SPAZZOLE
BRUSHES

PORTASPAZZOLE
BRUSH HOLDER

COLLETTORI
SLIP RINGS

Tutte le caratteristiche tecniche riportate in questo catalogo sono state fornite dalle case costruttrici e sono suscettibili di variazioni senza alcun preavviso.

All the technical specifications shown in the catalogue have been provided by the manufacturers and are subject to change without notice.

CARATTERISTICHE DELLE QUALITÀ USATE NELLA COSTRUZIONE DELLE SPAZZOLE

CHARACTERISTICS OF THE MATERIALS USED IN BRUSH CONSTRUCTION

CODICE *CODE*	**CARATTERISTICHE** *CHARACTERISTICS*
EG224	**Elettrografite usata per carrelli elevatori ed alte velocità.** *Electrographite used for lift trucks and high speed.*
EG236S-EG263-G163	**Elettrografite per uso generale, motori e generatori in C.C. ed alte velocità.** *Electrographite for general use, dc motors and generators and high speed.*
EG251	**Elettrografite per alte velocità e carichi variabili.** *Electrographite for high speed and variable loads*
EG269	**Elettrografite. Mantiene un valore di attrito costante su un ampio range di condizioni di carico.Ideale per applicazioni diesel o elettriche.** *Electrographite. Maintains a constant friction value in a wide range of load conditions. Ideal for diesel or electrical applications.*
EG283	**Elettrografite per uso generale ed alte velocità.** *Electrographite for general use and high speed.*
EG571	**Elettrografite per alte velocità con largo range di carico, bassa umidità ed ambiente contaminato.** *Electrographite for high speed with a wide load range, low humidity and reduced pollution.*
IM31	**Grafite-Bakelite con alta caduta di contatto per motori a velocità variabile.** *Graphite-Bakelite with high contact drop for variable speed motors.*

CARATTERISTICHE DELLE QUALITÀ USATE NELLA COSTRUZIONE DELLE SPAZZOLE

CHARACTERISTICS OF THE MATERIALS USED IN BRUSH CONSTRUCTION

CODICE *CODE*	**CARATTERISTICHE** *CHARACTERISTICS*
M19	**Metalgrafite con medio contenuto di rame.** *Metal-graphite with medium copper content.*
M192	**Metalgrafite con medio-alto contenuto di rame.** *Metal-graphite with medium-high copper content.*
M5X	**Elettrografite per generatori C.C. con alta velocità periferica, per motori a collettore a corrente trifase, motori di trazione tranviaria di grande potenza, generatori a bassa tensione, saldatrici e per anelli collettori.** *Electrographite for dc generators with high peripheral speed, for three phase current commutator motors, high-power tramway traction motors, low voltage generators, welding machines and slip rings.*
M70	**Metalcarbone con medio contenuto di rame.** *Metal-carbon with medium copper content.*
M75	**Metalcarbone con medio-alto contenuto di rame.** *Metal-carbon with medium-high copper content.*
M85	**Bronzo-Carbone con medio-alto contenuto di rame.** *Bronze-Carbon with medium-high copper content.*
N19X	**Elettrografite alte velocità per cartiere, acciaierie, con carichi medio-bassi.** *Electrographite for high speed for paper mills and steelworks with medium-high loads.*

SPAZZOLE INDUSTRIALI

INDUSTRIAL BRUSHES

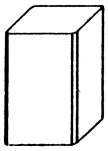
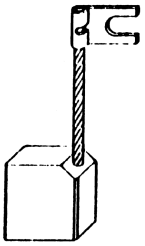
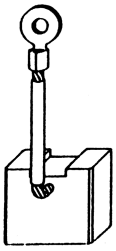
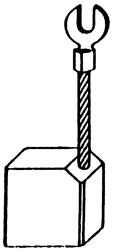
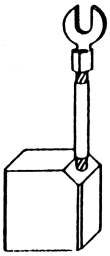
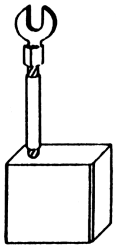
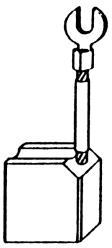
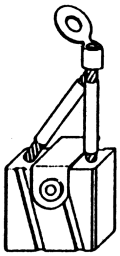
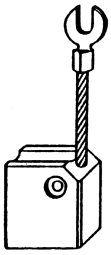
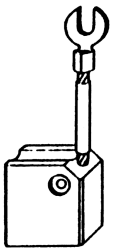
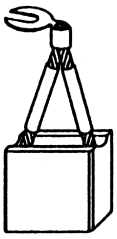
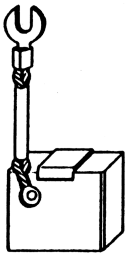
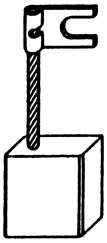
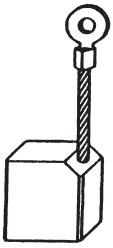
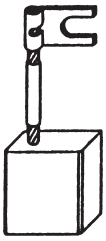
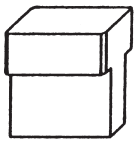
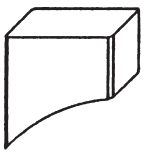
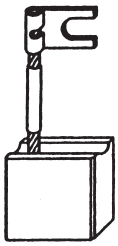
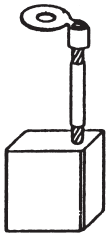
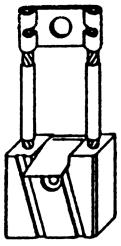
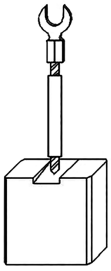
Articolo *Art.*	**Dimensioni** *Dimensions*			**Materiale** *Material*	**Qualità** *Model*	**Fig.** *Fig.*	**LL. cavo mm** *LL. cable mm*	**Diam. Ø cavo** *Cable ø diam.*	**Vite bloccagg.** *Locking screw*	**Costruttore** *Manufacturer*	*
	S / *T*	**L** / *W*	**A** / *H*								
501	5	8	13	**bronzo-carbone** *bronze-carbon*	M192	1	-	-	-	**Costrutt. vari** *Various manufact.*	○
502	5	10	16	**bronzo-carbone** *bronze-carbon*	M85	1	-	-	-	**Costrutt. vari** *Various manufact.*	○
506	6	8	25	**elettrografite** *electrographite*	EG236S	5	35	1	4	**Marelli** *Marelli*	□
507	6	12	25	**elettrografite** *electrographite*	EG283	8	50	1.5	3	-	□
508	6	12.5	22	**elettrografite** *electrographite*	M5X	3	54	1.5	5	**Carrelli Linde** *Linde Forklifts*	□
509	6	16	25	**elettrografite** *electrographite*	EG283	6	55	1.5	5	**Sicme** *Sicme*	□
511 • **(510)**	6	20	25	**elettrografite** *electrographite*	EG236S	12	60	1.9	4	**Eletar** *Eletar*	□
512	6	22	21.5	**metalgrafite** *metal-graphite*	M19	15	38/30	1.9	4	**Bosch-Amer-CFR** *Bosch-Amer-CFR*	□
519 • **(517-518)**	6	28	30.5	**elettrografite** *electrographite*	M5X	73	50	2.2	5	**Carrelli** *Forklifts*	□
520	6	30	30.5	**grafite-bakelite** *graphite-bakelite*	IM31	16	75	2.4	5	**M.B.M.** *M.B.M.*	□
521	6	30	32	**elettrografite** *electrographite*	EG269	12	84	2.4	4	**Eletar** *Eletar*	□
523	6.23	31.9	30	**grafite-bakelite** *graphite-bakelite*	IM31	25	45	1.9	4	**M.B.M.** *M.B.M.*	□
525	6.3	32	32	**grafite-bakelite** *graphite-bakelite*	IM31	29	60	1.9	4	**Asea** *Asea*	□
529	6.4	10	20	**elettrografite** *electrographite*	EG571	34	40	1.9	4	**Ansaldo** *Ansaldo*	□
530	6.4	16	32	**elettrografite** *electrographite*	EG283	34	74	1.9	6	**Siemens** *Siemens*	□
534	6.4	35	32	**grafite-bakelite** *graphite-bakelite*	IM31	9	50	2.8	4	**Piller** *Piller*	□
500	7	14	18	**metalcarbone** *metal-carbon*	M70	166	100	2.4	6	**Costrutt. vari** *Various manufact.*	○
535	7	20	30	**elettrografite** *electrographite*	EG236S	19	58	2.4	4	**Eletar** *Eletar*	□
536	7	20	25	**elettrografite** *electrographite*	EG236S	12	60	1.9	4	**Eletar** *Eletar*	□
537	7	25	30	**elettrografite** *electrographite*	EG236S	16	60	2.8	4	**Eletar** *Eletar*	□
538	7	30	32	**elettrografite** *electrographite*	N19X	19	70	2.8	5	**Eletar** *Eletar*	□
539	8	10	25	**elettrografite** *electrographite*	EG571	42	35	1.5	4	**Marelli** *Marelli*	□
540	8	10	25	**elettrografite** *electrographite*	EG571	41	48	1.5	4	**Costrutt. vari** *Various manufact.*	□
541	8/6	12	20	**bronzo-carbone** *bronze-carbon*	M192	43	-	-	-	-	○
542	8	12.5	22	**elettrografite** *electrographite*	M5X	3	54	1.5	5	**Carrelli Linde** *Linde Forklifts*	□
543	8	12.5	32	**grafite-bakelite** *graphite-bakelite*	IM31	46	74	1.7	5	**Siemens** *Siemens*	□
511 • **(546)**	8	15	25	**metalcarbone** *metal-carbon*	M70	50	40	2.4	4	**Marelli** *Marelli*	○
545	8	15	25	**elettrografite** *electrographite*	EG571	6	42	1.9	4	**Costrutt. vari** *Various manufact.*	□
547	8	16	20	**bronzo-carbone** *bronze-carbon*	M85	1	-	-	-	**Costrutt. vari** *Various manufact.*	○
548	8	16	20/12	**bronzo-carbone** *bronze-carbon*	M85	45	-	-	-	**Fimet** *Fimet*	○
549	8	16	25	**elettrografite** *electrographite*	EG224	12	50	2.4	5	**Eletar** *Eletar*	□
550	8	16	25	**elettrografite** *electrographite*	EG571	9	75	1.7	4	**Piller/Sicme** *Piller/Sicme*	□
551	8	16	25	**elettrografite** *electrographite*	EG571	50	60	1.9	4	**Marelli** *Marelli*	□

***** I simboli (○ □) stanno ad indicare su quali tipi di collettori vanno montate le spazzole.
The symbols (○ □) indicate on which types of collector the brushes are to be mounted.

