

> SELECTION CHART:

1. Items with page numbers are in this catalog.
 For items with shaded background, please consult our other SDP/SI catalogs or our Web site: www.sdp-si.com



2. The part numbers with the “-” in the 7th character denotes inch size bore and “M” in the 7th character signify metric size bore.

Type	Bearing Material			
	Sintered Bronze	PTFE Bronze	Acetal	Needle Roller Bearing
Press-Fit Self-Aligning	A 7Z41-		A 7Z44-	A 7Z47-
	A 7Z41M (pg. 5-54)		A 7Z44M (pg. 5-55)	A 7Z47M (pg. 5-65)
Press-Fit Self-Clinching Self-Aligning	A 7Z40-	A 7Z60-	A 7Z43-	A 7Z46-
	A 7Z40M (pg. 5-48)	A 7Z60M (pg. 5-49)	A 7Z43M (pg. 5-52)	A 7Z46M (pg. 5-66)
Press-Fit Self-Clinching Nonaligning		A 7Z61-		A 7Z48-
		A 7Z61M (pg. 5-50)		A 7Z48M (pg. 5-66)
Flange-Mounted Self-Aligning	A 7Z42-	A 7Z62-	A 7Z45-	A 7Z56-
	A 7Z42M (pg. 5-56)	A 7Z62M (pg. 5-57)	A 7Z45M (pg. 5-59)	A 7Z56M (pg. 5-68)
Flange-Mounted Nonaligning		A 7Z63-		A 7Z57-
		A 7Z63M (pg. 5-58)		A 7Z57M (pg. 5-69)
Pillow Block-Mounted Self-Aligning	A 7Z31-	A 7Z32-		A 7Z33-
	A 7Z31M (pg. 5-80)	A 7Z32M (pg. 5-81)		A 7Z33M (pg. 5-79)

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SELF-CLINCHING SINTERED BRONZE PRESSBEARINGS

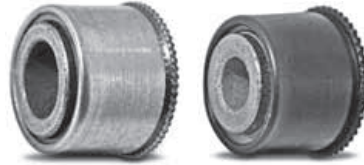
SDP/SI

SELF-ALIGNING TO $\pm 5^\circ$
 SELF-LUBRICATING

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM

> MATERIAL:

Bearing - Oil-Impregnated Sintered Bronze
Retainer - Carbon Steel, Black Oxide Finish
 or 300 Series Stainless Steel

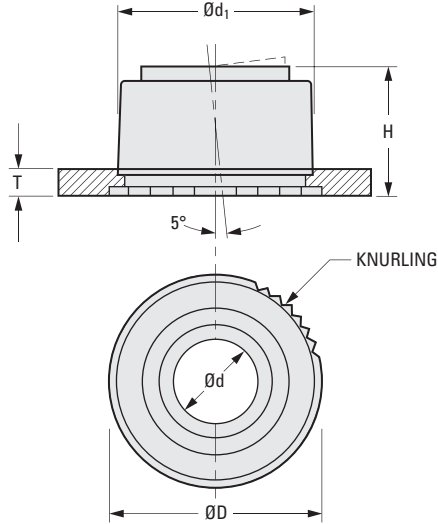


> OPERATING TEMPERATURE:

-29°C to +93°C

> SHAFT REQUIREMENTS:

Any material, HRC 95 min.,
 with a 0.4 μm or finer finish.



The projections shown are per ISO convention.

METRIC COMPONENT

Catalog Number *	d Nom. I.D.	Actual I.D. +0.02 0	d ₁ Panel Hole Dia. +0.07 0	T Min. Panel Thickness	D Knurl O.D.	H Height
A 7Z40MF <input type="checkbox"/> B04M	4	4.01	12.7	1	14	10.2
A 7Z40MF <input type="checkbox"/> B06M	6	6.02	12.7	1	14	10.2
A 7Z40MF <input type="checkbox"/> B08M	8	8.02	15.9	1.5	17	11.5
A 7Z40MF <input type="checkbox"/> B10M	10	10.02	15.9	1.5	17	11.5
A 7Z40MF <input type="checkbox"/> B12M	12	12.03	20.6	1.5	22	16.3
A 7Z40MF <input type="checkbox"/> B15M	15	15.03	27	2	28	19.4
A 7Z40MF <input type="checkbox"/> B18M	18	18.03	31.8	2.3	33	22.5

Catalog Number (Ref.)	Max. Speed rpm	Max. Radial Load N	
		Carbon Steel	Stainless Steel
A 7Z40MF <input type="checkbox"/> B04M	24170	800	800
A 7Z40MF <input type="checkbox"/> B06M	16110	1530	890
A 7Z40MF <input type="checkbox"/> B08M	12120	1850	1150
A 7Z40MF <input type="checkbox"/> B10M	9700	1850	1150
A 7Z40MF <input type="checkbox"/> B12M	8060	2550	1480
A 7Z40MF <input type="checkbox"/> B15M	6460	7000	4030
A 7Z40MF <input type="checkbox"/> B18M	5380	8500	4880

* To complete the Catalog Number, specify:

for a **Carbon Steel Retainer**
 or for a **Stainless Steel Retainer**.

