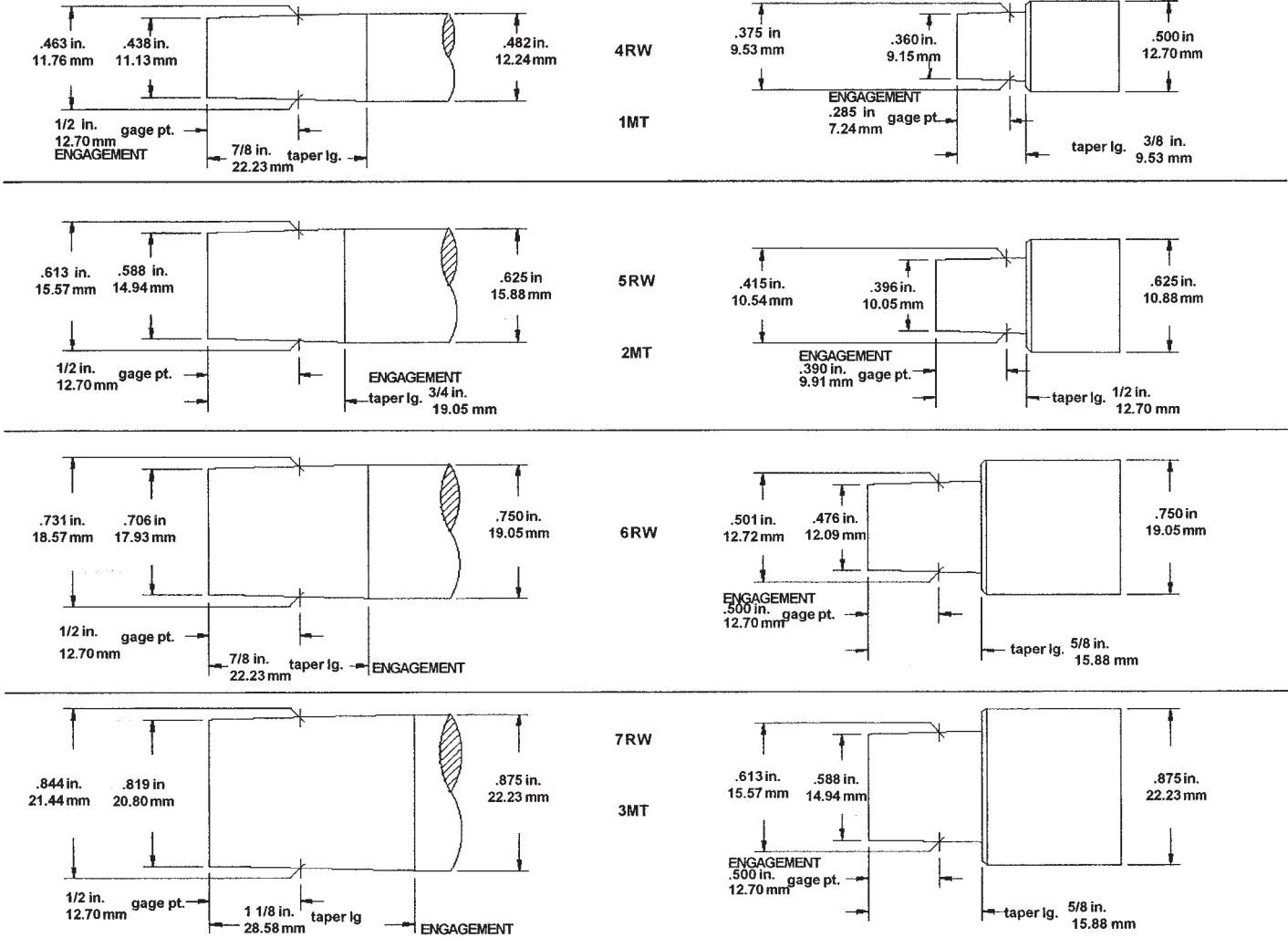




**Standard Tapered Electrode Theoretical Dimensions**      **Taper Size**      **Standard Male Taper Cap taper Dimensions**