• Articoli unificati
Unified articles

A richiesta possiamo fornire qualunque tipo di spazzola. Si richiede l'invio del campione.
On request we can supply any kind of brush. Please send sample.

○ =  □ = 

1 	3 	5 	6 
8 	9 	12 	15 
16 	19 	25 	29 
34 	41 	42 	43 
45 	46 	50 	73 
166 			

SPAZZOLE INDUSTRIALI

INDUSTRIAL BRUSHES

Articolo *Art.*	**Dimensioni** *Dimensions*			**Materiale** *Material*	**Qualità** *Model*	**Fig.** *Fig.*	**LL. cavo mm** *LL. cable mm*	**Diam. Ø cavo** *Cable ø diam.*	**Vite bloccagg.** *Locking screw*	**Costruttore** *Manufacturer*	*
	S / *T*	**L** / *W*	**A** / *H*								
552	8	16	25	grafite-bakelite *graphite-bakelite*	IM31	52	63	1.9	6	-	□
553 • **(555)**	8	16	25	metalcarbone *metal-carbon*	M70	13	-	-	3ma	Costrutt. vari *Various manufact.*	○
554	8	16	25	elettrografite *electrographite*	EG571	41	50	1.9	4	Saicem *Saicem*	□
556	8	16	25	metalcarbone *metal-carbon*	M70	54	50	2.4	4	Costrutt. vari *Various manufact.*	○
557	8	16	25	metalcarbone *metal-carbon*	M70	41	50	2.4	4	-	○
558	8	16	25	elettrografite *electrographite*	M5X	12	50	2.4	4	-	□ ○
559	8	16	25	metalcarbone *metal-carbon*	M70	12	50	2.4	4	M.B.M.-Costrutt. vari *M.B.M.-Various manufact.*	○
560	8	16	27	grafite-bakelite *graphite-bakelite*	IM31	53	50	1.9	4	M.B.M. *M.B.M.*	□
561	8	19	28	grafite-bakelite *graphite-bakelite*	IM31	3	55	2.2	5	Elektra Farandau *Elektra Farandau*	□
562	8	20	25	elettrografite *electrographite*	M5X	62	-	-	3ma	-	□ ○
563	8	20	25	metalcarbone *metal-carbon*	M70	13	-	-	3ma	Eletar *Eletar*	○
564	8	20	27	grafite-bakelite *graphite-bakelite*	IM31	63	50	2.4	5	M.B.M. *M.B.M.*	□
565	8	20	30	elettrografite *electrographite*	EG571	64	75	2.4	4	-	□
566	8	20	32	elettrografite *electrographite*	EG571	65	50	2.4	6	Ansaldo *Ansaldo*	□
567	8	25	25	elettrografite *electrographite*	EG269	9	60	2.4	5	Piller *Piller*	□
568	8	25	30	elettrografite *electrographite*	EG269	56	70	2.4	5	Eletar *Eletar*	□
569	8	25	30	metalcarbone *metal-carbon*	M70	13	-	-	3ma	-	○
571	8	25	35	grafite-bakelite *graphite-bakelite*	IM31	70	55	2.4	4	-	□
572	8	25	40	elettrografite *electrographite*	EG571	64	64	2.4	4	Costrutt. vari *Various manufact.*	□
573 • **(574)**	8	28	30.5	elettrografite *electrographite*	M5X	73	50	3.1	5	-	□ ○
575	8	30	25	grafite-bakelite *graphite-bakelite*	IM31	74	60	1.9	5	T.I.B.B. *T.I.B.B.*	□
576	8	32	32/28	elettrografite *electrographite*	M5X	76	74	2.2	6	Carrelli Linde *Linde Forklifts*	□
577	8	32	32	elettrografite *electrographite*	M5X	77	80	2.2	5	Carrelli Linde *Linde Forklifts*	□
578 *	8	32	40	elettrografite *electrographite*	EG571	78	77	3.1	6	-	□
580	8	40	32	grafite-bakelite *graphite-bakelite*	IM31	79	50	2.2	5	Asea *Asea*	□
581 *	8	40	32/28	grafite-bakelite *graphite-bakelite*	IM31	28	75	2.2	6	Asea *Asea*	□
582	9	13	23.5	elettrografite *electrographite*	M5X	450	25	3.1	6	Carrelli Amre *Amre Forklifts*	□
583	9	16	20	metalgrafite *metal-graphite*	M19	82	34	3.1	5	-	○
585	10	12.5	22	elettrografite *electrographite*	M5X	86	54	2.4	4	Carrelli Linde *Linde Forklifts*	□
586	10	12.5	32	elettrografite *electrographite*	EG283	52	70	1.9	6	Siemens *Siemens*	□

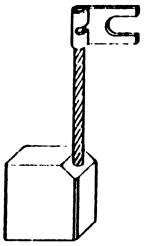
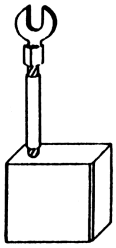
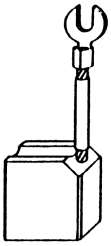
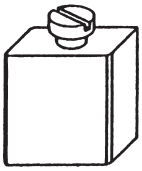
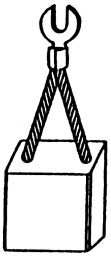
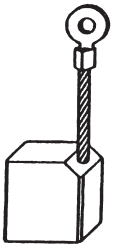
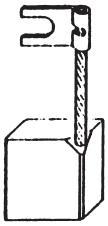
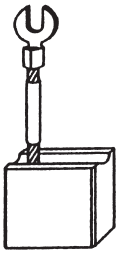
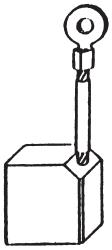
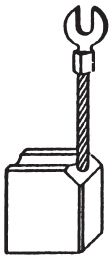
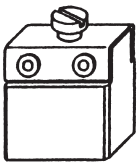
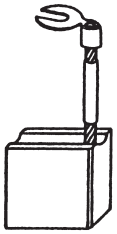
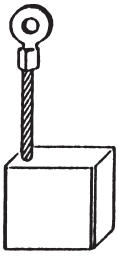
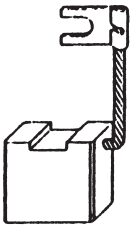
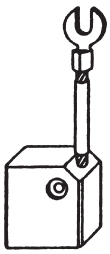
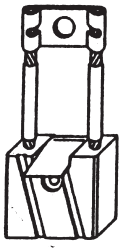
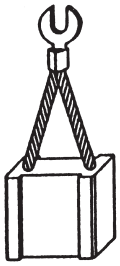
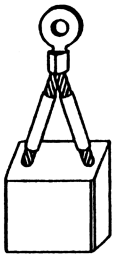
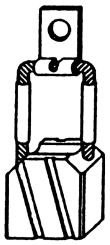
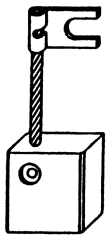
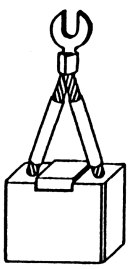
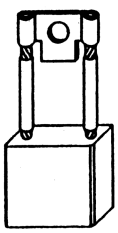
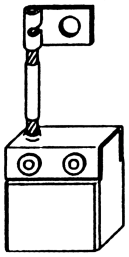
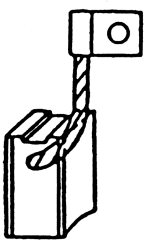
* I simboli (○ □) stanno ad indicare su quali tipi di collettori vanno montate le spazzole.
The symbols (○ □) indicate on which types of collector the brushes are to be mounted.

• Articoli unificati
Unified articles

A richiesta possiamo fornire qualunque tipo di spazzola. Si richiede l'invio del campione.
On request we can supply any kind of brush. Please send sample.

