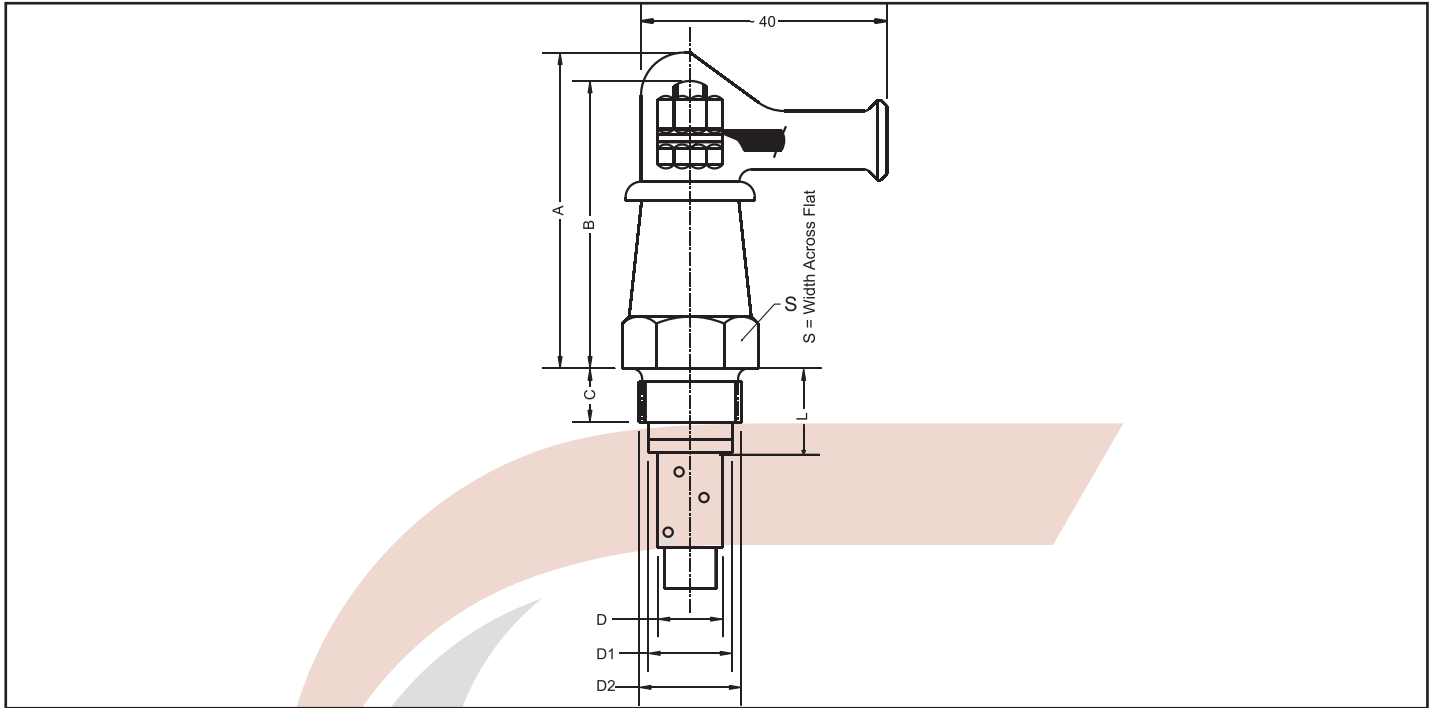


Dimension Data

Telescopic Brushes GP.TB Series



Model	A	B	C	D	D1	D2	S	L
GP 6 / 16	55	44	8	6	14	M16 x 1.5	19	12
GP 6 / 16 - I	55	54	8	7	14	M16 X 1.5	19	20
GP 8	55	54	10	8	15	M18 x 1.5	22	20

* Models comparable to ZF types.