Drawings Full Size

**CMW CODING FOR STRAIGHT TAPERED ELECTRODES**

X X X X X

Material	Nose	Attachment	Length
1 = CMW®28	1 = Dome	1 = No. 4RW	1 = 1"
	2 = Pointed	No. 1MT	2 = 1 1/4"
3 = CMW®3	3 = Flat		3 = 1 1/2"
5 = CMW®100	4 = Offset	2 = No. 5RW	4 = 1 3/4"
6 = ELKONITE® 10W3	5 = 2" Sph. R	No. 2MT	5 = 2"
	6 = 10" Sph. R.		6 = 2 1/4"
7 = ELKONITE®TC5	7 = Truncated	3 = No. 7RW	7 = 2 1/2"
8 = ELKON®100M	8 = 3" Sph. R	No. 3MT	8 = 2 3/4"
9 = ELKON®100W	9 = 4" Sph. R		9 = 3"
	0 = Shank for Male Cap	4 = No. 6RW	12 = 3 1/4"
			14 = 3 1/2"
			16 = 3 3/4"
			18 = 4"
			20 = 4 1/4"
			22 = 4 1/2"
Note: Prefix MP = Shank for Female Cap			

**RWMA CODING FOR STRAIGHT TAPERED ELECTRODES**

X X X X X

Nose	Material	Attachment	Length in no. of 1/4"
A = Pointed	1 = RWMA CL 1 CMW®28	4 = No. 4RW No. 1MT	04 = 1" 05 = 1 1/4" 06 = 1 1/2" 07 = 1 3/4"
B = Dome		5 = No. 5RW No. 2MT	08 = 2" 09 = 2 1/4" 10 = 2 1/2" 11 = 2 3/4"
C = Flat	2 = RWMA CL 2 CMW®3	6 = No. 6RW	12 = 3" 13 = 3 1/4" 14 = 3 1/2" 15 = 3 3/4"
D = Offset	3 = RWMA CL 3 CMW®100	7 = No. 7RW No. 3MT	16 = 4" 17 = 4 1/4" 18 = 4 1/2"
E = Truncated			







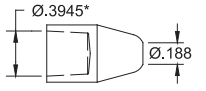
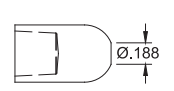
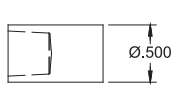
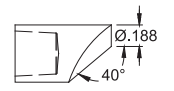
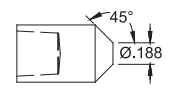
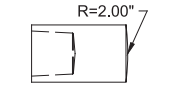
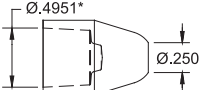
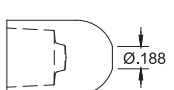
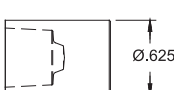
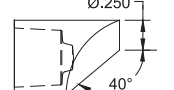
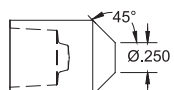
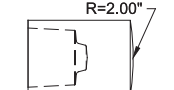
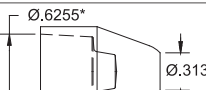



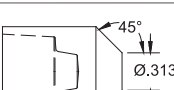



These economical, quick change caps are made of long-lasting, highly-efficient CMW®28, CMW®3, and CMW®328 copper alloys, precision manufactured to exacting tolerances in a wide range of standard configurations or to your special requirements for use on CMW shanks.

**CMW FEMALE CAP ELECTRODES**

ALL DIMENSIONS MARKED WITH AN (\*) ARE COMMON TO EACH CAP IN A HORIZONTAL LINE.







