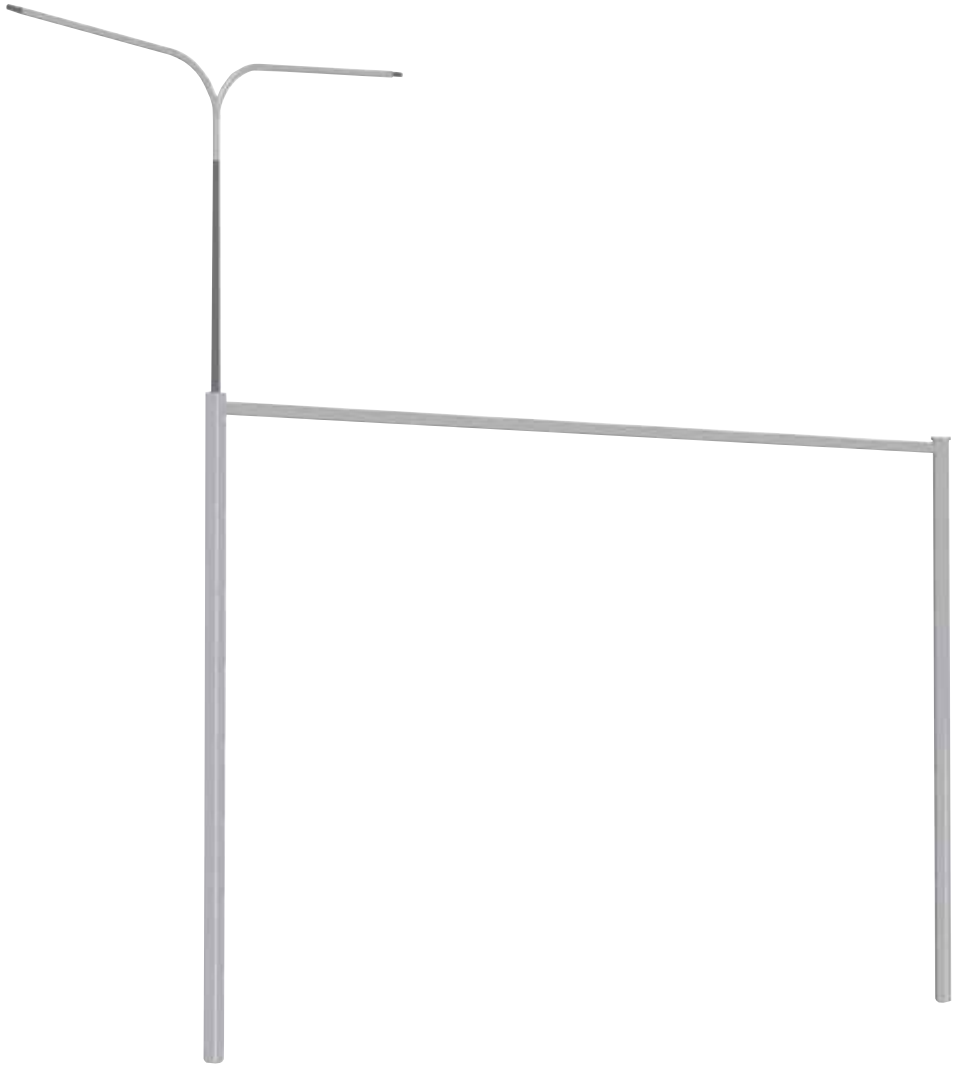
Tartto, Estonia

2.4 GUIDANCE

Besides lighting, guidance is also an important part of traffic infrastructure. A safe, clear and functional traffic environment can be built with the products presented in this section.

Espoo, Finland

2.4 TRAFFIC LIGHT POLES



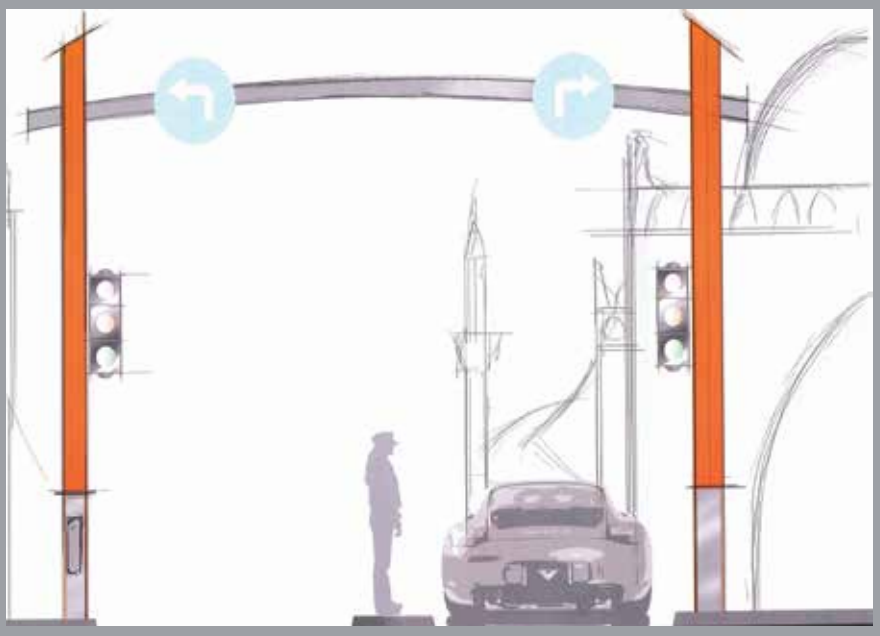
TECHNICAL DETAILS

Type	Height (m)	Base diameter (mm)	Hand hole distance (mm)	Hand Hole ID*	INSTALLATION OPTIONS	
					Embedding (mm)	Flange
LV4000	3,5	114	1200	C1	500	L1
LV4500	4		1200		500	L1
LV6000	5,5		1200		500	L1

*see p.148 Space for coupling

2.4 TRAFFIC PORTALS

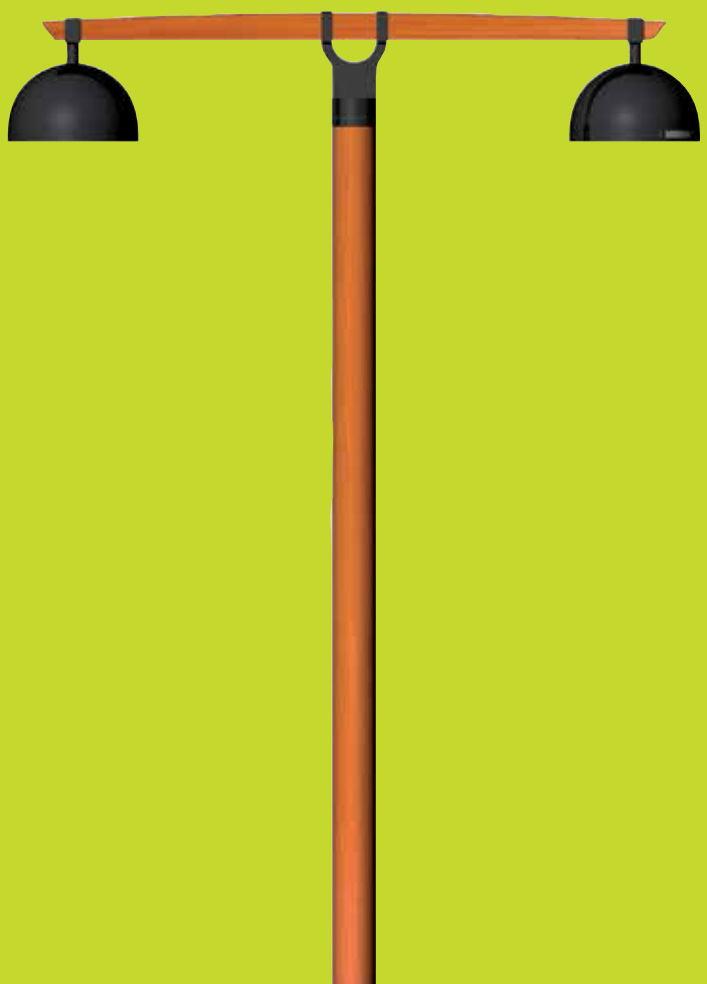
We design and manufacture traffic portals according to national model drawings and offer a range of decorative portals for traffic lights.



Helsinki. Finland

Espoo, Finland

3



TEHOMET WOODEN POLES

Tehomet's extensive pole collection also includes wooden lighting poles. The environmentally friendly wooden pole brings a familiar material to streets and parks alongside the traditional steel pole.

3.1 WOOD

The use of wood adds a multitude of shapes and possibilities to lighting poles. The visible wood grain and surface texture make a lighting pole manufactured from pine a distinctive product that respects tradition. The excellent design characteristics and surface finishing options of wood result in countless product variations.

Round conical

PALLAS

TECHNICAL DETAILS • PALLAS PARK

Height (m)	Top Ø (mm)	Base Ø (mm)	Base height (mm)	Space for coupling (mm)				Flange (mm)		Embedding (mm)
				Height	Width	Distance	Internal dimensions	Bolt spacing	Width	Concrete foundation
4	90	140	1300	400	85	500	90 x 85	200	270	500
5										
6										

TECHNICAL DETAILS • PALLAS

Height (m)	Top Ø (mm)	Base Ø (mm)	Base height (mm)	Space for coupling (mm)				Flange (mm)		Embedding (mm)
				Height	Width	Distance	Internal dimensions	Bolt spacing	Width	Concrete foundation
5	100	168	1400	400	85	500	120 X 85	200	270	500
6										
7		193					140 X 85	300	400	600
8										

The luminaire is installed on top of the pole in Park models; decorative arms can be used in other models.

The spigot options are the same in every wooden pole model.

Spigot options

(mm)
Ø 60 x 70
Ø 60 x 100
Ø 76 x 70
Ø 76 x 100

Mesnil-Esnard, France

Valkenburg, Netherlands

INARI

Round

TECHNICAL DETAILS • INARI PARK

Height (m)	Top Ø (mm)	Base Ø (mm)	Base height (mm)	Space for coupling (mm)				Flange (mm)		Embedding (mm)
				Height	Width	Distance	Internal dimensions	Bolt spacing	Width	Concrete foundation
4	140	140	1300	400	85	500	90 x 85	200	270	500
5										
6										

TECHNICAL DETAILS • INARI

Height (m)	Top Ø (mm)	Base Ø (mm)	Base height (mm)	Space for coupling (mm)				Flange (mm)		Embedding (mm)
				Height	Width	Distance	Internal dimensions	Bolt spacing	Width	Concrete foundation
6	168	168	1400	400	85	500	120 X 85	200	270	500
7								300	400	600
8	193	193					140 X 85			

The luminaire is installed on top of the pole in Park models; decorative arms can be used in other models.

3.3 WOOD

Square

RUKA

TECHNICAL DETAILS • RUKA PARK with door in the wood											
Height (m)	Top Ø (mm)	Base Ø (mm)	Base height (mm)	Space for coupling (mm)				Flange (mm)		Embedding (mm)	
				Height	Width	Distance	Internal dimensions	Bolt spacing	Width	Concrete foundation	Root Ø
4	140	140	400	400	85	500	90 x 85	200	270	according to foundation to be used	114
5											
6											

TECHNICAL DETAILS • RUKA											
Height (m)	Top Ø (mm)	Base Ø (mm)	Base height (mm)	Space for coupling (mm)				Flange (mm)		Embedding (mm)	
				Height	Width	Distance	Internal dimensions	Bolt spacing	Width	Concrete foundation	Root Ø
4	140	140	1400	400	85	500	100 x 85	200	270	according to foundation to be used	114
5											
6	160	160					120 x 85	300	400		140
7											
8	180	180					140 x 85				168

The luminaire is installed on top of the pole in Park models; decorative arms can be used in other models.

Joutseno, Finland

Sulkava, Finland

Square conical

KOLI

TECHNICAL DETAILS • KOLI PARK with door in the wood

Height (m)	Top Ø (mm)	Base Ø (mm)	Base height (mm)	Space for coupling (mm)				Flange (mm)		Embedding (mm)	
				Height	Width	Distance	Internal dimensions	Bolt spacing	Width	Concrete foundation	Root diameter Ø
4	80	140	400	400	85	500	90 x 85	200	270	according to foundation to be used	114
5											
6											

TECHNICAL DETAILS • KOLI

Height (m)	Top Ø (mm)	Base Ø (mm)	Base height (mm)	Space for coupling (mm)				Flange (mm)		Embedding (mm)	
				Height	Width	Distance	Internal dimensions	Bolt spacing	Width	Concrete foundation	Root diameter Ø
5	120	160	1400	400	85	500	100 x 85	200	270	according to foundation to be used	140
6											
7		180						300	400		168
8											

The luminaire is installed on top of the pole in Park models; decorative arms can be used in other models.

3.5 WOOD

16-sided conical

KEVO

TECHNICAL DETAILS • KEVO PARK

Height (m)	Top Ø (mm)	Base Ø (mm)	Base height (mm)	Space for coupling (mm)				Flange (mm)		Embedding (mm)
				Height	Width	Distance	Internal dimensions	Bolt spacing	Width	Concrete foundation
4	90	140	1300	400	85	500	90 x 85	200	270	500
5										
6										

TECHNICAL DETAILS • KEVO

Height (m)	Top Ø (mm)	Base Ø (mm)	Base height (mm)	Space for coupling (mm)				Flange (mm)		Embedding (mm)
				Height	Width	Distance	Internal dimensions	Bolt spacing	Width	Concrete foundation
5	100	168	1400	400	85	500	120 X 85	200	270	500
6										
7		193					140 X 85	300	400	600
8										

The luminaire is installed on top of the pole in Park models; decorative arms can be used in other models.

