

Carbon brush holders



Carbon brushes • Carbon brush holders

Overview

Leg brush holders

Brush holders with clamps

Brush holder bolts

Self-recoiling springs

Tubular brush holders

Small slipping systems

Flange brush holders /Brush rockers

Create a reliable future.

For over 60 years.

We are a supplier of current transmission solutions specializing in carbon brushes and carbon brush holders. Listening to our customers is one of our specialities; as your development partner with expert know-how we deliver exactly what is needed. Fast, reliable and at a fair price.

Because we build our own tools and manufacture almost all components in-house we are your ideal partner; from small quantities all the way to average and large series. We implement special designs gladly and efficiently.

Your advantages at MACK

- Friendly and competent contact partners
- Extensive program for immediate delivery
- Easy implementation of your individual special requests
- Small and large series production
- Development partners with expert know-how
- Excellent quality and reliability
- Company own machinery with a high vertical range of manufacture
- Company own tool and mould making

Our products – As diverse as your ideas.



Carbon Brushes

Proven standardized types and individually produced special solutions - our diversified range of quality brushes equipped with different fittings is the basis for a wide variety of transmission purposes. By using efficiently coordinated manufacturing methods we are able to produce small quantities as well as large series, we can deliver urgent orders as quickly as possible or directly shape and mould large quantities.

- Industrial carbon brushes
- Small carbon brushes
- Contact shoes
- Metal gauze brushes

Current transmission systems

You can profit from our experience in new constructions and the revision of existing linear or radial current transmission systems. Our own tool making and injection moulding facility enable us to quickly and easily implement individual solutions and change requests.

- Current collectors
- Small slipring systems
- Sliprings
- Plane grinding rings



Terminal boards

We use different moulding materials in the production of our terminal boards. In our assortment of round or oblong holes, different measurements and bolt sizes you will find a suitable terminal board including the joining materials.

Copper compound parts

We offer fixed, individually formed copper rails or flexible round and flat heads in single- and multiple layered versions to suit your needs; naturally they are also available with different insulations, insulation classes and surfaces.

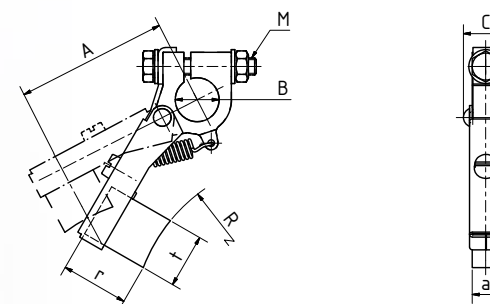


Carbon brush holders

Please find our large assortment of brush holders on the following pages...



Single leg brush holders for sliprings



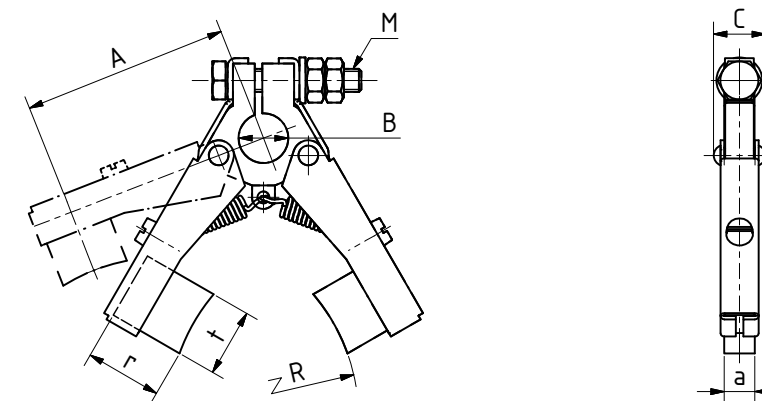
Type number	Brush dimensions			Radius R	Length* A	Bore diameter B		Width C	Connection screw M
	t	a	r			standard	max		
DE43.21.(B...)	4	3	10	At customer's option	21	7	8	7	M3
DE63.23.(B...)	6	3	15		23	7	8	7	M3
DE84.32.(B...)	8	4	15		32	8	10	8	M4
DE84.43.(B...)	8	4	15		43	8	10	8	M4
DE85.27.(B...)	8	5	15		27	8	10	9	M3
DE85.32.(B...)	8	5	15		32	8	10	9	M4
DE85.43.(B...)	8	5	15		43	8	10	9	M4
DE105.30.(B...)	10	5	16		30	8	10	9	M4
DE105.37.(B...)	10	5	16		37	8	10	9	M4
DE1064.37.(B...)	10	6.4	16		37	8	10	11	M4
DE1064.47.(B...)	10	6.4	16		47	8	10	11	M4
DE12564.40.(B...)	12.5	6.4	20		40	8	10	11	M4
DE12564.45.(B...)	12.5	6.4	20		45	8	10	11	M4
DE1258.47.(B...)	12.5	8	20		47	10	13	12	M5
DE168.40.(B...)	16	8	20		40	10	13	12	M5
DE168.46.(B...)	16	8	20		46	10	13	12	M5
DE168.50.(B...)	16	8	20		50	10	13	12	M5
DE168.62.(B...)	16	8	25		62	13	16	12	M5
DE1610.50.(B...)	16	10	25		50	10	16	14	M5
DE1610.62.(B...)	16	10	25		62	13	16	14	M5
DE208.50.(B...)	20	8	25		50	13	16	12	M5
DE208.60.(B...)	20	8	25		60	13	16	12	M5
DE2010.50.(B...)	20	10	25		50	10	13	14	M5
DE2010.56.(B...)	20	10	25		56	13	16	14	M5
DE2010.60.(B...)	20	10	25		60	13	16	14	M5
DE2010.70.(B...)	20	10	30		70	16	20	14	M5
DE258.60.(B...)	25	8	25		60	13	16	12	M5
DE258.70.(B...)	25	8	25		70	13	16	12	M5
DE2510.60.(B...)	25	10	25		60	13	16	14	M6
DE2510.70.(B...)	25	10	30		70	16	20	14	M6
DE25125.70.(B...)	25	12.5	30		70	16	20	17	M6
DE25125.80.(B...)	25	12.5	30		80	16	20	17	M6
DE25125.90.(B...)	25	12.5	30		90	16	20	17	M6
DE2516.85.(B...)	25	16	30		85	16	20	22	M8
DE3210.67.(B...)	32	10	32		67	13	16	15	M6
DE3210.80.(B...)	32	10	32		80	13	20	15	M6
DE32125.70.(B...)	32	12.5	32		70	16	20	17	M6
DE32125.80.(B...)	32	12.5	32		80	16	20	17	M6
DE32125.90.(B...)	32	12.5	32		90	16	20	17	M6
DE3216.85.(B...)	32	16	32		85	16	20	22	M8
DE3216.100.(B...)	32	16	32	100	16	20	22	M8	
DE4020.100.(B...)	40	20	40	100	16	20	26	M10	
DE4020.125.(B...)	40	20	40	125	25	-	26	M10	
DE4020.140.(B...)	40	20	40	140	25	-	26	M10	

Above dimensions are standard. Special dimensions available on request.
* Length of holder arm when fitted

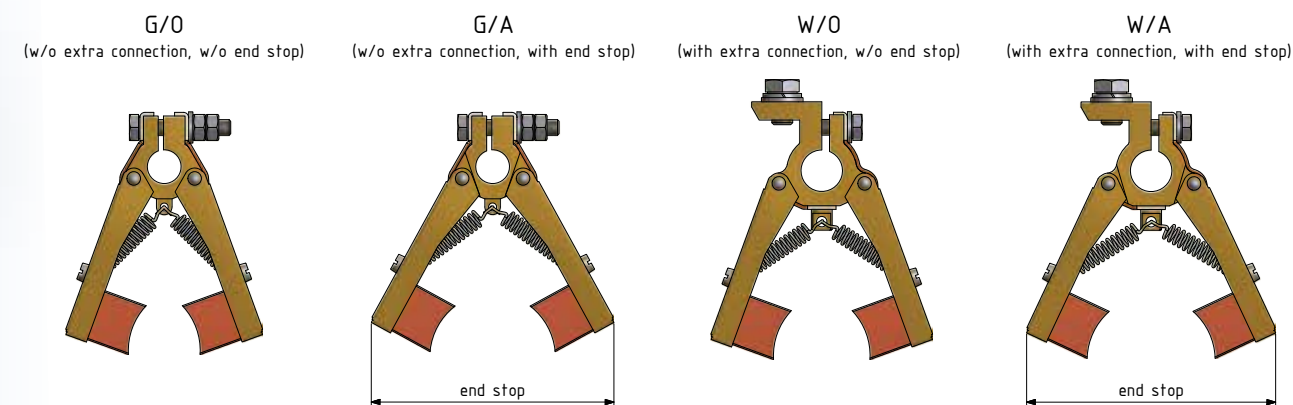
More
Leg brush holders
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- Overview
- Leg brush holders
- Brush holders with clamps
- Brush holder bolts
- Self-recoiling springs
- Tubular brush holders
- Small slipring systems
- Flange brush holders /Brush rockers