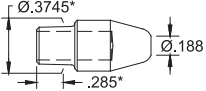
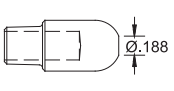
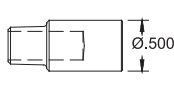
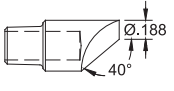
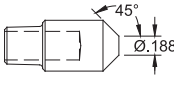
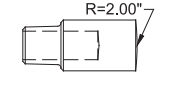
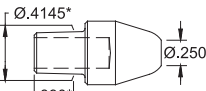
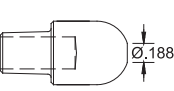
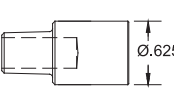
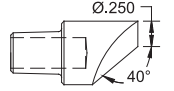
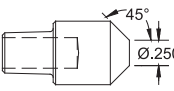
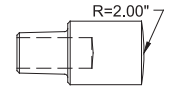
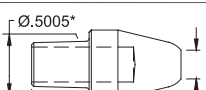
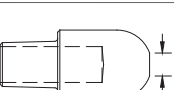
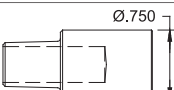
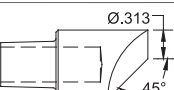
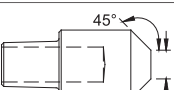
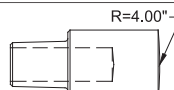
- See pages 12 for Shanks

						
	POINTED (A)	DOME (B)	FLAT (C)	OFFSET (D)	TRUNCATED (E)	RADIUS (F)
Cap Taper RW #4 Diameter .500* Length .840*						
CMW®28 CMW®3 CMW®328	MPA14Z MPA24 MPA24Z	MPB14Z MPB24 MPB24Z	MPC14Z MPC24 MPC24Z	MPD14Z MPD24 MPD24Z	MPE14Z MPE24 MPE24Z	MPF14Z MPF24 MPF24Z
Cap Taper RW #5 Diameter .625* Length .880*						
CMW®28 CMW®3 CMW®328	MPA15Z MPA25 MPA25Z	MPB15Z MPB25 MPB25Z	MPC15Z MPC25 MPC25Z	MPD15Z MPD25 MPD25Z	MPE15Z MPE25 MPE25Z	MPF15Z MPF25 MPF25Z
Cap Taper RW #6 Diameter .750* Length 1.000*						
CMW®28 CMW®3 CMW®328	MPA16Z MPA26 MPA26Z	MPB16Z MPB26 MPB26Z	MPC16Z MPC26 MPC26Z	MPD16Z MPD26 MPD26Z	MPE16Z MPE26 MPE26Z	MPF16Z MPF26 MPF26Z

**CMW MALE CAP ELECTRODES**

ALL DIMENSIONS MARKED WITH AN (\*) ARE COMMON TO EACH CAP IN A HORIZONTAL LINE.

- See pages 13 for Shanks

						
	POINTED (A)	DOME (B)	FLAT (C)	OFFSET (D)	TRUNCATED (E)	RADIUS (F)
Cap Taper RW #4 Diameter .500* Length 1.125*						
CMW®28 CMW®3 CMW®328	MA14Z MA24 MA24Z	MB14Z MB24 MB24Z	MC14Z MC24 MC24Z	MD14Z MD24 MD24Z	ME14Z ME24 ME24Z	MF14Z MF24 MF24Z
Cap Taper RW #5 Diameter .625* Length 1.250*						
CMW®28 CMW®3 CMW®328	MA15Z MA25 MA25Z	MB15Z MB25 MB25Z	MC15Z MC25 MC25Z	MD15Z MD25 MD25Z	ME15Z ME25 ME25Z	MF15Z MF25 MF25Z
Cap Taper RW #6 Diameter .750* Length 1.625*						
CMW®28 CMW®3 CMW®328	MA16Z MA26 MA26Z	MB16Z MB26 MB26Z	MC16Z MC26 MC26Z	MD16Z MD26 MD26Z	ME16Z ME26 ME26Z	MF16Z MF26 MF26Z



The CMW GCAP® electrode is the answer to welding galvanized steels. The GCAP's® revolutionary design, and precision manufacturing from CMW Engineering provides for no sticking from the very first weld. GCAP® electrode nuggets meet or exceed industry standards for high quality welds from the first weld through the life of the cap. This cap design made from R.W.M.A. class 2 material eliminates brass build-up by literally rolling the brass away. You will use

less electric power (up to 25% less) and still achieve superior welds due to GCAP® design. Productivity will increase with up to 10 times more welds without dressing.