○ =  □ = 

* **IN ESAURIMENTO** / *RUNNING OUT*

3 	9 	12 	13 
28 	41 	52 	53 
54 	56 	62 	63 
64 	65 	70 	73 
74 	76 	77 	78 
79 	82 	86 	450 

SPAZZOLE INDUSTRIALI

INDUSTRIAL BRUSHES

Articolo *Art.*	Dimensioni *Dimensions*			Materiale *Material*	Qualità *Model*	Fig. *Fig.*	LL. cavo mm *LL. cable mm*	Diam. Ø cavo *Cable ø diam.*	Vite bloccagg. *Locking screw*	Costruttore *Manufacturer*	*
	S / *T*	L / *W*	A / *H*								
589	10	16	25	elettrografite *electrographite*	EG283	8	70	2.2	4	Sicme *Sicme*	□
590	10	16	25	elettrografite *electrographite*	EG283	50	60	2.4	4	Marelli *Marelli*	□
591	10	16	32	grafite-bakelite *graphite-bakelite*	IM31	60	58	1.9	6	Siemens *Siemens*	□
592	10	16	40	elettrografite *electrographite*	EG283	89	50	2.2	6	Asea *Asea*	□
593	10	20	20	elettrografite *electrographite*	M5X	12	50	2.8	5	Carrelli Bosch *Bosch Forklifts*	□
594	10	20	25	metalcarbone *metal-carbon*	M70	13	-	-	4ma	Costrutt. vari *Various manufact.*	○
595	10	20	25	elettrografite *electrographite*	EG571	97	65	3.1	6	T.I.B.B. *T.I.B.B.*	□
596	10	20	26	elettrografite *electrographite*	M5X	99	45	2.4	5	CFR *CFR*	□ ○
597	10	20	30	elettrografite *electrographite*	N19X	42	75	2.8	4	Marelli *Marelli*	□
598	10	20	32	elettrografite *electrographite*	EG251	9	70	2.8	5	I.E.G. *I.E.G.*	□
599	10	20	32	grafite-bakelite *graphite-bakelite*	IM31	46	52	2.4	6	Siemens *Siemens*	□
600	10	20	32	elettrografite *electrographite*	EG283	12	85	3.1	6	Eletar *Eletar*	□
602 • **(601)**	10	20	35	metalcarbone *metal-carbon*	M70	6	72	3.1	5	Costrutt. vari *Various manufact.*	○
603	10	20	35	elettrografite *electrographite*	EG571	56	63	3.1	5	Eletar *Eletar*	□
604	10	20	35	elettrografite *electrographite*	M5X	8	75	2.8	5	-	□ ○
605	10	20	35	metalgrafite *metal-graphite*	M19	64	73	3.1	5	-	○
606	10	20	35	metalcarbone *metal-carbon*	M70	8	72	3.1	5	Costrutt. vari *Various manufact.*	○
607	10	20	35	elettrografite *electrographite*	EG251	34	75	2.8	6	Ansaldo *Ansaldo*	□
608	10	20	40	elettrografite *electrographite*	M5X	3	86	2.8	6	Elin *Elin*	□ ○
609	10	20	40	elettrografite *electrographite*	EG571	64	90	2.8	6	-	□
610	10	20	45	bronzo-carbone *bronze-carbon*	M85	1	-	-	-	Costrutt. vari *Various manufact.*	○
611	10	25	23	elettrografite *electrographite*	M5X	102	35	2.2	5	Carrelli Linde *Linde Forklifts*	□
612	10	25	25	metalcarbone *metal-carbon*	M70	13	-	-	4ma	Costrutt. vari *Various manufact.*	○
614	10	25	30	bronzo-carbone *bronze-carbon*	M85	13	-	-	4ma	Ansaldo *Ansaldo*	○
615	10	25	30	elettrografite *electrographite*	G163	34	50	2.8	5	Ansaldo *Ansaldo*	□
616	10	25	30.5	metalcarbone *metal-carbon*	M70	104	52	2.8	6	Carrelli OM *OM Forklifts*	○
618	10	25	32	elettrografite *electrographite*	EG283	3	75	2.8	6	Asea *Asea*	□
619	10	25	32	bronzo-carbone *bronze-carbon*	M85	54	85	4	6	-	○
620	10	25	32	elettrografite *electrographite*	M5X	54	82	3.5	6	-	□ ○
622	10	25	32	elettrografite *electrographite*	M5X	9	65	2.8	6	Piller *Piller*	□ ○
623	10	25	32	metalcarbone *metal-carbon*	M70	12	74	4.5	6	Eletar *Eletar*	○
624	10	25	35	metalcarbone *metal-carbon*	M70	54	75	4	6	M.B.M. *M.B.M.*	○
626	10	25	36/24	elettrografite *electrographite*	EG283	108	45	2.8	4	Ansaldo *Ansaldo*	□

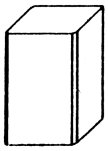
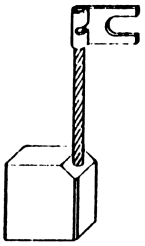
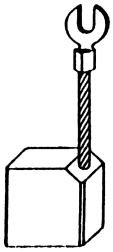
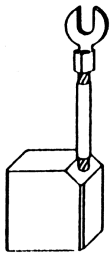
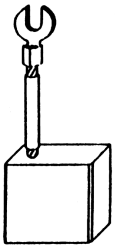
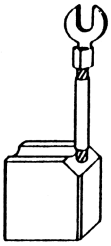
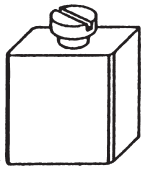
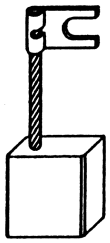
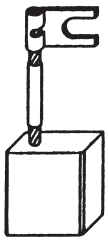
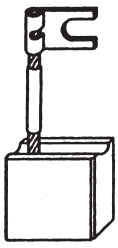
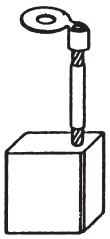
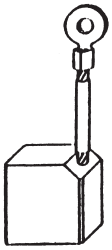
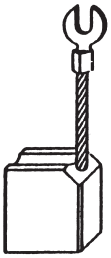
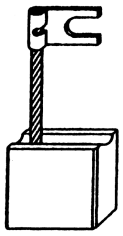
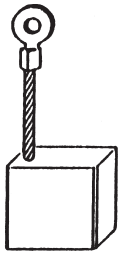
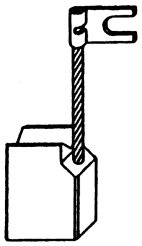
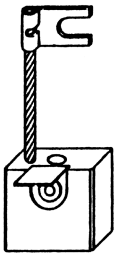
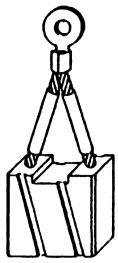
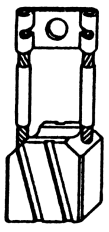
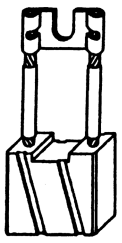
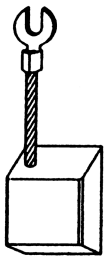
***** I simboli (○ □) stanno ad indicare su quali tipi di collettori vanno montate le spazzole.
The symbols (○ □) indicate on which types of collector the brushes are to be mounted.

• Articoli unificati
Unified articles

A richiesta possiamo fornire qualunque tipo di spazzola. Si richiede l'invio del campione.
On request we can supply any kind of brush. Please send sample.