Double leg brush holders for sliprings



Designs



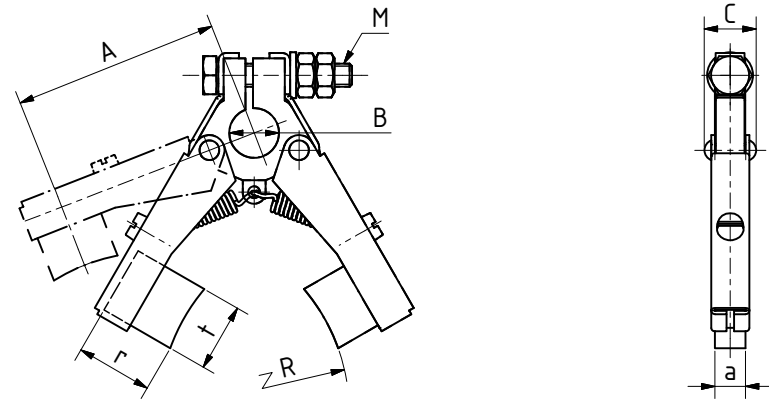
Type number	Brush dimensions			Radius R	Length* A	Bore diameter B		Width C	Connection screw M
	t	a	r			standard	max		
DD43.21.(B...)	4	3	10	At customer's option	21	7	8	7	M3
DD63.23.(B...)	6	3	15		23	7	8	7	M3
DD84.32.(B...)	8	4	15		32	8	10	8	M4
DD84.43.(B...)	8	4	15		43	8	10	8	M4
DD85.32.(B...)	8	5	15		32	8	10	9	M4
DD85.43.(B...)	8	5	15		43	8	10	9	M4
DD105.29.(B...)	10	5	16		29	8	10	9	M4
DD105.37.(B...)	10	5	16		37	8	10	9	M4
DD1064.35.(B...)	10	6.4	16		35	8	10	11	M4
DD1064.45.(B...)	10	6.4	16		45	8	10	11	M4
DD12564.40.(B...)	12.5	6.4	20		40	8	10	11	M4
DD12564.45.(B...)	12.5	6.4	20		45	8	10	11	M4
DD1258.40.(B...)	12.5	8	20		40	10	13	12	M5
DD1258.50.(B...)	12.5	8	20		50	10	13	12	M5
DD168.42.(B...)	16	8	20		42	10	13	12	M5
DD168.52.(B...)	16	8	20		52	10	13	12	M5
DD168.50.(B...)	16	8	20		50	10	13	12	M5
DD168.62.(B...)	16	8	25		62	13	16	12	M5
DD1610.50.(B...)	16	10	25		50	10	16	14	M5
DD1610.62.(B...)	16	10	25		62	13	16	14	M5

Above dimensions are standard. Special dimensions available on request.
Please specify design and optional end stop when ordering.
* Length of holder arm when fitted

More
Leg brush holders
(2 of 6)



- Overview
- Leg brush holders
- Brush holders with clamps
- Brush holder bolts
- Self-recoiling springs
- Tubular brush holders
- Small slipring systems
- Flange brush holders /Brush rockers



Type number	Brush dimensions			Radius R	Length* A	Bore diameter B		Width C	Connection screw M
	t	a	r			standard	max		
DD208.50.(B...)	20	8	25	At customer's option	50	13	16	12	M5
DD208.60.(B...)	20	8	25		60	13	16	12	M5
DD2010.50.(B...)	20	10	25		50	10	13	14	M5
DD2010.60.(B...)	20	10	25		60	13	16	14	M5
DD2010.70.(B...)	20	10	30		70	16	20	14	M5
DD258.52.(B...)	25	8	25		52	13	16	12	M5
DD258.60.(B...)	25	8	25		60	13	16	12	M5
DD2510.60.(B...)	25	10	25		60	13	16	14	M6
DD2510.70.(B...)	25	10	30		70	16	20	14	M6
DD25125.60.(B...)	25	12.5	25		60	13	16	17	M6
DD25125.70.(B...)	25	12.5	30		70	16	20	17	M6
DD25125.80.(B...)	25	12.5	30		80	16	20	17	M6
DD25125.90.(B...)	25	12.5	30		90	16	20	17	M6
DD2516.85.(B...)	25	16	30		85	16	20	22	M8
DD3210.70.(B...)	32	10	32		70	13	16	15	M6
DD3210.80.(B...)	32	10	32		80	13	20	15	M6
DD32125.80.(B...)	32	12.5	32		80	16	20	17	M6
DD32125.90.(B...)	32	12.5	32		90	16	20	17	M6
DD32125.100.(B...)	32	12.5	32		100	16	20	17	M6
DD3216.90.(B...)	32	16	32		90	16	20	22	M8
DD3216.100.(B...)	32	16	32	100	16	20	22	M8	
DD4020.100.(B...)	40	20	40	100	16	20	26	M10	
DD4020.125.(B...)	40	20	40	125	25	-	26	M10	
DD4020.140.(B...)	40	20	40	140	25	-	26	M10	

Above dimensions are standard. Special dimensions available on request.
Please specify design and optional end stop when ordering.
* Length of holder arm when fitted

Single leg brush holders made of plastic

Type number	Brush dimensions			Radius R	Length* A	Bore diameter B		Width C	Connection screw M
	t	a	r			standard	max		
KDE84.33.08.99.00	8	4	15	At customer's option	33	8	10	9	M3
KDE84.43.08.99.00	8	4	15		43	8	10	9	M3
KDE84.35.10.99.00	8	4	15		35	10	13	9	M4
KDE84.45.10.99.00	8	4	15		45	10	13	9	M4
KDE85.33.08.99.00	8	5	15		33	8	10	9	M3
KDE85.43.08.99.00	8	5	15		43	8	10	9	M3
KDE85.35.10.99.00	8	5	15		35	10	13	9	M4
KDE85.45.10.99.00	8	5	15		45	10	13	9	M4

Double leg brush holders made of plastic

Type number	Brush dimensions			Radius R	Length* A	Bore diameter B		Width C	Connection screw M
	t	a	r			standard	max		
KDD84.33.08.99.00	8	4	15	At customer's option	33	8	10	9	M3
KDD84.43.08.99.00	8	4	15		43	8	10	9	M3
KDD84.35.10.99.00	8	4	15		35	10	13	9	M4
KDD84.45.10.99.00	8	4	15		45	10	13	9	M4
KDD85.33.08.99.00	8	5	15		33	8	10	9	M3
KDD85.43.08.99.00	8	5	15		43	8	10	9	M3
KDD85.35.10.99.00	8	5	15		35	10	13	9	M4
KDD85.45.10.99.00	8	5	15		45	10	13	9	M4

* Length of holder arm when fitted

More Leg brush holders (3 of 6)



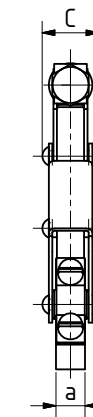
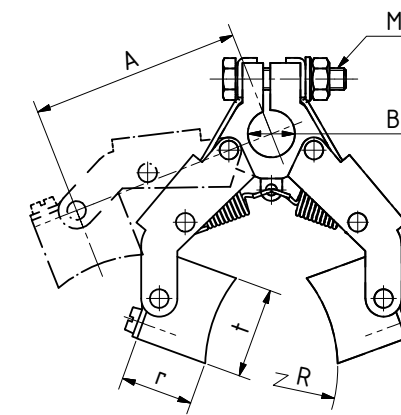
- Overview
- Leg brush holders
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- Small slipping systems
- Flange brush holders /Brush rockers

Double leg brush holders for sliprings with self-aligning brushes

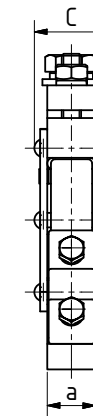
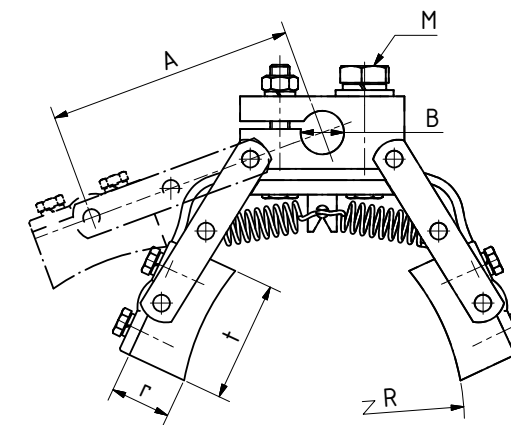
TYPE DDG