** Extended lengths upto 100mm optional available.

*** Inserts only optional available.

Telescopic Brushes & Inserts GP.TB Series

Current supply brushes for slipping-type clutches

Selection and ordering data

Insertion Length / mm	Current supply brushes				Brush inserts		
	ZF type	Order No.	weight approx. g	Colour code	ZF type	Order No.	weight approx. g

Wet Operation

14 ¹⁾	SK 4	2LZ2 060-0AA	32	green	SK 4 E	2LZ2 080-0AA	6
14 ¹⁾	TSK 6/16	2LZ2 061-0AA	40	yellow	TSK 6/16 E	2LZ2 081-0AA	7
22 ¹⁾	TSN 6/16	2LZ2 062-0AB	44	yellow	TSN 6/16 E	2LZ2 082-0AB	10
30	TSL 6/16	2LZ2 063-0AC	55	yellow	TSL 6/16 E	2LZ2 083-0AC	15
40		2LZ2 063-0AD	59			2LZ2 083-0AD	15
50		2LZ2 063-0AE	64			2LZ2 083-0AE	15
60		2LZ2 063-0AF	70			2LZ2 083-0AF	18
70		2LZ2 063-0AG	74			2LZ2 083-0AG	18
80		2LZ2 063-0AH	79			2LZ2 083-0AH	18
90		2LZ2 063-0AJ	82			2LZ2 083-0AJ	18
100 ²⁾		2LZ2 063-0AK	85			2LZ2 083-0AK	22
22 ¹⁾	TSN 8	2LZ2 064-0AB	54	red		2LZ2 084-0AB	12
30	TSL 8	2LZ2 065-0AC	65	red		2LZ2 085-0AC	15
40		2LZ2 065-0AD	71			2LZ2 085-0AD	15
50		2LZ2 065-0AE	75			2LZ2 085-0AE	15
60		2LZ2 065-0AF	80			2LZ2 085-0AF	18
70		2LZ2 065-0AG	82			2LZ2 085-0AG	18
80		2LZ2 065-0AH	88			2LZ2 085-0AH	18
90		2LZ2 065-0AJ	92			2LZ2 085-0AJ	18
100 ²⁾		2LZ2 065-0AK	96			2LZ2 085-0AK	22

With Contact For Wear Monitoring

22	TSN 8 V	2LZ2 066-0AB	69	red	TSN 8 VE	2LZ2 086-0AB	20
----	---------	--------------	----	-----	----------	--------------	----

Dry Operation

14 ¹⁾	STK 4 R	2LZ2 060-0BA	34		STK 4 ER	2LZ2 080-0BA	6
14 ¹⁾	STK 6/16 R	2LZ2 061-0BA	41		STK 6/16 ER	2LZ2 081-0BA	6
22 ¹⁾	STN 6/16 R	2LZ2 062-0BB	47		STN 6/16 ER	2LZ2 082-0BB	6
30	STL 6/16 R	2LZ2 063-0BC	75		STL 6/16 ER	2LZ2 083-0BC	9
40		2LZ2 063-0BD	78			2LZ2 083-0BD	9
50		2LZ2 063-0BE	81			2LZ2 083-0BE	9
60		2LZ2 063-0BF	84			2LZ2 083-0BF	12
70		2LZ2 063-0BG	87			2LZ2 083-0BG	12
80		2LZ2 063-0BH	90			2LZ2 083-0BH	12
90		2LZ2 063-0BJ	93			2LZ2 083-0BJ	12
100 ²⁾		2LZ2 063-0BK	96			2LZ2 083-0BK	16
22 ¹⁾	STN 8 R	2LZ2 064-0BB	55	--	STN 8 ER	2LZ2 084-0BB	5
30	STL 8 R	2LZ2 065-0BC	60	--	STL 8 ER	2LZ2 085-0BC	9
40		2LZ2 065-0BD	65			2LZ2 085-0BD	9
50		2LZ2 065-0BE	71			2LZ2 085-0BE	9
60		2LZ2 065-0BF	78			2LZ2 085-0BF	12
70		2LZ2 065-0BG	84			2LZ2 085-0BG	12
80		2LZ2 065-0BH	91			2LZ2 085-0BH	12
90		2LZ2 065-0BJ	98			2LZ2 085-0BJ	12
100 ²⁾		2LZ2 065-0BK	105			2LZ2 085-0BK	16

1) Insertion lengths 14 and 22 mm are preferred; they are stock item.

2) In urgent cases this brush insert should be ordered and shortened by the required length.

3) Only necessary if the slip ring velocity is more than 10 m/s when energized or if the clutch is almost constantly energized.

