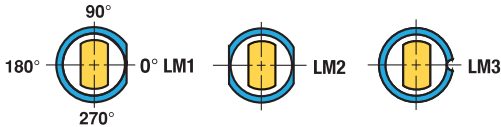


Ordering Example:

Qty Steel Type Code L P
6 M2 HNDC 020 x 25 x 11.00



Optional Locating Methods See Page 38 for details and options.

Steel: M2 Rc 60-63

TOLERANCES

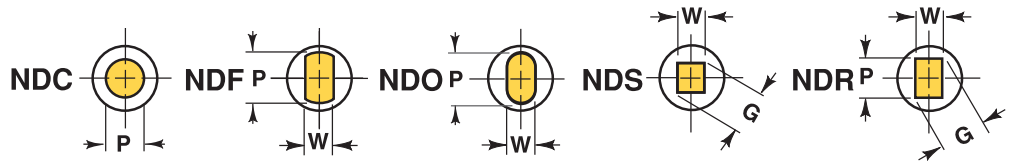
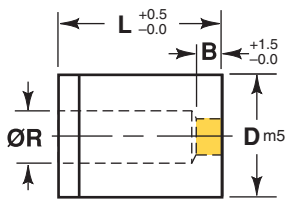
Round P $^{+0.01}_{-0.00}$ $\text{Ⓢ} 0.01$ P to D

Shape P, W ± 0.01 $\text{Ⓢ} 0.02$ P, W to D

Manufactured to ISO and NAPMA standards where applicable.

Body D	Code No.	Land B**	Max. R	Lengths								Round ID	Shape ID	
				19	20	22	25	28	30	32	35	Range P	Min. W	Max. P/G
8	008	4	4	●	●	●	●	●	●	●	●	1.5 – 3.2	–	–
10	010	4	6	●	●	●	●	●	●	●	●	1.5 – 5.0	1.5	5.0
13	013	5	8	●	●	●	●	●	●	●	●	1.5 – 7.2	1.5	7.2
16	016	5	9.5	●	●	●	●	●	●	●	●	5.0 – 8.8	1.9	8.8
20	020	5	12	●	●	●	●	●	●	●	●	7.0 – 11.0	1.9	11.0
22	022	6	15	●	●	●	●	●	●	●	●	9.0 – 14.0	1.9	14.0
25	025	6	17.5	●	●	●	●	●	●	●	●	11.0 – 16.5	1.9	16.5
32	032	6	21	●	●	●	●	●	●	●	●	13.0 – 20.0	4.0	20.0
38	038	8	27		●	●	●	●	●	●	●	16.0 – 26.0	4.0	26.0
40	040	8	27		●	●	●	●	●	●	●	16.0 – 26.0	4.0	26.0
45	045	8	36			●	●	●	●	●	●	19.0 – 35.0	8.0	35.0
50	050	8	41			●	●	●	●	●	●	22.0 – 40.0	9.0	40.0
56	056	8	46			●	●	●	●	●	●	25.0 – 45.0	10.0	45.0
63	063	8	51			●	●	●	●	●	●	28.0 – 50.0	11.0	50.0
71	071	8	57			●	●	●	●	●	●	31.0 – 56.0	12.0	56.0
76	076	8	61			●	●	●	●	●	●	39.0 – 60.0	15.0	60.0

N = Available ND only. ● Available HND & ND **Additional Land lengths available see page 8 (Taper Relief Dies)



Ordering Example:

Qty Steel Type Code L W P Locate
6 M2 NDR 016 x 25 x 4.20 x 5.40 LM1

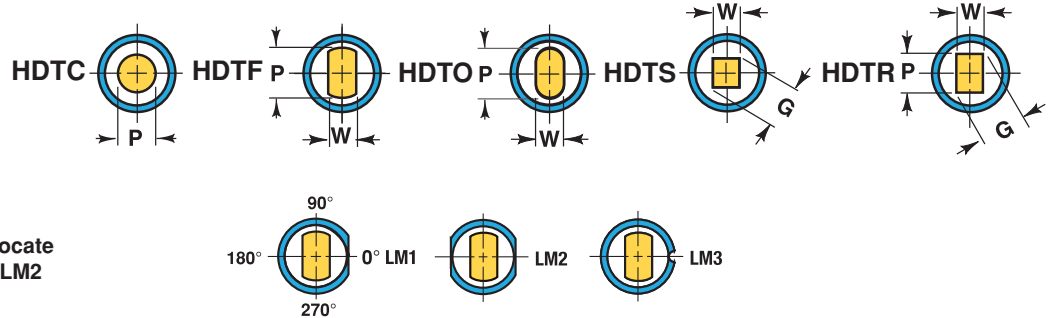
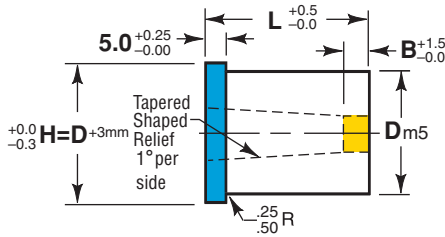


Optional Locating Methods See Page 38 for details and options.

Standard Alterations are changes that are beyond the ranges listed in the catalog that can be altered for a minimal charge. See page 37.

For additional standard forms and configurations see pages 32 and 33.

PORTER Standard Taper Relief Headed Die Buttons (HDT-)



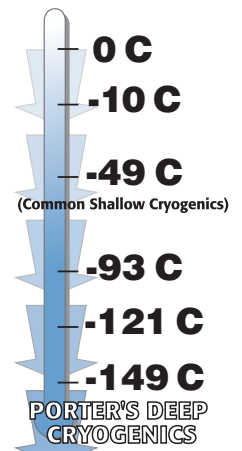
Ordering Example:

Qty Steel Type Code/B L W P Locate
 5 M2 HDTS 025A 30 x 4.00 x 4.00 LM2

Optional Locating Methods See Page 38 for details and options.

Body D	Code No.	B			Lengths L										Range P	Min. W	Max. P/G
		Std S	Alt A	Alt B	13	16	19	20	22	25	28	30	32	35			
5.0	005	4	5	3	●	●	●	●	●	●	●	●	●	●	1.30 – 3.20	1.30	3.20
6.0	006	4	5	3	●	●	●	●	●	●	●	●	●	●	1.30 – 3.90	1.30	3.90
8.0	008	4	5	3	●	●	●	●	●	●	●	●	●	●	1.30 – 5.40	1.30	5.40
10.0	010	4	5	3	●	●	●	●	●	●	●	●	●	●	1.60 – 6.80	1.30	6.80
13.0	013	5	8	3	●	●	●	●	●	●	●	●	●	●	3.00 – 8.80	1.90	8.80
16.0	016	5	8	3			●	●	●	●	●	●	●	●	7.40 – 10.80	1.90	10.80
20.0	020	5	10	3			●	●	●	●	●	●	●	●	9.50 – 13.60	1.90	13.60
22.0	022	6	10	3			●	●	●	●	●	●	●	●	10.50 – 15.00	1.90	15.00
25.0	025	6	10	3			●	●	●	●	●	●	●	●	12.00 – 17.00	1.90	17.00
32.0	032	6	12	3			●	●	●	●	●	●	●	●	16.00 – 22.00	4.00	22.00
38.0	038	6	12	3			●	●	●	●	●	●	●	●	18.00 – 27.00	4.00	27.00
40.0	040	8	12	3			●	●	●	●	●	●	●	●	18.00 – 27.00	4.00	27.00
45.0	045	8	12	3					D	D	D	D	D	D	18.00 – 35.00	4.00	35.00
50.0	050	8	12	3					D	D	D	D	D	D	18.00 – 40.00	4.00	40.00
56.0	056	8	12	3					D	D	D	D	D	D	18.00 – 45.00	4.00	45.00
63.0	063	8	12	3					D	D	D	D	D	D	18.00 – 50.00	4.00	50.00
71.0	071	8	12	3					D	D	D	D	D	D	18.00 – 56.00	4.00	56.00
76.0	076	8	12	3					D	D	D	D	D	D	25.00 – 60.00	5.60	60.00

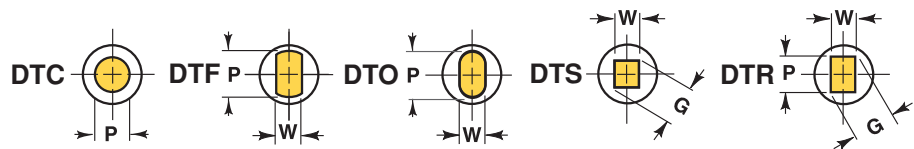
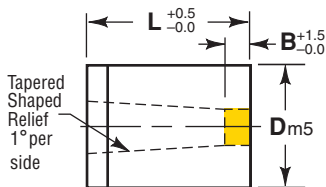
● Available Both HDT & DT D Available in DT only



THEN TEMPERED!

