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Friction Drive Wheels  
pg. 15-2



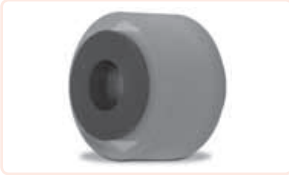
Feed Rollers Without Bearing  
pg. 15-3



Feed Rollers Without Bearing  
pg. 15-4



Idler Rollers With Sintered Bronze  
Bearing  
pg. 15-5



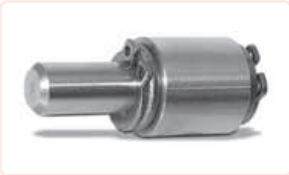
Idler Rollers With Polymer Bearing  
pg. 15-6



Idler Rollers with Double-Shielded  
ABEC 3 Bearing  
pg. 15-7



Prototype Building Engineering Kit  
pg. 15-8



Low Cost Idlers with Sintered Bronze  
Bearings  
pg. 15-9



Stud Type Cam Followers  
pg. 15-10



Cam Followers, Shallow Head  
pg. 15-11



Molded Cams with Metal Insert  
pg. 15-12



Molded Cams  
pg. 15-13

4.8 mm FACE

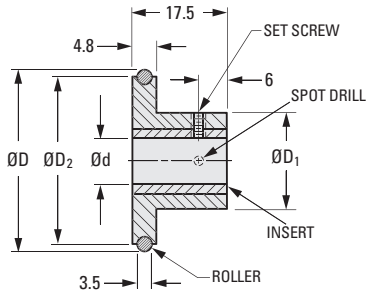
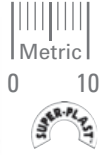
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> MATERIAL:

Body – Acetal

Insert – Brass

Roller – Buna “N”, 70 Durometer



**METRIC COMPONENT**

Catalog Number	D Dia.	d Bore +0.025 0	D <sub>1</sub> Hub Dia.	D <sub>2</sub> Dia.	Set Screw
A 6Z10M131304	15.9	4	16	12.7	M3
A 6Z10M131904	22.3	4	16	19.1	M3
A 6Z10M132504	28.6	4	16	25.4	M3
A 6Z10M133804	41.3	4	19	38.1	M3
A 6Z10M135104	54	4	25	50.8	M3
A 6Z10M131306	15.9	6	16	12.7	M3
A 6Z10M131906	22.3	6	16	19.1	M3
A 6Z10M132506	28.6	6	16	25.4	M3
A 6Z10M133806	41.3	6	19	38.1	M3
A 6Z10M135106	54	6	25	50.8	M3
A 6Z10M131908	22.3	8	16	19.1	M4
A 6Z10M132508	28.6	8	25	25.4	M4
A 6Z10M135108	54	8	25	50.8	M4

URETHANE SURFACE  
WITHOUT BEARING

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**> MATERIAL:**

- Roller** - Urethane 60 Durometer  
Ground Outside Diameter
- Sleeve** - Aluminum