Lahti, Finland

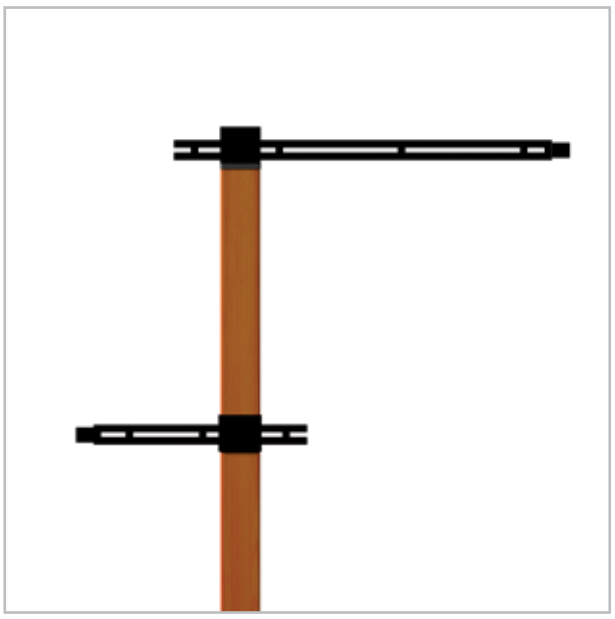
ARMS FOR WOODEN POLES

KOSKELO

LOKKI

When it comes to bigger Tehomet wooden poles, different sizes and designs of arms can be installed according to needs and the milieu. Park poles are intended for post top installations.

PÄÄSKY

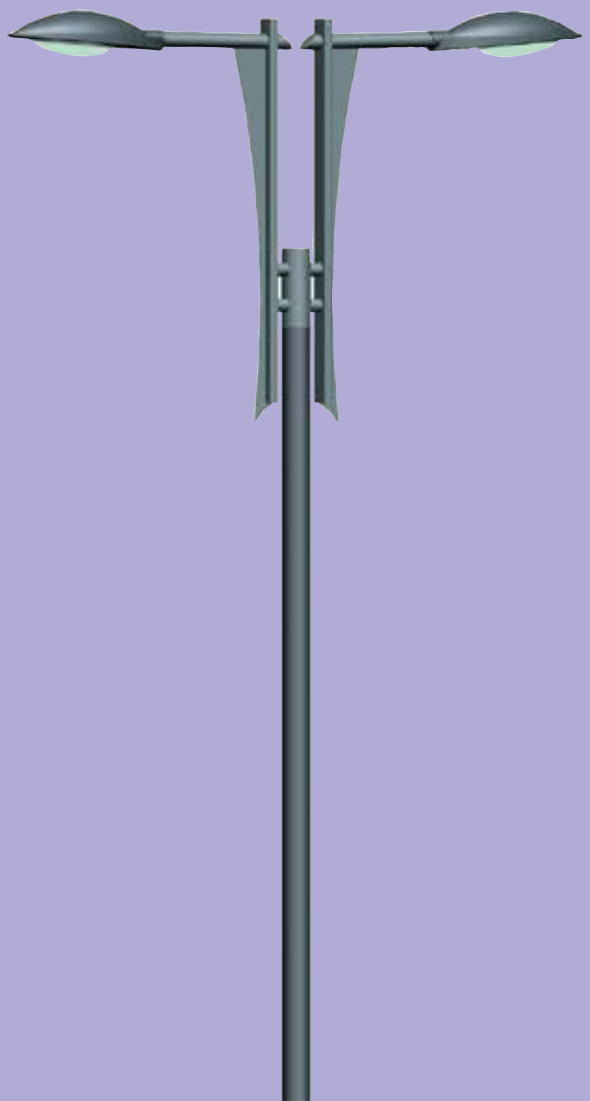


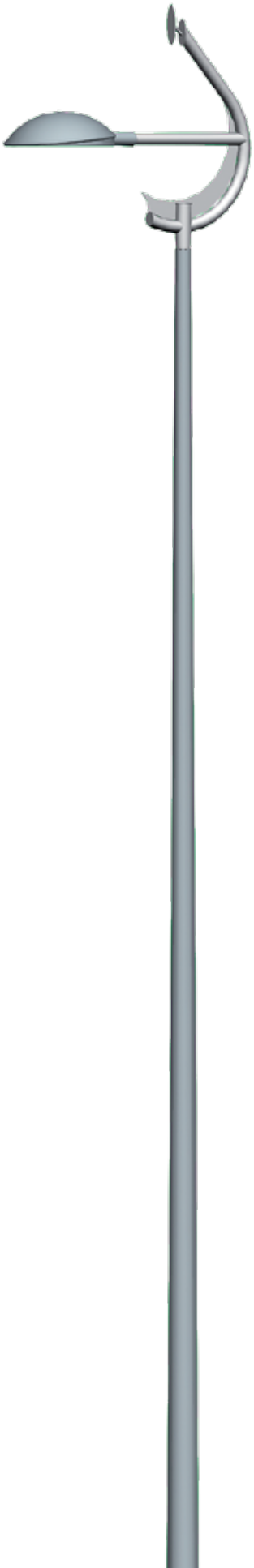
TIKKA

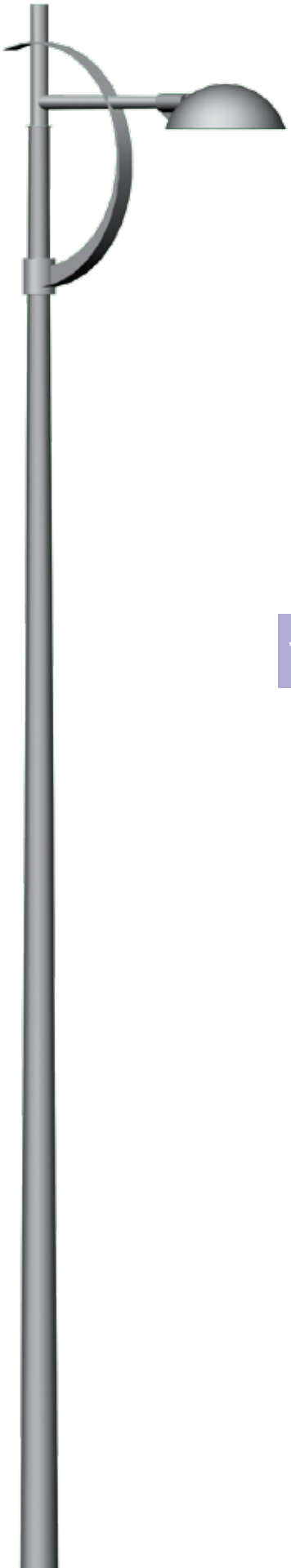
Arm reaches 600mm and 1200mm

Lahti, Finland

4

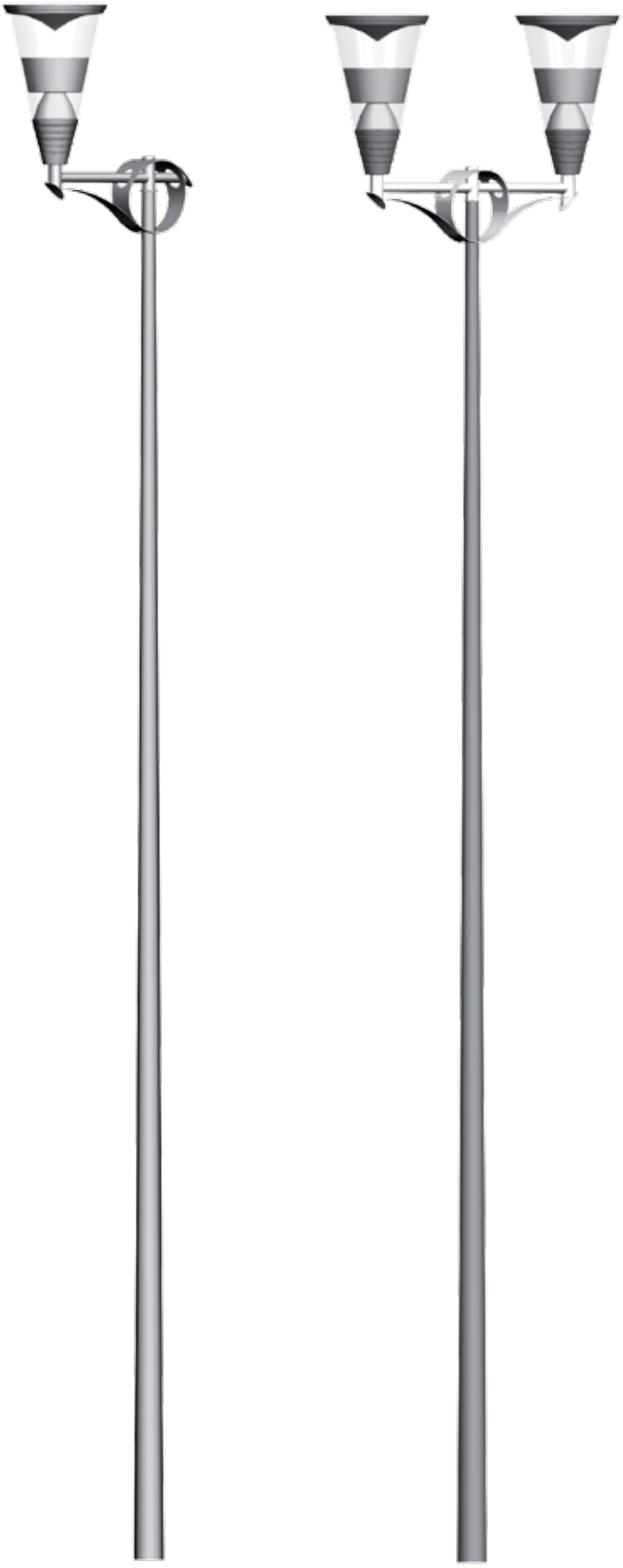






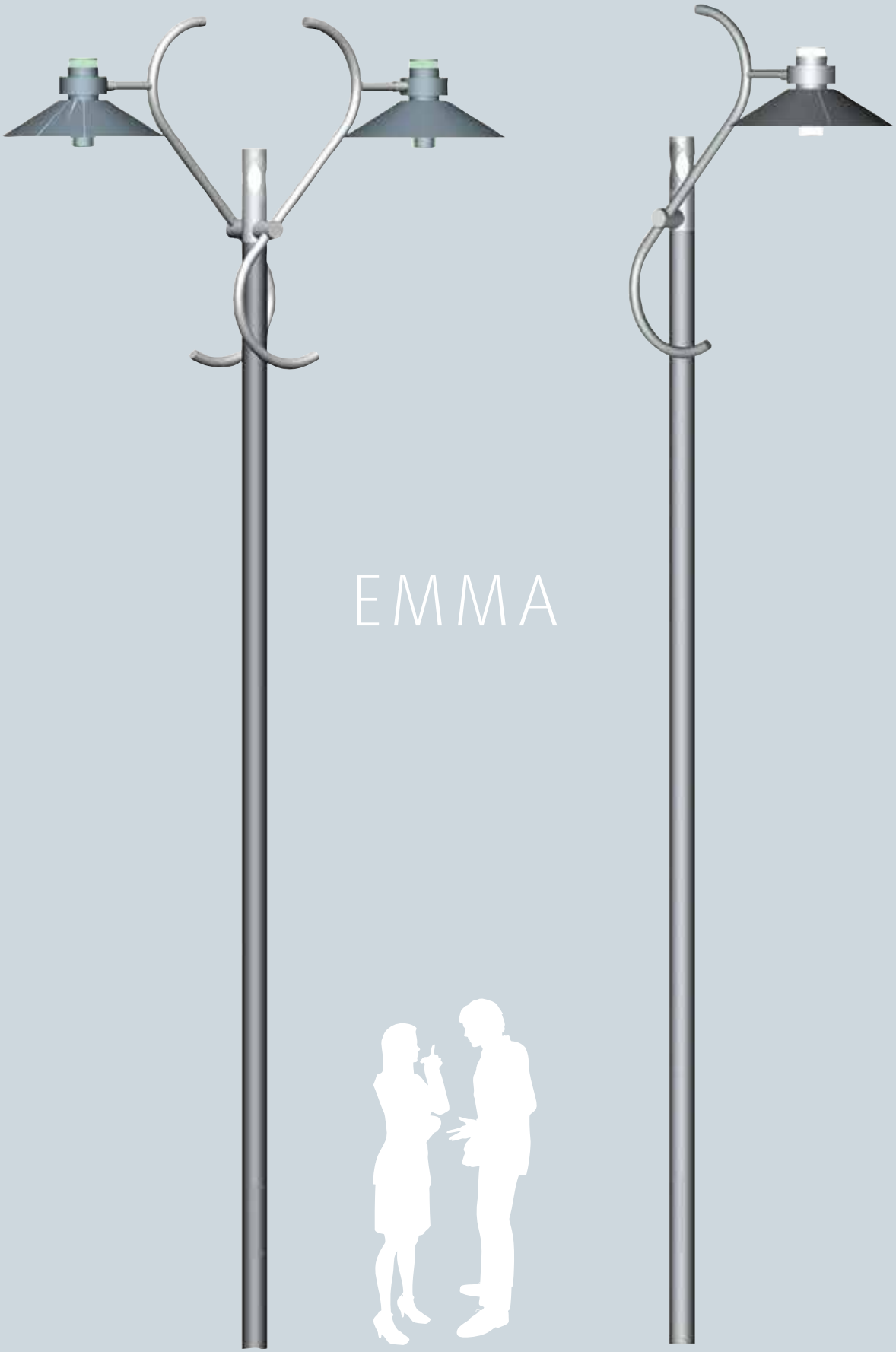
TEHOMET DECO MODELS

The Tehomet Deco series offers a large variety of intriguing possibilities for individual lighting in public spaces. The material alternatives are steel, wood, aluminium and fascinating combinations of them.