Telescopic Brushes & Inserts GP.TB Series

Current supply brushes for slipping-type clutches

Selection and ordering data

Insertion Length / mm	Current supply brushes				Brush inserts		
	ZF type	Order No.	weight approx. g	Colour code	ZF type	Order No.	weight approx. g

Wet Operation

14 ¹⁾	SK 4	2LZ2 060-0AA	32	green	SK 4 E	2LZ2 080-0AA	6
14 ¹⁾	TSK 6/16	2LZ2 061-0AA	40	yellow	TSK 6/16 E	2LZ2 081-0AA	7
22 ¹⁾	TSN 6/16	2LZ2 062-0AB	44	yellow	TSN 6/16 E	2LZ2 082-0AB	10
30	TSL 6/16	2LZ2 063-0AC	55	yellow	TSL 6/16 E	2LZ2 083-0AC	15
40		2LZ2 063-0AD	59			2LZ2 083-0AD	15
50		2LZ2 063-0AE	64			2LZ2 083-0AE	15
60		2LZ2 063-0AF	70			2LZ2 083-0AF	18
70		2LZ2 063-0AG	74			2LZ2 083-0AG	18
80		2LZ2 063-0AH	79			2LZ2 083-0AH	18
90		2LZ2 063-0AJ	82			2LZ2 083-0AJ	18
100 ²⁾		2LZ2 063-0AK	85			2LZ2 083-0AK	22
22 ¹⁾	TSN 8	2LZ2 064-0AB	54	red		2LZ2 084-0AB	12
30	TSL 8	2LZ2 065-0AC	65	red		2LZ2 085-0AC	15
40		2LZ2 065-0AD	71			2LZ2 085-0AD	15
50		2LZ2 065-0AE	75			2LZ2 085-0AE	15
60		2LZ2 065-0AF	80			2LZ2 085-0AF	18
70		2LZ2 065-0AG	82			2LZ2 085-0AG	18
80		2LZ2 065-0AH	88			2LZ2 085-0AH	18
90		2LZ2 065-0AJ	92			2LZ2 085-0AJ	18
100 ²⁾		2LZ2 065-0AK	96			2LZ2 085-0AK	22

With Contact For Wear Monitoring

22	TSN 8 V	2LZ2 066-0AB	69	red	TSN 8 VE	2LZ2 086-0AB	20
----	---------	--------------	----	-----	----------	--------------	----

Dry Operation

14 ¹⁾	STK 4 R	2LZ2 060-0BA	34		STK 4 ER	2LZ2 080-0BA	6
14 ¹⁾	STK 6/16 R	2LZ2 061-0BA	41		STK 6/16 ER	2LZ2 081-0BA	6
22 ¹⁾	STN 6/16 R	2LZ2 062-0BB	47		STN 6/16 ER	2LZ2 082-0BB	6
30	STL 6/16 R	2LZ2 063-0BC	75		STL 6/16 ER	2LZ2 083-0BC	9
40		2LZ2 063-0BD	78			2LZ2 083-0BD	9
50		2LZ2 063-0BE	81			2LZ2 083-0BE	9
60		2LZ2 063-0BF	84			2LZ2 083-0BF	12
70		2LZ2 063-0BG	87			2LZ2 083-0BG	12
80		2LZ2 063-0BH	90			2LZ2 083-0BH	12
90		2LZ2 063-0BJ	93			2LZ2 083-0BJ	12
100 ²⁾		2LZ2 063-0BK	96			2LZ2 083-0BK	16
22 ¹⁾	STN 8 R	2LZ2 064-0BB	55	--	STN 8 ER	2LZ2 084-0BB	5
30	STL 8 R	2LZ2 065-0BC	60	--	STL 8 ER	2LZ2 085-0BC	9
40		2LZ2 065-0BD	65			2LZ2 085-0BD	9
50		2LZ2 065-0BE	71			2LZ2 085-0BE	9
60		2LZ2 065-0BF	78			2LZ2 085-0BF	12
70		2LZ2 065-0BG	84			2LZ2 085-0BG	12
80		2LZ2 065-0BH	91			2LZ2 085-0BH	12
90		2LZ2 065-0BJ	98			2LZ2 085-0BJ	12
100 ²⁾		2LZ2 065-0BK	105			2LZ2 085-0BK	16

1) Insertion lengths 14 and 22 mm are preferred; they are stock item.

2) In urgent cases this brush insert should be ordered and shortened by the required length.