All feed rollers supplied with 2 set screws

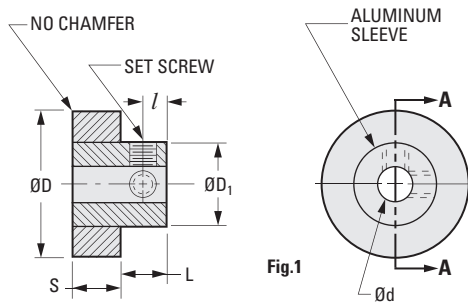


Fig.1

**SECTION A-A**

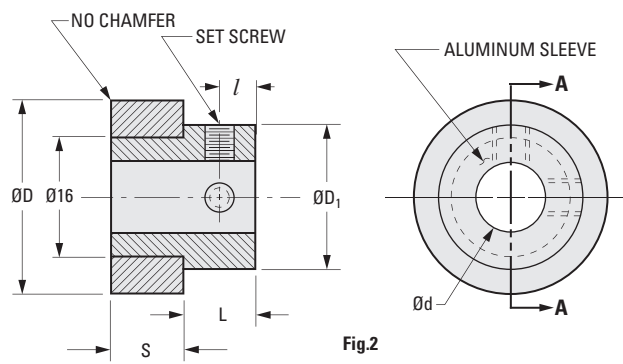


Fig.2

**SECTION A-A**

**METRIC COMPONENT**

Catalog Number	Fig. No.	D Dia. ± 0.075	d Bore +0.0127 0	S Face Width ± 0.25	L Hub Proj.	l	D <sub>1</sub> Sleeve O.D.	Set Screw
A 7T 5MUR1405	1	14	5	6.35	6.35	3.17	11.1	M3
A 7T 5MUR1905	1	19	5	6.35	6.35	3.17	11.1	M3
A 7T 5MUR1606	1	16	6	9.52	6.35	3.17	12.7	M4
A 7T 5MUR1906	1	19	6	9.52	6.35	3.17	12.7	M4
A 7T 5MUR2206	1	22	6	9.52	6.35	3.17	12.7	M4
A 7T 5MUR2510	2	25	10	9.52	9.52	4.76	19	M4
A 7T 5MUR3210	1	32	10	9.52	9.52	4.76	20.62	M5
A 7T 5MUR3810	1	38	10	9.52	9.52	4.76	25.4	M5
A 7T 5MUR3812	1	38	12	12.7	12.7	6.35	25.4	M6
A 7T 5MUR4412	1	44	12	12.7	12.7	6.35	31.75	M6
A 7T 5MUR5012	1	50	12	12.7	12.7	6.35	34.9	M6



# FEED ROLLERS

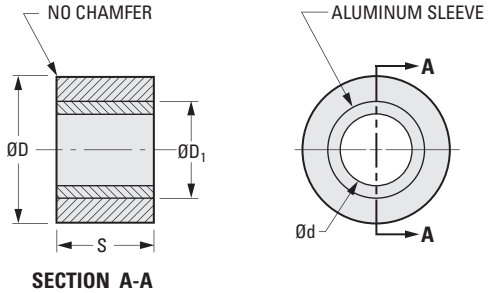
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URETHANE SURFACE  
WITHOUT BEARING

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**> MATERIAL:**

- Roller** - Urethane 60 Durometer  
Ground Outside Diameter
- Sleeve** - Aluminum



**METRIC COMPONENT**

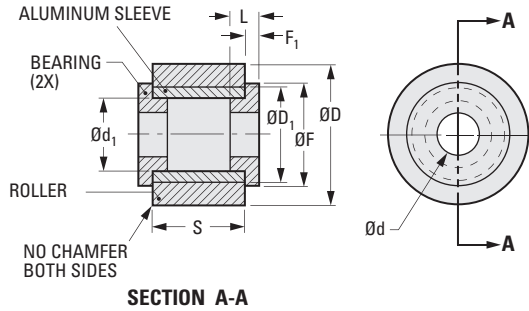
Catalog Number	D Dia. ± 0.075	d Bore +0.013 0	S Face Width ± 0.25	D <sub>1</sub> Sleeve O.D.
A 7M 5MUR1206A	12	6	6.35	8.74
A 7M 5MUR1206B	12	6	18.2	8.74
A 7M 5MUR1206C	12	6	12.7	8.74
A 7M 5MUR1710	17	10	6.35	12.7
A 7M 5MUR1910	19	10	12.7	12.7
A 7M 5MUR2010	20	10	12.7	12.7
A 7M 5MUR2310	23	10	12.3	17.47
A 7M 5MUR2810A	28	10	11.12	12.7
A 7M 5MUR2810B	28	10	17.47	12.7
A 7M 5MUR5010	50	10	17.47	34.92
A 7M 5MUR5012A	50	12	19.05	34.92
A 7M 5MUR5012B	50	12	25.4	34.92