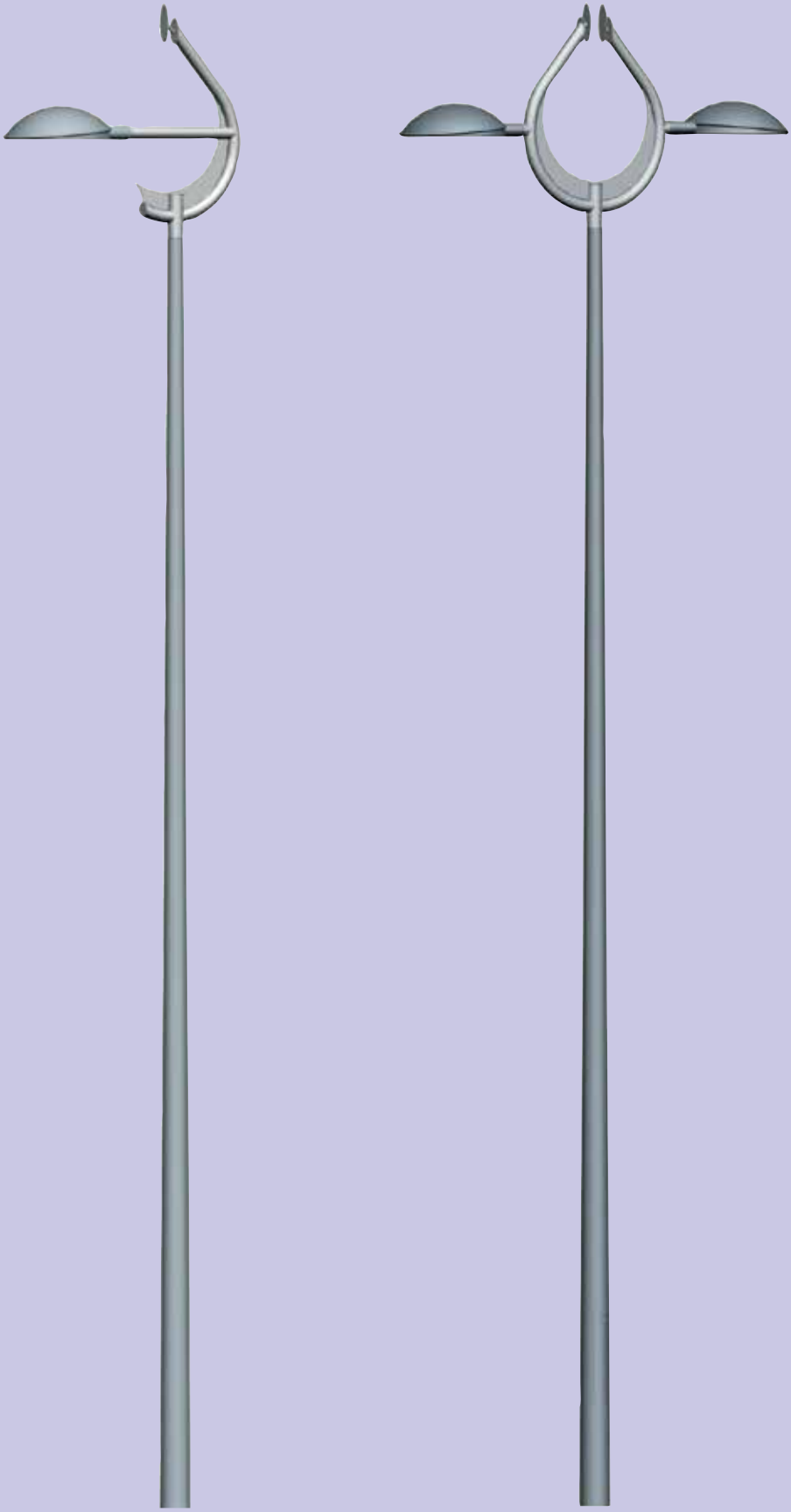


GANNET

Steel as a lighting pole material ensures excellent durability and long lifespan. Different coating options not only make a pole more durable, but also improve pole's appearance and uniqueness.