Design 1



Design 2



Type number	Brush dimensions			Radius R	Length* A	Bore diameter B		Width C	Conection screw M	max. current	Design
	t	a	r			standard	max				
DDG224.40.(B...)	22	4	18	At customer's option	40	8	10	7.5	M 4	25 A	1
DDG1664.40.(B...)	16	6.4	13		40	8	10	11.5	M 4	25 A	1
DDG2264.40.(B...)	22	6.4	13		40	8	10	11.5	M 4	30 A	1
DDG258.60.(B...)	25	8	20		60	12	16	13.5	M 5	60 A	1
DDG3210.60.(B...)	32	10	20		60	12	20	15.5	M 8	150 A	1
DDG3216.65.(B...)	32	16	20		65	12	20	22	M 8	180 A	1
DDG4514.80.(B...)	45	14	25		80	16	20	23	M 10	220 A	2
DDG4516.80.(B...)	45	16	25		80	16	20	27	M 12	265 A	2
DDG4516.95.(B...)	45	16	25		95	16	20	27	M 12	265 A	2
DDG5020.95.(B...)	50	20	25		95	16	20	30	M 12	350 A	2
DDG6025.105.(B...)	60	25	25		105	17	20	36	M 12	500 A	2

Above dimensions are standard. Special dimensions available on request.
* Length of holder arm when fitted

More
Leg brush holders
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Overview

Leg brush holders

Brush holders
with clamps

Brush holder
bolts

Self-recoiling
springs

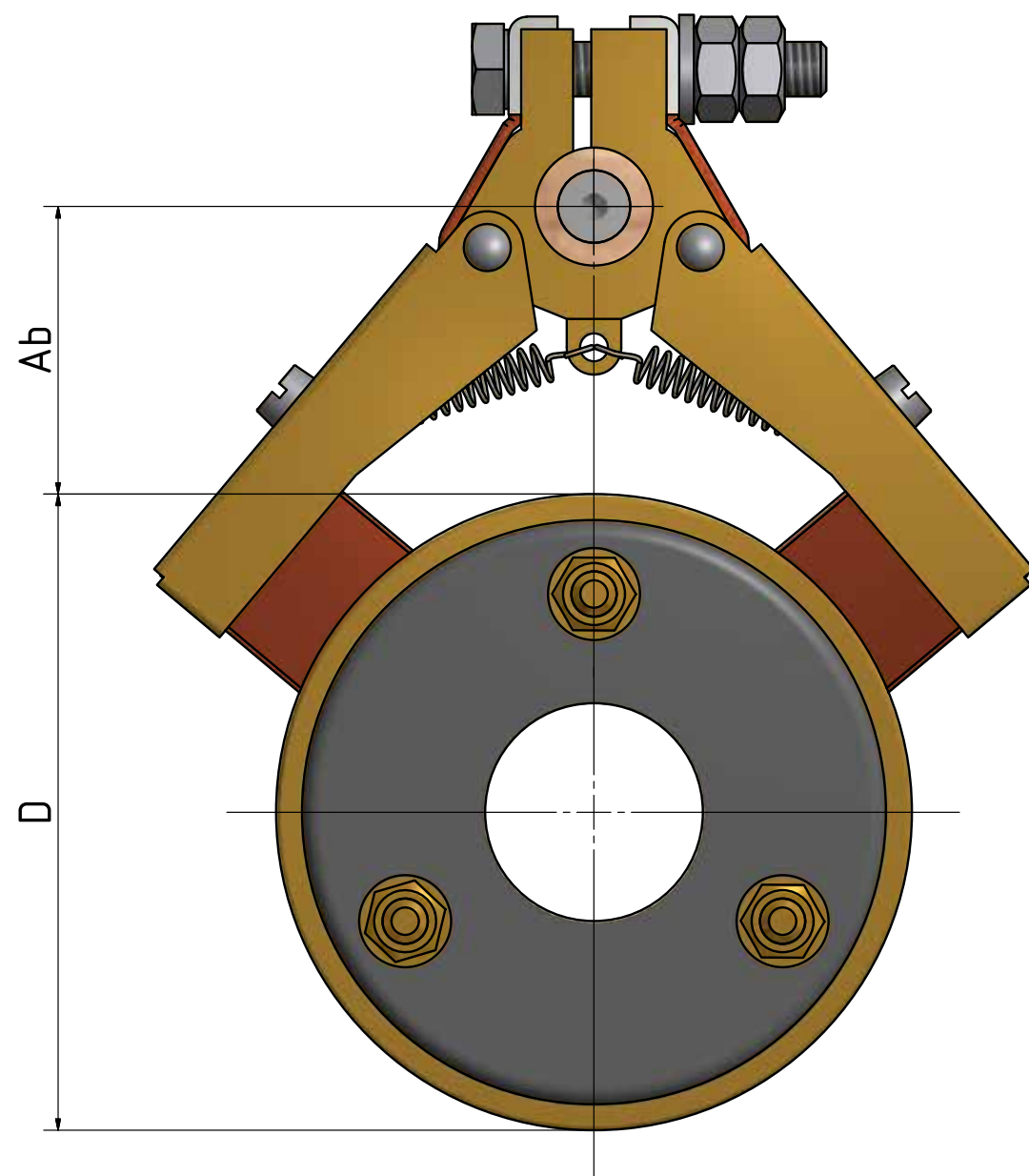
Tubular brush
holders

Small slipring
systems

Flange brush holders
/Brush rockers

Bolt distance

Table to determine bolt distance (Ab)



Type number	Bore diameter	Slipring diameter (D)								
		50	75	100	150	200	250	300	350	400
DD43.21.07	7	15	14	14						
DD63.23.07	7	15	14	14						
DD84.32.08	8	20	19	18	17	17	17			
DD84.43.08	8	24	21	20	19	18	17			
DD85.32.08	8	20	19	18	17	17	16			
DD85.43.08	8	24	21	20	19	18	17			
DD105.29.08	8	23	21	20	19	18	17			
DD105.37.08	8	23	21	20	19	18	17			
DD1064.35.08	8	24	21	20	19	18	17			
DD1064.45.08	8	24	21	20	19	18	17			
DD12564.40.08	8	25	22	21	20	20	20	20	20	20
DD12564.45.08	8	25	22	21	20	20	20	20	20	20
DD1258.40.10	10	25	25	22	22	20	20	20	20	20
DD1258.50.10	10	30	28	28	25	25	24	24	22	22
DD168.42.10	10	30	28	28	25	25	24	24	22	22
DD168.52.10	10	30	30	30	28	28	25	25	24	24
DD168.50.10	10	28	28	28	25	25	25	22	22	22
DD168.62.13	13			28	28	25	25	22	22	22
DD1610.50.10	10		32	30	30	25	25	22	22	22
DD1610.62.13	13		32	30	30	25	25	22	22	22
DD208.50.13	13		28	28	27	27	26	26	25	25
DD208.60.13	13		32	30	30	25	25	22	22	22
DD2010.50.10	10			26	26	25	25	24	24	24
DD2010.60.13	13			32	30	30	25	22	22	22
DD2010.70.16	16			35	35	35	33	33	32	32
DD258.52.13	13			26	26	26	26	24	24	24
DD258.60.13	13			28	28	26	26	25	25	25
DD2510.60.13	13			28	28	26	26	25	25	25
DD2510.70.16	16			35	35	34	34	32	32	32
DD25125.60.13	13			30	30	30	28	28	26	26
DD25125.70.16	16			35	35	34	34	32	32	32
DD25125.80.16	16			36	36	36	35	35	34	34
DD25125.90.16	16			45	45	43	43	42	42	40
DD2516.85.16	16			45	45	43	43	42	42	40
DD3210.70.13	13			34	34	33	33	32	32	30
DD3210.80.13	13			36	36	35	35	34	34	33
DD32125.80.16	16			43	43	42	42	42	40	40
DD32125.90.16	16			45	45	43	43	42	42	40
DD32125.100.16	16			55	50	48	46	45	45	42
DD3216.90.16	16			45	45	43	43	42	42	40
DD3216.100.16	16			55	50	48	46	45	45	42
DD4020.100.16	16			55	50	48	46	45	45	42
DD4020.125.25	25				60	55	50	45	42	42
DD4020.140.25	25				80	75	70	60	55	50

Above dimensions are general. Please contact us for special dimensions and further information.