For best use of CMW GCAPs®, a stepper program is recommended. Consult CMW application engineering.  
U.S. Patent 49,954,687; 5,015,816; 5,126,528.  
Other patents pending.

**CMW FEMALE GCAP® ELECTRODES**

ALL DIMENSIONS MARKED WITH AN (\*) ARE COMMON TO EACH CAP IN A HORIZONTAL LINE.

- See pages 12 for Shanks  
- See page 71 for suggested weld schedules



	STRAIGHT	OFFSET	OFFSET 15°	OFFSET 30°
Cap Taper RW #4 Diameter .500* Length .840* CMW®3	 MPG244	 MPGD244	 MPGD244-1501	 MPGD244-3001
Cap Taper RW #5 Diameter .625* Length .880* CMW®3	 MPG254	 MPGD254	 MPGD254-1501	 MPGD254-3001
Cap Taper RW #5 Diameter .625* Length .880* CMW®3	 MPG255	 MPGD255	 MPGD255-1501	 MPGD255-3001
Cap Taper RW #6 Diameter .750* Length 1.000* CMW®3	 MPG266	 MPGD266	 MPGD266-1501	 MPGD266-3001

**CMW MALE GCAP® ELECTRODES**

ALL DIMENSIONS MARKED WITH AN (\*) ARE COMMON TO EACH CAP IN A HORIZONTAL LINE.

- See pages 13 for Shanks  
- See page 71 for suggested weld schedules



	STRAIGHT	OFFSET	OFFSET 15°	OFFSET 30°
Cap Taper RW #4 Diameter .500* Length 1.125* CMW®3	 MG244	 MGD244	 MGD244-1501	 MGD244-3001
Cap Taper RW #5 Diameter .625* Length 1.250* CMW®3	 MG254	 MGD254	 MGD254-1501	 MGD254-3001
Cap Taper RW #5 Diameter .625* Length 1.250* CMW®3	 MG255	 MGD255	 MGD255-1501	 MGD255-3001
Cap Taper RW #6 Diameter .750* Length 1.625* CMW®3	 MG266	 MGD266	 MGD266-1501	 MGD266-3001



These economical, quick change caps are made of long lasting, highly efficient CMW<sup>®</sup>28, CMW<sup>®</sup>3, CMW<sup>®</sup>328 copper alloy, precision manufactured to exacting tolerances in a wide range of standard configurations or to your special requirements.

**CMW FEMALE ASIAN CAP ELECTRODES**

ALL DIMENSIONS MARKED WITH AN (\*) ARE COMMON TO EACH CAP IN A HORIZONTAL LINE.



ASIAN TYPE (D)



ASIAN TYPE (R)

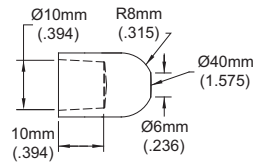


ASIAN TYPE (F)

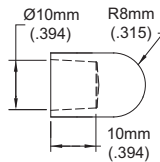


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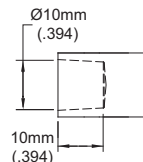
Taper 1:9.6  
Dia. 13mm (.512)\*  
Length 20mm (.787)\*



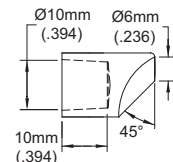
MPB141Z-01  
MPB241-01  
MPB241Z-04



MPB141Z-02  
MPB241-02  
MPB241Z-07



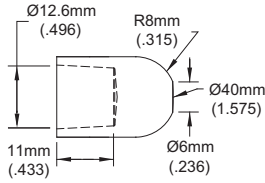
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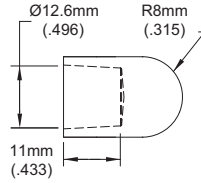
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MPD241Z-02

