

READY Plain Bearing Components

3 types of pins, 2 types of bushings



Precision Guide Pins (-825)

Our Precision Guide Pins are designed to be used with either plain bearing or ball bearing bushings.

Vacuum degassed, ball bearing quality steel is induction hardened to 60 - 64 Rc, then core tempered for toughness. This produces an optimum combination of wear resistance for long operating life and shock resistance for safety.

Demountable Pins (-835)

Our Demountable Pins are designed for use in either plain bearing or ball bearing applications. Like our precision press fit pins, they are case hardened to 60 - 64 Rc, then core tempered for toughness.

They can be assembled to the same die set plate hundreds of times without distorting the hole center distances or damaging the holes themselves. So they not only simplify die building and maintenance, but they ensure maximum accuracy as well.

Ready demountable pins can be held in place either with toe clamps and screws, or with a retainer plug. This second option increases the die space available.

Bore Sizes for Plain Bearing Pins and Bushings

Pin Diameter	-825, -835 Bore Diameter	-55 Bore Diameter	-2x5, -6x5 Bore Diameter
3/4"	--	0.7506 0.7500	1.2506 1.2500
1"	0.9991 0.9985	1.0006 1.0000	1.5006 1.5000
1 1/4"	1.2489 1.2482	1.2506 1.2500	1.7506 1.7500
1 1/2"	1.4989 1.4982	1.5006 1.5000	2.0007 2.0000
1 3/4"	1.7489 1.7482	1.7506 1.7500	2.2507 2.2500
2"	1.9989 1.9982	2.0007 2.0000	2.5007 2.5000
2 1/2"	2.4986 2.4979	2.5007 2.5000	3.2509 3.2500
3"	2.9986 2.9974	3.0007 3.0000	3.7509 3.7500

Double Diameter Pins (-55)

Our double diameter pins are also designed for use with ball bearing as well as plain bearing bushings. They are case hardened to 60-64 Rc for wear resistance, then core tempered for toughness. A tapped hole is provided at the end of the pin for the ball cage assembly.

The press fit diameter is interchangeable with familiar brands of plain bearing and ball bearing pins, so Ready double diameter pins may be used for die maintenance as well as for new tooling.

Demountable Sintered Bronze Bushings (-235, -245, -285)

Our Sintered Bronze Bushings set a new standard of performance for stamping die guide bushings. A layer of bronze is sintered to the inside diameter of a steel bushing, creating a mechanical bond at the bronze/steel interface stronger than that of traditional plated bushings. Please refer to the following page for details.

Demountable Steel Bushings (-645)

Our Steel Bushings are manufactured to the same high level of precision as our Sintered Bronze Bushings. If operated at moderate speeds and side loads with good lubrication, they are an economic substitute for sintered bronze bushings. These two types of bushings are fully interchangeable.

Our patented Sintered Bronze Bushings offer many advantages over plated bronze bushings.

- **Thicker Bronze:** The sintered bronze in our bushings is substantially thicker than the plating technology it replaces.
- **Porous Surface:** Holds the lubrication oil where you need it most, to resist wear. Sintered bronze is porous bronze, up to 40% porosity.
- **Stronger Bond:** Our patented process forms a unique fusion bond so the bronze and substrate become one. See the 1000x magnification in the adjacent panel.
- **Wear Resistance:** The combination of increased thickness, porosity and stronger bonding means our bushing is your best choice for high speed and eccentric loading. The longest life possible under extreme conditions.

Bronze plating is not a simple process. If the bushing is dirty or there are contaminants in the plating solution, the bronze will not adhere properly and will peel away from the surface. The fourth batch of bushings, for example, will be less likely to be defect-free than the first batch placed in a tank with fresh plating solution.

The second problem with plating is that the thickness of the bronze layer depends on the plating time. A thick bronze layer is simply too costly to produce, and on large diameter bushings in particular, problems arise when the thin plating wears away and the underlying steel comes in contact with the guide pin.

READY's Sintered Bronze Bushings solve both problems. Using a patented manufacturing process, a layer of bronze is sintered to the inside diameter of the steel bushing, creating a strong, reliable mechanical bond. The thickness of the bronze layer is not limited by time or cost con-

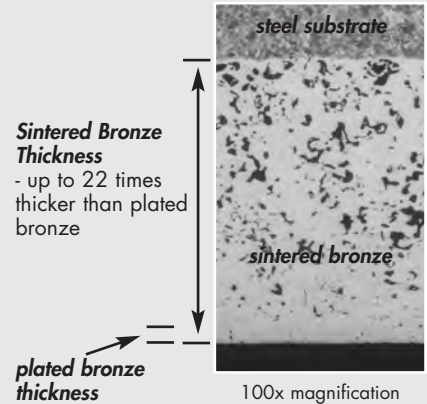
straints, so it is thicker than plated bronze, and it increases proportionally with the bushing diameter.