Example: For a Stainless Steel retainer, specify Catalog Number A 7Z40MFXB08M.

See page 5-51 for installation data

SINTERED BRONZE PRESSBEARINGS

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PRESS-FIT INSTALLATION
 SELF-ALIGNING TO $\pm 5^\circ$
 SELF-LUBRICATING



> MATERIAL:

Bearing - Oil-Impregnated Sintered Bronze
Retainer - Carbon Steel, Black Oxide Finish

> OPERATING TEMPERATURE:

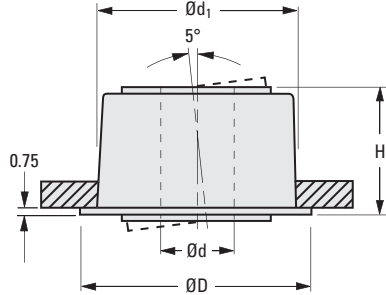
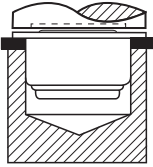
-29°C to +93°C

> SHAFT REQUIREMENTS:

Any material, HRB 95 min., with a 0.4 μ m or finer finish.

> INSTALLATION NOTES:

1. The punch must be relieved to accommodate protruding insert.
2. **DO NOT PRESS BEARING ON INSERT!**



METRIC COMPONENT

Catalog Number	d Nom. I.D.	Actual I.D. +0.02 0	d ₁ Panel Hole Dia. +0.07 0	D Flange Dia.	H Height	Max. Speed rpm	Max. Radial Load N
A 7Z41MPSB04M	4	4.01	12.7	14.2	9.6	24170	800
A 7Z41MPSB06M	6	6.02	12.7	14.2	9.6	16110	1530
A 7Z41MPSB08M	8	8.02	15.9	17.4	10.8	12120	1850
A 7Z41MPSB10M	10	10.02	15.9	17.4	10.8	9700	1850
A 7Z41MPSB12M	12	12.03	20.6	22.2	15.2	8060	2550
A 7Z41MPSB15M	15	15.03	27	28.5	19.6	6460	7000

FLANGE-MOUNTED SINTERED BRONZE BEARINGS

SDP/SI

SELF-ALIGNING TO $\pm 5^\circ$
 SELF-LUBRICATING
 FLANGE-MOUNTED

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> MATERIAL:

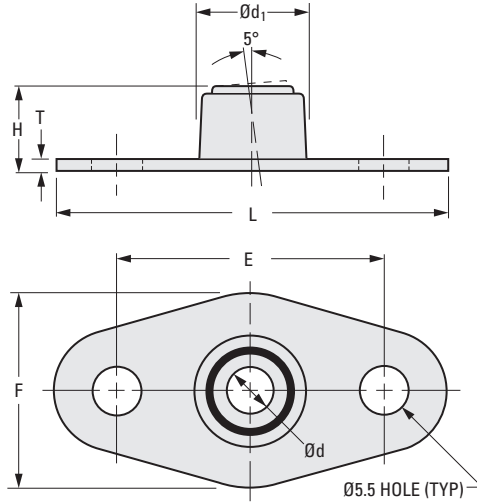
Bearing - Oil-Impregnated Sintered Bronze
Flange & Retainer - Carbon Steel, Black Oxide Finish

> OPERATING TEMPERATURE:

-29°C to +93°C

> SHAFT REQUIREMENTS:

Any material, soft or hard, HRB 95,
 with a 0.4 μm or finer finish



The projections shown are per ISO convention.

METRIC COMPONENT

Catalog Number	d Nom. I.D.	Actual I.D. +0.02 0	d ₁ Clearance Hole Dia. (Ref.)	L Overall Length	F Overall Width	E Mtg. Dist.	T Nominal Flange Thickness	H Height	Max. Speed rpm	Max. Radial Load N
A 7Z42MBFM06MB	6	6.02	13.5	45	22.3	31	1.2	10.2	16110	790
A 7Z42MBFM08MB	8	8.02	17	53	30.2	39	1.5	11.5	12120	1190
A 7Z42MBFM10MB	10	10.02							9700	1490
A 7Z42MBFM12MB	12	12.03	21.5	60	36.5	45.2	1.5	16.3	8060	2530
A 7Z42MBFM15MB	15	15.03	28	60	39.7	45.2	2.3	19.4	6460	3750