CMW<sup>®</sup>28  
CMW<sup>®</sup>3  
CMW<sup>®</sup>328

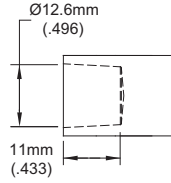
Taper 1:9.6  
Dia. 16mm (.625)\*  
Length 23mm (.906)\*



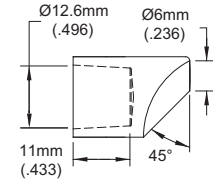
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MPB25-14  
MPB25Z-19



MPB15Z-12  
MPB25-18  
MPB25Z-20



MPC15Z-01  
MPC25-02  
MPC25Z-05



MPD15Z-03  
MPD25-05  
MPD25Z-04

CMW<sup>®</sup>28  
CMW<sup>®</sup>3  
CMW<sup>®</sup>328





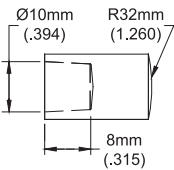
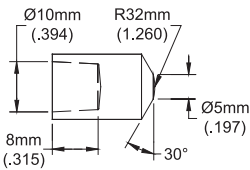
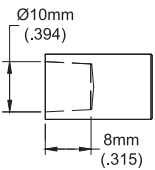
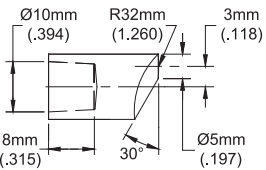
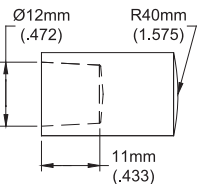
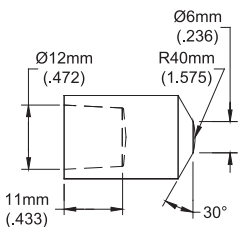
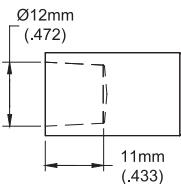
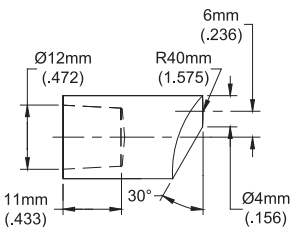




These economical, quick change caps are made of long lasting, highly efficient CMW®328 copper alloy, precision manufactured to exacting tolerances in a wide range of standard configurations or to your special requirements.




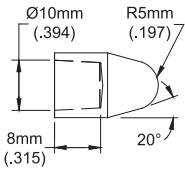
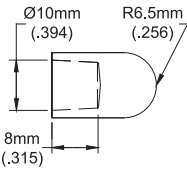
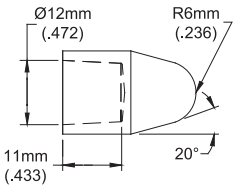
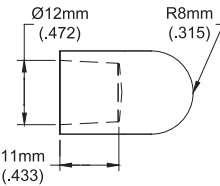
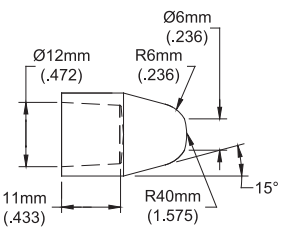
**CMW FEMALE METRIC-ISO 5821 CAP ELECTRODES**

ALL DIMENSIONS MARKED WITH AN (\*) ARE COMMON TO EACH CAP IN A HORIZONTAL LINE.