○ =  □ = 

DELL'ERBA

1 	3 	6 	8 
9 	12 	13 	34 
42 	46 	50 	54 
56 	60 	64 	89 
97 	99 	102 	104 
108 			

SPAZZOLE INDUSTRIALI

INDUSTRIAL BRUSHES

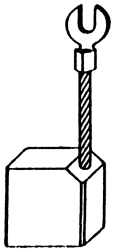
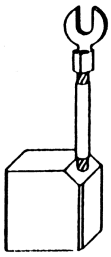
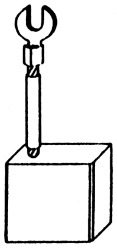
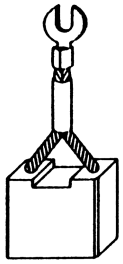
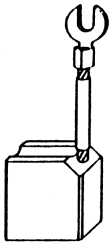
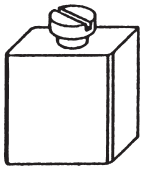
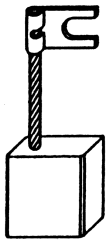
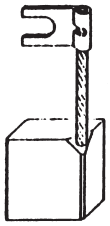
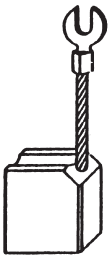
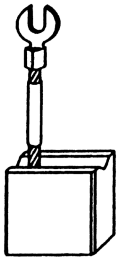
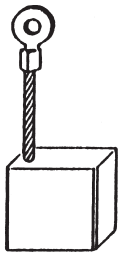
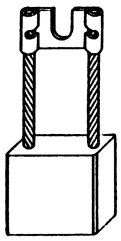
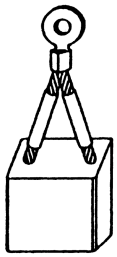
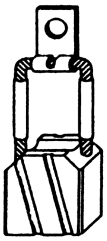
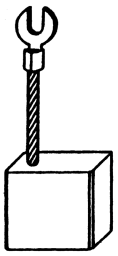
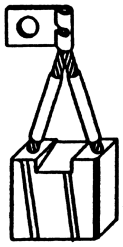
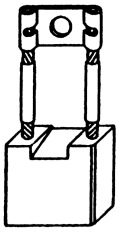
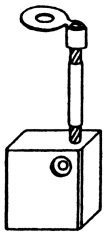
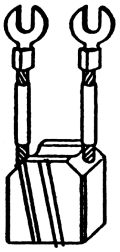
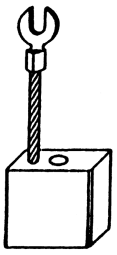
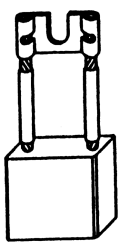
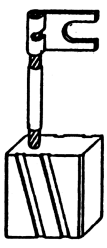
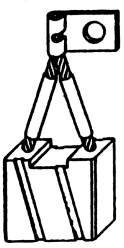
Articolo *Art.*	**Dimensioni** *Dimensions*			**Materiale** *Material*	**Qualità** *Model*	**Fig.** *Fig.*	**LL. cavo mm** *LL. cable mm*	**Diam. Ø cavo** *Cable ø diam.*	**Vite bloccagg.** *Locking screw*	**Costruttore** *Manufacturer*	*
	S / *T*	**L** / *W*	**A** / *H*								
627	10	25	40	**elettrografite** *electrographite*	N19X	12	80	3.1	6	**Costrutt. vari** *Various manufact.*	□
628	10	26	30.5	**metalcarbone** *metal-carbon*	M70	112	35	3.1	5	**Costrutt. vari** *Various manufact.*	○
629	10	28	30.5	**elettrografite** *electrographite*	M5X	111	55	3.1	5	**Amre-Carer** *Amre-Carer*	□ ○
631	10	30	25	**elettrografite** *electrographite*	EG571	34	60	3.1	6	**T.I.B.B.** *T.I.B.B.*	□
632	10	30	35	**metalcarbone** *metal-carbon*	M70	113	85	3.5	6	**Marelli** *Marelli*	○
633	10	30	35	**elettrografite** *electrographite*	M5X	8	75	3.1	5	-	□ ○
634	10	30	40	**elettrografite** *electrographite*	EG571	64	82	3.1	5	**Marelli** *Marelli*	□
636	10	32	30	**metalgrafite** *metal-graphite*	M19	11	80	3.1	6	**Carrelli OM** *OM Forklifts*	○
637	10	32	30	**elettrografite** *electrographite*	M5X	11	70	3.5	6	**Carrelli OM** *OM Forklifts*	□
638	10	32	32	**elettrografite** *electrographite*	M5X	77	50	2.8	5	**Carrelli Linde** *Linde Forklifts*	□
640	12	20	30	**elettrografite** *electrographite*	M5X	117	85	3.1	4	**Amre** *Amre*	□ ○
646	12	20	35	**metalgrafite** *metal-graphite*	M19	6	67	3.5	6	**Eletar** *Eletar*	○
647	12	20	35	**metalcarbone** *metal-carbon*	M70	8	67	4	6	**M.B.M.** *M.B.M.*	○
648	12	20	35	**elettrografite** *electrographite*	EG571	92	70	3.1	6	**Costrutt. vari** *Various manufact.*	□
651	12	25	35	**elettrografite** *electrographite*	EG571	56	83	3.5	6	**Eletar** *Eletar*	□
652	12	25	40	**bronzo-carbone** *bronze-carbon*	M85	6	100	4	6	-	○
654	12	25	32	**metalcarbone** *metal-carbon*	M70	13	-	-	5ma	**Costrutt. vari** *Various manufact.*	○
655	12	25	40	**metalcarbone** *metal-carbon*	M70	8	100	4	6	**M.B.M.** *M.B.M.*	○
658	12	32	32	**bronzo-carbone** *bronze-carbon*	M85	13	-	-	5ma	**Costrutt. vari** *Various manufact.*	○
659	12	32	32/28	**elettrografite** *electrographite*	M5X	76	70	3.5	6	**Leroy** *Leroy*	□ ○
660	12	40	45	**bronzo-carbone** *bronze-carbon*	M85	13	-	-	5ma	**Costrutt. vari** *Various manufact.*	○
662	12.5	20	32	**elettrografite** *electrographite*	EG283	52	60	3.5	6	**Ansaldo** *Ansaldo*	□
666	12.5	25	32	**elettrografite** *electrographite*	EG571	9	60	3.5	6	**Piller** *Piller*	□
667	12.5	25	32	**metalcarbone** *metal-carbon*	M70	9	71	4.5	6	**Ansaldo-Marelli** *Ansaldo-Marelli*	○
668	12.5	25	32	**elettrografite** *electrographite*	M5X	127	74	3.1	6	**OM** *OM*	□ ○
669	12.5	25	32	**elettrografite** *electrographite*	EG571	121	95	3.5	6	**Isea** *Isea*	□
670	12.5	25	32	**metalgrafite** *metal-graphite*	M19	129	72	4	6	**Linde** *Linde*	○
671	12.5	25	32	**elettrografite** *electrographite*	M5X	75	62	3.5	6	**Esab** *Esab*	□ ○
820	12.5	25	32	**metalcarbone** *metal-carbon*	M70	13	-	-	5ma	**Costrutt. vari** *Various manufact.*	○
672	12.5	25	35	**elettrografite** *electrographite*	EG283	59	75	3.5	5	**Comer** *Comer*	□
673	12.5	25	35	**elettrografite** *electrographite*	M5X	130	54	2.8	5	**CFR** *CFR*	□ ○
674	12.5	32	25	**elettrografite** *electrographite*	M5X	11	80	2.8	5	**Eletar/OM** *Eletar/OM*	□ ○

*** I simboli (○ □) stanno ad indicare su quali tipi di collettori vanno montate le spazzole.**
The symbols (○ □) indicate on which types of collector the brushes are to be mounted.

• **Articoli unificati**
Unified articles

A richiesta possiamo fornire qualunque tipo di spazzola. Si richiede l'invio del campione.
On request we can supply any kind of brush. Please send sample.

○ =  □ = 

6 	8 	9 	11 
12 	13 	34 	52 
56 	59 	64 	75 
76 	77 	92 	111 
112 	113 	117 	121 
127 	129 	130 	

SPAZZOLE INDUSTRIALI

INDUSTRIAL BRUSHES

Articolo *Art.*	Dimensioni *Dimensions*			Materiale *Material*	Qualità *Model*	Fig. *Fig.*	LL. cavo mm *LL. cable mm*	Diam. Ø cavo *Cable ø diam.*	Vite bloccagg. *Locking screw*	Costruttore *Manufacturer*	*
	S / *T*	L / *W*	A / *H*								
675	12.5	32	32	elettrografite *electrographite*	EG263	132	85	2.8	6	Ansaldo *Ansaldo*	□
676	12.5	32	32	elettrografite *electrographite*	M5X	131	74	3.1	6	Linde *Linde*	□ ○
678	12.5	32	32	elettrografite *electrographite*	EG283	133	75	2.8	8	Siemens *Siemens*	□
679	12.5	32	38	metalgrafite *metal-graphite*	M19	134	85	3.1	7	Linde *Linde*	○
680	12.5	32	40	elettrografite *electrographite*	EG571	75	100	3.1	6	-	□
681	12.5	32	40	elettrografite *electrographite*	EG283	8	85	3.1	9	Sicme *Sicme*	□
682	12.5	32	40	elettrografite *electrographite*	G163	127	100	2.4	6	Ansaldo *Ansaldo*	□
810	12.5	32	40	elettrografite *electrographite*	EG283	237	80	3.2	6.5	ABB *ABB*	□
821	12.5	32	40	metalcarbone *metal-carbon*	M70	13	-	-	5ma	Costrutt. vari *Various manufact.*	○
684	15	20	25	metalcarbone *metal-carbon*	M70	95	-	-	-	T.I.B.B. *T.I.B.B.*	○
688	15	20	35	elettrografite *electrographite*	EG571	56	80	3.1	5	Eletar-OM *Eletar-OM*	□
694	15	30	30	elettrografite *electrographite*	EG571	140	90	4.5	7	T.I.B.B. *T.I.B.B.*	□
699	15	30	45	bronzo-carbone *bronze-carbon*	M85	41	90	5.5	8	-	○
704	16	20	32	elettrografite *electrographite*	EG283	52	60	3.5	5	Ansaldo *Ansaldo*	□
706	16	25	32	elettrografite *electrographite*	M5X	75	62	3.5	7	Esab *Esab*	□ ○
707	16	25	32	elettrografite *electrographite*	EG571	9	75	4	6	Ansaldo *Ansaldo*	□
708	16	25	35	metalcarbone *metal-carbon*	M70	6	80	4.5	6	Asea *Asea*	○
710 • (709)	16	25	40	elettrografite *electrographite*	EG571	146	110	3.5	6	Costrutt. vari *Various manufact.*	□
711	16	32	30	elettrografite *electrographite*	M5X	11	80	3.5	6	OM *OM*	□ ○
713	16	32	32	elettrografite *electrographite*	EG283	133	85	3.1	8	Siemens *Siemens*	□
717 *	16	32	35	bronzo-carbone *bronze-carbon*	M85	13	-	-	6ma	Ansaldo *Ansaldo*	○
718	16	32	40	elettrografite *electrographite*	EG283	75	90	3.1	8	Ansaldo *Ansaldo*	□
719	16	32	40	metalcarbone *metal-carbon*	M75	9	90	5	8	Ansaldo-Marelli *Ansaldo-Marelli*	○
720	16	32	40	metalcarbone *metal-carbon*	M70	6	85	5	9	Costrutt. vari *Various manufact.*	○
721	16	32	40	bronzo-carbone *bronze-carbon*	M85	8	85	5	9	-	○
722	16	32	40	metalcarbone *metal-carbon*	M70	168	112	5	8	-	○
723	16	32	40	elettrografite *electrographite*	EG571	75	100	3.5	6	Ansaldo *Ansaldo*	□
811	16	32	45	elettrografite *electrographite*	EG571	238	75	3.4	6.5	Cear *Cear*	□
724	16	37	35	elettrografite *electrographite*	M5X	153	67	4	8	Cesab *Cesab*	□ ○
755 • (753-754)	20	32	40	metalcarbone *metal-carbon*	M70	165	112	5	8	M.B.M. *M.B.M.*	○
756	20	32	40	elettrografite *electrographite*	EG571	75	100	4.5	6	Ansaldo *Ansaldo*	□

* I simboli (○ □) stanno ad indicare su quali tipi di collettori vanno montate le spazzole.
The symbols (○ □) indicate on which types of collector the brushes are to be mounted.