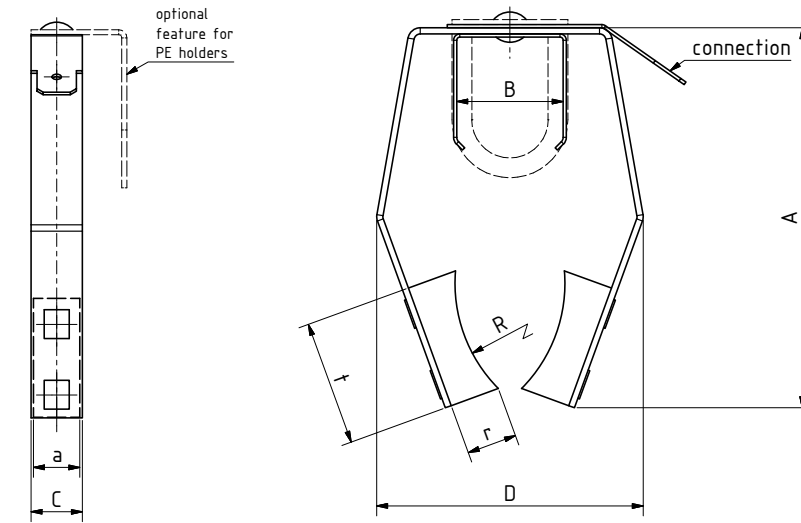
More
Leg brush holders
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U-bolt brush holders

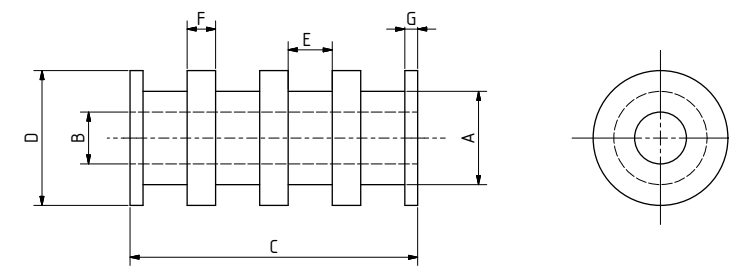
TYPE DDB



Type number	Brush dimensions			Phase/PE	A	B	C	D	Connection	R	max. current
	t	a	r								
DDB206.51.15.99	20	6	8	phase	51	15	6	41	push-on terminal 4.8	15	16 A
DDB2064.70.18.99	20	6.4	8	phase	70	18	8	59	thread M5	25	25 A
DDB2064.70.18.98	20	6.4	8	PE	70	18	8	59	thread M5	25	25 A
DDB2064.70.18.97	20	6.4	8	phase	70	18	8	59	push-on terminal 6.3	25	16 A
DDB2064.70.18.96	20	6.4	8	PE	70	18	8	59	push-on terminal 6.3	25	16 A
DDB208.625.18.99	20	8	8	phase	62.5	18	8	44	push-on terminal 6.3	22.5	16 A
DDB208.625.18.98	20	8	8	PE	62.5	18	8	44	push-on terminal 6.3	22.5	16 A
DDB208.70.18.99	20	8	8	phase	70	18	8	59	thread M6	25	50 A
DDB208.70.18.98	20	8	8	PE	70	18	8	59	thread M6	25	50 A

U-bolt brush holders are available with copper-graphite as well as silver-graphite brushes.

Spindle for U-bolt brush holders



Type number	Suitable for type	A	B	C	D	E	F	G
DDB.Rolle.16.4	DDB206	16	8	47.5	22	6.5	5.5	2.5
DDB.Rolle.18.4	DDB2064, DDB208	18	10	55.5	26	8.5	5.5	2.5

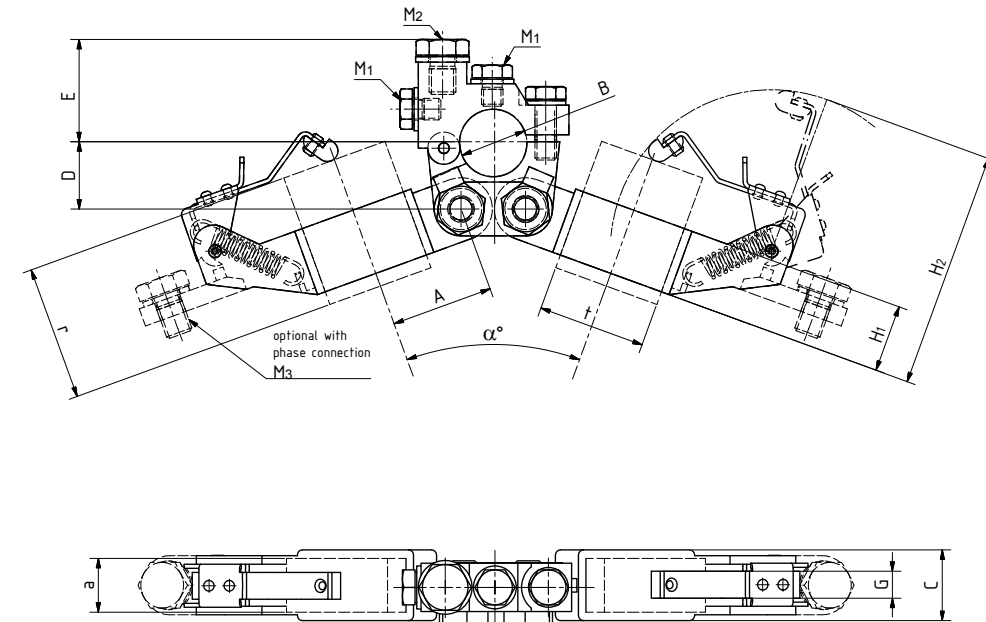
More
Leg brush holders
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Double brush holders with clamps

TYPE TBS



Type number	Brush dimensions			A	B	C	D	E	G	H ₁	H ₂	α°	M ₁	M ₂	M ₃	Phase terminals	Adjustable brush pressure
	t	a	r														
TBS4.168.16.0	16	8	25	16	16	14	17	22.5	6	20	62	40-60	M5	M6	-	0	no
TBS4.168.16.2	16	8	25	16	16	14	17	22.5	6	20	62	40-60	M5	M6	M3	2	no
TBS4.208.16.0	20	8	25	22	16	15	17	22.5	6	16	57	40-60	M5	M6	-	0	no
TBS4.208.16.2	20	8	25	22	16	15	17	22.5	6	16	57	40-60	M5	M6	M6	2	no
TBS4.2010.16.0	20	10	32	22	16	16	17	22.5	6	20	62	40-60	M5	M6	-	0	no
TBS4.2010.16.2	20	10	32	22	16	16	17	22.5	6	20	62	40-60	M5	M6	M6	2	no
TBS3.2510.16.0	25	10	32	25	16	15.5	19.5	25	6	20	74	40-60	M6	M6	-	0	no
TBS4.2510.16.0.V	25	10	32	26	16	17	19.5	22.5	6	20	63	40-60	M5	M6	-	0	yes
TBS4.2510.20.0.V	25	10	32	26	20	17	19.5	24.5	6	20	63	40-60	M5	M6	-	0	yes
TBS3.25125.16.0	25	12.5	32	25	16	17.5	19.5	25	6	20	74	40-60	M6	M6	-	0	no
TBS4.25125.20.0.V	25	12.5	32	26	20	20	19.5	24.5	8	20	63	40-60	M5	M6	-	0	yes
TBS4.32125.16.2	32	12.5	40	32	16	21	27.5	22.5	10	20	70	40-60	M8	M10	M10	2	no
TBS3.3216.25.0.V	32	16	40	34	25	22	26	31	10	25	79	40-60	M8	M10	-	0	yes
TBS4.3216.20.2.V	32	16	40	32	20	24	27.5	32	10	25	76	40-60	M8	M10	M10	2	yes
TBS3.3220.25.0.V	32	20	40	34	25	26	26	31	10	25	79	40-60	M8	M10	-	0	yes
TBS4.3220.20.2	32	20	40	32	20	26	27.5	32	10	25	86	40-60	M8	M8	M10	2	no
TBS3.3225.25.0	32	25	50	32	25	31	24.5	29	10	30	80	40-60	M8	M10	-	0	no
TBS2.4020.25.0	40	20	40	38	25	25.5	28	46.5	12	26.5	78	40-60	M8	M10	-	0	no
TBS3.4020.25.0.V	40	20	40	38	25	26	26	31	10	25	79	40-60	M8	M10	-	0	yes
TBS3.4020.25.2	40	20	40	38	25	26	25	31	10	25	79	40-60	M8	M10	M10	2	no
TBS4.4032.25.0.V	40	32	50	36	25	37	30	34.5	10	28	86	40-60	M8	M10	-	0	yes
TBS4.4032.25.2.V	40	32	50	36	25	37	30	34.5	10	28	86	40-60	M8	M10	M10	2	yes

Above dimensions are general. Please contact us for special dimensions and further information.