	 METRIC TYPE (A)	 METRIC TYPE (B)	 METRIC TYPE (C)	 METRIC TYPE (D)
Taper 1:10 Dia. 13mm (.512)* Length 18mm (.709)*	 <p>Ø10mm (.394) R32mm (1.260) 8mm (.315)</p>	 <p>Ø10mm (.394) R32mm (1.260) 8mm (.315) 30° Ø5mm (.197)</p>	 <p>Ø10mm (.394) 8mm (.315)</p>	 <p>Ø10mm (.394) R32mm (1.260) 3mm (.118) 8mm (.315) 30° Ø5mm (.197)</p>
CMW®328	MPF241Z-01	MPE241Z-01	MPC241Z-01	MPD241Z-01
Taper 1:10 Dia. 16mm (.625)* Length 20mm (.787)*	 <p>Ø12mm (.472) R40mm (1.575) 11mm (.433)</p>	 <p>Ø6mm (.236) Ø12mm (.472) R40mm (1.575) 11mm (.433) 30°</p>	 <p>Ø12mm (.472) 11mm (.433)</p>	 <p>6mm (.236) Ø12mm (.472) R40mm (1.575) 11mm (.433) 30° Ø4mm (.156)</p>
CMW®328	MPF25Z-01	MPE25Z-02	MPC25Z-02	MPD25Z-02

**CMW FEMALE METRIC-ISO 5821 CAP ELECTRODES**

ALL DIMENSIONS MARKED WITH AN (\*) ARE COMMON TO EACH CAP IN A HORIZONTAL LINE.

	 METRIC TYPE (E)	 METRIC TYPE (F)	 METRIC TYPE (G)
Taper 1:10 Dia. 13mm (.512)* Length 18mm (.709)*	 <p>Ø10mm (.394) R5mm (.197) 8mm (.315) 20°</p>	 <p>Ø10mm (.394) R6.5mm (.256) 8mm (.315)</p>	No Standard Available
CMW®328	MPA241Z-01	MPB241Z-01	
Taper 1:10 Dia. 16mm (.625)* Length 20mm (.787)*	 <p>Ø12mm (.472) R6mm (.236) 11mm (.433) 20°</p>	 <p>Ø12mm (.472) R8mm (.315) 11mm (.433)</p>	 <p>Ø6mm (.236) Ø12mm (.472) R6mm (.236) R40mm (1.575) 11mm (.433) 15°</p>
CMW®328	MPA25Z-03	MPB25Z-03	MPA25Z-09



CMW shanks are precision manufactured from CMW®3 class 2 material to provide a high quality mount for cap type electrodes. They are designed for high strength and electrical conductivity.

\*These shanks are shown with a blind water hole for cap replacement without shutting off water. Shanks with through water holes are available, by adding "TH" to the basic part number. Example: MP30212TH.

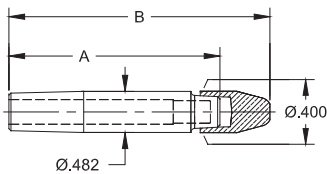
**SHANKS FOR FEMALE CAP ELECTRODES**

- See pages 8 & 9 for CMW standard nose and GCAP® electrode caps



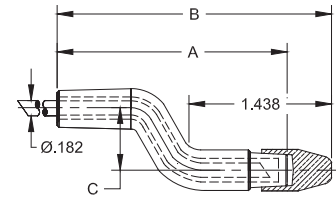
SHANKS FOR FEMALE CAPS WITH #4 RW TAPERS

Part No.	A	B
MP3012	1.25	1.75
MP3013	1.50	2.00
MP3014	1.75	2.25
MP3015	2.00	2.50
MP3016	2.25	2.75
MP3017	2.50	3.00
MP3018	2.75	3.25
MP3019	3.00	3.50
MP30112	3.25	3.75
MP30114	3.50	4.00
MP30116	3.75	4.25
MP30118	4.00	4.50



BENT OFFSET SHANKS FOR FEMALE CAPS WITH #4 RW TAPERS

Part No.	A	B	C
MP3019-08	2.62	3.28	0.50
MP3019-12	2.56	3.22	0.75
MP30112-12	2.81	3.47	0.75
MP30112-16	2.37	3.03	1.00
MP30116-16	2.87	3.53	1.00
MP30116-20	2.60	3.28	1.25