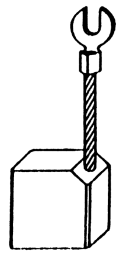
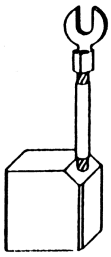
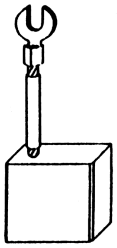
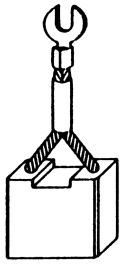
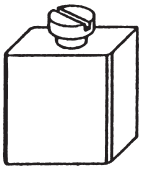
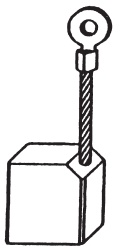
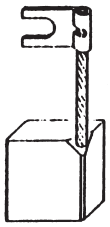
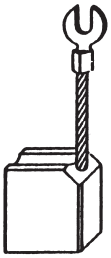
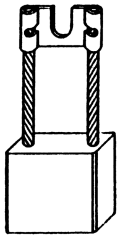
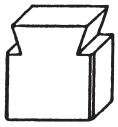
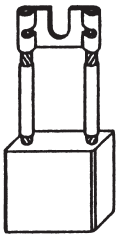
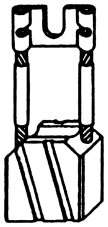
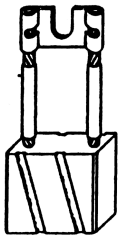
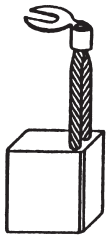
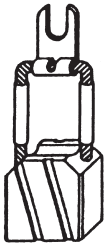
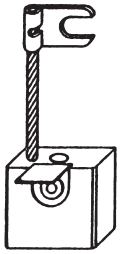
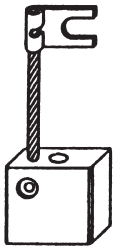
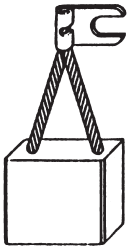
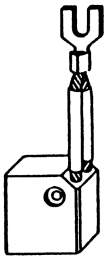
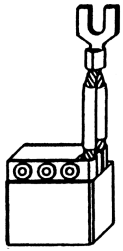
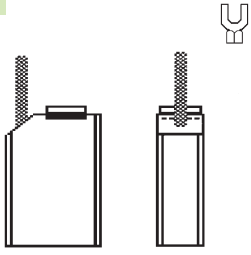
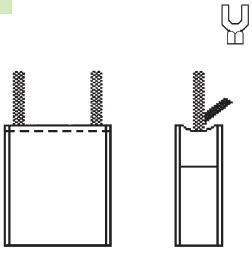
• Articoli unificati
Unified articles

A richiesta possiamo fornire qualunque tipo di spazzola. Si richiede l'invio del campione.
On request we can supply any kind of brush. Please send sample.

○ = 

□ = 

*** IN ESAURIMENTO** / *RUNNING OUT*

6 	8 	9 	11 
13 	41 	52 	56 
75 	95 	127 	131 
132 	133 	134 	140 
146 	153 	165 	168 
237 	238 		

SPAZZOLE INDUSTRIALI

INDUSTRIAL BRUSHES

Articolo *Art.*	**Dimensioni** *Dimensions*			**Materiale** *Material*	**Qualità** *Model*	**Fig.** *Fig.*	**LL. cavo mm** *LL. cable mm*	**Diam. Ø cavo** *Cable ø diam.*	**Vite bloccagg.** *Locking screw*	**Costruttore** *Manufacturer*	*
	S / *T*	**L** / *W*	**A** / *H*								
758	20	40	40	**metalcarbone** *metal-carbon*	M70	168	112	5.5	8	-	○
760	20	40	45	**metalcarbone** *metal-carbon*	M70	163	100	5	8	**Costrutt. vari** *Various manufact.*	○
766	25	40	40	**elettrografite** *electrographite*	M5X	177	112	5.5	8	**Fimet** *Fimet*	□○
767	25	40	45	**metalcarbone** *metal-carbon*	M70	163	108	5.5	8	**Eletar** *Eletar*	○
768	30	30	30	**metalgrafite** *metal-graphite*	M19	181	105	5	7 mm (Faston)	**T.I.B.B.** *T.I.B.B.*	○
770	30	30	35	**elettrografite** *electrographite*	EG571	161	95	3.5	8	**T.I.B.B.** *T.I.B.B.*	□
772	32	40	45	**metalcarbone** *metal-carbon*	M70	165	105	5.5	8	**Ansaldo** *Ansaldo*	○
701	5+5	16	29	**elettrografite** *electrographite*	EG236S	189	85	1.25	7	**Siemens** *Siemens*	□
729	5+5	20	32	**elettrografite** *electrographite*	EG283	189	85	1.5	10 mm (Faston)	**Siemens** *Siemens*	□
774	6+6	20	32	**grafite-bakelite** *graphite-bakelite*	IM31	184	55	1.9	4	-	□
730	6.2+6.2	20	32	**elettrografite** *electrographite*	EG283	189	85	1.5	10 mm (Faston)	**Siemens** *Siemens*	□
776	6.3+6.3	25	32	**elettrografite** *electrographite*	IM31	190	75	2.4	5	-	□
777	6.4+6.4	20	32	**grafite-bakelite** *graphite-bakelite*	IM31	184	55	1.9	4	-	□
778	6.4+6.4	22	32	**grafite-bakelite** *graphite-bakelite*	IM31	190	55	1.9	4	-	□
780	8+8	16	27	**metalcarbone** *metal-carbon*	IM31	193	50	1.9	4	**M.B.M.** *M.B.M.*	□
781	8+8	20	27	**grafite-bakelite** *graphite-bakelite*	IM31	193	50	2.4	5	**M.B.M.** *M.B.M.*	□
783	8+8	25	30	**grafite-bakelite** *graphite-bakelite*	IM31	193	55	2.4	4	-	□
787 *	8+8	32	40	**elettrografite** *electrographite*	EG283	199	70	3.1	6	-	□
814	8+8	32	45	**elettrografite** *electrographite*	EG571	231	75	2/6	6.5	**Cear** *Cear*	□
815	8+8	32	52	**elettrografite** *electrographite*	EG571	232	80	2/6	6.5	**IEC** *IEC*	□
790	8+8	40	35	**elettrografite** *electrographite*	M5X	196	67	3.1	8	-	□○
791	8+8	40	45	**elettrografite** *electrographite*	EG283	204	108	2.2	6	-	□
792	10+10	25	40	**elettrografite** *electrographite*	EG283	195	80	1.9	7	-	□
793	10+10	32	40	**elettrografite** *electrographite*	EG571	198	90	2.2	6	-	□
794	10+10	32	45	**elettrografite** *electrographite*	EG571	209	100	3.1	6	-	□
798	12.5+12.5	32	45	**elettrografite** *electrographite*	EG283	215	90	3.1	7	-	□
819	12.5+12.5	40	65	**elettrografite** *electrographite*	EG571	236	160	3/5	6.5	**Ansaldo** *Ansaldo*	□

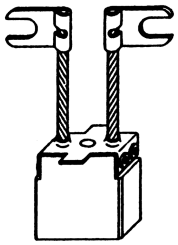
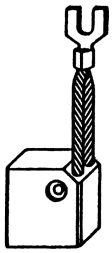
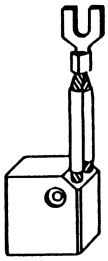
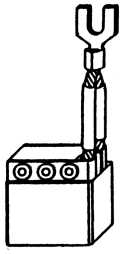
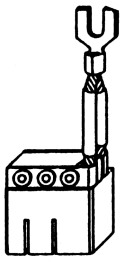
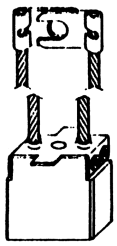
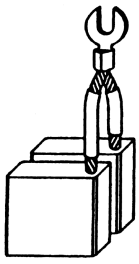
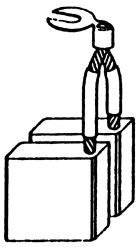
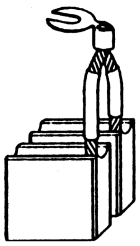
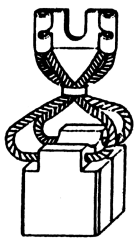
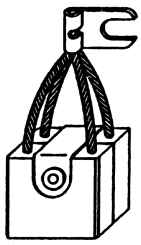
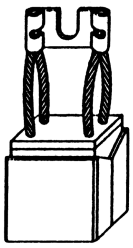
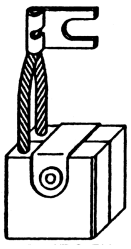
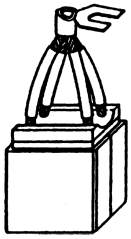
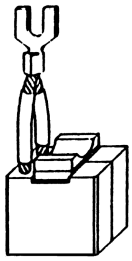
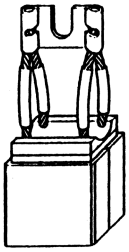
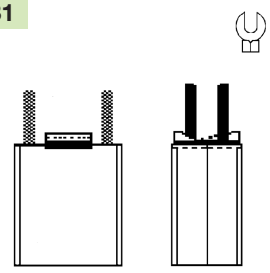
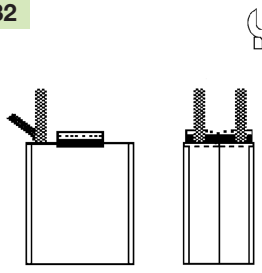
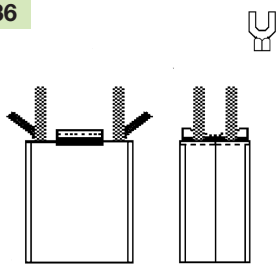
* I simboli (○ □) stanno ad indicare su quali tipi di collettori vanno montate le spazzole.
The symbols (○ □) indicate on which types of collector the brushes are to be mounted.

• Articoli unificati
Unified articles

A richiesta possiamo fornire qualunque tipo di spazzola. Si richiede l'invio del campione.
On request we can supply any kind of brush. Please send sample.

