

Composite Pole - TR45

Designed for Post Top or Side Mounting 4' - 6' Mast Arms

- Smooth, tapered composite pole shaft
- Direct embedded and anchor base models
- Base cover provided with AB pole

Ordering Information

Sample Catalog Number Logic

	B	C	D	E	F	G
TR45	16	AB	DBZ	SMS	30	•
TR45	20	DE	BLK	TXT	40	•
Pole	Above Grade Height	Installation Method	Color	Surface Finish	Tenon O.D.	Options

B Above Grade Height

Cat No.	Description
TR45-10	10 feet /3.0 M
TR45-11	11 feet /3.4 M
TR45-12	12 feet /3.7 M
TR45-13	13 feet /4.0 M
TR45-14	14 feet /4.3 M
TR45-15	15 feet /4.6 M
TR45-16	16 feet /4.9 M
TR45-17	17 feet /5.2 M
TR45-18	18 feet /5.5 M
TR45-19	19 feet /5.8 M
TR45-20	20 feet /6.1 M
TR45-21	21 feet /6.4 M
TR45-22	22 feet /6.7 M
TR45-23	23 feet /7.0 M
TR45-24	24 feet /7.3 M
TR45-25	25 feet /7.6 M
TR45-26	26 feet /7.9 M
TR45-27	27 feet /8.3 M
TR45-28	28 feet /8.5 M
TR45-29	29 feet /8.8 M
TR45-30	30 feet /9.1 M

C Installation Method

Cat No.	Description
DE	Direct Embedded
AB	Anchor Base

D Color

Cat No.	Description
BLK	Black
DBZ	Dark Bronze
DGR	Dark Green
SLV	Silver
WHT	White
GRY	Grey
CC	Custom Color - Please provide a min. 3" x 3" color chip.

E Surface Finish

Cat No.	Description
TXT	Natural texture of the reinforcing strands
SMS	Smooth surface finish

F Tenon O.D.

Cat No.	Description
23	2 3/8" (60 mm) O.D.
30	3" (76 mm) O.D.
40	4" (120 mm) O.D.
99	Custom Tenon O.D.

G Options

Cat No.	Description
DTC	Top pole cap and drilling for a side mounted arm(s). Provide template or drawing for hole locations.
FLD	Top pole cap. Field drill to accept a luminaire.
RC	Receptacle housing and a NEC-approved cover with 15A GFCI receptacle. Standard location is 12"/305 mm below the top of the pole.

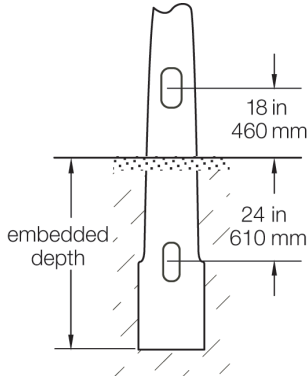
- Other accessories are shown on the Accessories specification sheet.

ABOVE GRADE
HEIGHT
20' MODEL
SHOWN



TR45 Tapered composite pole shaft

Direct Embedded - DE



Shaft Length	Embedded Depth
10 to 13 ft	3 ft / .91 M
14 to 24 ft	4 ft / 1.2 M
25 to 30 ft	5 ft / 1.5 M

* Embedded depths may vary per local codes, site soil conditions, drainage and very high wind conditions.

Hand hole is:
2.5"/62 mm x 5"/125 mm.

Specifications

POLE SHAFT

The pole shaft shall be round tapered, smooth with a .14"/3.5 mm per foot taper. The hand hole shall be 2.5"/62 mm x 5"/125 mm with a cover. The shaft shall be constructed of continuous fiberglass filament combined with a thermosetting resin. The glass filament shall be helically wound at alternating high and low angle layers for maximum compressive and bending strength. The hand hole area and hardware attachment areas shall be reinforced.

The butt end of the embedded-type post shall be enlarged and oval to increase the resistance to rotation and provide maximum ground bearing resistance (anti-lift). The post shall be non-conductive and chemically inert.

PERFORMANCE CRITERIA

The post shall be designed with a minimum safety factor of 1.5:1 and have no more than a 15% deflection at full wind loading. The post shall deflect no more than 2.5% of the above-ground length with 100 lbs of lateral top load. Poles shall be tested and rated per ANSI C136.20-2012.

DIRECT EMBEDDED INSTALLATION

Direct embedded poles shall have a 2.5 inch (62 mm) by 6 inch (152 mm) slot for conduit entrance 24 inches (610 mm) below finished grade. Embedded depths may vary per local codes, site soil conditions, drainage and very high wind conditions.