URETHANE SURFACE  
WITH SINTERED BRONZE BEARING

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**> MATERIAL:**

- Roller** - Urethane 60 Durometer  
Ground Outside Diameter
- Sleeve** - Aluminum Alloy
- Bearing** - Sintered Bronze



**METRIC COMPONENT**

Catalog Number	D O.D.	d Bore +0.038 0	S Face Width $\pm 0.25$	L Bearing Length	F Flange Dia.	F <sub>1</sub> Flange Thickness	d <sub>1</sub> Sleeve I.D.	D <sub>1</sub> Sleeve O.D.
A 7Z 5MUR1203A	12	3	6.35	4	9	1.5	6	8.74
A 7Z 5MUR1203B	12	3	18.2	4	9	1.5	6	8.74
A 7Z 5MUR1203C	12	3	12.7	4	9	1.5	6	8.74
A 7Z 5MUR1706	17	6	6.35	4	14	2	10	12.7
A 7Z 5MUR1906	19	6	12.7	4	14	2	10	12.7
A 7Z 5MUR2006	20	6	12.7	4	14	2	10	12.7
A 7Z 5MUR2306	23	6	12.3	4	14	2	10	17.47
A 7Z 5MUR2806A	28	6	11.12	4	14	2	10	12.7
A 7Z 5MUR2806B	28	6	17.47	4	14	2	10	12.7
A 7Z 5MUR5006	50	6	17.47	4	16	3	10	34.92
A 7Z 5MUR5008A	50	8	19.05	8	16	3	12	34.92
A 7Z 5MUR5008B	50	8	25.4	8	16	3	12	34.92



# IDLER ROLLERS



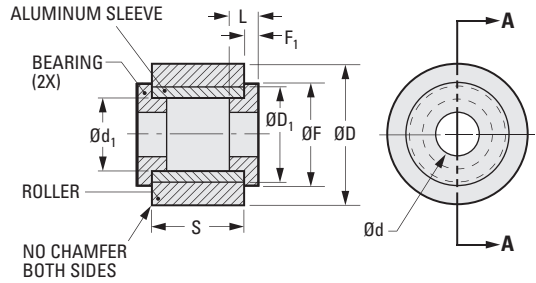
URETHANE SURFACE  
WITH POLYMER BEARING

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**> MATERIAL:**

- Roller** - Urethane 60 Durometer  
Ground Outside Diameter
- Sleeve** - Aluminum Alloy
- Bearing** - M250® Polymer



**SECTION A-A**

**METRIC COMPONENT**

Catalog Number	D O.D.	d Bore	S Face Width ± 0.25	L Bearing Length	F Flange Dia.	F <sub>1</sub> Flange Thickness Ref.	d <sub>1</sub> Sleeve I.D.	D <sub>1</sub> Sleeve O.D.
A 7ZB5MURG1203A	12	3 <sup>+0.080</sup> <sub>+0.020</sub>	6.35	4	9	1.5	6	8.74
A 7ZB5MURG1203B	12		18.2	4	9	1.5	6	8.74
A 7ZB5MURG1203C	12		12.7	4	9	1.5	6	8.74
A 7ZB5MURG1706	17	6 <sup>+0.105</sup> <sub>+0.030</sub>	6.35	4	14	2	10	12.7
A 7ZB5MURG1906	19		12.7	4	14	2	10	12.7
A 7ZB5MURG2006	20		12.7	4	14	2	10	12.7
A 7ZB5MURG2306	23		12.3	4	14	2	10	17.47
A 7ZB5MURG2806A	28		11.12	4	14	2	10	12.7
A 7ZB5MURG2806B	28		17.47	4	14	2	10	12.7
A 7ZB5MURG5006	50	8 <sup>+0.120</sup> <sub>+0.040</sub>	17.47	4	16	2	10	34.92
A 7ZB5MURG5008A	50		19.05	6	16	2	12	34.92
A 7ZB5MURG5008B	50		25.4	6	16	2	12	34.92