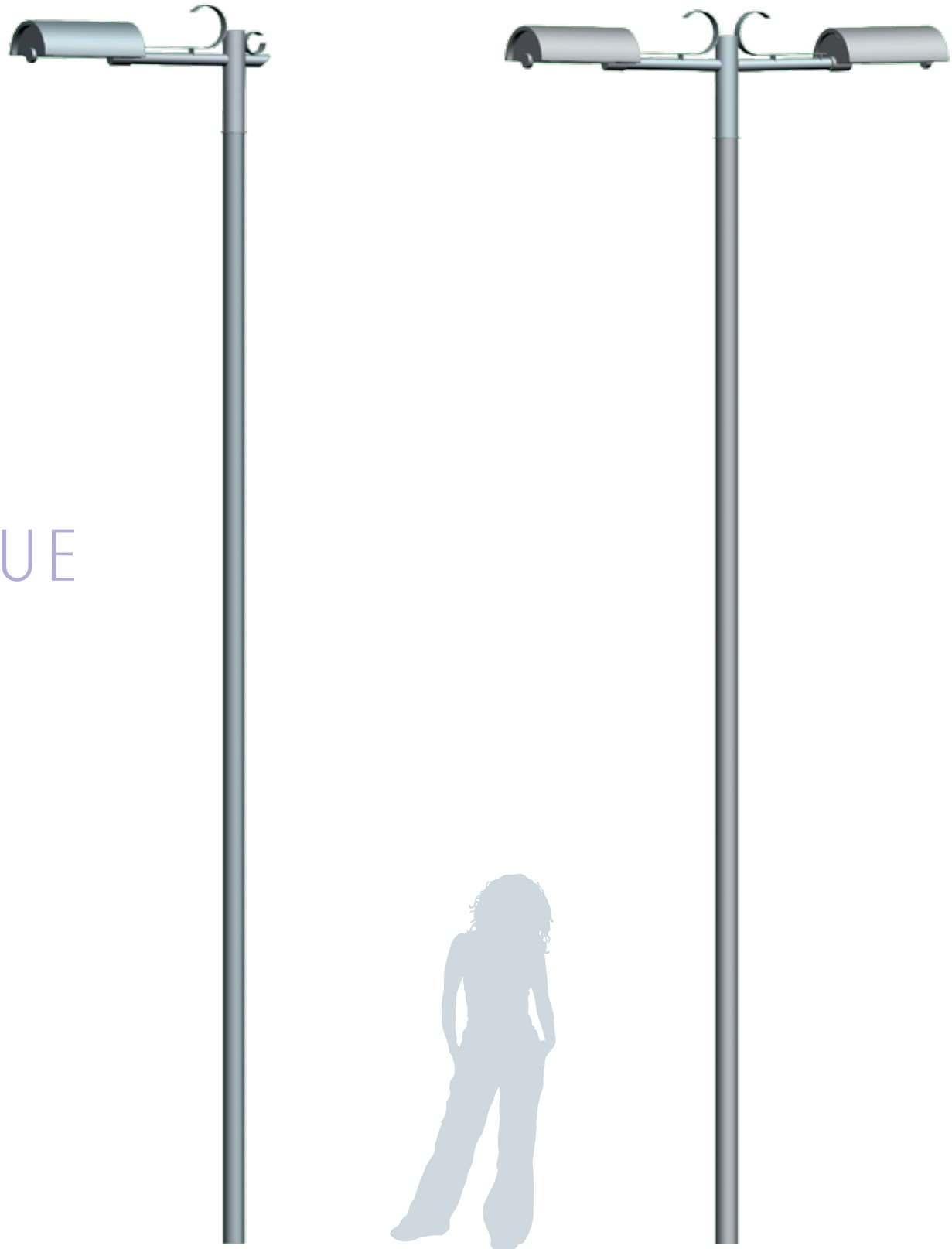


EMMA

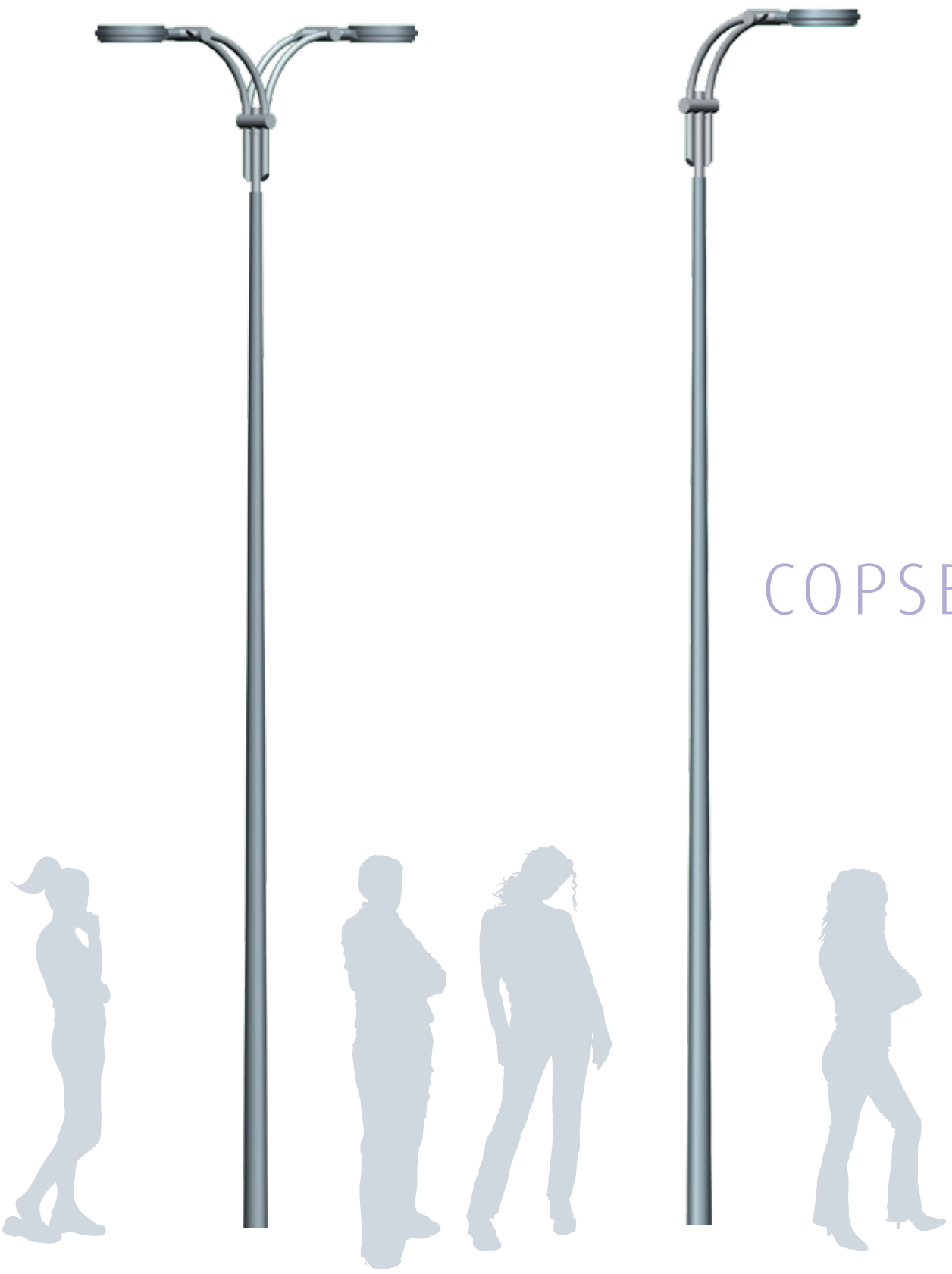


TULIP

CENTIMO

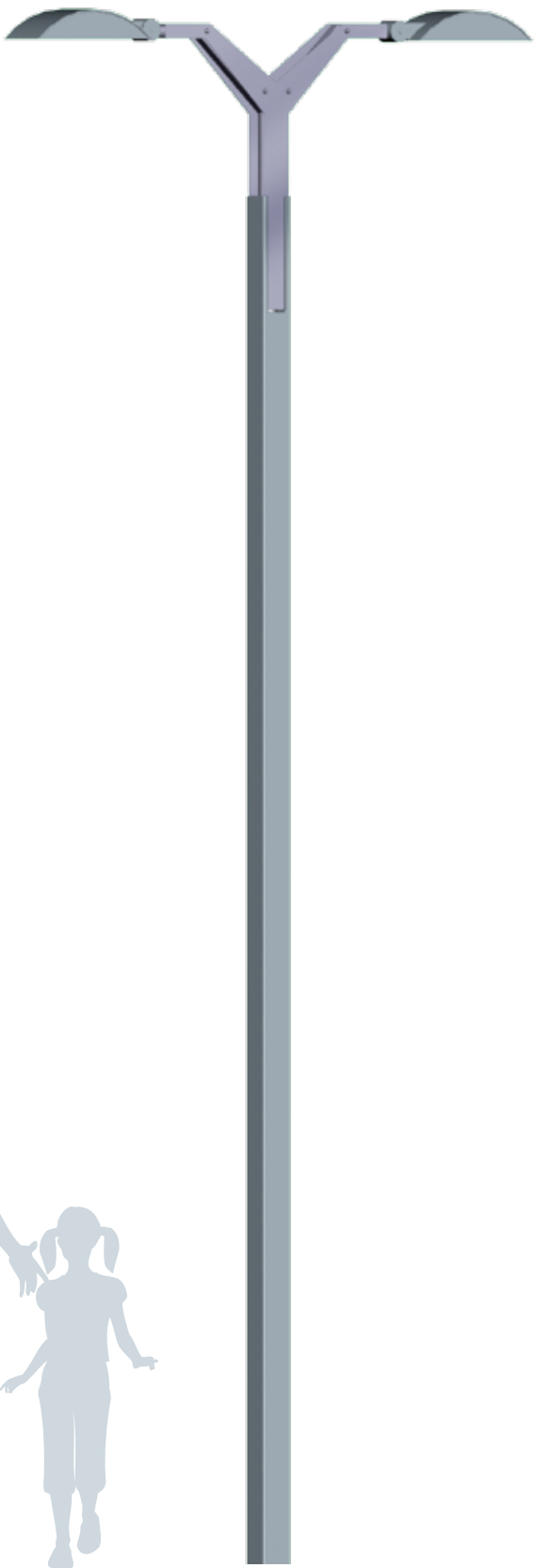


DUE



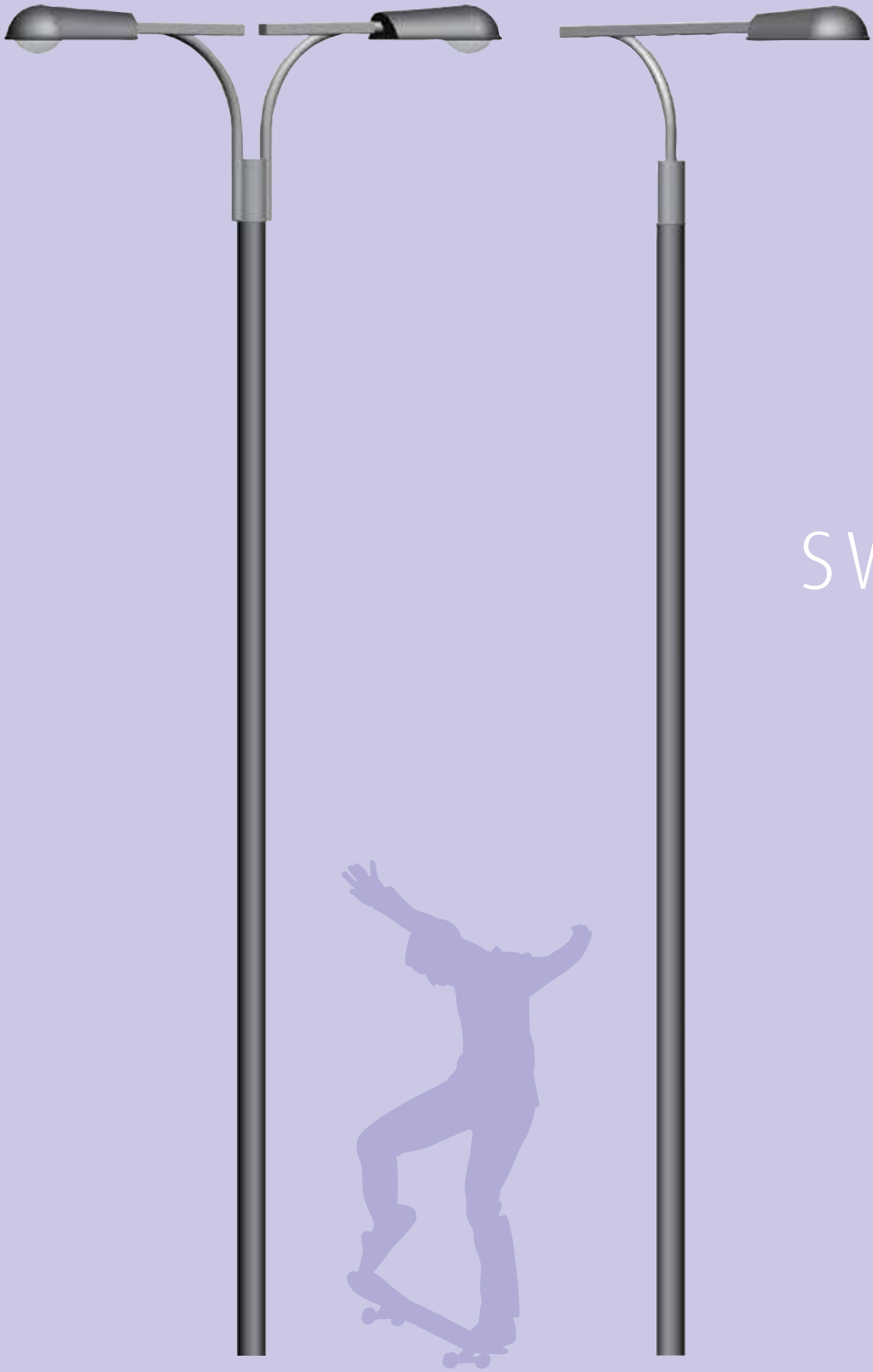
COPSE

LINEA



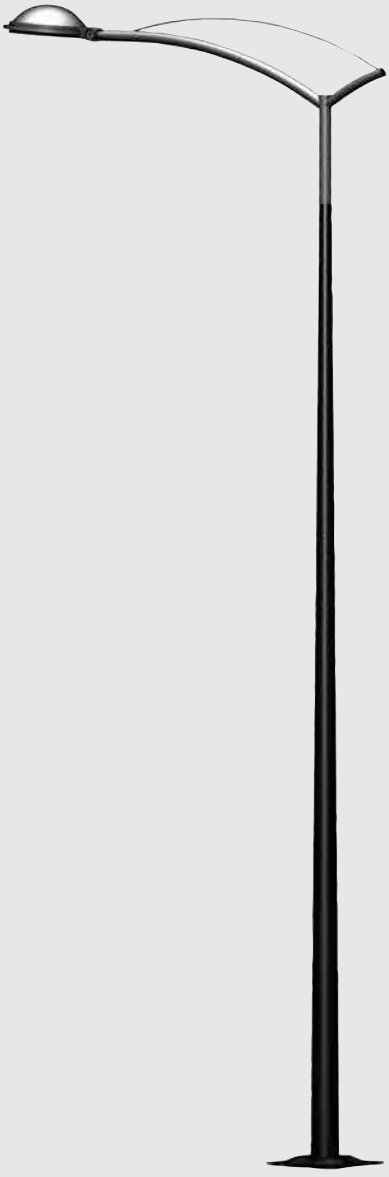
INSTEP

KARDAS



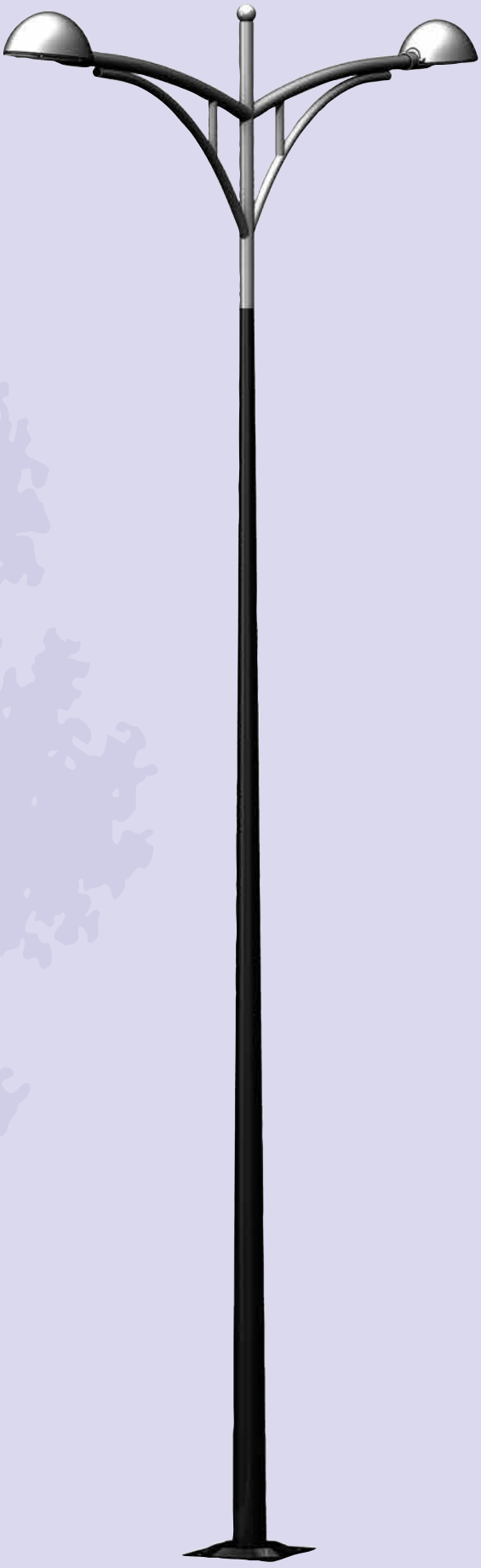
SWON 111

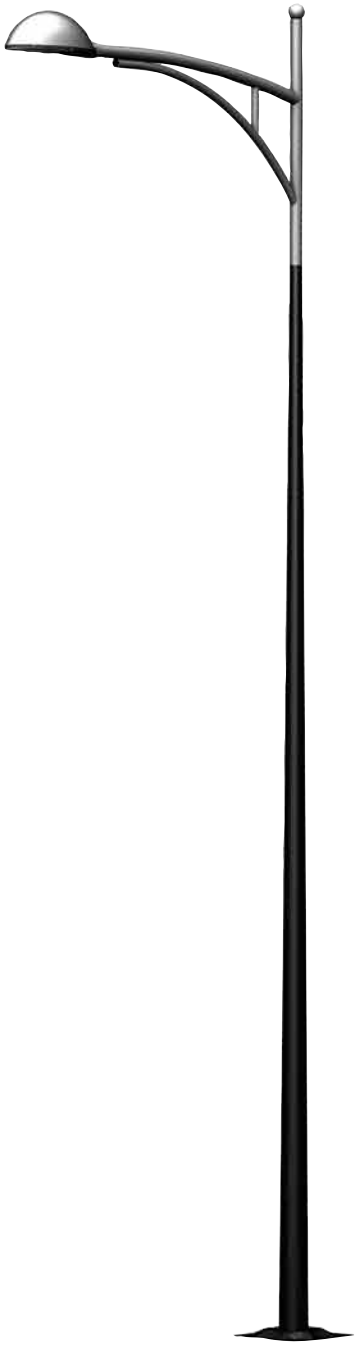
MILO

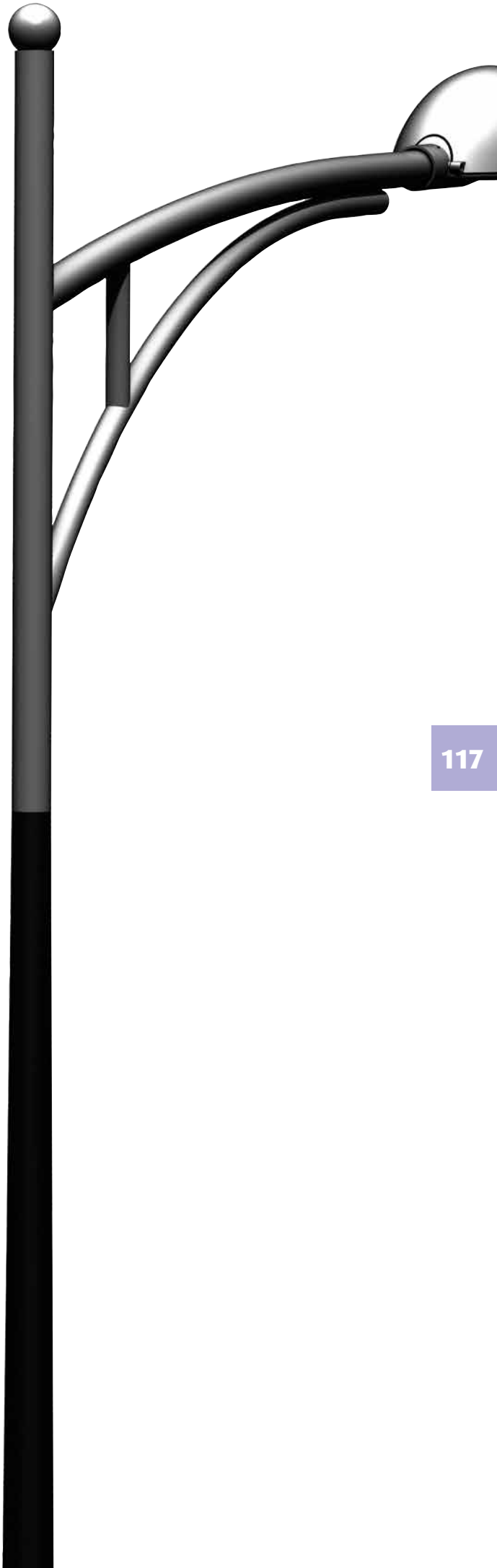


LUNA

BALDO

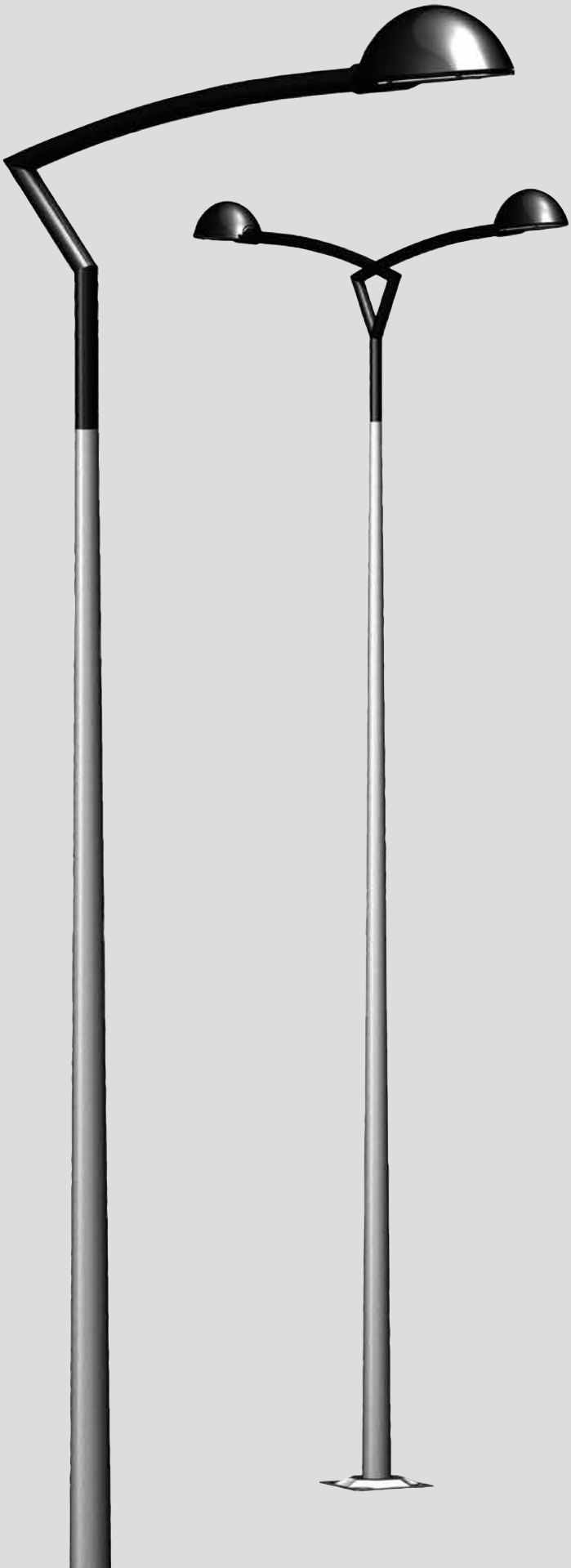






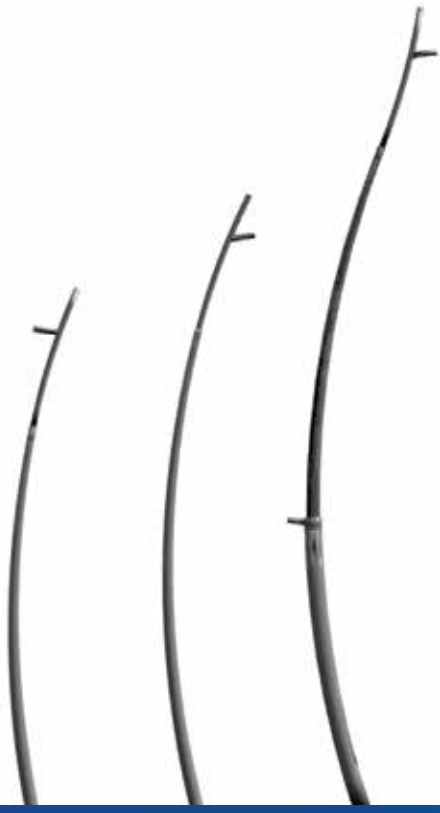
SATU

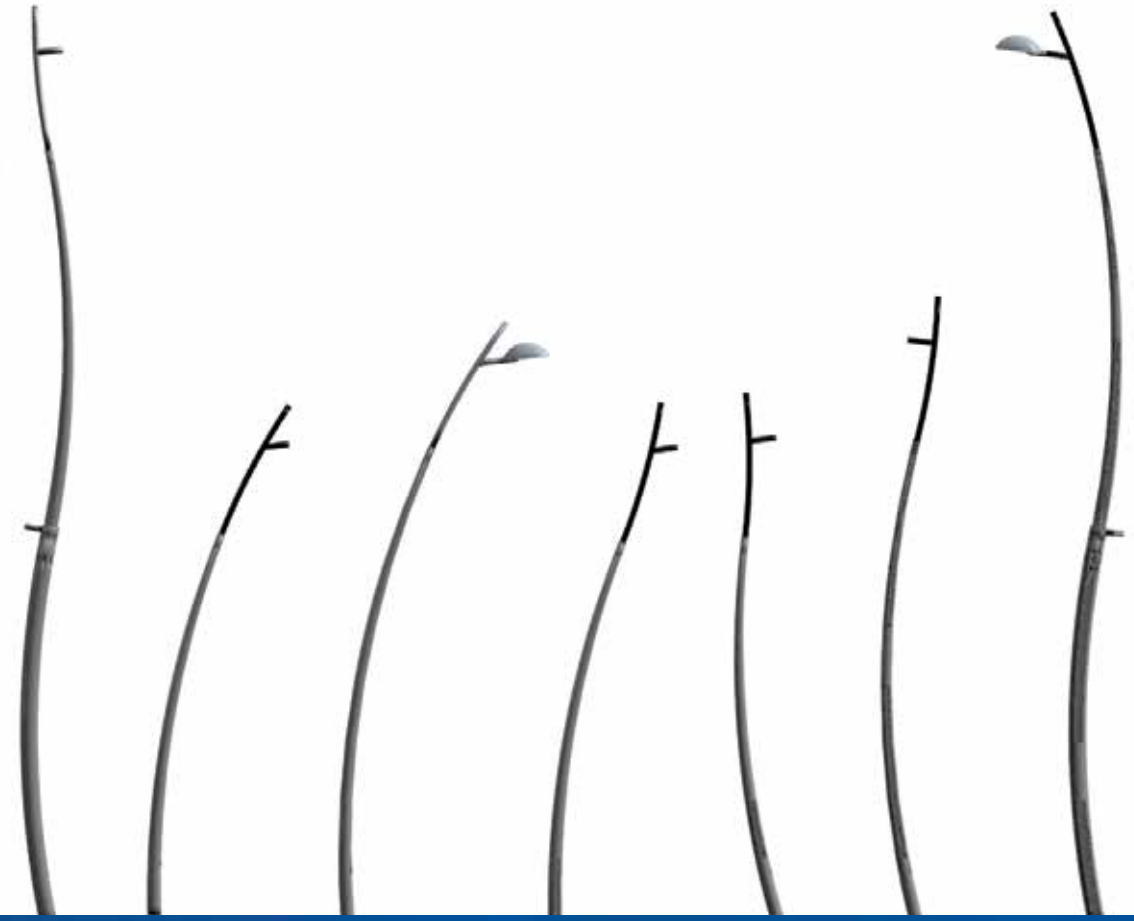
GALO



IDYLINE

Valmont's aluminium poles offer a unique combination of exciting shapes and richness of detail.