All Porter Standard Taper Die Buttons are "Deep Cryogenically" treated for
 1. Wear
 2. Toughness
 3. Dimensional Stability
 See page 42 for details.

PORTER Standard Taper Relief Headless Die Buttons (DT-)



Ordering Example:

Qty Steel Type Code/B L P
 10 M2 DTC 050B x 40 x 20.00



Optional Locating Methods See Page 38 for details and options.

Steel: M2 Rc 60-63

TOLERANCES

Round P $^{+0.01}_{-0.00}$ 0.01 P to D

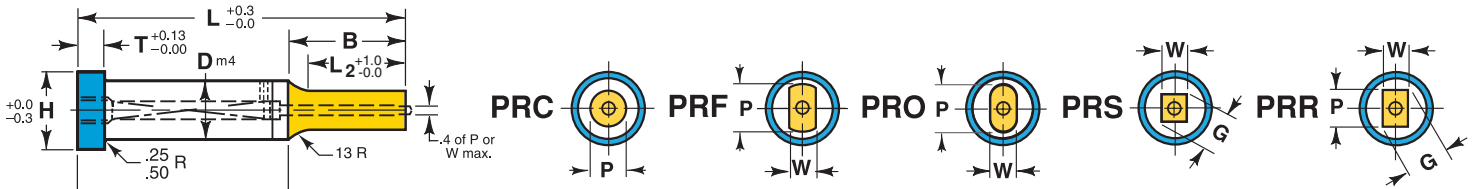
Shape P, W ± 0.01 0.02 P,W to D

Manufactured to ISO and NAPMA standards where applicable.

Standard Alterations are changes that are beyond the ranges listed in the catalog that can be altered for a minimal charge. See page 37.

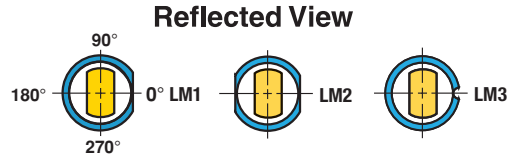
For additional standard forms and configurations see pages 32 and 33.

PORTER Ultra Precision Headed Retrako Punch (PR-)



Ordering Example: Qty Steel Type Code L₂/L P
13 M2 PRC 013 1960 x 10.50

For additional standard forms and configurations see pages 32 and 33.



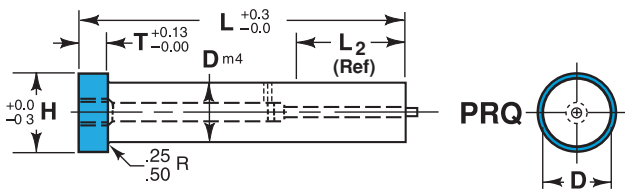
Optional Locating Methods See Page 38 for details and options.

Shank		Head		L ₂				Lengths L										Point			Replacement Retrako® Kit*
D mm	Code No.	H	T	8	13	19	25	45	50	56	60	63	70	71	80	90	100	Range P	Min W	Max P/G	
5.0	005	8	5	•	•	•		◆	•	•	•	•	•	•	•	•	•	1.60 – 4.99	1.60	5.00	K2M
6.0	006	9	5	•	•	•		◆	•	•	•	•	•	•	•	•	•	2.40 – 5.99	2.40	6.00	K3M
8.0	008	11	5		•	•		◆	•	•	•	•	•	•	•	•	•	3.20 – 7.99	3.20	8.00	K4M
10.0	010	13	5		•	•		◆	•	•	•	•	•	•	•	•	•	4.50 – 9.99	4.50	10.00	K6M
13.0	013	16	5		•	•			◆	•	•	•	•	•	•	•	•	6.00 – 12.99	6.00	13.00	K6M
16.0	016	19	5		•	•			◆	•	•	•	•	•	•	•	•	8.00 – 15.99	7.20	16.00	K9M
20.0	020	23	5		•	•				◆	•	•	•	•	•	•	•	9.50 – 19.99	8.00	20.00	K9M
25.0	025	28	5		•	•					◆	•	•	•	•	•	•	12.00 – 24.99	9.00	25.00	K9M
32.0	032	35	5		•	•							•	•	•	•	•	16.00 – 31.99	10.00	32.00	K12M