More Brush holders with clamps (1 of 2)

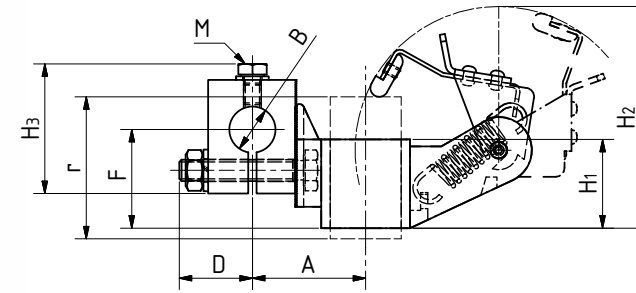


- Overview
- Leg brush holders
- Brush holders with clamps
- Brush holder bolts
- Self-recoiling springs
- Tubular brush holders
- Small slipping systems
- Flange brush holders /Brush rockers

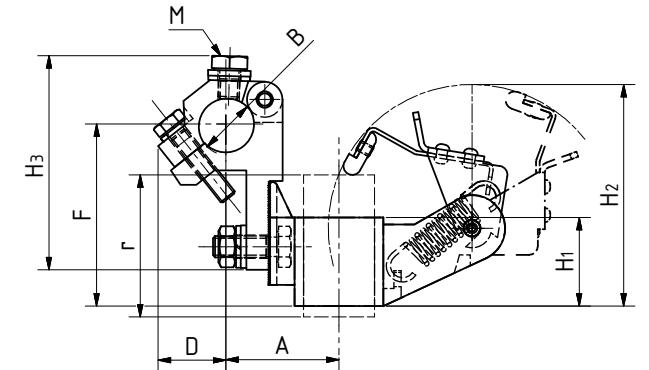
Single brush holders with clamps

TYPE GH

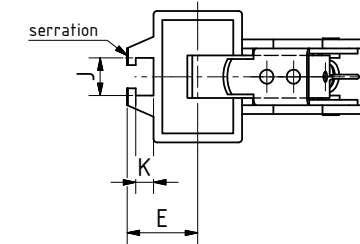
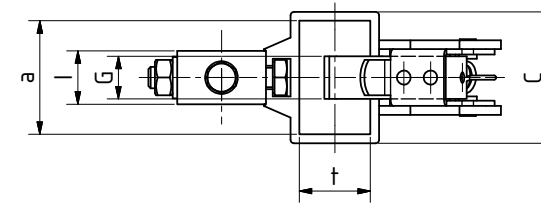
with clamp version K



with clamp version L



For both clamp versions



Type number	Brush holders										with clamps								
	Brush dimensions			C	E	G	H ₁	H ₂	J	K	De-sign	A	B	C	D	F	H ₃	I	M
GH510	5	10	20	14.5	12.5	6	15	36.5	9.5	4.5									
GH6310	6.3	10	20	14.5	13.2	6	15	37	9.5	4.5									
GH810	8	10	20	14.5	14	6	15	38.5	9.5	4.5									
GH63125	6.3	12.5	25	17	13.2	6	20	47.5	9.5	4.5									
GH8125	8	12.5	25	17	14	6	20	47	9.5	4.5									
GH10125	10	12.5	25	17	15	6	20	47	9.5	4.5									
GH816	8	16	32	20.5	14	8	22	56	10.5	5									
GH1016	10	16	32	20.5	15	8	22	56	10.5	5									
GH12516	12.5	16	32	20.5	16.3	8	22	55	10.5	5									
GH6320	6.3	20	32	24.5	13.2	8	25	56	10.5	5									
GH820	8	20	32	24.5	14	8	25	56	10.5	5									
GH1020	10	20	32	24.5	15	8	25	57	10.5	5									
GH12520	12.5	20	32	24.5	16.3	8	25	60	10.5	5									
GH1620	16	20	32	24.5	18	8	25	60	10.5	5									
GH825	8	25	32	29.5	14	10	25	63	10.5	5									
GH1025	10	25	40	29.5	15	10	25	63	10.5	5									
GH12525	12.5	25	40	29.5	16.3	10	25	67	10.5	5									
GH1625	16	25	40	29.5	18	10	25	69	10.5	5									
GH2025	20	25	40	29.5	20	10	25	70	10.5	5									
GH12532	12.5	32	40	37.5	16.3	12	25	60	10.5	5									
GH1632	16	32	40	37.5	18	12	25	61	10.5	5									
GH2032	20	32	40	37.5	20	12	25	64	10.5	5									
GH2532	25	32	45	37	22.5	10	30	70	10.5	5.2									

Please specify required clamp version and dimensions.

Above dimensions are general. Please contact us for special dimensions and further information.

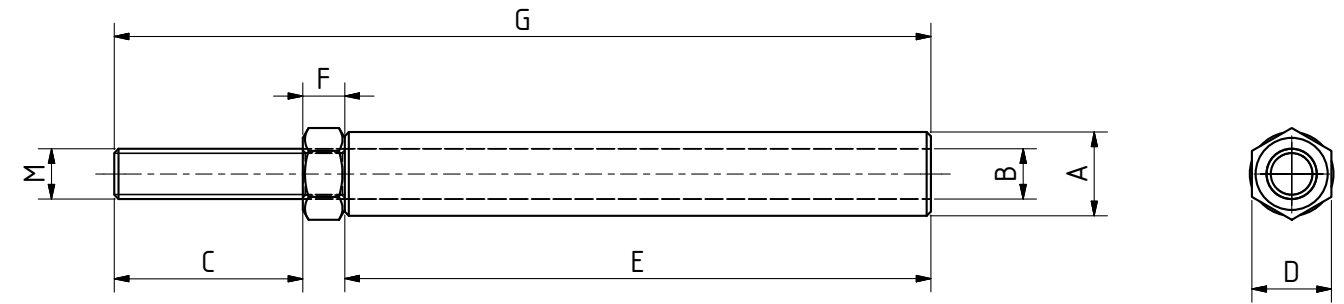
More Brush holders with clamps (2 of 2)



- Overview
- Leg brush holders
- Brush holders with clamps
- Brush holder bolts
- Self-recoiling springs
- Tubular brush holders
- Small slipping systems
- Flange brush holders /Brush rockers

Brush holder bolts

TYPE B



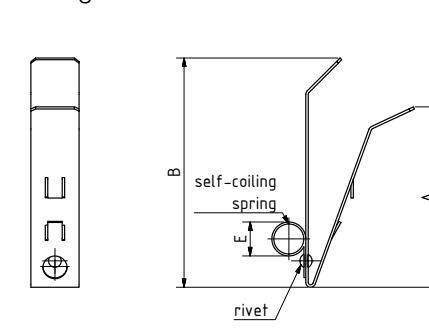
Type number	M	A	B	C	D	E	F	G
B30	M8 x 1.25	10	8	9	13	32	4	45
B31	M8 x 1.25	10	8	13	13	45	4	62
B32	M8 x 1.25	10	8	13	13	70	4	87
B33	M8 x 1.25	10	8	39	13	90	6	135
B34	M8 x 1.25	12	8	39	13	100	6	145
B35	M8 x 1.25	13	8	44	13	100	6	150
B35a	M10 x 1.5	13	10	42	17	100	8	150
B36	M10 x 1.5	14	10	37	17	100	8	145
B37	M10 x 1.5	15	10	37	17	110	8	155
B38	M10 x 1.5	16	10	47	17	110	8	165
B39	M12 x 1.75	18	12	45	19	120	10	175
B40	M12 x 1.75	20	12	45	19	140	10	195
B41	M12 x 1.75	22	12	50	19	140	10	200
B42	M12 x 1.75	23	12	55	19	140	10	205
B43	M12 x 1.75	25	12	55	19	140	10	205

Insulation available in different materials, such as plastic, laminated paper or fibre glass.
Above dimensions are general. Please contact us for special dimensions and further information.