Cannes, France

Vitoria, Spain

PATAGONIA

AGO

La Rochelle, France

Claix, France

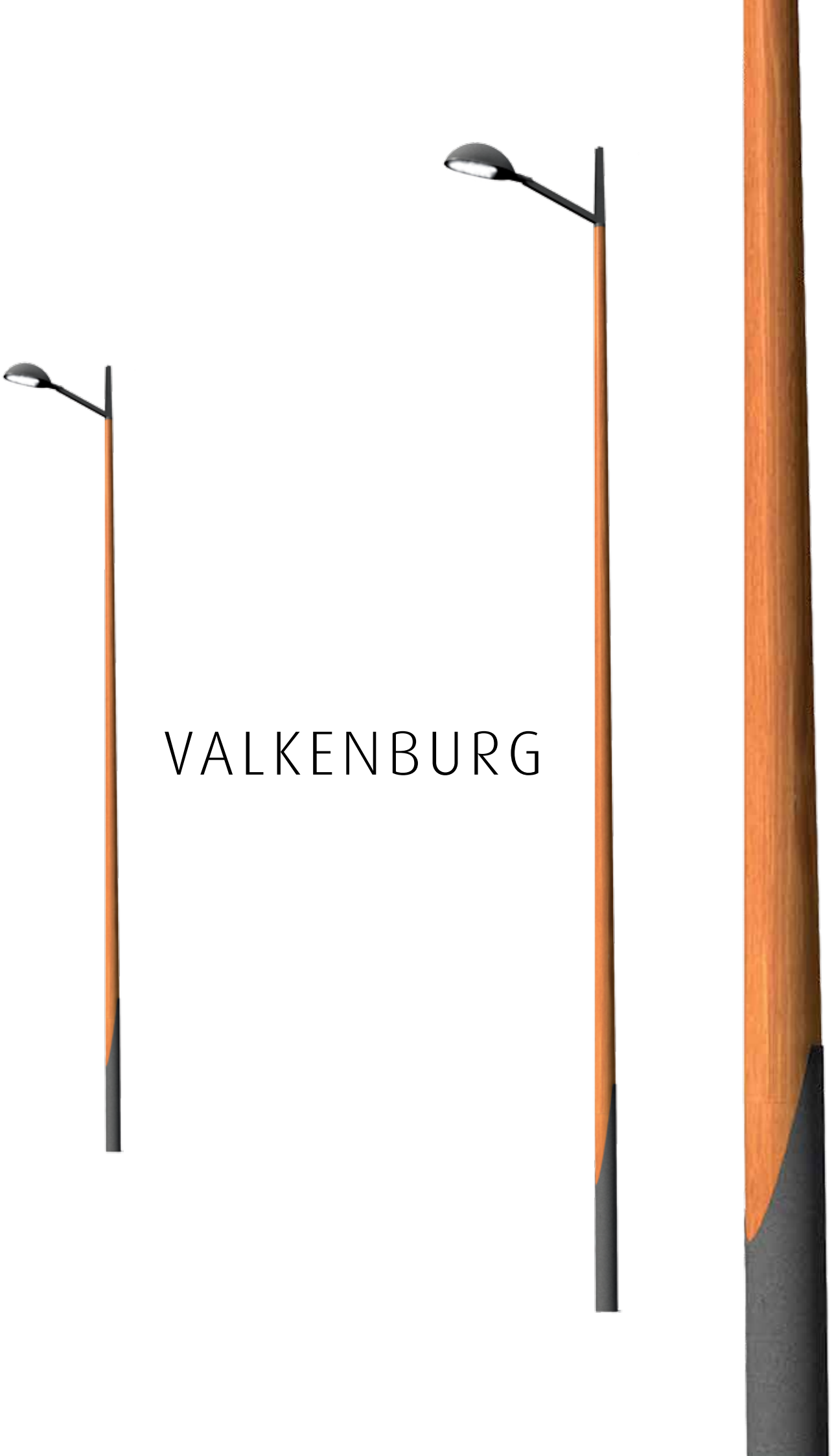
ANNAPURNA

BASEBALL

Omaha, USA

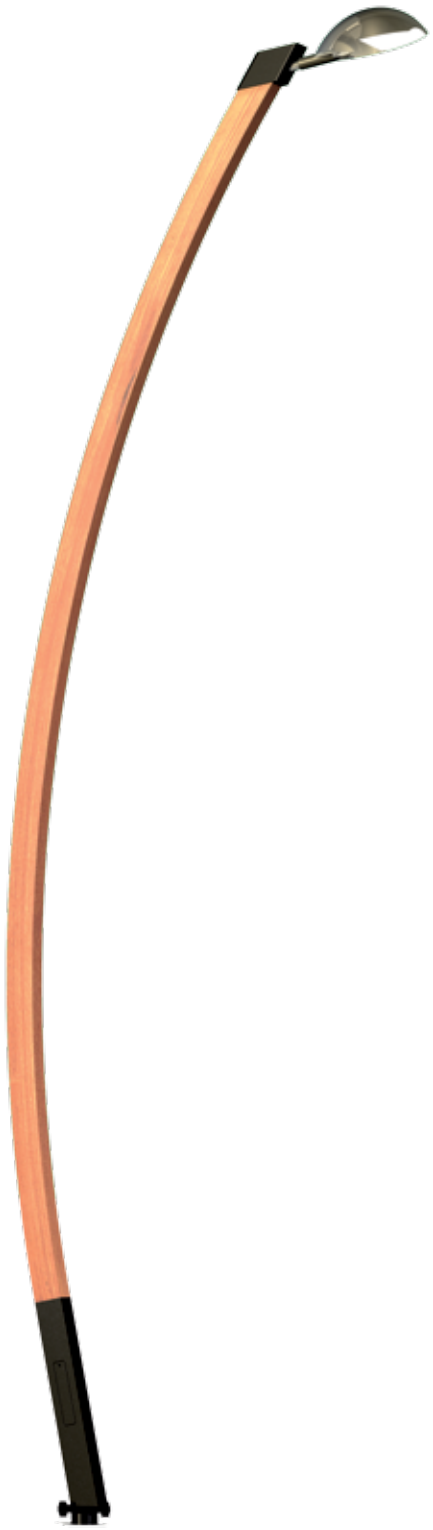
4.3 WOOD

Valkenburg, Netherlands



VALKENBURG

WILJAMI

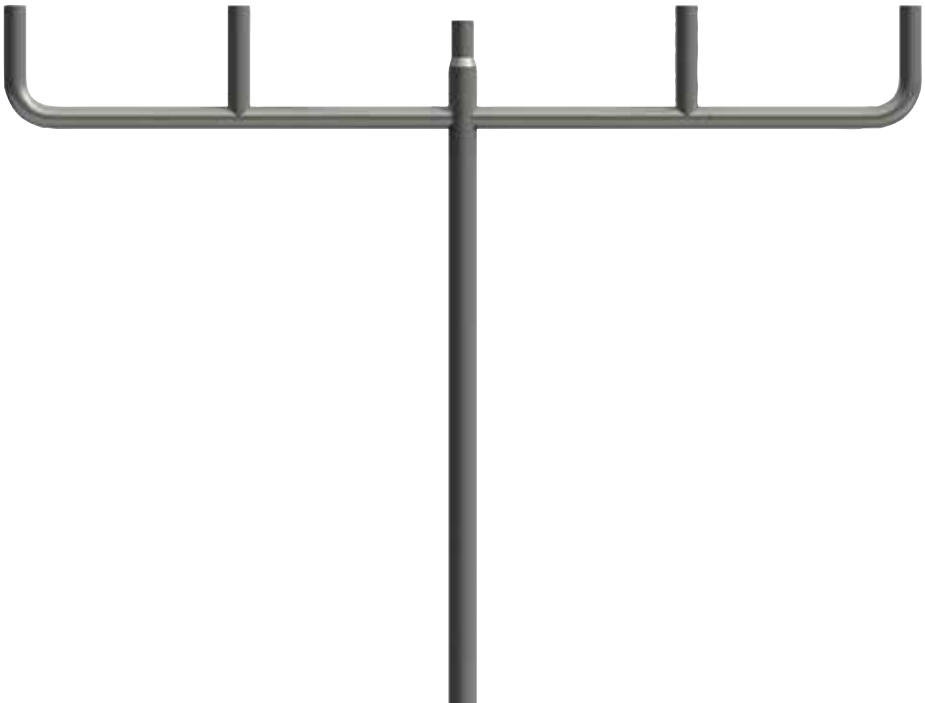


Kangasniemi, Finland

5

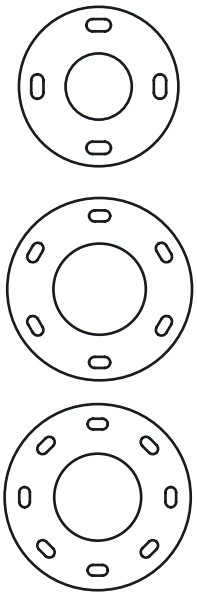
ACCESSORIES & INSTRUCTIONS

With the equipment and accessories presented in this section, standard poles can be modified to suit the widest variety of lighting needs and milieus. Instructions about installations and installation options are also included in the following.