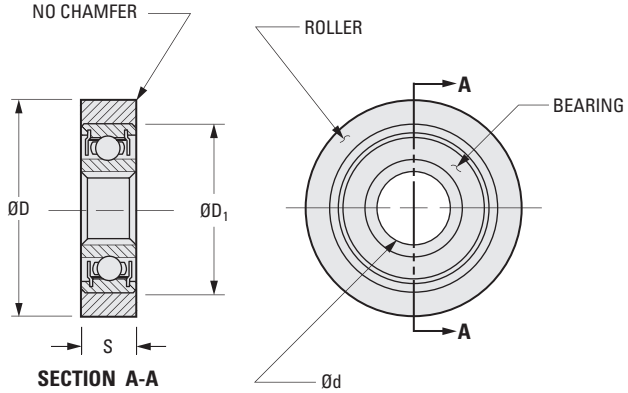
URETHANE SURFACE  
WITH DOUBLE-SHIELDED ABEC 3 BEARING

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**> MATERIAL:**

**Roller** - Urethane 60 Durometer  
Ground Outside Diameter

**Bearing, Double-Shielded** - Stainless Steel



**METRIC COMPONENT**

Catalog Number	D Dia. ± 0.075	d Bore 0 -0.005	S Face Width ± 0.25	D <sub>1</sub> Dia.
A 7Z 8MURBB1205	12	5	3	9
A 7Z 8MURBB1905	19	5	3	9
A 7Z 8MURBB1606	16	6	5	13
A 7Z 8MURBB1906	19	6	5	13
A 7Z 8MURBB2810	28	10	7	19
A 7Z 8MURBB3810	38	10	7	19
A 7Z 8MURBB3812	38	12	8	28
A 7Z 8MURBB4412	44	12	8	28

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STAINLESS STEEL  
SINTERED BRONZE BEARINGS

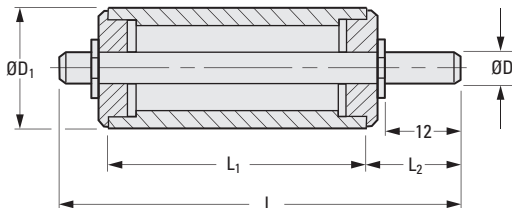
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**> MATERIAL:**

- Shaft - 303 Stainless Steel
- Housing - 303 Series Stainless Steel
- Bearings - Sintered Bronze

**> SPECIFICATIONS:**

- Idlers with:
- 5 and 6 dia. shaft have a tolerance of -0.004/-0.012
- 8 dia. shaft have a tolerance of -0.005/-0.014



**METRIC COMPONENT**

Catalog Number	L	L <sub>1</sub>	L <sub>2</sub>	D Dia. g6	D <sub>1</sub> Dia.	Clearance Dia.
Δ S7AYPAM32120510	32	12	14.3	5	10	10.2
S7AYPAM32120512	32	12	14.3	5	12	12
Δ S7AYPAM32120612	32	12	15	6	12	14
S7AYPAM32120618	32	12	15	6	18	18
Δ S7AYPAM50250510	50	25	14.3	5	10	10.2
S7AYPAM50250512	50	25	14.3	5	12	12
S7AYPAM50250515	50	25	14.3	5	15	15
S7AYPAM50250618	50	25	15	6	18	18
S7AYPAM50250818	50	25	16.2	8	18	18
S7AYPAM50250820	50	25	16.2	8	20	20

Δ Retaining ring clearance diameter or bronze bearing flange diameter is larger than diameter "D<sub>1</sub>"