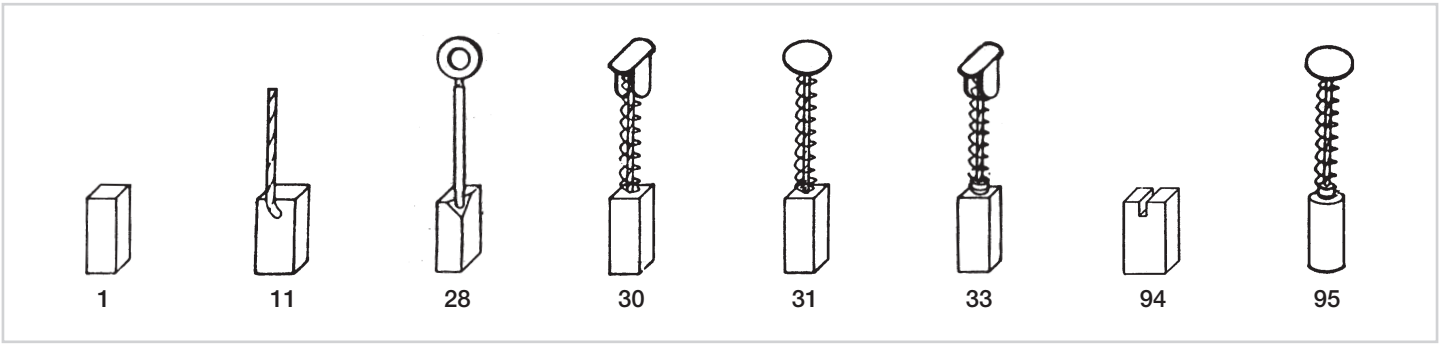
○ =  □ = 

* **IN ESAURIMENTO** / *RUNNING OUT*

161 	163 	165 	168 
177 	181 	184 	189 
190 	193 	195 	196 
198 	199 	204 	209 
215 	231 	232 	236 

SPAZZOLE PER MOTORI A BASSA TENSIONE

BRUSHES FOR LOW-VOLTAGE MOTORS

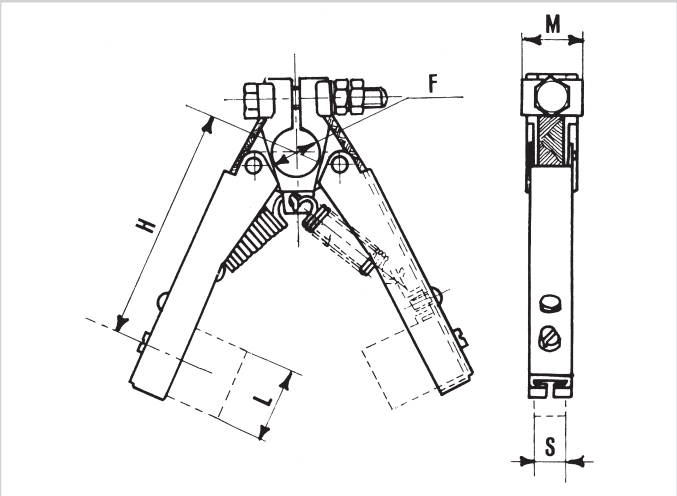


Articolo *Art.*	**Ø Dimensioni mm** *Ø Dimensions mm*	**Materiale** *Material*	**Qualità** *Model*	**Figura** *Figure*
4051	6x22/20	**metalgrafite** / *metalgraphite*	CMH3	95
4002	3x4x13	**elettrografite** / *electrographite*	EGO	30
4003	3x4x14	**argento-grafite** / *silver-graphite*	AG84	30
4052 *	3x4x15	**metalgrafite** / *metalgraphite*	M70	30
4004 *	3.1x4.1x10	**argento-grafite** / *silver-graphite*	SM3	30
4005 *	3.1x4.1x10	**elettrografite** / *electrographite*	EGO	31
4053	4x4x10	**metalgrafite** / *metalgraphite*	M70	11
4007	4.5x4.5x16/14	**elettrografite** / *electrographite*	EGO	33
4009	4x5x10	**argento-grafite** / *silver-graphite*	SM3	30
4054	4x5x13	**metalgrafite** / *metalgraphite*	M70	30
4006	4x5x15	**argento-grafite** / *silver-graphite*	SM3	30
4011 *	4.3x5x10	**argento-grafite** / *silver-graphite*	SM3	28
4055	5x5x16	**metalgrafite** / *metalgraphite*	M70	31
4056	5x6x13	**metalgrafite** / *metalgraphite*	M70	30
4013	5x6x15	**elettrografite** / *electrographite*	EGO	30
4057	5x8x20/18	**metalgrafite** / *metalgraphite*	M70	33
4058	6x8x23/20	**metalgrafite** / *metalgraphite*	CM5H	33
4059	6x9x25/22	**metalgrafite** / *metalgraphite*	M70	33
4014	6.1x9.1x23/21	**metalgrafite** / *metalgraphite*	CM9	33
4060	6x10x25	**metalgrafite** / *metalgraphite*	M70	1
4015	7x10x21/18	**metalgrafite** / *metalgraphite*	CM3H	33

*** IN ESAURIMENTO**
RUNNING OUT

PORTASPAZZOLE PER COLLETTORI AD ANELLI

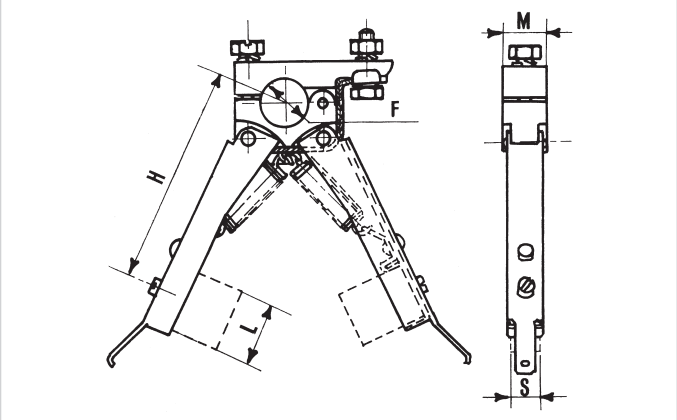
BRUSH HOLDER FOR SLIP RINGS



- Morsetto in ottone fuso, leve portaspazzole in lamiera di ottone stampata non concentrica con il perno di fissaggio.
- Spazzole fissate con vite o a pressione.
- Il passaggio corrente tra spazzola e morsetto avviene mediante piattina di rame flessibilissima stagnata alle due estremità di contatto.

- *Cast brass clamp, brush holder lever in drop-forged brass plate, not concentric with fixing pin.*
- *Brushes fixed with screw or pressure-fitted.*
- *Current passes between the brush and the clamp by means of an extra-flexible copper plate, tin-plated at the two contact ends.*

Articolo *Art.*	L / S		**H**	**M**	**F**
	S **Spessore** *Thickness*	**L** **Larghezza** *Width*			
BPS.674	5	8	35	9	10
BPS.675	5	10	40	9	10
BPS.676	8	12	42	13	10
BPS.684	8	16	44	13	12
BPS.685	8	16	50	13	12
BPS.686	8	16	62	13	12
BPS.687	8	16	65	13	16
BPS.688	8	16	70	13	12
BPS.689	8	20	60	13	12
BPS.690	8	20	70	13	16
BPS.691	8	25	65	13	12
BPS.692	10	20	65	15	16
BPS.693	10	25	63	15	16
BPS.694	12	25	84	16	16
BPS.695	12	32	80	16	16
BPS.696	16	32	110	20	16



Articolo *Art.*	L / S		**H**	**M**	**F**
	S **Spessore** *Thickness*	**L** **Larghezza** *Width*			
BPS.705	10	25	71	15	18
BPS.715	20	40	110	25	22

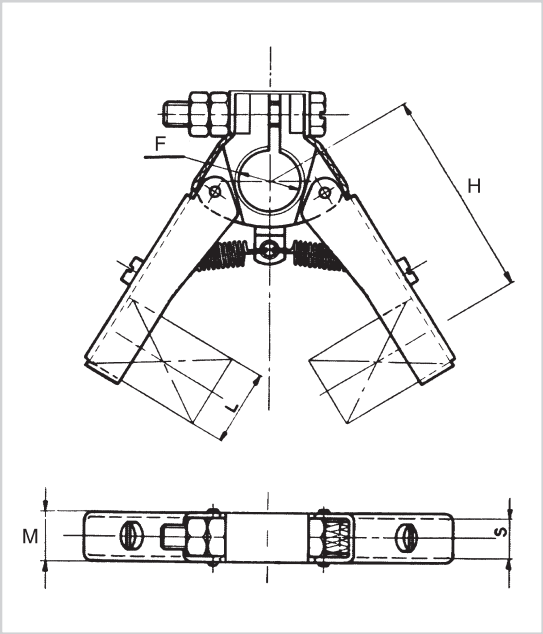
IN ESAURIMENTO
RUNNING OUT

- Morsetto in ottone fuso e apribile a cerniera, leva portaspazzole in lamiera di ottone stampata non concentrica con il perno di fissaggio.
- Il passaggio corrente tra spazzola e morsetto avviene mediante piattina di rame flessibilissima stagnata alle due estremità di contatto.