*Retrako Kits available see page 36 for details. 5 mm Ø + 32 mm Ø = no side hole.
◆ L₂ = 19 max

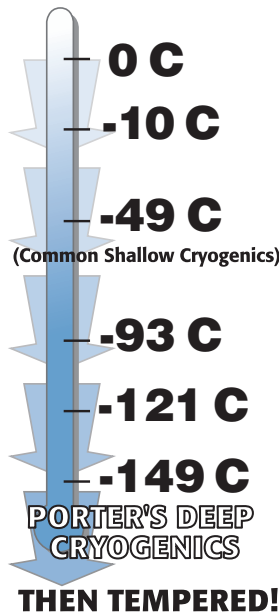
All Lengths in Light Blue Panel have Hot Forged Heads for added strength and toughness.

PORTER Ultra Precision Headed Retrako Punch Blank (PRQ)



Ordering Example: Qty Steel Type Code L₂/L
13 M2 PRQ 010 1980

Standard Alterations are changes that are beyond the ranges listed in the catalog that can be altered for a minimal charge. See page 37.



Steel: D2, M2 Rc 60-63
Heads Rc 40-55 (25mm Ø and smaller and L ≥ 50)

TOLERANCES

Round P $\begin{matrix} +0.005 \\ -0.000 \end{matrix}$ $\text{Ⓢ} \text{ .008 P,W to D}$

Shape P,W $\begin{matrix} +0.005 \\ -0.000 \end{matrix}$ $\text{Ⓢ} \text{ .008 P,W to D}$

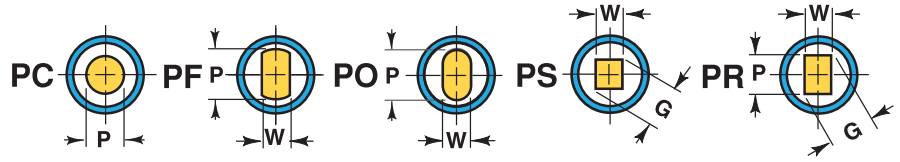
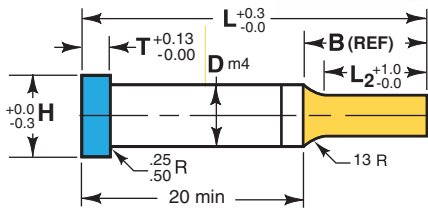
Manufactured to ISO and NAPMA standards where applicable.

All Porter Ultra Precision Punches up to 25mm Dia. are "Deep Cryogenically" treated for

1. Wear
2. Toughness
3. Dimensional Stability

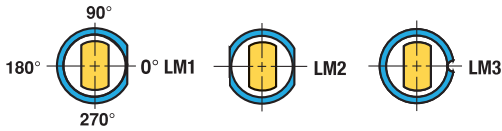
See page 42 for more details.

PORTER Ultra Precision Headed Punch (P-)



Ordering Example: Qty Steel Type Code L₂/L W P Locate
13 PM4 PS 013 1971 5.50 x 5.50 LM2

Reflected View



Optional Locating Methods See Page 38 for details and options.

Steel: D2 L ≤ 100, M2 Rc 60-63
PM4, Rc 63-65
Heads Rc 40-55 (25mm Ø and smaller and L ≥ 50)

TOLERANCES

Round P $+0.005$
 -0.000 Ⓞ .008 P,W to D

Shape P,W $+0.005$
 -0.000 Ⓞ .008 P,W to D

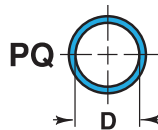
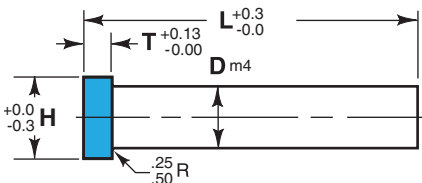
Manufactured to ISO and NAPMA standards where applicable.