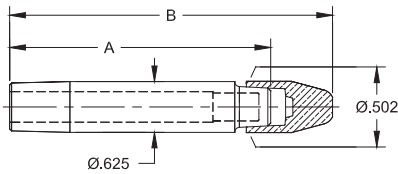


Bent Dimensions for Reference Only



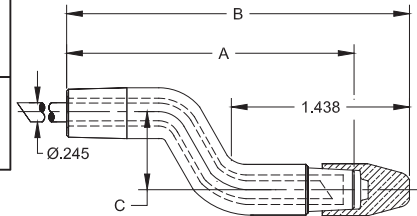
SHANKS FOR FEMALE CAPS WITH #5 RW TAPERS

Part No.	A	B
MP3023	1.46	2.00
MP3024	1.71	2.25
MP3025	1.96	2.50
MP3026	2.21	2.75
MP3027	2.46	3.00
MP3028	2.71	3.25
MP3029	2.96	3.50
MP30212	3.21	3.75
MP30214	3.46	4.00
MP30216	3.71	4.25
MP30218	3.96	4.50
MP30220	4.21	4.75
MP30222	4.46	5.00



BENT OFFSET SHANKS FOR FEMALE CAPS WITH #5 RW TAPERS

Part No.	A	B	C
MP3029-08	2.58	3.20	0.50
MP3029-12	2.60	3.12	0.75
MP30212-12	2.77	3.44	0.75
MP30212-16	2.33	3.00	1.00
MP30214-12	3.00	3.66	0.75
MP30214-16	2.81	3.48	1.00
MP30216-16	2.83	3.49	1.00
MP30216-20	2.77	3.43	1.25

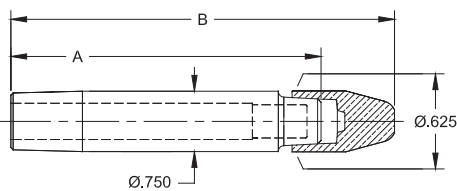


Bent Dimensions for Reference Only



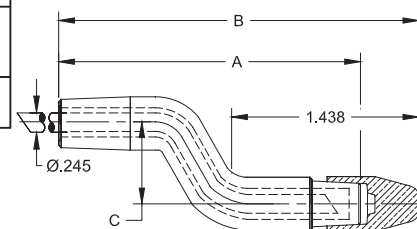
SHANKS FOR FEMALE CAPS WITH #6 RW TAPERS

Part No.	A	B
MP3044	1.64	2.25
MP3045	1.89	2.50
MP3046	2.14	2.75
MP3047	2.39	3.00
MP3048	2.64	3.25
MP3049	2.89	3.50
MP30412	3.14	3.75
MP30414	3.39	4.00
MP30416	3.64	4.25
MP30418	3.89	4.50
MP30420	4.14	4.75
MP30422	4.39	5.00



BENT OFFSET SHANKS FOR FEMALE CAPS WITH #6 RW TAPERS

Part No.	A	B	C
MP3049-08	2.69	3.30	0.50
MP30412-12	2.81	3.42	0.75
MP30414-12	2.94	3.55	0.75
MP30416-16	3.06	3.67	1.00
MP30420-20	3.25	3.86	1.25



Bent Dimensions for Reference Only



CMW shanks are precision manufactured from CMW®3 class 2 material to provide a high quality mount for cap type electrodes. They are designed for high strength and electrical conductivity.

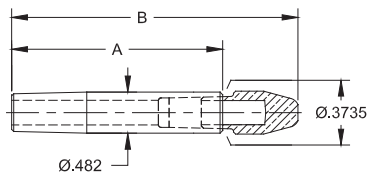
**SHANKS FOR MALE CAP ELECTRODES**

- See pages 8 & 9 for CMW standard nose and GCAP® electrode caps



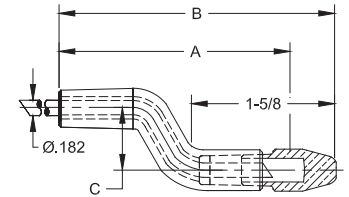
SHANKS FOR MALE CAPS WITH #4 RW TAPERS

Part No.	A	B
3012	1.25	1.88
3013	1.50	2.12
3014	1.75	2.38
3015	2.00	2.62
3016	2.25	2.88
3017	2.50	3.12
3018	2.75	3.38
3019	3.00	3.62
30112	3.25	3.88
30114	3.50	4.12
30116	3.75	4.38
30118	4.00	4.62