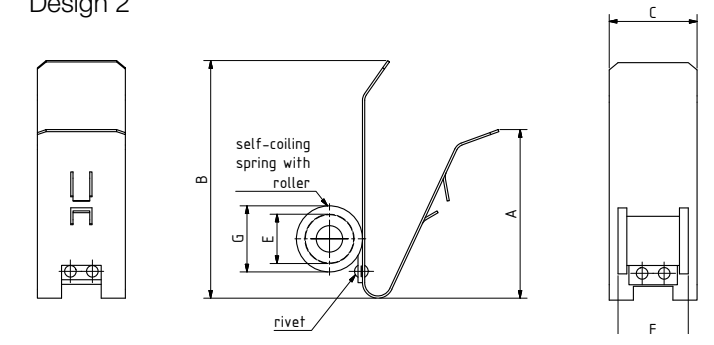
- Overview
- Leg brush holders
- Brush holders with clamps
- Brush holder bolts
- Self-recoiling springs
- Tubular brush holders
- Small slipping systems
- Flange brush holders /Brush rockers

Self-recoiling springs - Designs

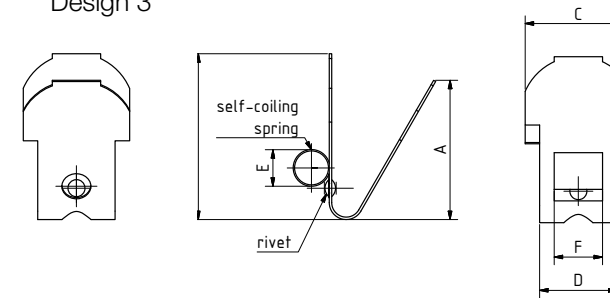
Design 1



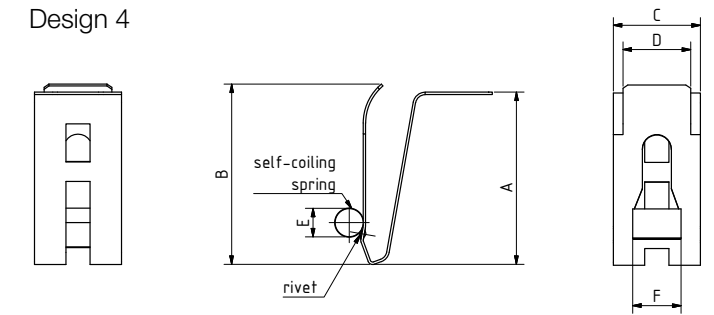
Design 2



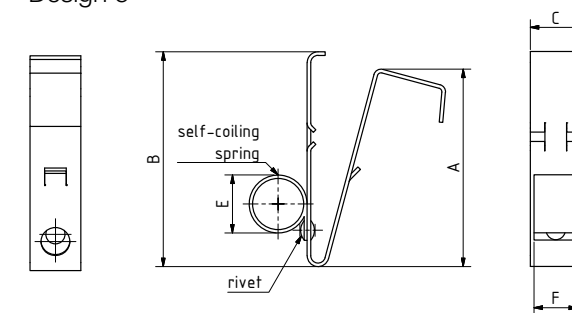
Design 3



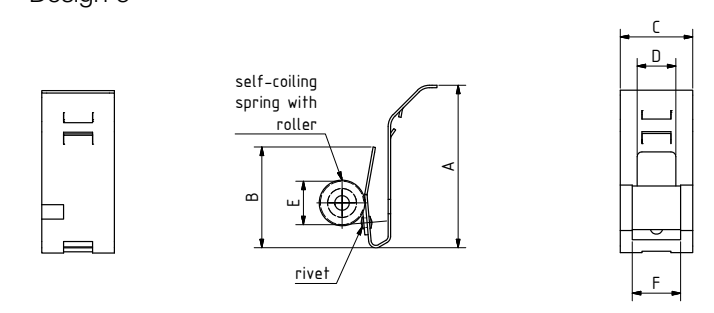
Design 4



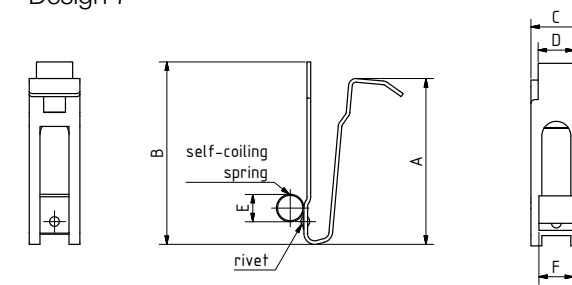
Design 5



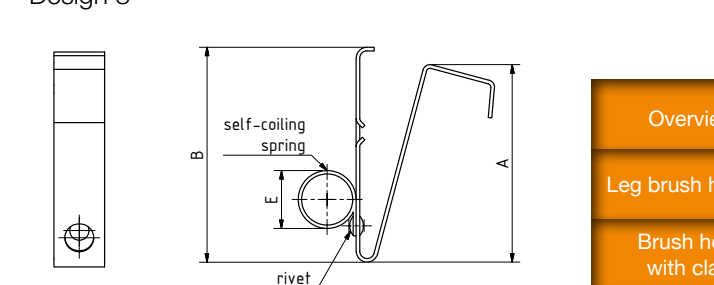
Design 6



Design 7



Design 8



All types are available in several sizes and with different brush pressures.

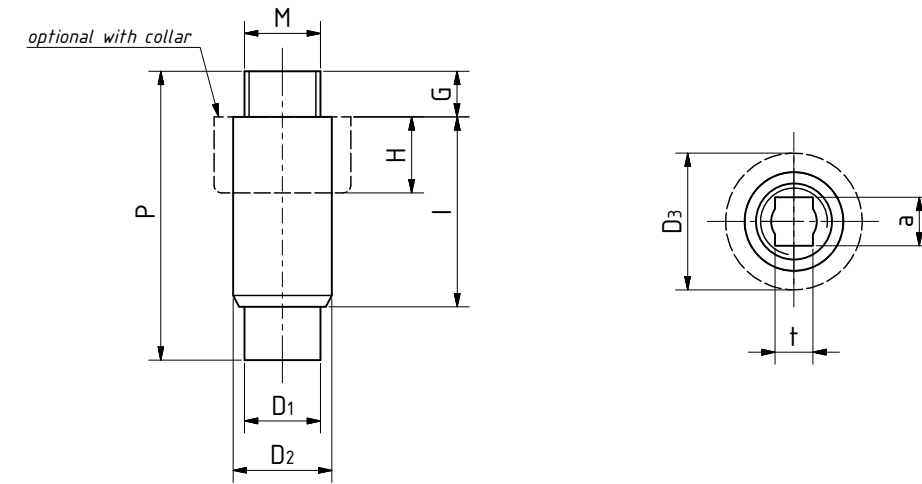
For further information as well as our enquiry and order forms, please refer to www.mack-kohlebuersten.de. Above dimensions are general. Please contact us for special dimensions and further information.



- Overview
- Leg brush holders
- Brush holders with clamps
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- Tubular brush holders
- Small slipping systems
- Flange brush holders /Brush rockers

Tubular brush holders

TYPE KH



Type number	t	a	D ₁	D ₂	P	I	M	G	with collar	
									H	D ₃
KH34	3	4	7						at customer's option	
KH364	3	6.4	9						at customer's option	
KH44	4	4	8						at customer's option	
KH45	4	5	8						at customer's option	
KH48	4	8	12						at customer's option	
KH48159	4.8	15.9	21						at customer's option	
KH55	5	5	9						at customer's option	
KH56	5	6	9						at customer's option	
KH564	5	6.4	10						at customer's option	
KH58	5	8	12						at customer's option	
KH510	5	10	14						at customer's option	
KH5135.49	5	13.5	made of brass sheet	-	49	-	-	-	-	-
KH515.44	5	15	made of brass sheet	-	44	-	-	-	-	-
KH66	6	6	10						at customer's option	
KH69	6	9	13						at customer's option	
KH613.335	6	13	made of brass sheet	17.1	33.5	25	M19 x 1	8.5	12.5	20.1
KH613.425	6	13	made of brass sheet	17.1	42.5	34	M19 x 1	8.5	21.5	20.1
KH616	6	16	21						at customer's option	
KH6311.42	6.3	11	made of brass sheet	-	42	-	-	-	-	-
KH6311.22	6.3	11	made of brass sheet	-	22	-	-	-	-	-
KH648	6.4	8	12						at customer's option	
KH6410	6.4	10	14						at customer's option	
KH64125	6.4	12.5	16						at customer's option	
KH64125.45	6.4	12.5	made of brass sheet	-	45	-	-	-	-	-
KH88	8	8	13						at customer's option	
KH810	8	10	16						at customer's option	
KH810.28	8	10	made of brass sheet	-	28	-	-	-	-	-
KH812	8	12	16						at customer's option	
KH8125.25	8	12.5	made of brass sheet	-	25	-	-	-	-	-
KH10125	10	12.5	18						at customer's option	

Insulation available in different materials, such as plastic, laminated paper or fibre glass.