Shank		Head		L ₂				Lengths L												Range P	Min W	Max P/G		
D mm	Code No.	H	T	8	13	19	25	45	50	56	60	63	70	71	80	90	100	110	125				150	
4.0	004	7	5	●	●	●	●	●	●	●	●	●	●	●	●	●	●					1.00 – 3.99	1.60	4.00
5.0	005	8	5	●	●	●	●	●	●	●	●	●	●	●	●	●	●					1.20 – 4.99	1.60	5.00
6.0	006	9	5	●	●	●	●	●	●	●	●	●	●	●	●	●	●					1.60 – 5.99	1.60	6.00
8.0	008	11	5	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			2.50 – 7.99	2.50	8.00
10.0	010	13	5	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		3.20 – 9.99	3.20	10.00
13.0	013	16	5		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	5.00 – 12.99	4.50	13.00
16.0	016	19	5		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	8.00 – 15.99	6.00	16.00
20.0	020	23	5		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	9.00 – 19.99	8.00	20.00
22.0	022	25	5		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	10.00 – 21.99	8.50	22.00
25.0	025	28	5		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	12.00 – 24.99	9.00	25.00
32.0	032	35	5		●	●	●				●	●	●	●	●	●	●	●	●	●	●	16.00 – 32.00	10.00	32.00

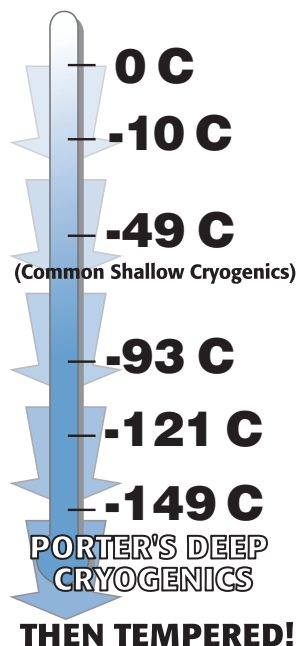
• These sizes also available in PM4 material. P,W below 1.60 L₂ = 8 max. P,W below 2.50 L₂ = 19 max.

All Lengths 110 mm and under in Light Blue Panel have Hot Forged Heads for added strength and toughness.

PORTER Ultra Precision Headed Punch Blank (PQ)



Ordering Example: Qty Steel Type Code L
25 PM4 PQ 020 100

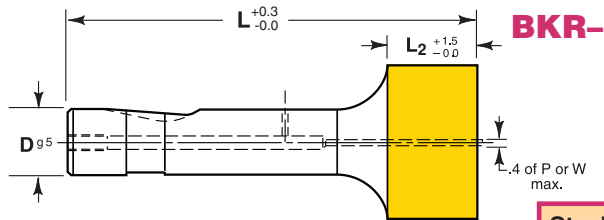


All Porter Ultra Precision Punches up to 25 mm Dia. are “Deep Cryogenically” treated for
1. Wear
2. Toughness
3. Dimensional Stability
See page 42 for more details.

Standard Alterations are changes that are beyond the ranges listed in the catalog that can be altered for a minimal charge. See page 37.

For additional standard forms and configurations see pages 32 and 33.

PORTER Light Duty Knob Style Punches



Ordering Example:

Qty Steel Type Code L P
15 M2 BRKC 013 80 25.20

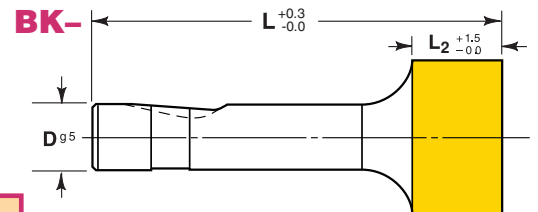
Steel: M2 Rc 60-63

TOLERANCES

Round P $\begin{matrix} +0.01 \\ -0.00 \end{matrix}$ ⊙ 0.01 P to D

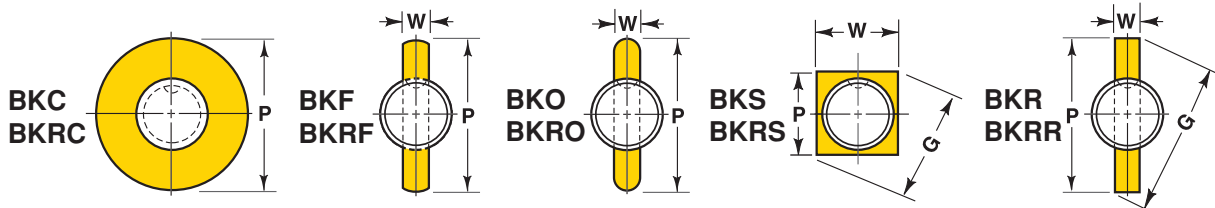
Shape P, W ± 0.01 ⊙ 0.02 P,W to D

Manufactured to ISO and NAPMA standards where applicable.
Back Draft 0.1/100mm L₂ max.