ANCHOR BASE

Anchor bases shall be constructed of primed and painted aluminum or galvanized steel. The base shall be factory bonded to the pole.

TENON

A painted galvanized steel or aluminum tenon shall be firmly bonded to the pole for mounting a post-top luminaire or arm.

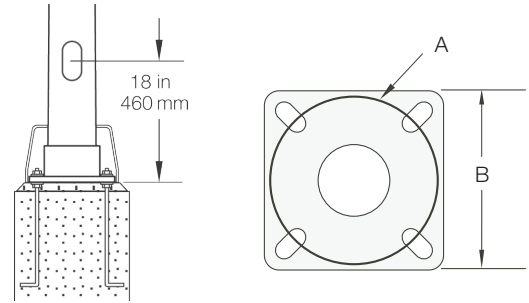
FINISH

The surface of the post shall be uniform and consistent for the entire length of the post. A UV-resistant catalyzed urethane coating shall be extremely durable and retains its gloss after a 5000 hour exposure test per ASTM G154, with no dulling or chalking of the surface.

BASE COVER

For anchor-base poles, the standard base cover shall be a round or square two-piece molded ABS cover. This base cover shall be corrosion free and painted to match the pole. Base covers are not included with direct-embedded poles.

Anchor Base Installation - AB



Anchor Base Dimensions for TR45

- Hand hole is 2.5"/62 mm x 5"/125 mm
- Mounting slots are 1"/25 mm x 1.5"/38 mm for 10" and 12" bolt circle
- Conduit entry hole in base plate is 4.0"/100 mm

Shaft Length	Bolt Circle (A)	Base Plate Size (B)	Anchor Bolts
10' - 21'	10"/254 mm	10"/254 mm	3/4" x 30"
22' - 30'	12"/304 mm	11.5"/292 mm	3/4" x 30"

Wind Loading Data

Cat No.	Description	WT	WIND SPEED (MPH) WITH 3 SECOND GUST FACTOR							
			90	100	110	120	130	140	150	
10	10 feet/3.10 M	34	14.8	11.9	9.7	8.1	6.8	5.8	5.0	
11	11 feet/3.35 M	36	15.0	12.0	9.8	8.1	6.8	5.8	5.0	
12	12 feet/3.66 M	38	14.1	11.2	9.1	7.6	6.4	5.4	4.7	
13	13 feet/3.96 M	40	13.1	10.1	8.5	7.0	5.9	5.0	4.3	
14	14 feet/4.27 M	45	12.7	10.1	8.2	6.7	5.6	4.8	4.1	
15	15 feet/4.57 M	49	12.5	9.9	8.0	6.6	5.5	4.7	4.0	
16	16 feet/4.88 M	52	12.6	10.0	8.1	6.7	5.6	4.7	4.0	
17	17 feet/5.18 M	53	11.3	8.9	7.2	5.9	4.9	4.1	3.5	
18	18 feet/5.49 M	54	12.2	9.6	7.8	6.4	5.3	4.5	3.8	
19	19 feet/5.79 M	57	11.0	8.7	7.0	5.7	4.7	4.0	3.4	
20	20 feet/6.10 M	59	10.8	8.5	6.8	5.6	4.6	3.9	3.3	
21	21 feet/6.40 M	88	10.9	8.6	6.9	5.6	4.7	3.9	3.3	
22	22 feet/6.71 M	90	8.8	6.9	5.5	4.4	3.6	3.0	2.4	
23	23 feet/7.01 M	92	8.3	5.9	5.1	4.1	3.4	2.8	2.2	
24	24 feet/7.32 M	95	8.1	6.3	5.0	4.0	3.3	2.7	2.1	
25	25 feet/7.62 M	100	7.9	6.1	4.8	3.9	3.2	2.6	2.0	
26	26 feet/7.92 M	105	7.7	6.0	4.7	3.8	3.1	2.5	1.9	
27	27 feet/8.32 M	123	6.6	5.1	4.0	3.1	2.5	2.0	1.4	
28	28 feet/8.53 M	126	6.4	4.9	3.8	3.0	2.4	1.9	1.3	
29	29 feet/8.84 M	130	6.2	4.8	3.7	2.9	2.3	1.8	1.2	
30	30 feet/9.14 M	139	5.1	3.8	2.9	2.2	1.7	1.3	0.8	

Wind speed values are for a 3 second gust per ASCE. Calculated per ANSI C136.20-2012. Assumes load 12 inches above the pole top. Safety factor = 1.5:1. Maximum weight for tenon mount is 150 lbs. Contact factory for AASHTO or specific local codes.