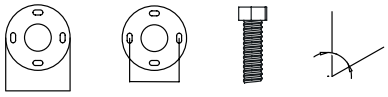


5.1 TEHOMET FLANGES

STANDARD FLANGES



TECHNICAL DETAILS

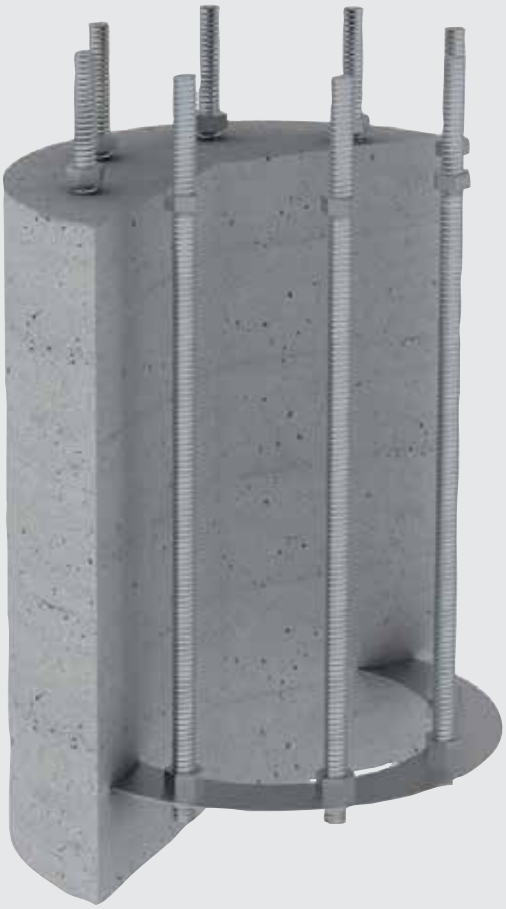


Type	Outer diameter	Bolt circle Ø	Bolt	Bolt angle
L1	260	200	M16	90°
L2	325	250	M20	
L3	420	325	M24	
L4	420	325	M24	
L5	500	400	M24	60°
L6	560	450	M30	
L7	620	500	M30	45°
L8	700	550	M36	

SLIP FLANGES

TECHNICAL DETAILS

Type	Inner diameter	Bolt circle	Bolt spacing
LL1	170	304	264
LL2	220	304	264
LL3	273	376	326



When it is not possible to install a pole into a pre-fabricated concrete foundation for some reason, a Tehomet pole can be equipped with a flange plate and use anchor bolts for installation. The anchor bolt cage is delivered with templates that position the anchor bolts accurately, making it easy to install the poles after the foundation has been cast.

5.2 POLE CAPS

A pole cap provides the finishing touch for an elegant look. The appearance of a pole can be highlighted with various pole caps. Besides adding value to the appearance, the cap also adds functionality and protects the pole. Please ask our sales team for suitable alternatives.

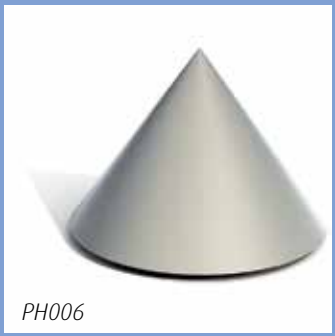
PH001

PH002

PH003

PH004

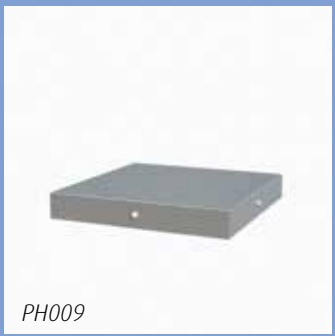
PH005



PH006

PH007

PH008



PH009

PH010

PH011

PH012

PH013

5.3 WALL ARMS

When a pole installation is not an option, a coherent outdoor lighting look can be created with wall arms.

In our range, there are models with different outreaches. These wall arms can also be modified with different decorative elements.

SV018

▶200 mm◀ ▶ 500 mm ◀

▶ 1000 mm ◀

SV017

▶ 500 mm ◀ ▶ 1000 mm ◀

SV001

SV002

SV003

SV004

SV005

SV006

SV007

SV008

SV009

SV010

SV011

SV012

5.3 WALL ARMS

SV013

SV014

SV015

SV016

SV017

SV018

SV009

SV010

Levi, Finland

SV017

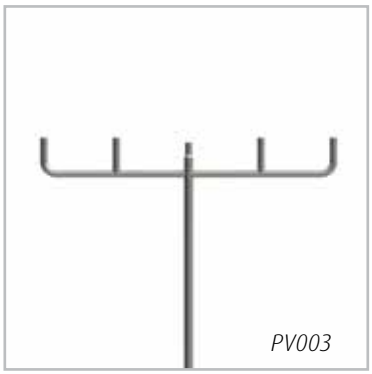
SV011

SV012

5.4 POLE ARMS


PV001


PV002


PV003


PV005


PV006


PV007


PV009


PV010


PV011


PV013


PV014


PV015

The lengths of the arms vary from short pedestrian arms all the way to road lighting arms with outreaches up to four metres. Project-tailored implementation is also possible.

PV004

Double arm configurations also available

PV008

PV012

PV016

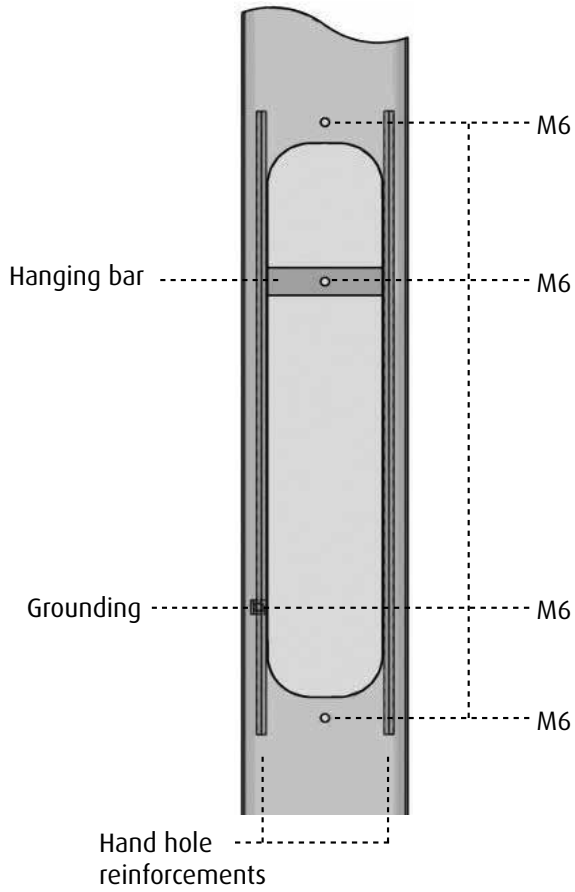
Salla, Finland

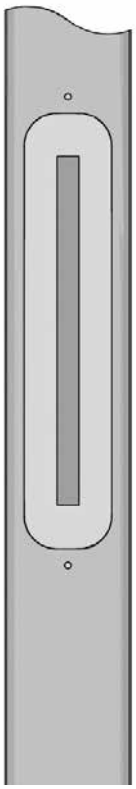
Different alternatives to attach banners or festive lighting for example, are also included in our selection.

Kangasniemi, Finland

5.5 SPACE FOR COUPLING

STEEL POLE HAND HOLE





Traffic light pole 's
hand hole

TECHNICAL DETAILS • CONICAL POLES

ID	Hand hole ID	Width	Height	Inner diameter min (mm)
	A1	75	400	50x50
	A2	80		50x50
	A3	80		65x65
	A4	90		80x90
	A5	100		90x125
	B3	80		65x65
	B4	90		80x90
	B5	100		90x125
	B6	110		100x150
	B7	110		100x180

TECHNICAL DETAILS • STEPPED- / CYLINDRICAL POLES

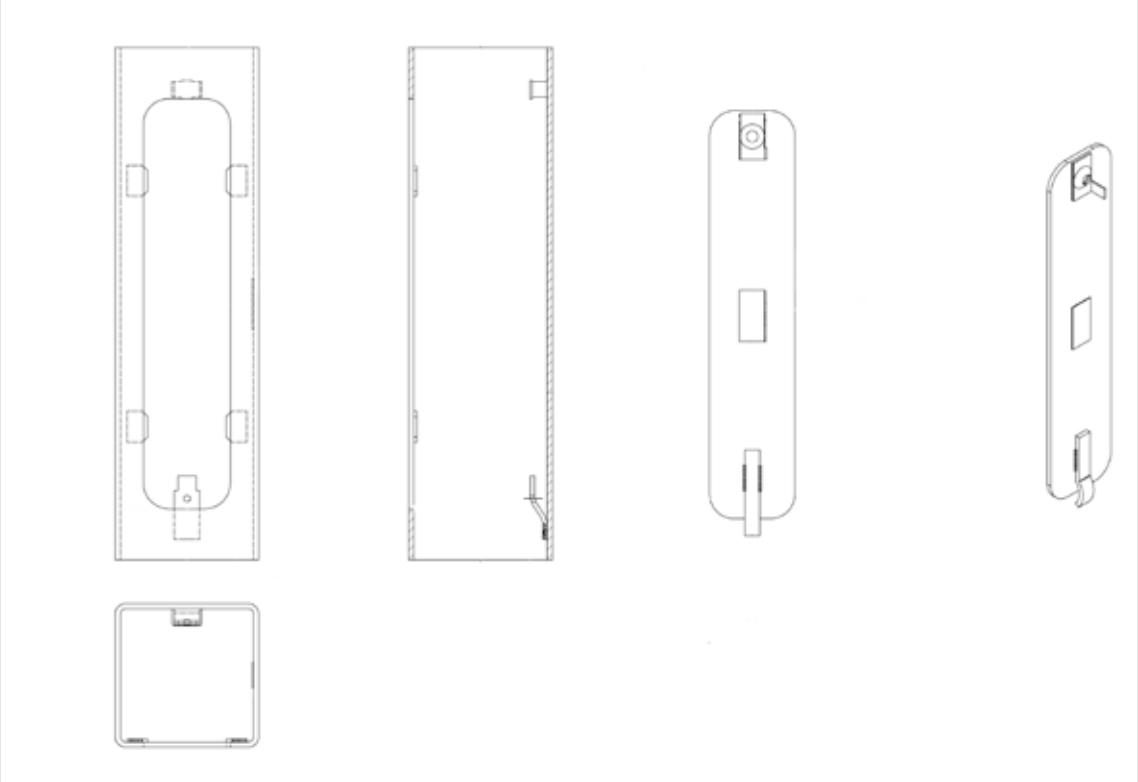
ID	Hand hole ID	Width	Height	Inner diameter min (mm
	A1	80	400	65x65
	A2	90		80x90
	A3	90		80x115
	A4	100		90x160
	A5	100		90x200
	B1	80		65x65
	B2	90		80x90
	B3	90		80x115
	B4	100		90x160
	B5	100		90x200
	C1	80		65x65