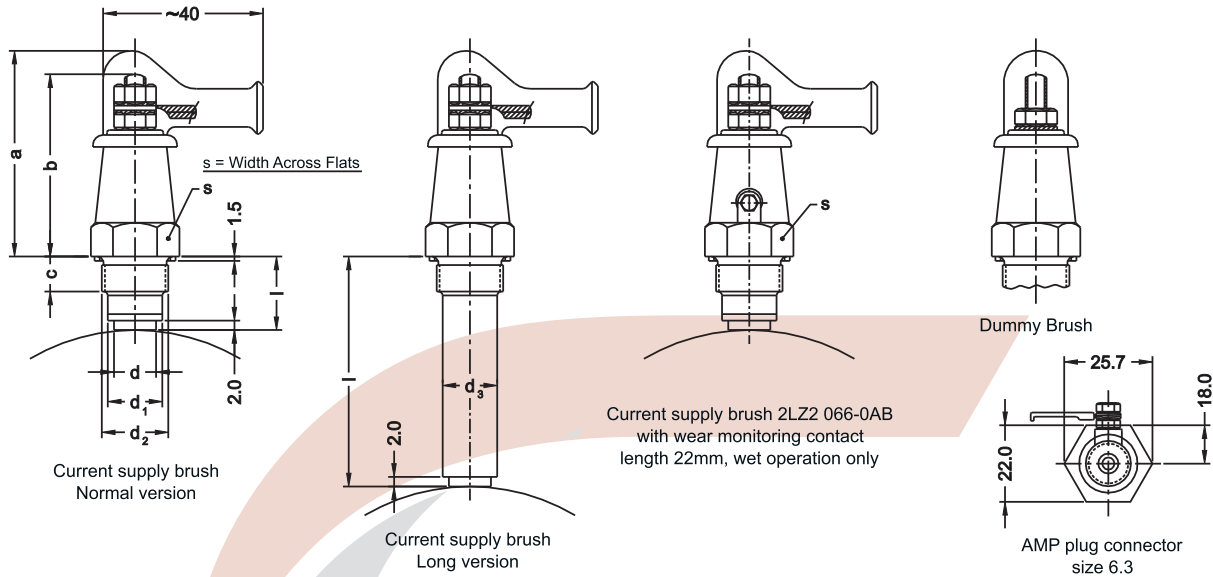
3) Only necessary if the slip ring velocity is more than 10 m/s when energized or if the clutch is almost constantly energized.

Dimension Data

Telescopic Brushes & Inserts GP.TB Series

Current supply brushes for slipping-type clutches

Dimensions



Insertion Length	Dimensions								For		
	a	b	c	d	d ₁	d ₂	d ₃	s	slipping-type multiple-disc clutches	self-adjusting multiple-disc clutches	spring-applied multiple-disc clutches

Wet Operation

14	47	40	8	4	12	M 14 x1.5	--	17	2LP1 250	--	--
14	47	40	8	6	14	M 16 x1.5	--	19	2LP1 310 to 2LP1 355 and	2LP4 350	2LP5 320 to 2LP5 340
22	56	52	10	6	14	M 16 x1.5	--	19	2LP2 320 to 2LP2 355		
30	56	52	10	6	14	M 16 x1.5	9.5	19			
40											
50											
60											
70											
80											
90											
100											
22	56	52	10	8	15	M 18 x1.5	--	22	2LP1 411 and above and 2LP2 410 and above and 2LP3 410 and above	2LP4 410 and above	2LP5 380 and above
30	56	52	10	8	15	M 18 x1.5	9.5	22			
40											
50											
60											
70											
80											
90											
100											
With Contact For Wear Monitoring											
22	56	52	10	8	15	M 18 x1.5	--	22			