BENT OFFSET SHANKS FOR MALE CAPS WITH #4 RW TAPERS

Part No.	A	B	C
3019-08	2.62	3.37	0.50
3019-12	2.56	3.31	0.75
30112-12	2.81	3.56	0.75
30112-16	2.37	3.12	1.00
30116-16	2.87	3.62	1.00
30116-20	2.62	3.37	1.25

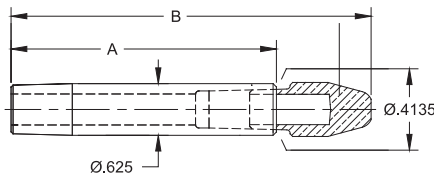


Bent Dimensions for Reference Only



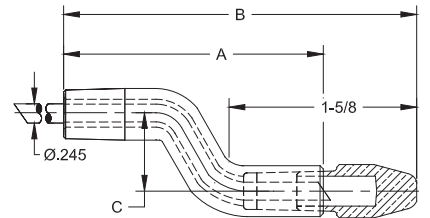
SHANKS FOR MALE CAPS WITH #5 RW TAPERS

Part No.	A	B
3022	1.25	2.00
3023	1.50	2.25
3024	1.75	2.50
3025	2.00	2.75
3026	2.25	3.00
3027	2.50	3.25
3028	2.75	3.50
3029	3.00	3.75
30212	3.25	4.00
30214	3.50	4.25
30216	3.75	4.50
30218	4.00	4.75
30220	4.25	5.00
30222	4.50	5.25



BENT OFFSET SHANKS FOR MALE CAPS WITH #5 RW TAPERS

Part No.	A	B	C
3028-08	2.37	3.12	0.50
3028-12	2.31	3.06	0.75
30212-12	2.81	3.56	0.75
30212-16	2.37	3.12	1.00
30214-12	3.06	3.81	0.75
30214-16	2.62	3.37	1.00
30214-20	2.37	3.12	1.25
30216-16	2.87	3.62	1.00
30216-20	2.62	3.37	1.25

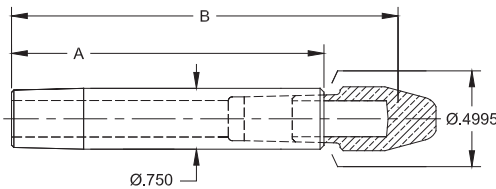


Bent Dimensions for Reference Only



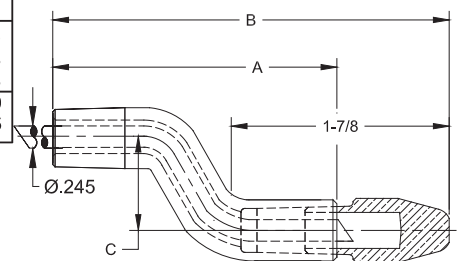
SHANKS FOR MALE CAPS WITH #6 RW TAPERS

Part No.	A	B
3043	1.50	2.62
3044	1.75	2.88
3045	2.00	3.12
3046	2.25	3.38
3047	2.50	3.62
3048	2.75	3.88
3049	3.00	4.12
30412	3.25	4.38
30414	3.50	4.62
30416	3.75	4.88
30418	4.00	5.12
30420	4.25	5.38
30422	4.50	5.62



BENT OFFSET SHANKS FOR MALE CAPS WITH #6 RW TAPERS

Part No.	A	B	C
30412-08	2.62	3.75	0.50
30412-12	2.56	3.69	0.75
30414-12	2.75	3.88	0.75
30416-16	2.87	4.00	1.00
30420-20	3.12	4.25	1.25



Bent Dimensions for Reference Only