A = not reinforced

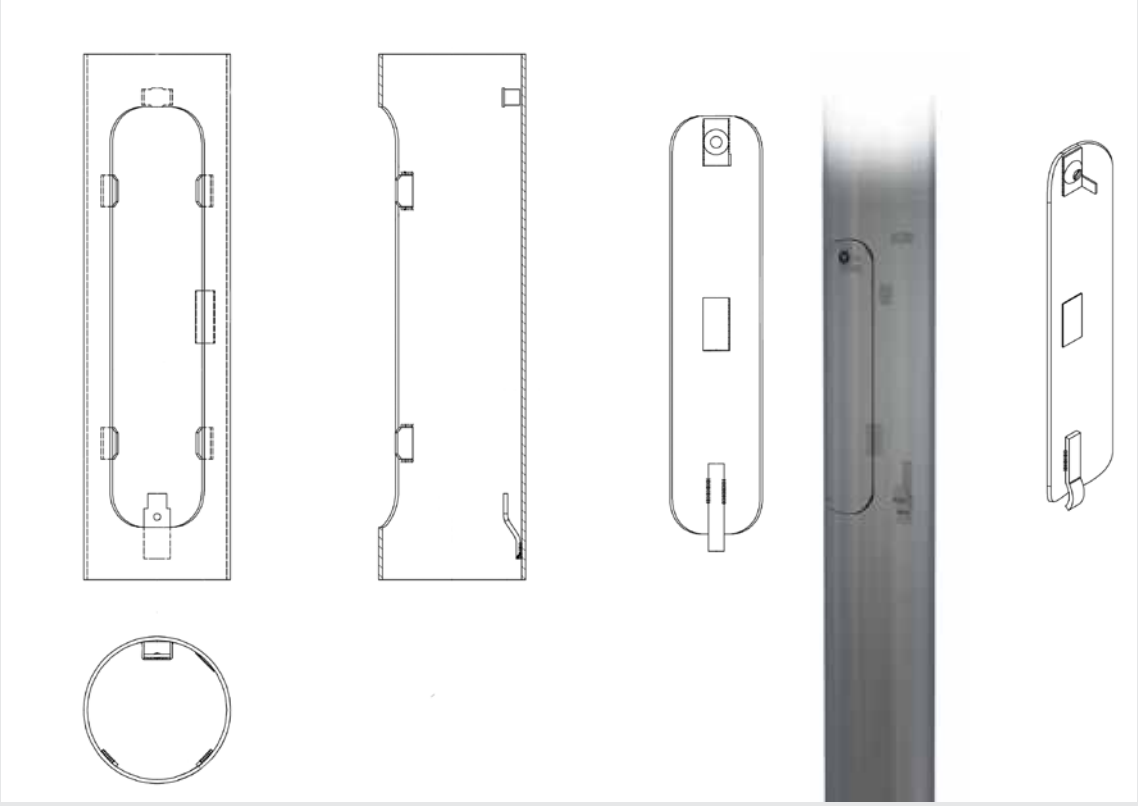
B = reinforced

C = traffic light pole

WOODEN POLE HAND HOLE



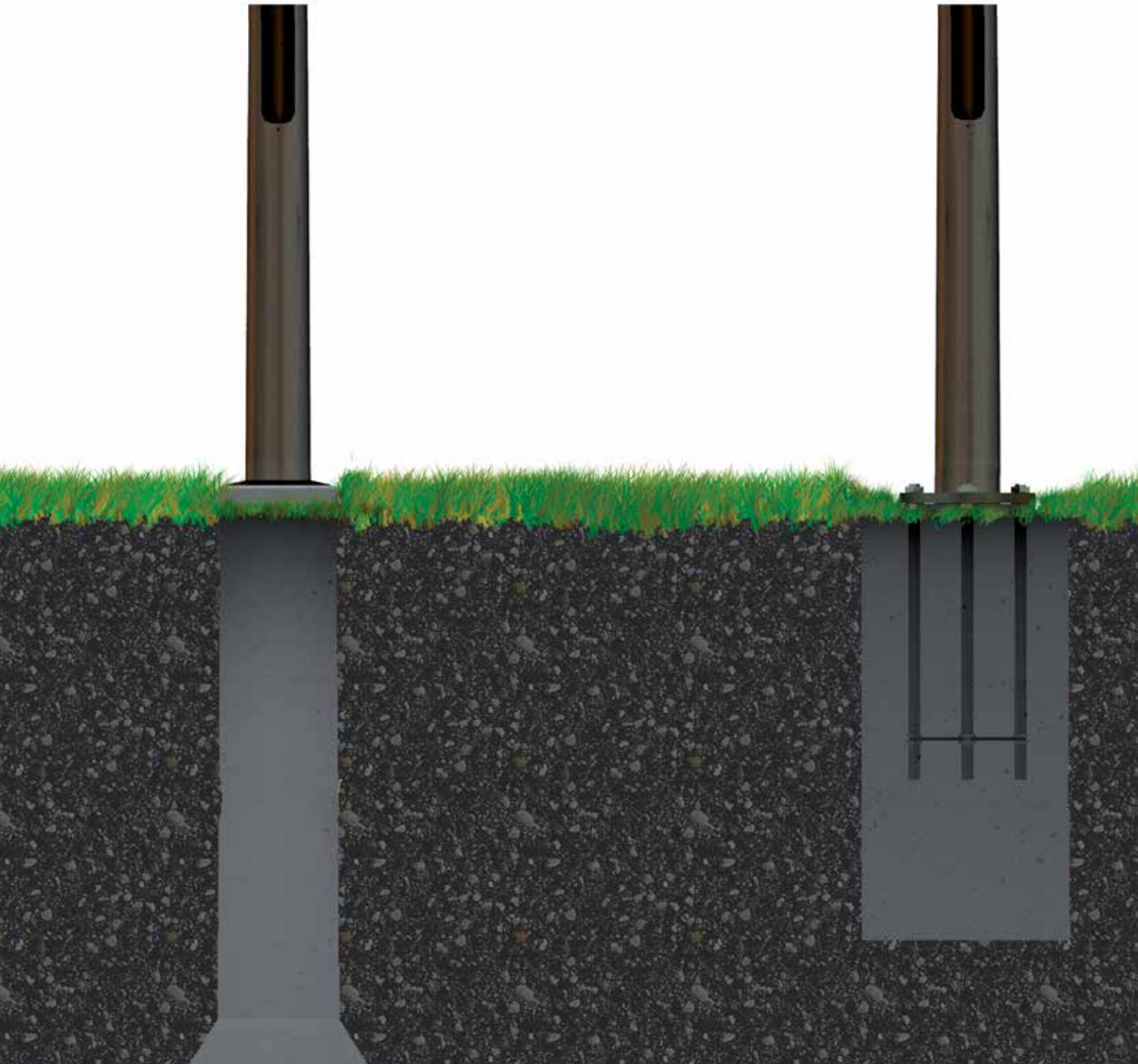
Square base

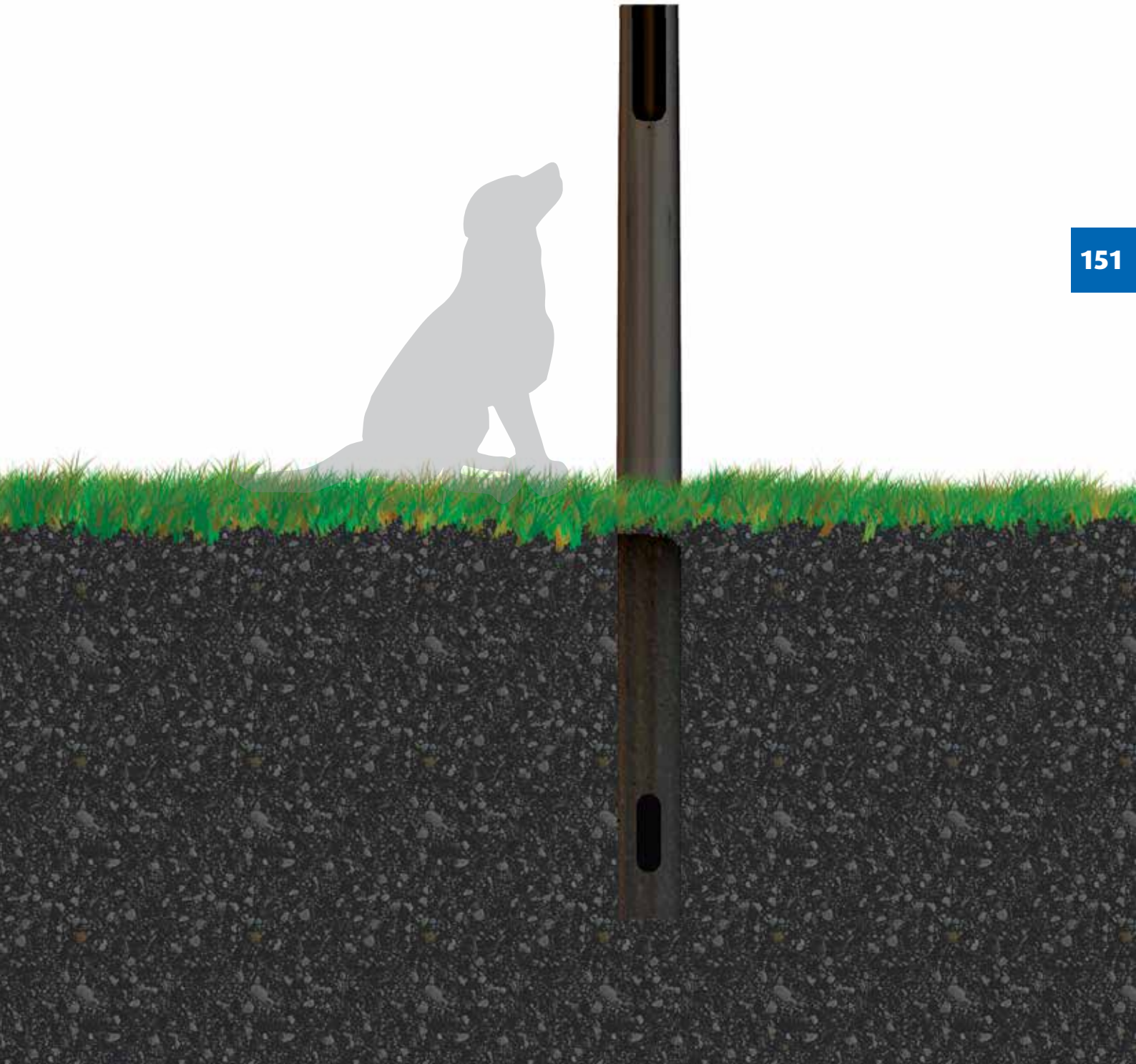


Round base

5.6 INSTALLATION OPTIONS

Typically, Tehomet poles are installed into a pre-fabricated concrete foundation. In addition, anchor bolt installation with a flanged base is also available.





5.7 INSTALLATION INSTRUCTIONS

GENERAL INSTRUCTIONS ON HOW TO INSTALL A LIGHTING POLE

1. Install the neoprene gasket in its place. The sealing is delivered with arms for conical poles.
2. Install the arm in the pole.
3. Orient the arm with the shaft.
4. Tighten the set screws in the top of the pole (tightening torque 15 Nm).
5. Fasten the lifting belt to the pole (soft lifting belts are recommended, avoid use of chains).
6. Place the foundation's root protective rubber in its place (see foundation manufacturer's instructions).
7. Lift the pole carefully in order not to damage the luminaire.
8. Position the pole in the right angle in relation to the road and set the pole carefully down into foundation.
9. When the pole is in place in the foundation, adjust the pole's straightness using screws in the foundation or wedges.
10. Tighten the foundation's screws evenly (see the foundation manufacturer's instructions).
11. Slide the root protection rubber in its place.
12. Finally, make sure that the pole is straight.

When installing a pole, appropriate equipment and tools must be used!

6

SURFACE FINISHING

HOW A STEEL'S ALLOY CONSTITUENTS, SILICON (SI) AND PHOSPHORUS (P), AFFECT ON THE APPEARANCE AND LAYER THICKNESS OF THE ZINC SURFACE

Two factors primarily affect the hot dip galvanization steel's appearance, surface thickness and adhesion: the percentage of Si + P and the dipping time. The steel structure's shape and size affect how the hot dip galvanization is done and ultimately the end result. The steel's strength class does not have a direct impact on the appearance or the thickness of the zinc surface.

Low-silicon steel (Si + P ≤ 0.04%), (EN 10025-2, class 1)

Low-silicon steel with Si + P ≤ 0.04% is recommended if the appearance of the galvanized steel is important or if the structure is painted. This ensures that the zinc surface is bright, evenly coloured and well bonded according to EN ISO 1461. The layer thicknesses (typically <90µm) are enough for the Nordic climate. With this Si + P percentage it is not possible to deliver thicker, national annex B or C class zinc surfaces.

Medium-silicon steel (Si=0.15-0.25%), (EN 10025-2, class 3)

If the zinc surface's thickness is the key factor and a surface according to EN ISO 1461 class B is wanted, medium-silicon steel is recommended (Si=0.15-0.25%). Even though the zinc surface of medium-silicon steel is thicker, the adhesion is weaker than with low-silicon steel. Also some colour differences and darker spots may occur. By using so-called limited silicon content steel (Si= 0.15-0.20%), the probability of achieving a better appearance and adhesion of coating is improved. Steel structures can be painted after galvanization, but a quality surface is harder to achieve compared with low-silicon steel. The small amount of phosphorus (P) has no effect on the galvanization of medium-silicon steel.

High-silicon steel (Si= 0.25-0.35%)

If a particularly thick zinc surface (embedded structures) according to EN ISO 1461 class C is desired, high-silicon steel (Si= 0.25-0.35%) must be chosen. The zinc surfaces are thick, rough and fragile and they darken fast. Quality pre-treatment and painting are difficult to carry out.

GOOD RESISTANCE AGAINST CORROSION

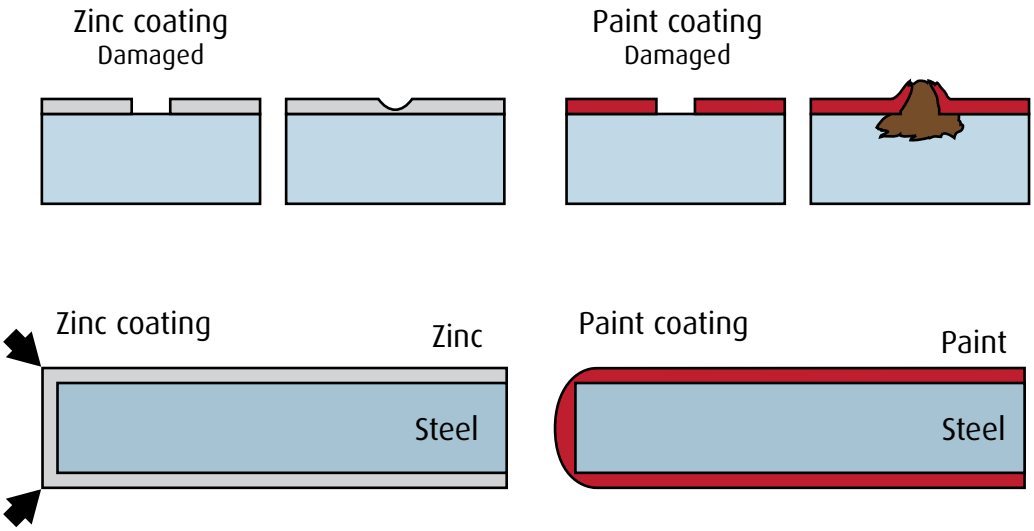
Zinc's good corrosion resistance is based on a protective film, a carbonate layer, which forms on its surface. The service life of a zinc surface depends on the layer thickness. Long-term corrosion tests conducted in Finland and practical experience show that zinc corrodes in a rural setting by around 0.5 microns and in an urban setting by around 1 micron per year.