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# STUD TYPE CAM FOLLOWERS



NEEDLE BEARINGS  
CAGE-GUIDED  
FULL-COMPLEMENT

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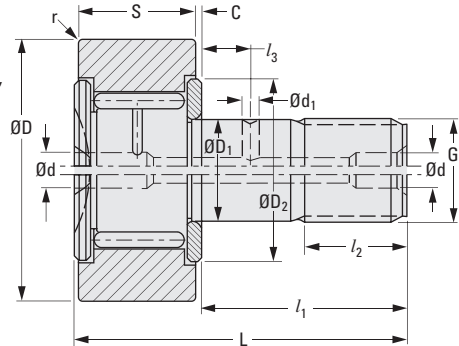
### ► MATERIAL:

Roller & Needles - 52100 Steel  
Stud - 1055 Steel



Catalog Number	Load Ratings* N			
	Dyn. C	Stat. C <sub>0</sub>	Dyn. C <sub>w</sub>	Stat. C <sub>ow</sub>
S9930AMKRV16	6400	8500	4850	6500
S9930AMKRV19	7300	10800	5500	7900
S9930AMKRV22	8600	12900	6300	9100
S9930AMKRV26	8600	12900	7300	11300
S9930AMKRV30	12200	19000	9500	14600
S9930AMKRV32	12200	19000	10000	15800
S9930AMKRV35	18300	35000	12800	23000
S9930AMKRV40	21000	39500	14800	26500

\*The basic load ratings C and C<sub>0</sub> apply if the bearing outer ring (with cylindrical outside surface) is mounted into a housing with standard bearing fit; when used as track roller, the load rating C<sub>w</sub> and C<sub>ow</sub> apply.



### METRIC COMPONENT

Catalog Number	l <sub>1</sub> Stud Length	D Roller Dia.	D <sub>1</sub> Stud Dia. h7	S Roller Width	L Length	G Thread Size	l <sub>2</sub> Thread Length	Lubrication Holes Dia.	
								d	d <sub>1</sub>
S9930AMKRV16	16	16	6	11	28	M6 x 1	8	4Δ	—
S9930AMKRV19	20	19	8	11	32	M8 x 1.25	10	4Δ	—
S9930AMKRV22	23	22	10	12	36	M10 x 1	12	4	—
S9930AMKRV26	23	26	10	12	36	M10 x 1	12	4	—
S9930AMKRV30	25	30	12	14	40	M12 x 1.5	13	6	3
S9930AMKRV32	25	32	12	14	40	M12 x 1.5	13	6	3
S9930AMKRV35	32.5	35	16	18	52	M16 x 1.5	17	6	3
S9930AMKRV40	36.5	40	18	20	58	M18 x 1.5	19	6	3

Δ Relubrication via stud end face only.

Catalog Number	l <sub>3</sub> Location	r Corner Radius Min.	C	Max. Speed rpm	Stud Housing Dia.		D <sub>2</sub> Clamp. Dia.	Max. Clamp. Torque N • m
					Min.	Max.		
S9930AMKRV16	—	0.15	0.6	8500	8.964	9.000	12	3
S9930AMKRV19	—	0.15	0.6	7000	10.957	11.000	14	8
S9930AMKRV22	—	0.3	0.6	6000	12.957	13.000	17	15
S9930AMKRV26	—	0.3	0.6	6000	12.957	13.000	17	15
S9930AMKRV30	6	0.6	0.6	4500	14.957	15.000	23	22
S9930AMKRV32	6	0.6	0.6	4500	14.957	15.000	23	22
S9930AMKRV35	8	0.6	0.8	3400	19.948	20.000	27	58
S9930AMKRV40	8	0.1	0.8	2900	21.948	22.000	32	87

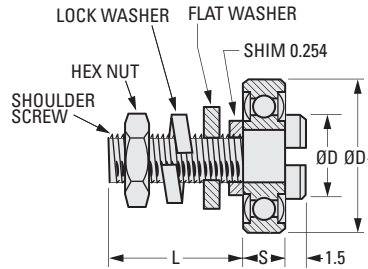
\*\*Limiting speeds shown are for grease lubrication. With oil lubrication, the speed can be increased by approximately 30% except for sealed versions (which are available on special order).