You can test the bond strengths yourself. Cut through the diameter of a plated bushing and you stand a good chance to see peeling. Do the same with our sintered bushing and you will see that the bronze-steel bond is unaffected. If you need to shorten the inserted diameter to fit our bushing into a thin stripper plate, you can do so without harming it.

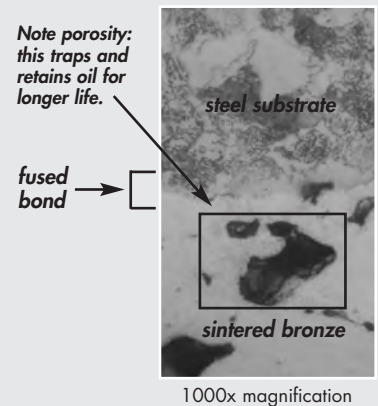
There is a third advantage to our sintered bushings. Because sintered bronze is porous, it holds the lubrication oil in place and helps to maintain an unbroken lubrication layer, which improves wear resistance. The bronze pores act as small oil reservoirs, so our Sintered Bronze Bushings are more forgiving if maintenance has been overlooked. However, for best results, we recommend regular, periodic lubrication with a high viscosity oil.

Take A Closer Look ...

Actual magnified views of bushing cross sections.



This view reveals the greater bronze thickness and the porosity of our Sintered Bronze Bushing.



This view reveals the fusion bonding of the thick sintered bronze layer to the steel substrate.

Compare The Thickness ...

Nominal Diameter O Nom.	Plated Bronze Layer Thickness	READY Sintered Bronze Layer Thickness
1"	0.002"	0.027"
1 1/4"	0.002"	0.030"
1 1/2"	0.002"	0.033"
1 3/4"	0.002"	0.034"
2"	0.002"	0.037"
2 1/2"	0.002"	0.041"
3"	0.002"	0.044"

Precision Pin Selection Guide (-825)