ZINC SURFACE REPAIRS DAMAGE BY ITSELF

Zinc surface tolerates knocks and erosion well. Should damage occur, steel and zinc together with moisture form a galvanic pair; zinc as anode and steel as cathode. Zinc soaks around the damage and precipitates on steel's surface protecting it. A zinc surface can last tens or even hundreds of years without any specific maintenance.

UNIFORM PROTECTION THROUGHOUT

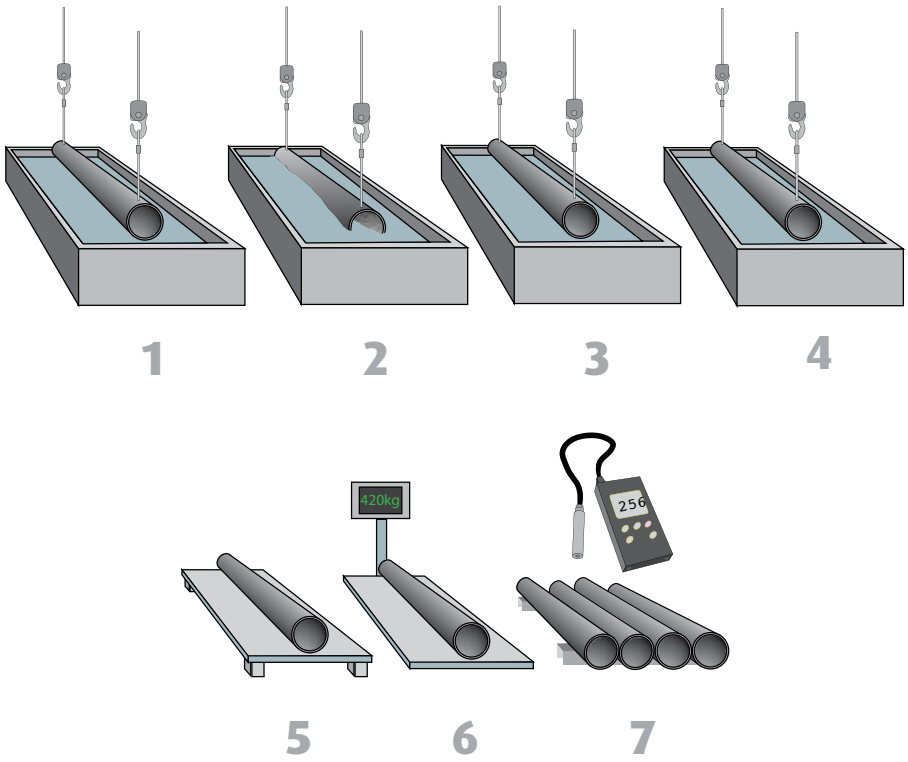
By submerging the steel into molten zinc, a uniform protective layer is obtained throughout. The zinc penetrates hard-to-reach internal surfaces, tubes and other even smaller gaps. The zinc coating has uniform thickness throughout, even at the sharp points. Corners which are susceptible to knocks receive the enhanced protection of a paint coating.



6.2 HOT DIP GALVANIZATION

HOT DIP GALVANIZATION PROCESS ACCORDING TO INTERNATIONAL STANDARD EN ISO 1461

The process in which steel is protected with zinc is called hot dip galvanization. Imperfections have to be removed before the zinc coating. After this, steel is cleaned by pickling it in dilute hydrochloric acid (1), which removes rust and mill scale. After rinsing the items with water (2), pieces are immersed in a flux bath (3). This creates a protective layer of salt that prevents the steel from oxidizing before the actual zinc coating is applied. After the structure has been cleaned and dried, it is immersed in molten (450°C) zinc (4). Regular immersion time is 3-6 minutes. The time is based on wall thickness, size and weight. Zinc and steel react together and form a coating. After cooling either in water or in air (5), the items are weighed (6). The surface finish is examined visually and the thickness is magnetically measured (7). Depending on the steel's Si percentage and immersion time, layer thicknesses vary from 60 microns to 150 microns.



1. Removal of rust by acid soaks
2. Water rinsing
3. Flux bath
4. Immersion in molten zinc
5. Cooling and finishing
6. Weighing
7. Examination and measuring

PAINTING OF HOT DIP GALVANIZED STEEL STRUCTURE

Surface finishing work for a hot dip galvanized structure is done in dry and warm indoor conditions to ensure first-class quality. During the process, items are not exposed to environmental conditions that might weaken the quality of the surface treatment.

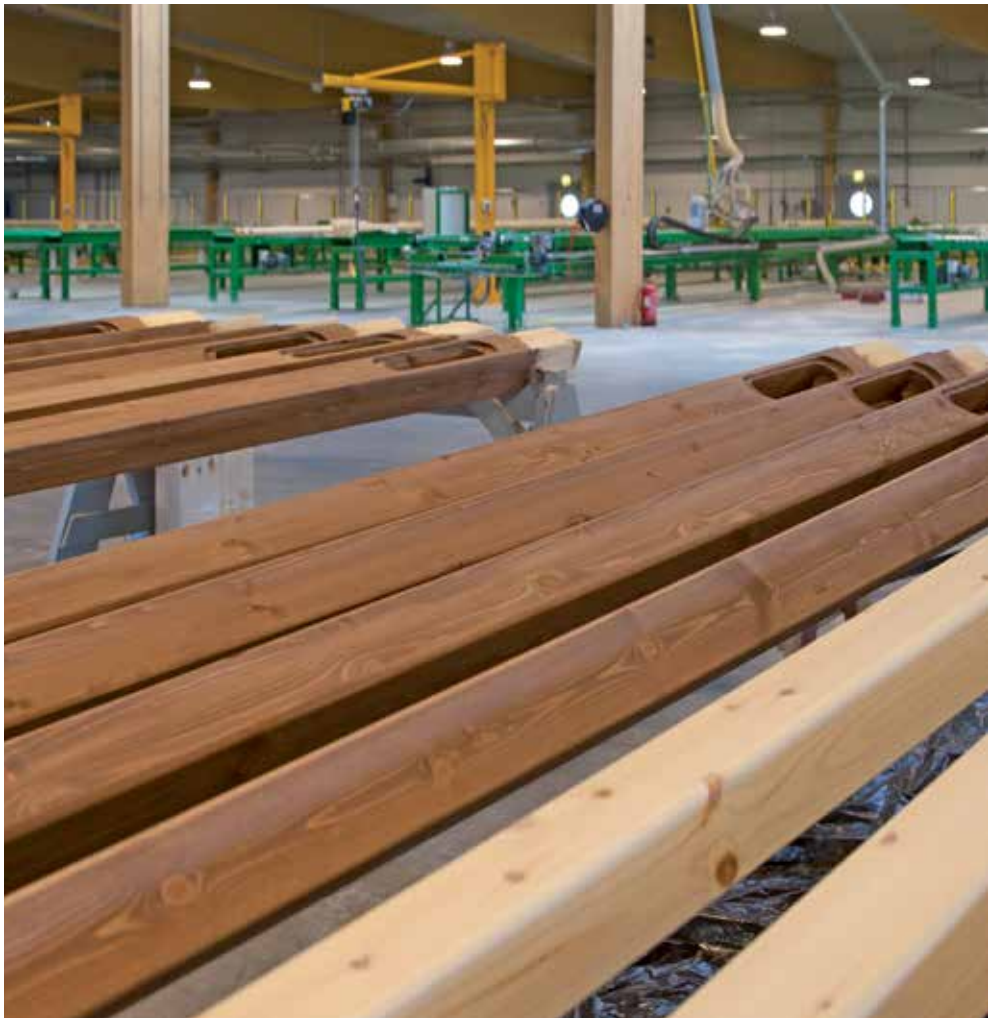
The finishing of a structure begins with sandblast sweeping as described in the EN ISO 12944-4 standard. Sandblast sweeping removes from the surface zinc salts that form after galvanization as well as other impurities. This is carried out at low air pressure using a non-metallic cleaning abrasive whose grain size is optimized so that a sufficient surface coarseness is obtained to ensure paint adhesion. Blast cleaning takes place in uniform indoor conditions just before painting to ensure that no corrosion products harmful to the protective paint compound remain on the cleaned surface.

Painting is performed with powder coating or two-component wet paints as per the customer's order. During painting, painting chamber conditions are regulated according to the requirements of the paint products. Before painting, the structure is examined for possible surface imperfections and any such imperfections are removed prior to applying the surface treatment. During the painting process, the thickness of the paint layer and paint consumption are monitored to verify that the desired coating thickness is achieved. An examination of the paint layer thickness ensures that the final product receives a layer thickness and sufficient protection to fulfill requirements.

After painting, curing of the paint takes place in a powder coating oven or, in the case of wet paints, in a painting chamber at an optimized temperature. During curing, the paint film or films acquire the characteristics planned for surface finishing. The products are checked visually, and paint layer thickness and, if necessary, bonding are measured. After checking, the approved products are packed for delivery. The entire process is performed in the same premises, and during the short surface-finishing process the structures are not exposed to variable environmental conditions, which helps to ensure the quality end result.

6.4 FINISHING OF WOODEN POLES

Decorative Tehomet wooden poles are covered with five protective layers of environmentally friendly, water-dilutable finishing. The first layer protects the wood against fungus and mould, the second layer provides a translucent colour, and finally three protective coats are applied to optimize UV protection and general environmental resistance. Surface finishing is tested according to EN 927-5 and EN 9276 standards. For wooden poles, there are 8 standard colours for wood and 4 for steel. Other colours are available on special request.



COLOUR OPTIONS

Vanilla

Cinnamon

Nutmeg

Saffron

Topaz

Slate

Onyx

Cocoa

COLOUR OPTIONS FOR STEEL COMPONENTS

Silver grey

Graphite grey

Dark brown

Black

The colour tones may differ from the actual tones due to printing.

7 REFERENCES

Naantali, Finland

Over the years, Tehomet poles have been installed in squares, at road sides, in parks and in yards. Some examples have been collected in the following pages. A more extensive presentation of our products can be found on our website: www.tehomet.com

Lauttasaari, Helsinki, Finland

Tuusniemi, Finland

Jyväskylä, Finland

Tampere, Finland

Mikkeli, Finland

Turku, Finland

Rauma, Finland

Heinola, Finland

Rovaniemi, Finland

Helsinki, Finland

Kouvola, Finland

Ranua, Finland

Kouvola, Finland

8 STANDARDS AND CERTIFICATES

EC-CERTIFICATE OF CONFORMITY

0416 - CPD - 3611-01

Decision on certification 2007-07-13

In compliance with the Directive 89/106/EEC of the Council of European Communities of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to the construction products (Construction Products Directive - CPD), amended by the Directive 93/68/EEC of the Council of European Communities of 22 July 1993, it has been stated that the construction product

Tehomet lighting columns, 3 m ... 15 m

placed on the market by

Tehomet Oy
Nikkarintie 4, FI-51200 KANGASNIEMI

and produced in the factory Kangasniemi, Finland

is submitted by the manufacturer to a factory production control and to the further testing of samples taken at the factory in accordance with a prescribed test plan and that the notified body Inspecta Sertifiointi Oy has performed the initial type-testing for the relevant characteristics of the product, the initial inspection of the factory and of the factory production control and performs the continuous surveillance, assessment and approval of the factory production control.

This certificate attests that all provisions concerning the attestation of conformity and the performances described in Annex ZA of the standard

EN 40-5, and in standards EN 40-3-1, EN 40-3-3

were applied and that the product fulfils all the prescribed requirements.

This certificate was first issued on 2007-07-13 and remains valid as long as the conditions laid down in the harmonised technical specification in reference or the manufacturing conditions in the factory or the FPC itself are not modified significantly. The validity of the certificate can be checked on the Internet at www.sertifiointi.fi.

Espoo 2007-07-13

INSPECTA SERTIFIOINTI OY

Matti T. Virtanen, Director

CE

inspecta

Tehomet products are designed and dimensioned according to EN 40-3-3 standard and manufactured according to EN 40-5. Hot dip galvanization is done according to the international EN ISO 1461 standard.

INSPECTA

CERTIFICATE

No. 5674-01

Inspecta Certification has granted this certificate to

Tehomet Oy
Parikkala

The certificate verifies that the chain of custody of
wood-based raw material complies with standards

PEFC COC:2006 (Technical Documentation Annex 4)
PEFC LOGO USE:2008 (ST 2001)

Certification covers

Manufacturing of decorative wooden lighting columns.

The certificate is valid on condition that the chain of custody remains
in compliance with the aforementioned standards and the General Regulations ABC 750.
The validity of the certificate can be checked on the Internet at www.sertifiointi.fi

The certificate is issued on 2009-08-14.

The certificate is valid until 2014-08-14.

Anne Qvintus, Managing Director

PEFC CHAIN OF CUSTODY

INSPECTA CERTIFICATION, P.O. BOX 94, MIESTENTIE 3, FI-02151 ESPOO