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ROLLER CLUTCHES

SDP/SI

FOR 4 mm TO 35 mm HARDENED SHAFTS
UNIDIRECTIONAL DRIVE

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> MATERIAL:

- Roller Cup** - Case-Hardened Steel
- Needle Bearing** - 52100 Hardened Chrome Steel
- Springs** - Stainless Steel
- Cage** - Nylon 66 (or Equivalent)



> FEATURES:

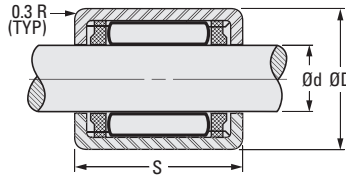
- Ideal for indexing, backstopping or overrunning operations.
- Free rolling one way, drives in opposite direction.
- Lightweight, low profile.
- High indexing frequency, up to 4CPS.
- Operating temperature, grease +10°C to +70°C.
- Minimum backlash.

> SHAFT REQUIREMENTS:

Shaft surface hardness must be HRC 58 min.

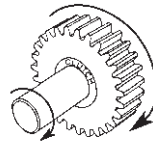
> HOUSING RECOMMENDATION:

Recommended tolerances for Housing Bore according to N7 for Steel, R7 for Aluminum.

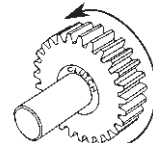


What It Does...

Transmits torque load in one direction.
Overruns freely in opposite direction.
Either shaft or housing can be driving member.



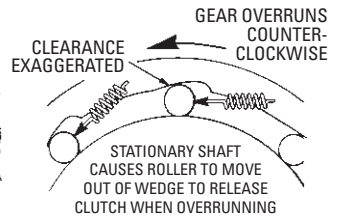
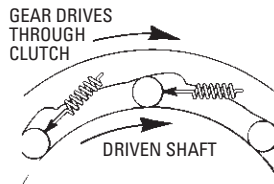
GEAR DRIVES
SHAFT CLOCKWISE



GEAR OVERRUNS
SHAFT COUNTERCLOCKWISE

How It Works...

Rollers wedge between shaft and outer race. Positive wedging forces prevent slipping. Springs position rollers for instantaneous lockup.



METRIC COMPONENT

Catalog Number	d Shaft Dia. h6	D Dia.	S Face Width 0 -0.2	Max. Torque N • m	Rotating Overrun Speed Max. rpm	
					Shaft	Housing
S99NH3MURC0406	4	8	6	0.34	34000	8000
S99NH3MURC0612	6	10	12	1.76	23000	13000
S99NH3MURC0812	8	12	12	3.15	17000	12000
S99NH3MURC1012	10	14	12	5.3	14000	11000
S99NH3MURC1216	12	18	16	12.2	11000	8000
S99NH3MURC1416	14	20	16	17.3	9500	8000
S99NH3MURC1616	16	22	16	20.5	8500	7500
S99NH3MURC1816	18	24	16	24.1	7500	7500
S99NH3MURC2016	20	26	16	28.5	7000	6500
S99NH3MURC2520	25	32	20	66	5500	5500
S99NH3MURC3020	30	37	20	90	4500	4500
S99NH3MURC3520	35	42	20	121	3900	3900

SINTERED BEARING SUPPORT
UNDIRECTIONAL DRIVE

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> MATERIAL:

- Roller Cup** - Case-Hardened Steel
- Needle Bearing** - 52100 Hardened Chrome Steel
- Springs** - Stainless Steel
- Cage** - Plastic
- Bearing Support** - Sintered Bronze Bearings

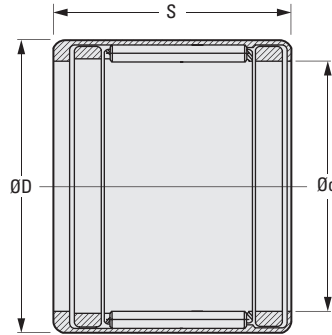


> SHAFT REQUIREMENTS:

Shaft surface hardness must be HRC 58 min.

> HOUSING RECOMMENDATION:

Recommended tolerances for Housing Bore are N6 for Steel, R6 for Aluminum. Tolerances for Housing Bore of N7 for Steel and R7 for Aluminum can be used if only 50% of the torque is used.



METRIC COMPONENT

Catalog Number	d Shaft Dia. h6	D Dia.	S Face Width 0 -0.2	Torque Limit N • m	Max. Speed Limit rpm		Max. Load Limit N	Max. Load Speed Limit N/min.
					Shaft	Housing		
*Δ S99NH4MURC0408	4	8	8	0.34	34000	8000	80	16000
* S99NH4MURC0615	6	10	15	1.76	23000	13000	110	18000

* During operation of the above items:

F max. = Load Speed Limit (N/min.)