Ordering Example:

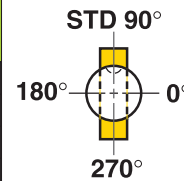
Qty Steel Type Code L W P
4 M2 BKS 020 100 23.00 x 23.00



Shank D	Code No.	Point Length L ₂	Lengths L				Point		Replacement Retrakto Kit*
			71	80	90	100	Round Range P	Shape Min W Max P/G	
13	013	20	●	●	●	●	13.10 – 32.00	5.00 32.00	K6M
16	016	25	●	●	●	●	16.10 – 38.00	6.00 38.00	K6M
20	020	25	●	●	●	●	20.10 – 40.00	8.00 40.00	K9M
25	025	25	●	●	●	●	25.10 – 44.00	10.00 44.00	K9M
32	032	32	●	●	●	●	32.10 – 50.00	11.50 50.00	K12M

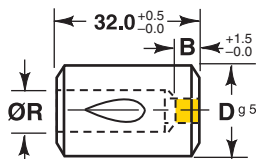
*Retrakto Kits available see page 36 for details.

For additional standard forms and configurations see pages 32 and 33.



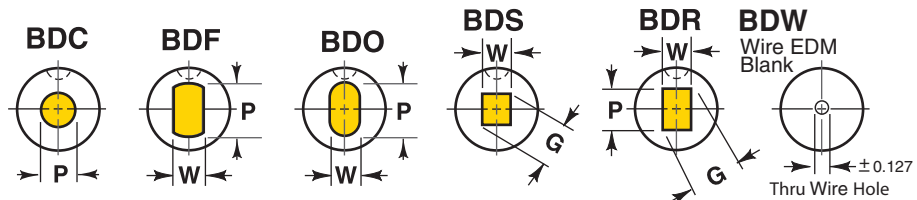
Standard ball seat location is at 90° using reflected view for punches. Alternate locations of 0°, 180° and 270° are available at no extra charge. Custom ball seat locations can be specified as number of degrees counterclockwise from 0°.

PORTER Bal-Lok Die Buttons (BD-)



Ordering Example:

Qty Steel Type Code P
25 M2 BDC 016 x 5.65



*SPECIAL NOTE: Small quantities of Bal-Lok die buttons may be substituted with a taper relief of 1 degree per side.

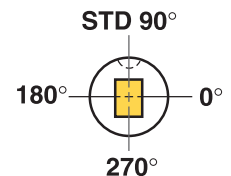
Body		Min. B	Max. R	Length L	Round I.D. Range P	Shape I.D.	
Code	D					Min. W	Max. P/G
013	13.0	4	6.00	32.0	1.50 – 5.20	1.50	5.20
016	16.0	4	8.00	32.0	3.20 – 7.20	2.00	7.20
020	20.0	4	12.00	32.0	4.00 – 11.00	2.40	11.00
025	25.0	5	16.00	32.0	8.00 – 15.00	4.00	15.00
032	32.0	6	20.00	32.0	11.00 – 19.00	4.80	19.00
038	38.0	6	27.00	32.0	16.50 – 26.00	6.40	26.00

Steel: D2, M2, Rc 60-63

TOLERANCES

Round P $\begin{matrix} +0.01 \\ -0.00 \end{matrix}$ ⊙ 0.01 P to D

Shape P,W $\begin{matrix} +0.02 \\ -0.00 \end{matrix}$ ⊙ 0.02 P,W to D



Standard Ball Seat location is at 90°, alternate locations of 0°, 180° and 270° are available at no extra charge. See pages 32 and 33 for additional standard I.D. forms.

Standard Alterations are changes that are beyond the ranges listed in the catalog that can be altered for a minimal charge. See page 37.