- *Openable hinged cast brass clamp, brush holder lever in drop-forged brass plate, not concentric with the fixing pin.*
- *Current passes between the brush and the clamp by means of an extra-flexible copper plate, tin-plated at the two contact ends.*

PORTASPAZZOLE PER COLLETTORI AD ANELLI

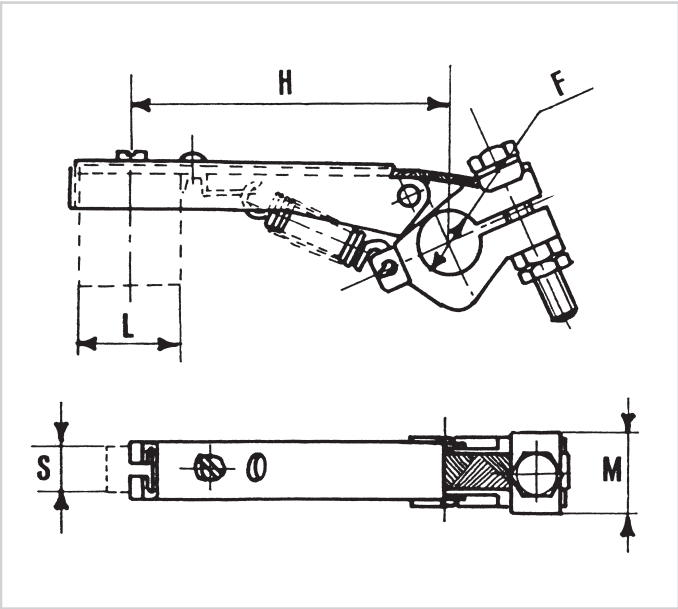
BRUSH HOLDER FOR SLIP RINGS



- Portaspazzole con morsetto in plastica ad alta resistenza con foro tondo.
- Leve portaspazzole in lamiera di ottone stampata. Il passaggio di corrente tra spazzola e morsetto avviene mediante piattina di rame flessibilissima.

- *Brush holder complete with high resistant plastic clamp with round hole.*
- *Brush holder levers in drop-forged brass plate. Current passes between the brush and the clamp by means of an extra-flexible copper plate.*

Articolo *Art.*	L S		**H**	**M**	**F**
	S **Spessore** *Thickness*	**L** **Larghezza** *Width*			
TPS.708 tondo/*round*	5	8	35	10	10 - Ø.10
TPS.710 tondo/*round*	5	10	35	10	10 - Ø.10



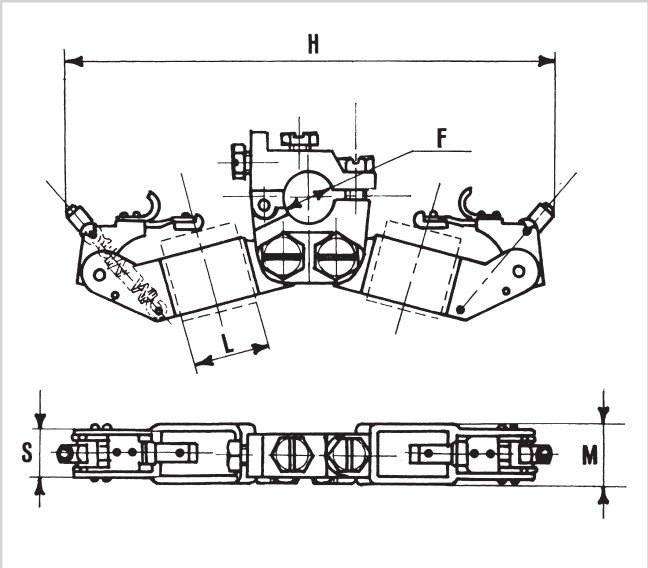
Articolo *Art.*	L S		**H**	**M**	**F**
	S **Spessore** *Thickness*	**L** **Larghezza** *Width*			
UPS.634	5	8	35	9	10
UPS.635	5	10	40	9	10
UPS.636	8	12	42	13	10
UPS.644	8	16	44	13	12
UPS.648	8	20	60	13	12
UPS.649	8	20	70	13	16
UPS.651	10	20	65	15	16
UPS.652	10	25	63	15	16
UPS.653	12	25	84	16	16

- Morsetto in ottone fuso, leve portaspazzole in lamiera di ottone stampata non concentrica con il perno di fissaggio.
- Spazzola fissata con vite o a pressione.
- Il passaggio corrente tra spazzola e morsetto avviene mediante piattina di rame flessibilissima stagnata alle due estremità di contatto.

- *Cast brass clamp, brush holder levers in drop-forged brass plate, not concentric with the fixing pin.*
- *Brush fixed with screw or pressure fitted.*
- *Current passes between the brush and the clamp by means of an extra-flexible copper plate, tin-plated at the two contact ends.*

PORTASPAZZOLE PER COLLETTORI AD ANELLI

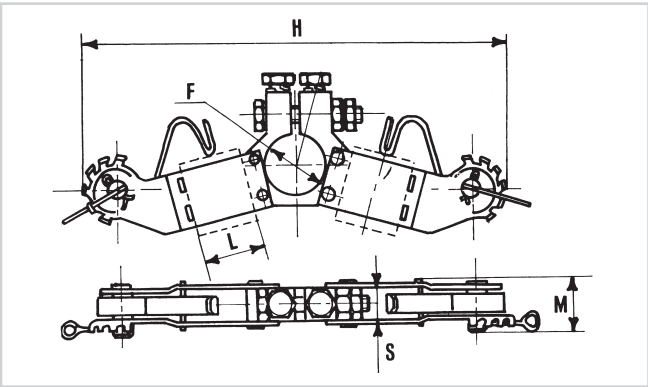
BRUSH HOLDER FOR SLIP RINGS



Articolo *Art.*	L / S		H	M	F
	S **Spessore** *Thickness*	**L** **Larghezza** *Width*			
FPS.601	10	20	150	16	20
FPS.603	10	25	160	16	20
FPS.605	12.5	25	166	19	20
FPS.610	16	32	205	23.5	20
FPS.615	20	32	210	26	20
FPS.617	20	40	245	26	25
FPS.620	25	40	245	30	30
FPS.612	16	40	245	23.5	20

- Portaspazzole in ottone fuso.
- Morsetto apribile a cerniera .
- Arresto della leva premispazzola nella parte superiore per cambio spazzole.
- Molla di pressione regolabile in filo di acciaio.
- Si possono adattare i bracci in diverse inclinazioni e vengono sincronizzati tramite ingranaggio incorporato.

- *Cast brass brush holder.*
- *Openable hinged clamp.*
- *Brush presser lever stop at the top for brush change.*
- *Adjustable steel-wire pressure spring.*
- *The arms can be adjusted to different inclinations and they are synchronized by means of built-in gears.*



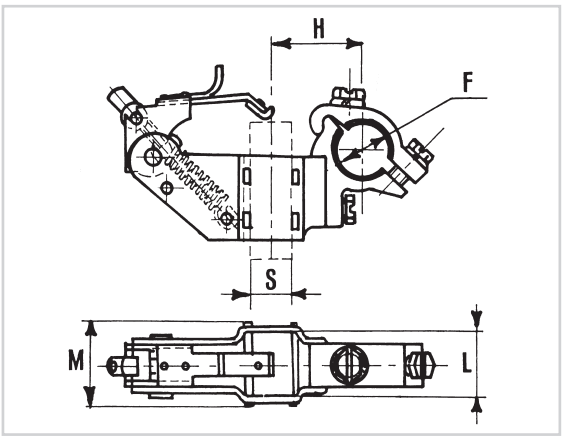
Articolo *Art.*	L / S		H	M	F	Ø collettore *Ø slip ring*
	S **Spessore** *Thickness*	**L** **Larghezza** *Width*				
FPS.624	8	16	100	16.5	12	52 - 60
FPS.625	8	16	100	16	16	91 - 101
FPS.632	10	30	150	18	16	120 - 130

- Portaspazzole per macchine ad anelli con bracci ad angolazione fissa.
- Si possono adattare i bracci in diverse inclinazioni e vengono sincronizzati tramite ingranaggio incorporato.
- Arresto del tipo premispazzole in alto per cambio spazzole.

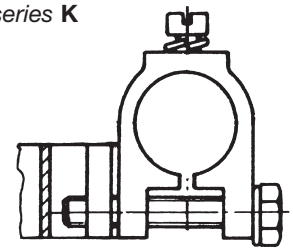
- *Brush holder for ring machines with fixed-angle arms.*
- *Cast brass clamp, drop-forged brass plate arms nailed to the clamp.*
- *Brush presser stop at the top for brush change.*

PORTASPAZZOLE IN CORRENTE CONTINUA

DC BRUSH HOLDER



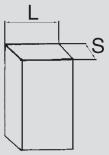
serie / *series* **K**



COMPLETI DI BLOCCHETTO / *COMPLETE WITH BLOCK*

- Corpo in lamiera di ottone stampata, blocchetto in profilo ottone apribile a griffa, molla di pressione regolabile in filo d'acciaio ad elica.
- Arresto in alto della leva premispazzola per cambio della spazzola.

