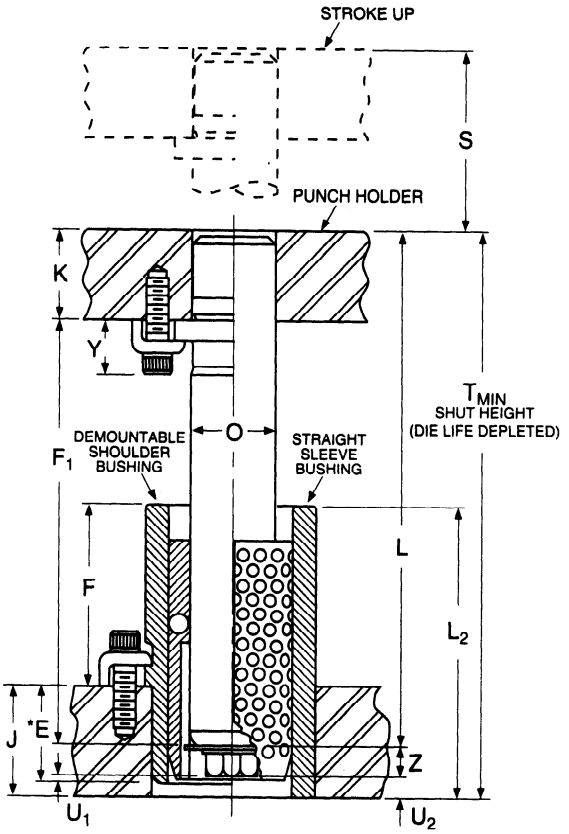
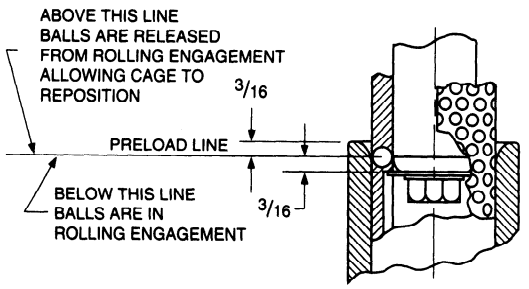
Type II and III Selection Data

ROTATING DANLY STYLE BALL BEARING DIE SETS





Data For Finding Guide Post Length

TYPE OF GUIDE POST	TYPE OF BUSHING	
	DEMOUNTABLE SHOULDER BUSHING	STRAIGHT SLEEVE BUSHING
STRAIGHT POST	$L=T-U_1-Z-J+E$	$L=T-U_2-Z$
DEMOUNTABLE POST	$F_1=T-U_1-Z-J+E-K$ **CAUTION** $F+J+K+Y<T$	$F_1=T-U_2-Z-K$ **CAUTION** $L_2+K+Y<T$

POST DIA. O	Z	E	U_1	U_2
1	15/32	1 3/16	1/16	1/8
1 1/4	15/32	1 3/16		
1 1/2	1/2	1 7/16		
1 3/4	1/2	1 11/16		
2	1/2	1 15/16		
2 1/2	9/16	1 15/16		
3	9/16	1 15/16		

*Die shoe thickness must be greater than the "E" dimension when shoulder bushing is used.

Note: If calculated guide post length is not listed

1. Select next longer length and cut off to required length, **(Caution: Demountable Guide Post may not be cut off; choose next shorter length.)**
2. Or, select shorter length and recess post in punch holder to obtain correct "L" dimension.

Press fit length should be equal to or greater than the diameter of the guide post, if possible.

Instructions For Using Type I, II, and III Bushing and Ball Cage Selection Chart

To select a Type II or Type III Ball Bearing Bushing Assembly:

1. Determine the desired stroke,
2. Determine the required guide post diameter,
3. Determine the desired operating condition, or the extent to which the cage leaves the bushing,
4. Last, determine whether a Demountable or Straight Sleeve Bushing is preferred.

Once these four factors: (1) stroke, (2) guide post diameter, (3) operating condition and (4) type of bushing, are established, refer to the Selection Chart.

First find the column headed by the desired stroke (S). Moving down this column, opposite the required guide post diameter, find the color square in the desired operating condition (Salmon for condition shown in Figure A; Red for condition shown in Figure B; Yellow for condition shown in Figure C.) Selection of the longest bushing-cage combination, shutheight permitting, will provide increased life.

Once the square has been determined, follow the horizontal line to the left for selection of bushing and ball cage lengths. Refer to chart above to select guide post length. When these have been selected, refer back to the pages giving full dimensions and catalog numbers of these assembly components.

Note: If stroking rate is under 150 SPM, Figure B is recommended, which allows the ball cage to reposition at each stroke.