More
Tubular brush
holders
(1 of 3)



- Overview
- Leg brush holders
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Connections

Thread



Groove

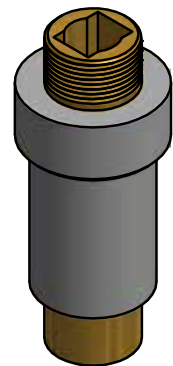


Blade terminal



Designs

Collar



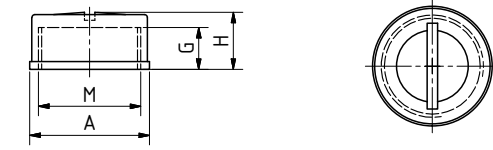
Knurl



Inside thread

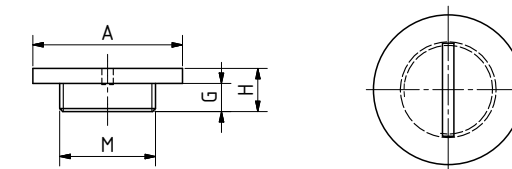


Screw caps with inside thread



Type number	Thread M	Thread depth G	External diameter A	Overall height H
A 7 x 0.75/5	M7 x 0.75	5	10.5	7.5
A 7 x 0.75/6	M7 x 0.75	6	10.5	7.5
A 8 x 0.75/6	M8 x 0.75	6	12.5	8.5
A 8 x 1/6	M8 x 1	6	12.5	8
A 9 x 0.75/6	M9 x 0.75	6	12.5	8
A 9 x 1/6	M9 x 1	6	12.5	8.5
A 10 x 0.75/4	M10 x 0.75	4	13.5	5.5
A 10 x 1/5	M10 x 1	5	13	8
A 10 x 1/6	M10 x 1	6	13	9
A 10 x 1/7	M10 x 1	7	13	10
A 12 x 1/6	M12 x 1	6	18	10
A 12 x 1/6.5	M12 x 1	6.5	17	10
A 12 x 1/7	M12 x 1	7	17	10
A 12 x 1/7C	M12 x 1	7	15	10
A 13 x 1/6	M13 x 1	6	17	10
A 13 x 1/7	M13 x 1	7	17	10
A 14 x 1/7	M14 x 1	7	19	12
A 14 x 1/7C	M14 x 1	7	17.5	10
A 15 x 1/6.5	M15 x 1	6.5	20	10
A 16 x 1/7	M16 x 1	7	22	11
A 16 x 1/7C	M16 x 1	7	20	9.5
A 17 x 1/7	M17 x 1	7	22	11
A 18 x 1/7	M18 x 1	7	22.5	11.5
A 19 x 1/9.5	M19 x 1	9.5	23	13
A 20 x 1/8	M20 x 1	8	25	13

Screw caps with external thread



Type number	Thread M	Thread depth G	External diameter A	Overall height H
AG 8 x 0.75/4	M8 x 0.75	4	11	5.5
AG 12 x 1/5	M12 x 1	5	15	7.5
AG 16 x 1/6	M16 x 1	6	end-to-end thread	
AG 16 x 1/5	M16 x 1	5	25	7.5
AG 20 x 1/6	M20 x 1	6	end-to-end thread	
AG 7/8"	7/8" (22.2 mm)	5	end-to-end thread	
AG 23 x 1/6	M23 x 1	6	29	9
AG 23 x 1/6C	M23 x 1	6	26	9
AG 24 x 1/6	M24 x 1	6	30	9
AG 24 x 1.5/9	M24 x 1.5	9	end-to-end thread	

More Tubular brush holders (2 of 3)



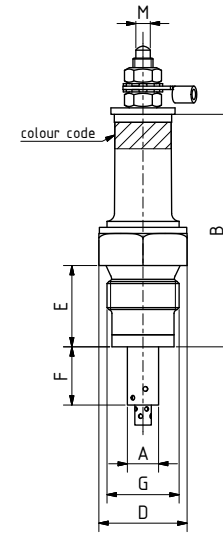
- Overview
- Leg brush holders
- Brush holders with clamps
- Brush holder bolts
- Self-recoiling springs
- Tubular brush holders
- Small slipping systems
- Flange brush holders /Brush rockers

Spark plug holder & telescope conductor

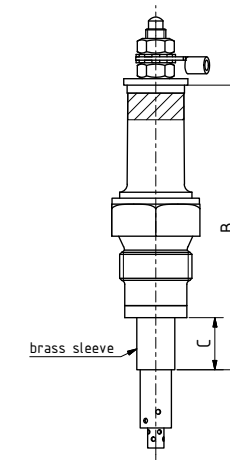
TYPE ST



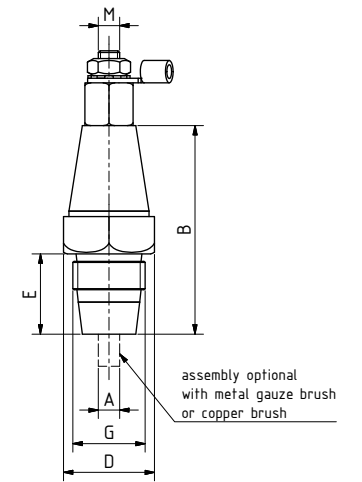
Design 1
telescope conductor
with telescope gauze brush



Design 2
telescope conductor (with brass sleeve)
with telescope gauze brush



Design 3
spark plug holder



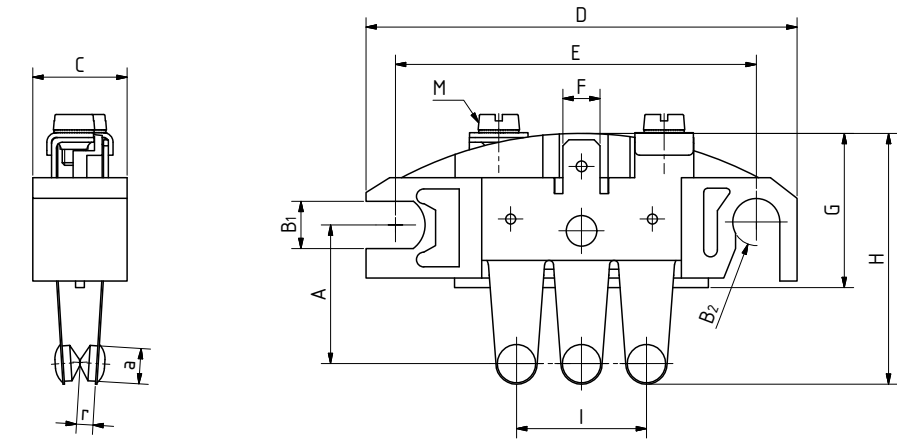
Type number	A	B	C	D	E	F	G	M	Colour ring	Assembly with	Design
ST4.45.1415.SW17.99*	4	45	-	SW17	15	-	M14 x 1.5	M4	-	-	3
ST5.41.1415.SW17.00	5	41	-	SW17	12	13	M14 x 1.5	M5	-	gauze brush	1
ST5.41.1415.SW17.01	5	41	-	SW17	12	13	M14 x 1.5	M5	-	copper brush	1
ST5.41.1415.SW17.99*	5	41	-	SW17	12	-	M14 x 1.5	M5	-	-	1
ST6.52.1815.SW22.00	6	52	-	SW22	19	20	M18 x 1.5	M5	-	gauze brush	1
ST6.52.1815.SW22.01	6	52	-	SW22	19	20	M18 x 1.5	M5	-	copper brush	1
ST6.52.1815.SW22.99*	6	53	-	SW22	19	-	M18 x 1.5	M5	-	-	1
ST6.53.1615.SW19.00	6	53	-	SW19	20	19	M16 x 1.5	M5	-	gauze brush	1
ST6.53.1615.SW19.01	6	53	-	SW19	20	19	M16 x 1.5	M5	-	copper brush	1
ST6.53.1615.SW19.99*	6	53	-	SW19	20	-	M16 x 1.5	M5	-	-	1
ST6.53.1815.SW22.00	6	53	-	SW22	17	22	M18 x 1.5	M5	-	gauze brush	1
ST6.53.1815.SW22.01	6	53	-	SW22	17	22	M18 x 1.5	M5	-	copper brush	1
ST6.53.1815.SW22.99*	6	53	-	SW22	17	-	M18 x 1.5	M5	-	-	1
ST6.55.1815.SW22.99*	6	55	-	SW22	19	-	M18 x 1.5	M5	-	-	3
ST6.87.1615.SW19.00	8	87	13	SW19	20	13	M16 x 1.5	M5	yellow	gauze brush	2
ST8.58.1815.SW22.00	8	58	-	SW22	20	14	M18 x 1.5	M5	red	gauze brush	1
ST8.58.1815.SW22.01	8	58	-	SW22	20	14	M18 x 1.5	M5	red	copper brush	1
ST8.71.1815.SW22.00	8	71	13	SW22	20	13	M18 x 1.5	M5	-	gauze brush	2

Above dimensions are general. Please contact us for special dimensions and further information.
* Type numbers ending with ,99' are without assembly as metal gauze brushes or copper brushes.