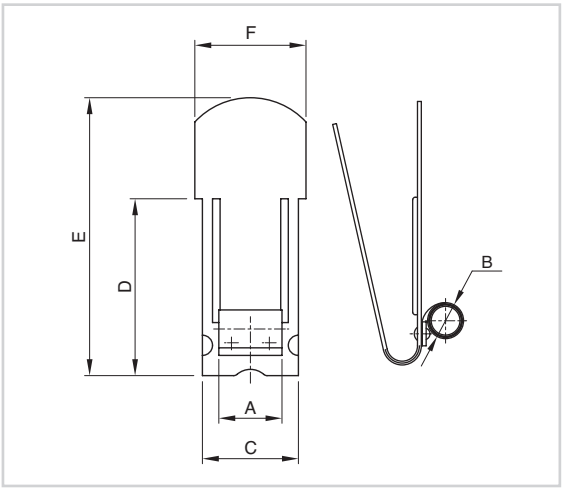
- *Body in drop-forged brass plate, block in brass profile with openable jaw, adjustable pressure spring made of steel wire helix.*
- *Adjustable, spiral, steel-wire pressure spring. Brush presser stop at the top for brush change.*

Articolo *Art.*			**H**	**M**	**Blocchetto** *Block*	
	S **Spessore** *Thickness*	**L** **Larghezza** *Width*			**Serie** *Series*	**F Ø**
RPS.725	12	20	26	24	k	16
RPS.731	8	25	29	27	k	16

IN ESAURIMENTO
RUNNING OUT

PORTAMOLLA COMPLETO DI MOLLA A PRESSIONE COSTANTE PER PORTASPAZZOLE A CASSETTI

SPRING HOLDER COMPLETE WITH CONSTANT COMPRESSION SPRING FOR TWO-DRAWER BRUSH HOLDER



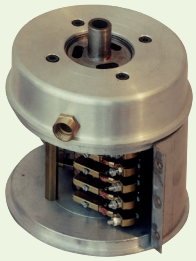
Articolo *Art.*	**A**	**B**	**C**	**D**	**E**	**F**	**Pressione portamolle N** *Spring presse N*
MP.42	12.40	**11.20**	19	35	55	22	10
MP.48	14.90	**14.50**	19	35	55	22	12.8
MP.51	14.90	**16.25**	19	35	55	22	16
MP.54	12.40	**11.80**	19	35	55	22	10
MP.85	14.90	**20.80**	19	35	55	22	20
MP.90	12.40	**8.90**	19	35	55	22	8
MP.41	11.95	**8.15**	16	27	45	22	6.2
MP.59	9.45	**7.45**	16	27	45	22	5

PRESE DI CORRENTE ROTANTI

ROTATING POWER SOCKETS

SU RICHIESTA è possibile fornire prese rotanti per applicazioni su: macchine confezionatrici avvolgitori, macchine insaccamento, macchine per la pelletteria, centri di lavoro. Per informazioni contattare il nostro ufficio commerciale.
ON REQUEST, rotating sockets can be supplied for applications on: packaging machines, wrapping machines, bagging machines, leather-ware machines, machining centres. For more details, please contact our sales department.

PR.100



PR.101

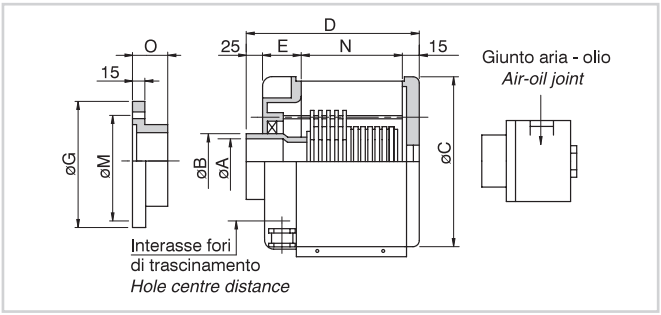


PR.102



PR.103





CARATTERISTICHE TECNICHE
Anelli in bronzo. Portaspazzole a doppio braccio in ottone.
Base portante e testata superiore in alluminio.
Carter di chiusura in acciaio inox composto da due metà apribili.
Albero in acciaio montato su cuscinetti a sfera. Protezione IP55.

TECHNICAL SPECIFICATIONS
Bronze rings. Double-arm brass brush holder.
Aluminium support base and upper head.
Stainless steel cover made up of two halves to be opened.
Steel shaft mounted on ball bearings. IP55 protection.

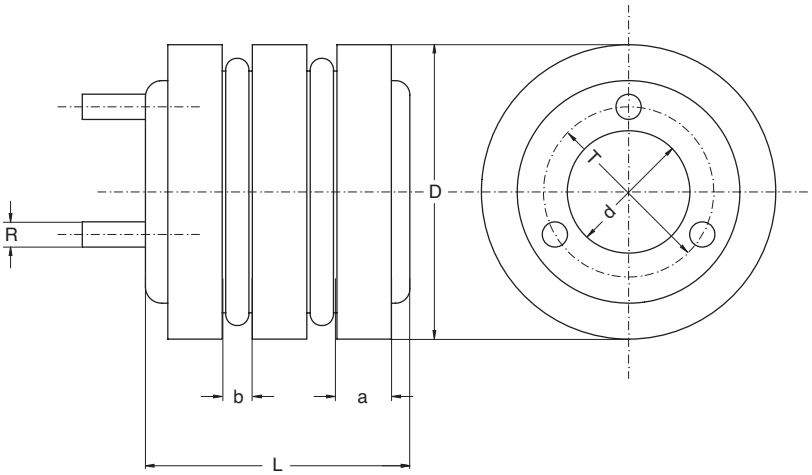
PER POTERE EVADERE LA VOSTRA RICHIESTA INDICARE I SEGUENTI DATI:
IN ORDER TO PROCESS YOUR REQUEST PLEASE ALWAYS SPECIFY THE FOLLOWING DETAILS:

PARAMETRI / *PARAMETERS* - **POTENZA** / *POWER*			
N° Anelli / *No. of Rings*			
Tensione (V.) / *Voltage (V)*			
Corrente (A.) / *Current (A)*			
SEGNALI / *SIGNALS*			
N° Anelli / *No. of Rings*			
Tensione (V.) / *Voltage (V)*			
Corrente (A.) / *Current (A)*			
Collegamenti / *Connections*	• **Festoni cavi** / *Cable terminals*	• **Morsettiera** / *Terminal board*	• **Morsettiera** / *Terminal board*
Attacco / *Coupling*	• **Flangia** / *Flange*	• **Albero** / *Shaft*	• **Albero** / *Shaft*
Tipo giunto/ N° vie / *Joint type/No.of ways*	** **Aria/N°** / *Air/No.*	** **Olio/N°** / *Oil/No.*	• **Olio/N°** / *Oil/No.*
Tipo passacavo / *Type of cable entry*			
Altezza max (D) / *Max. height (D)*			
Diametro max (C) / *Max. diameter (C)*			
Spessore flangia (O) / *Flange thickness (O)*			

* **Aria = collegamento all'aria compressa** / *Air: connection to compressed air.*
* **Olio = collegamento oleodinamico** / *Oil: connection to hydraulic system.*

COLLETTORI AD ANELLI

SLIP RINGS



SU RICHIESTA POSSIAMO FORNIRE COLLETTORI SPECIALI A DISEGNO.
ON REQUEST SPECIAL SLIP RINGS CAN BE MADE ACCORDING TO CUSTOMER'S SPECIFICATIONS.



2 ANELLI / *2 RINGS*

Articolo *Art.*	**D Ø Collettore** *D Slip ring Ø*	**a Larg. anello** *a ring Width*	**b Isolante** *b Insulat.*	**d Ø max. foratura** *d max Hole Ø*	**R Ø Perni ma** *R Pin Ø ma*	**L Altezza colett.** *L ring Height*	**Ampere ammissib.** *permit. Ampères*
6202	40	7	5	18	4	30	10
6203	40	10	7	18	4	37	10
6204	52	9	7	24	5	35	20
6205	60	10	7	28	6	37	25
6206	60	12	7	28	6	41	25
6207	70	10	7	32	6	37	25
6208	70	13	6	32	6	42	25
6209	80	12	7	40	6	42	25
6210	91	12	6	42	6	41	40
6211	91	14	7	42	8	45	50
6212	91	17	8	42	8	59	100
6213	101	14	10	52	8	48	100
6214	112	8	6	55	5	34	50
6215	112	14	10	48	10	55	100

I COLLETTORI VENGONO FORNITI CON FORO GREZZO
SLIP RINGS ARE PROVIDED WITH HOLE RAW

COLLETTORI AD ANELLI

SLIP RINGS



3 ANELLI / *3 RINGS*

Articolo *Art.*	**D Ø Collettore** *D Slip ring Ø*	**a Larg. anello** *a ring Width*	**b Isolante** *b Insulat.*	**d Ø max. foratura** *d max Hole Ø*	**R Ø Perni ma** *R Pin Ø ma*	**L Altezza colett.** *L ring Height*	**Ampere ammissib.** *permit. Ampères*
6304	40	7	5	18	4	42	10
6305	40	10	7	18	4	54	10
6306	52	9	7	24	5	51	20
6307	60	10	7	28	6	54	25
6308	60	12	7	28	6	60	25
6309	70	10	7	32	6	54	25
6310	70	13	6	32	6	61	25
6311	80	12	7	40	6	61	25
6312	91	12	6	42	6	59	40
6313	91	14	7	42	8	66	50
6314	91	14	10	42	8	72	50
6315	91	17	8	42	8	84	100
6316	101	14	10	52	8	72	100
6317	112	8	6	55	5	48	50
6318	112	14	10	55	10	72	100
6319	121	15	10	65	12	75	100
6320	121	20	10	65	12	90	150
6321	131	20	11	70	12	100	150
6322	140	16	11	75	10	80	100
6323	140	20	15	75	12	100	150
6324	151	20	16	75	12	102	150
6325	160	25	10	75	12	106	150
6326	180	25	16	90	12	119	150
6327	200	25	17	110	14	122	200
6328	225	32	14	130	14	146	300
6329	250	30	20	150	14	150	300



4 ANELLI / *4 RINGS*

Articolo *Art.*	**D Ø Collettore** *D Slip ring Ø*	**a Larg. anello** *a ring Width*	**b Isolante** *b Insulat.*	**d Ø max. foratura** *d max Hole Ø*	**R Ø Perni ma** *R Pin Ø ma*	**L Altezza colett.** *L ring Height*	**Ampere ammissib.** *permit. Ampères*
6402	52	9	7	24	5	67	20
6403	60	10	7	28	6	71	25
6404	60	12	7	28	6	79	25
6405	70	10	7	32	6	71	25
6406	70	13	6	32	6	80	25
6407	80	12	7	40	6	80	25
6408	91	14	7	42	8	87	50
6409	101	14	10	52	8	96	100
6410	112	8	6	55	5	62	50
6411	121	20	10	65	12	120	150
6412	151	20	10	65	12	120	150
6413	160	25	10	75	12	141	150

I COLLETTORI VENGONO FORNITI CON FORO GREZZO
SLIP RINGS ARE PROVIDED WITH HOLE RAW