Dry Operation

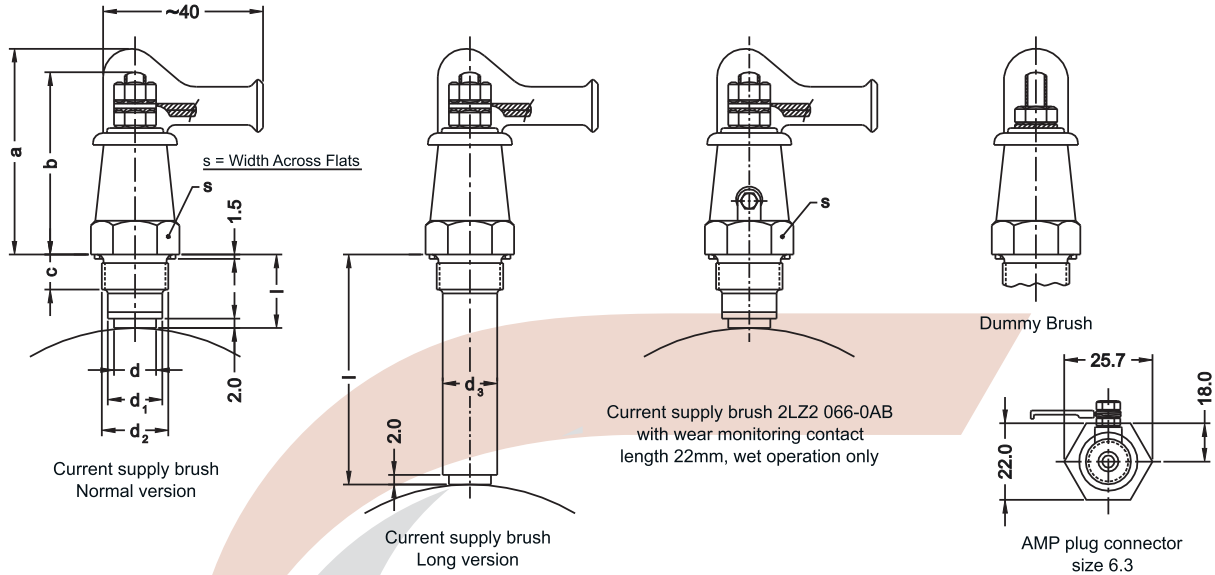
14	47	40	8	4	12	M 14 x1.5	--	17	--	--	--
14	47	40	8	6	14	M 16 x1.5	--	19	--	2LP4 350	2LP5 320 to 2LP5 350
22	56	52	10	6	14	M 16 x1.5	--	19	--		
30	56	52	10	6	14	M 16 x1.5	9.5	19			
40											
50											
60											
70											
80											
90											
100											
22	56	52	10	8	15	M 18 x1.5	--	22	--	2LP4 410 and above	2LP5 410 and above
30	56	52	10	8	15	M 18 x1.5	9.5	22	--		
40											
50											
60											
70											
80											
90											
100											

Dimension Data

Telescopic Brushes & Inserts GP.TB Series

Current supply brushes for slipping-type clutches

Dimensions



Insertion Length	Dimensions							For		
	a	b	c	d	d ₁	d ₂	d ₃	s	slipping-type multiple-disc clutches	self-adjusting multiple-disc clutches

Wet Operation

14	47	40	8	4	12	M 14 x1.5	--	17	2LP1 250	--	--
14	47	40	8	6	14	M 16 x1.5	--	19	2LP1 310 to 2LP1 355 and	2LP4 350	2LP5 320 to 2LP5 340
22	56	52	10	6	14	M 16 x1.5	--	19	2LP2 320 to 2LP2 355		
30	56	52	10	6	14	M 16 x1.5	9.5	19			
40											
50											
60											
70											
80											
90											
100											
22	56	52	10	8	15	M 18 x1.5	--	22	2LP1 411 and above and 2LP2 410 and above and 2LP3 410 and above	2LP4 410 and above	2LP5 380 and above
30	56	52	10	8	15	M 18 x1.5	9.5	22			
40											
50											
60											
70											
80											
90											
100											
With Contact For Wear Monitoring											
22	56	52	10	8	15	M 18 x1.5	--	22			

Dry Operation

14	47	40	8	4	12	M 14 x1.5	--	17	--	--	--
14	47	40	8	6	14	M 16 x1.5	--	19	--	2LP4 350	2LP5 320 to 2LP5 350
22	56	52	10	6	14	M 16 x1.5	--	19	--		
30	56	52	10	6	14	M 16 x1.5	9.5	19			
40											
50											
60											
70											
80											
90											
100											
22	56	52	10	8	15	M 18 x1.5	--	22	--	2LP4 410 and above	2LP5 410 and above
30	56	52	10	8	15	M 18 x1.5	9.5	22	--		
40											
50											
60											
70											
80											
90											
100											