SHALLOW HEAD

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**> MATERIAL:**

**Bearing** - 440C Stainless Steel, ABEC-3, Double Shield  
**Hardware** - 303 Stainless Steel



**METRIC COMPONENT**

Catalog Number	Dimension				Thread
	L	D	D <sub>1</sub>	S	
A 7Y 5MCF0803	6	5	8	4	M2 x 0.4
A 7Y 5MCF1004	8	6	10	4	M3 x 0.5
A 7Y 5MCF1304	8	6	13	5	M3 x 0.5
A 7Y 5MCF1306	12	8	13	5	M5 x 0.8
A 7Y 5MCF1608	16	10	16	5	M6 x 1.0

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**> MATERIAL:**  
 Cam - Acetal, Black  
 Insert - Brass

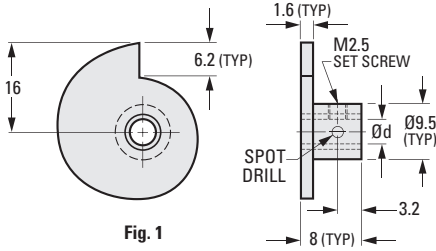


Fig. 1

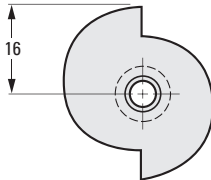


Fig. 2

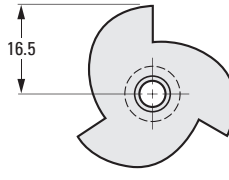


Fig. 3

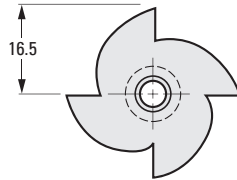


Fig. 4

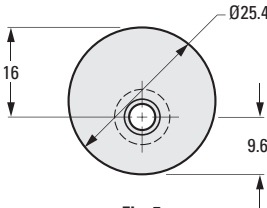


Fig. 5

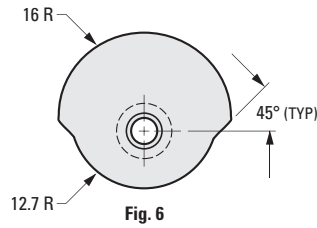


Fig. 6

**METRIC COMPONENT**

Catalog Number	Fig. No.	d Bore +0.025 0	Rise per 15°
A 3Y 3M1Z03	1	3	0.25
A 3Y 3M1Z04	1	4	0.25
A 3Y 3M2Z03	2	3	0.5
A 3Y 3M2Z04	2	4	0.5
A 3Y 3M3Z03	3	3	0.75
A 3Y 3M3Z04	3	4	0.75
A 3Y 3M4Z03	4	3	1
A 3Y 3M4Z04	4	4	1
A 3Y 3M5Z03	5	3	—
A 3Y 3M5Z04	5	4	—
A 3Y 3M6Z03	6	3	—
A 3Y 3M6Z04	6	4	—

MOLDED

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> **MATERIAL:**  
Acetal, Black

> **SPECIFICATIONS:**  
Bore is sized for press fit on standard shafting.  
Use straight knurl for maximum torques.

Other bore sizes available on special order.

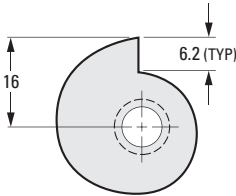


Fig. 1

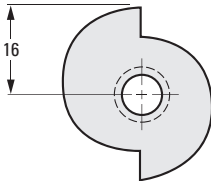
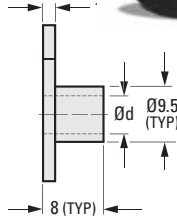