F_R = Load Limit (N)

n = Speed Limit (housing or shaft) (rpm)

F_R • n = F max.

Δ Equipped with plastic springs.

Continued on the next page



NEEDLE BEARING SUPPORT
UNDIRECTIONAL DRIVE

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► MATERIAL:

- Roller Cup** - Case-Hardened Steel
- Needle Bearing** - 52100 Hardened Chrome Steel
- Springs** - Stainless Steel
- Cage** - Plastic
- Bearing Support** - Needle Bearings

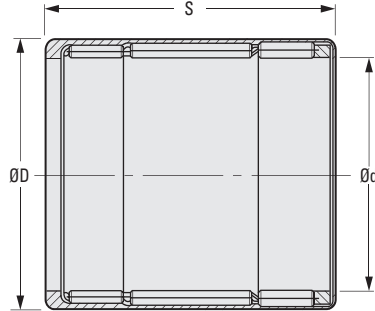


► SHAFT REQUIREMENTS:

Shaft surface hardness must be HRC 58 min.

► HOUSING RECOMMENDATIONS:

Recommended tolerances for Housing Bore are N6 for Steel, R6 for Aluminum. Tolerances for Housing Bore of N7 for Steel and R7 for Aluminum can be used if only 50% of the torque is used.



METRIC COMPONENT

Catalog Number	d Shaft Dia. h6	D Dia.	S Face Width 0 -0.2	Max. Torque N • m	Rotating Overrun Speed Max. rpm		Load Ratings N	
					Shaft	Housing	Dynamic	Static
S99NH4MURC0822	8	12	22	3.15	17000	12000	3500	4100
S99NH4MURC1022	10	14	22	5.3	14000	11000	3750	4650
S99NH4MURC1226	12	18	26	12.2	11000	8000	5800	6700
S99NH4MURC1426	14	20	26	17.3	9500	8000	6300	7800
S99NH4MURC1626	16	22	26	20.5	8500	7500	6900	9000
S99NH4MURC1826	18	24	26	24.1	7500	7500	7400	10200
S99NH4MURC2026	20	26	26	28.5	7000	6500	7900	11400
S99NH4MURC2530	25	32	30	66	5500	5500	9800	14000
S99NH4MURC3030	30	37	30	90	4500	4500	10800	16900
S99NH4MURC3530	35	42	30	121	3900	3900	11400	18800

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NEEDLE ROLLER PRESSBEARINGS

SDP/SI

PRESS-FIT INSTALLATION
SELF-ALIGNING TO $\pm 5^\circ$

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> MATERIAL:

Bearing - Drawn Cup Needle
Housing - Carbon Steel, Black Oxide Finish

> OPERATING TEMPERATURE:

-30°C to +100°C

> FEATURES:

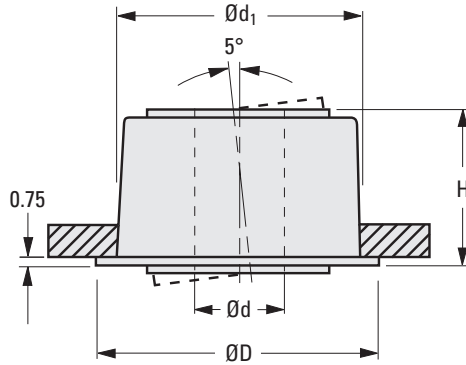
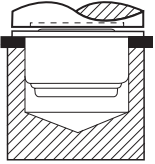
High-speed, high-load
No precision holes required
Major assembly and production savings

> SHAFT REQUIREMENTS:

Any material, HRC 58 to 64
with a 0.4 μm or finer finish.

> INSTALLATION NOTES:

1. The punch must be relieved to accommodate protruding insert.
2. **DO NOT PRESS BEARING ON INSERT!**



SHAFT DIAMETERS

Nominal Shaft Diameter	Maximum Diameter	Minimum Diameter
4	4.000	3.992
6	6.000	5.992
8	8.000	7.991
10	10.000	9.991
12	12.000	11.989
15	15.000	14.989

METRIC COMPONENT

Catalog Number	d Nom. I.D.	d ₁ Panel Hole Dia. +0.07/0	D Flange Dia.	H Height	Max. Speed rpm	Max. Radial Load N
A 7Z47MPSN04M	4	15.9	17.4	10.8	41000	1780
A 7Z47MPSN06M	6				35000	
A 7Z47MPSN08M	8	20.6	22.2	15.2	28000	1830
A 7Z47MPSN10M	10				23000	
A 7Z47MPSN12M	12	27	28.5	19.6	20000	2550
A 7Z47MPSN15M	15	31.8	33.3	21.6	16000	