More
Tubular brush
holders
(3 of 3)



- Overview
- Leg brush holders
- Brush holders with clamps
- Brush holder bolts
- Self-recoiling springs
- Tubular brush holders
- Small slipping systems
- Flange brush holders /Brush rockers



Type number	Brush type	a	r	A	B ₁	B ₂	C	D	E	F	G	H	I	M	max. current*
FSAGR.01.00.99.00	Copper-graphite brushes	6	3	23	8	8	16	73	60	push-on terminal 6.3	26	41.5	22	M4	25 A
FSAGR.01.01.99.00	Silver-graphite brushes	6	3	23	8	8	16	73	60	push-on terminal 6.3	26	41.5	22	M4	25 A
FSAKL.01.00.99.00	Copper-graphite brushes	3	1.5	12.5	5	5	12	50	40	solder lug 6 mm	12	27	14	-	15 A
FSAKL.01.01.99.00	Silver-graphite brushes	3	1.5	12.5	5	5	12	50	40	solder lug 6 mm	12	27	14	-	15 A

Plane grinding rings and further equipment for current transmission systems are also available from MACK. For further information, please refer to our brochure „Current Transmission Systems“.

Our small slipring systems are designed for plane grinding rings with diameters of 50 mm and 101.5 mm. Other dimensions are available on request. * Figures based on a duty rating of 60%.

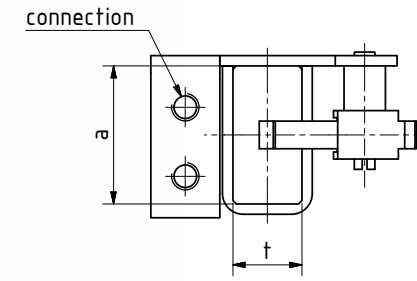
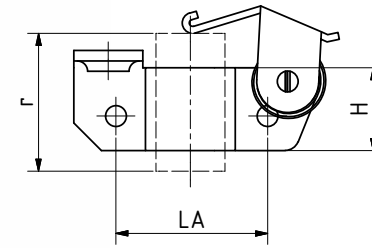
- Overview
- Leg brush holders
- Brush holders with clamps
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- Tubular brush holders
- Small slipring systems
- Flange brush holders /Brush rockers

Flange brush holders

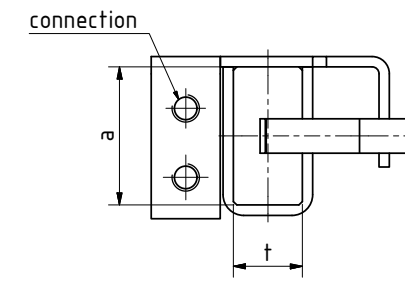
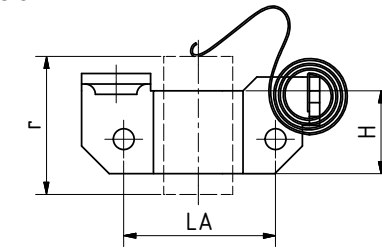
TYPE FH



Version A



Version B



Type number	Brush dimension		r	H	LA	Connection	Version
	t	a					
FH48.85.A.99.00	4	8	10	8.5	16	-	A
FH56.8.B.99.00	5	6	14	8	12	M3	B
FH5125.10.A.99.00	5	12.5	17	10	16	M3	A
FH648.10.A.99.00	6.4	8	20	10	16	M3	A
FH648.10.B.99.00	6.4	8	19	10	14	M3	B
FH6410.10.B.98.00	6.4	10	19	10	15	M3 + push-on terminal 4.8	B
FH6410.10.B.99.00	6.4	10	19	10	14	M3	B
FH6410.13.B.99.00	6.4	10	23	13	20	push-on terminal 4.8	B
FH64125.10.A.98.00	6.4	12.5	17	10	14	M3	A
FH64125.10.A.99.00	6.4	12.5	16	10	15	2x M3	A
FH64125.18.B.99.00	6.4	12.5	22	18	20	M4	B
FH6416.12.B.99.00	6.4	16	24	12	20	M4	B
FH6416.18.B.99.00	6.4	16	22	18	20	M4	B
FH6416.225.B.99.00	6.4	16	24	22.5	26	2x push-on terminal 6.3	B
FH810.10.A.99.00	8	10	17	10	16	M3	A
FH810.10.B.99.00	8	10	17	10	16	M3	B
FH810.14.B.99.00	8	10	20	14	20	2x M4	B
FH8125.15.A.99.00	8	12.5	24	15	20	2x M3	A
FH8125.225.B.99.00	8	12.5	24	22.5	26	2x push-on terminal 6.3	B
FH816.12.B.99.00	8	16	24	12	20	M4	B
FH1013.19.B.99.00	10	13	26	19	20	-	B
FH1016.12.B.99.00	10	16	21	12	20	M4	B
FH1020.12.B.99.00	10	20	26	12	20	2x M5	B

Further dimensions available on request.

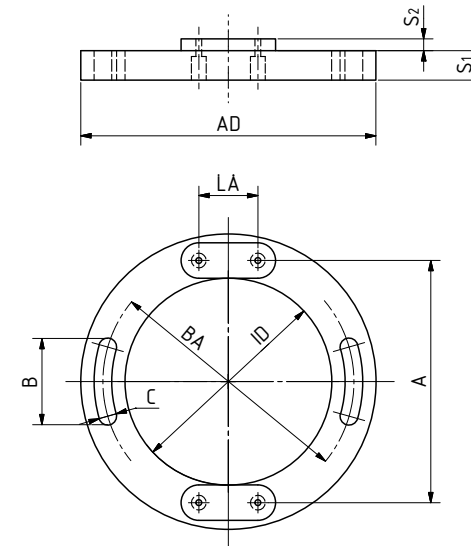
Brush rockers



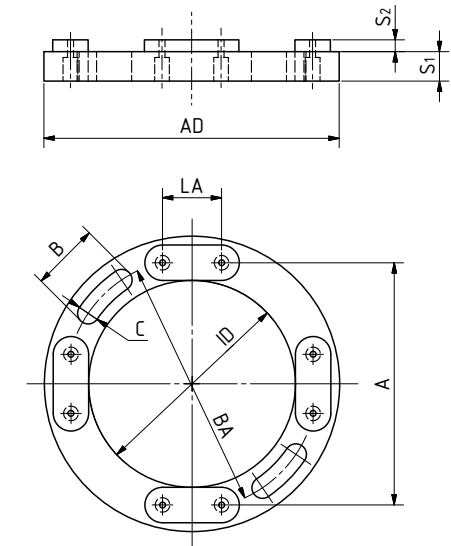
- Overview
- Leg brush holders
- Brush holders with clamps
- Brush holder bolts
- Self-recoiling springs
- Tubular brush holders
- Small slipping systems
- Flange brush holders /Brush rockers



Version A



Version B



Type number	Version	AD	ID	A	LA	S ₁	S ₂	BA	B	C
BB645.40.A	A	64.5	40	52.5	20	6	4	52	22	4
BB65.40.B	B	65	40	53	20	6	-	52	3	3
BB54.305.A	A	54	30.5	44	20	10	1	(without)		
BB355.20.A	A	35.5	20	25	12	3.2	-	29	2.5	2.5
BB52.23.A	A	52	23	29.3	11	8	-	37	7	7
BB52.23.A	A	52	23	33.5	16	8	-	(without)		
BB53.33.A	A	53	33	40.5	14	8	-	43	4.2	4.2
BB65.35.B	B	65	35	47	20	6	-	52.5	3.2	3.2
BB86.48.B	B	86	48	62.5	20	3	2.3	68	6.3	6.3
BB86.61.B	B	86	61	69	14	10	3.5	75	M4	M4
BB88.56.A	A	88	56	63.2	16	8	3.5	72.5	24	5.5
BB98.55.B	B	98	55	63.5	22	7	0.7	82	15	6

Further dimensions available on request.

Flange brush holders



Overview

Leg brush holders

Brush holders with clamps

Brush holder bolts

Self-recoiling springs

Tubular brush holders

Small slipping systems

Flange brush holders /Brush rockers



Carbon brushes • Carbon brush holders

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