Fig. 2

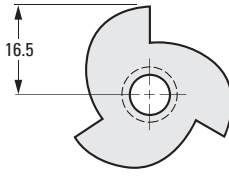


Fig. 3

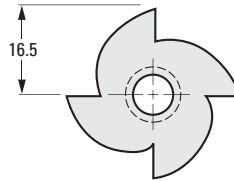


Fig. 4

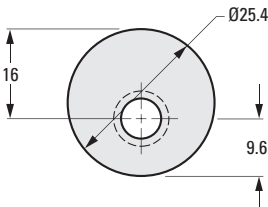


Fig. 5

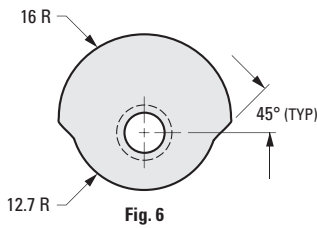


Fig. 6

**METRIC COMPONENT**

Catalog Number	Fig. No.	d Bore	Rise per 15°
A 3Y 3M1M06	1	6	0.25
A 3Y 3M2M06	2	6	0.5
A 3Y 3M3M06	3	6	0.75
A 3Y 3M4M06	4	6	1
A 3Y 3M5M06	5	6	—
A 3Y 3M6M06	6	6	—

**THE BETTER WAY TO FASTEN ROTATING COMPONENTS.**

**Solves...Phasing, Timing, Positioning and Frequent Removal Problems**



**> HERE'S HOW IT WORKS:**

Two slots are machined into the hub, one oriented radially, the other angularly, to create a transverse wedge which remains attached to the solid portion of the hub on one side. The resultant cantilevered clamping section has a tapped hole to accept a cap screw which passes through a clearance hole in the solid portion of the hub, and into a threaded hole in the transverse wedge section. As the screw is tightened, the cantilevered section clamps the shaft securely. The screw can be tightened and released repeatedly without marring the shaft or affecting its torque transmitting abilities.



**> PROVED MOST EFFECTIVE:**

For precision application – Lab tests proved Fairloc® to be superior to all other comparable fasteners. For high torque application – Torques up to 400 lb.in. are obtained with a 5/8" bore Fairloc® hub.

**> TYPICAL APPLICATION AREAS FOR FAIRLOC® INCLUDE:**

Computer Tape Drives, Aerospace Components, Aircraft Instrumentation, Aircraft Fuel Control Systems, Machine Tools, N/C Machines, Computer Input / Output Systems, Military Fire Control Systems, Medical Equipment, Business Machines, Optical Equipment, Power Drives.

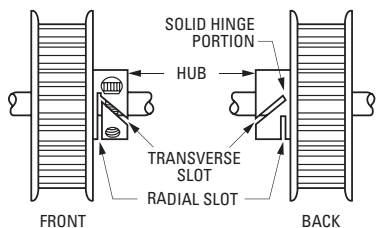
**> FEATURES:**

**Full Use Of The Bore** - Gives maximum support to the component, reduces wobble or misalignment.

**Easy Adjustment** - Fairloc® replaces set screws and clamps, eliminates marred shafts; components can be repositioned with a single hex key adjustment.

**Compact, Self-Contained Design** - When available space or access is limited, Fairloc's® small hub envelope is a distinct advantage.

**Very High Reliability**



Call on our Engineering Department to discuss the advantages of applying the Fairloc® concept to your designs.

FASTENER SELECTOR GUIDE						Legend
Fastening Method	A	B	C	D	E	
Clamps	Yes	No	No	Yes	No	<b>A</b> – Shaft remains smooth <b>B</b> – Self-contained (no additional inventory) <b>C</b> – Component is fully supported <b>D</b> – Easy adjustment <b>E</b> – Can be pinned if desired
*Fairloc®	Yes	Yes	Yes	Yes	Yes	
Keys	No	No	No	No	No	
Pins	No	No	No	No	Yes	
Set Screws	No	No	No	No	Yes	

\* Patented  
 ® Registered trademark



**> DID YOU KNOW?**

That you can see a video showing how the Fairloc® integral fastener works and how it can benefit your application. It is located at: [www.sdp-si.com/fairloc](http://www.sdp-si.com/fairloc).