Nominal Pin Diameter O	Length L	Catalog Number	Nominal Pin Diameter O	Length L	Catalog Number
1"	3 1/4	5-0813-825	1 3/4"	5	5-1420-825
	3 3/4	5-0815-825		5 3/4	5-1423-825
	4 1/4	5-0817-825		6 1/2	5-1426-825
	4 1/2	5-0818-825		7	5-1428-825
	4 3/4	5-0819-825		7 1/2	5-1430-825
	5	5-0820-825		8	5-1432-825
	5 1/4	5-0821-825		8 1/2	5-1434-825
	5 1/2	5-0822-825		9	5-1436-825
	5 3/4	5-0823-825		9 1/2	5-1438-825
	6	5-0824-825		10	5-1440-825
	6 1/2	5-0826-825		10 1/2	5-1442-825
	7	5-0828-825		11	5-1444-825
	7 1/2	5-0830-825		11 1/2	5-1446-825
	8	5-0832-825		12	5-1448-825
8 1/2	5-0834-825	12 1/2	5-1450-825		
9	5-0836-825	13	5-1452-825		
1 1/4"	4 1/4	5-1017-825	14	5-1456-825	
	4 3/4	5-1019-825	15	5-1460-825	
	5 1/4	5-1021-825	17	5-1468-825	
	5 1/2	5-1022-825	5 3/4	5-1623-825	
	5 3/4	5-1023-825	6 1/2	5-1626-825	
	6	5-1024-825	7 1/4	5-1629-825	
	6 1/2	5-1026-825	7 1/2	5-1630-825	
	7	5-1028-825	7 3/4	5-1631-825	
	7 1/2	5-1030-825	8	5-1632-825	
	8	5-1032-825	8 1/2	5-1634-825	
	8 1/2	5-1034-825	9	5-1636-825	
	9	5-1036-825	9 1/2	5-1638-825	
1 1/2"	10	5-1040-825	10	5-1640-825	
	11	5-1044-825	10 1/2	5-1642-825	
	12	5-1048-825	11	5-1644-825	
	4 1/4	5-1217-825	11 1/2	5-1646-825	
	5	5-1220-825	12	5-1648-825	
	5 3/4	5-1223-825	12 1/2	5-1650-825	
	6	5-1224-825	13	5-1652-825	
	6 1/2	5-1226-825	14	5-1656-825	
	7	5-1228-825	15	5-1660-825	
	7 1/2	5-1230-825	16	5-1664-825	
	8	5-1232-825	17	5-1668-825	
	8 1/2	5-1234-825	18	5-1672-825	
	9	5-1236-825	8	5-2032-825	
	9 1/2	5-1238-825	8 3/4	5-2035-825	
10	5-1240-825	9 1/2	5-2038-825		
10 1/2	5-1242-825	10	5-2040-825		
11	5-1244-825	11	5-2044-825		
11 1/2	5-1246-825	12	5-2048-825		
12	5-1248-825	13	5-2052-825		
12 1/2	5-1250-825	14	5-2056-825		
13	5-1252-825	17	5-2068-825		
14	5-1256-825	18	5-2072-825		
1 3/4"	8 1/2	5-1234-825	20	5-2080-825	
	9	5-1236-825	8	5-2432-825	
	9 1/2	5-1238-825	9	5-2436-825	
	10	5-1240-825	10	5-2440-825	
	10 1/2	5-1242-825	11	5-2444-825	
	11	5-1244-825	12	5-2448-825	
	11 1/2	5-1246-825	13	5-2452-825	
	12	5-1248-825	14	5-2456-825	
2"	12 1/2	5-1250-825	17	5-2468-825	
	13	5-1252-825	20	5-2480-825	
	5 3/4	5-1623-825	8	5-2432-825	
	6 1/2	5-1626-825	9	5-2436-825	
	7 1/4	5-1629-825	10	5-2440-825	
	7 1/2	5-1630-825	11	5-2444-825	
	7 3/4	5-1631-825	12	5-2448-825	
	8	5-1632-825	13	5-2452-825	
2 1/2"	8 1/2	5-1034-825	14	5-2456-825	
	9	5-1036-825	17	5-2468-825	
	9 1/2	5-1038-825	20	5-2480-825	
	10	5-1040-825	5 3/4	5-1623-825	
	10 1/2	5-1042-825	6 1/2	5-1626-825	
	11	5-1044-825	7 1/4	5-1629-825	
	11 1/2	5-1046-825	7 1/2	5-1630-825	
	12	5-1048-825	7 3/4	5-1631-825	
	12 1/2	5-1050-825	8	5-1632-825	
	13	5-1052-825	8 1/2	5-1634-825	
	14	5-1054-825	9	5-1636-825	
	15	5-1056-825	9 1/2	5-1638-825	
	16	5-1058-825	10	5-1640-825	
	17	5-1060-825	10 1/2	5-1642-825	
18	5-1062-825	11	5-1644-825		
19	5-1064-825	11 1/2	5-1646-825		
20	5-1066-825	12	5-1648-825		
21	5-1068-825	12 1/2	5-1650-825		
22	5-1070-825	13	5-1652-825		
23	5-1072-825	14	5-1656-825		
24	5-1074-825	15	5-1660-825		
25	5-1076-825	16	5-1664-825		
26	5-1078-825	17	5-1668-825		
27	5-1080-825	18	5-1672-825		
28	5-1082-825	19	5-1676-825		
29	5-1084-825	20	5-1680-825		
30	5-1086-825	21	5-1684-825		
31	5-1088-825	22	5-1688-825		
32	5-1090-825	23	5-1692-825		
33	5-1092-825	24	5-1696-825		
34	5-1094-825	25	5-1700-825		
35	5-1096-825	26	5-1704-825		
36	5-1098-825	27	5-1708-825		
37	5-1100-825	28	5-1712-825		
38	5-1102-825	29	5-1716-825		
39	5-1104-825	30	5-1720-825		
40	5-1106-825	31	5-1724-825		
41	5-1108-825	32	5-1728-825		
42	5-1110-825	33	5-1732-825		
43	5-1112-825	34	5-1736-825		
44	5-1114-825	35	5-1740-825		
45	5-1116-825	36	5-1744-825		
46	5-1118-825	37	5-1748-825		
47	5-1120-825	38	5-1752-825		
48	5-1122-825	39	5-1756-825		
49	5-1124-825	40	5-1760-825		
50	5-1126-825	41	5-1764-825		
51	5-1128-825	42	5-1768-825		
52	5-1130-825	43	5-1772-825		
53	5-1132-825	44	5-1776-825		
54	5-1134-825	45	5-1780-825		
55	5-1136-825	46	5-1784-825		
56	5-1138-825	47	5-1788-825		
57	5-1140-825	48	5-1792-825		
58	5-1142-825	49	5-1796-825		
59	5-1144-825	50	5-1800-825		
60	5-1146-825	51	5-1804-825		
61	5-1148-825	52	5-1808-825		
62	5-1150-825	53	5-1812-825		
63	5-1152-825	54	5-1816-825		
64	5-1154-825	55	5-1820-825		
65	5-1156-825	56	5-1824-825		
66	5-1158-825	57	5-1828-825		
67	5-1160-825	58	5-1832-825		
68	5-1162-825	59	5-1836-825		
69	5-1164-825	60	5-1840-825		
70	5-1166-825	61	5-1844-825		
71	5-1168-825	62	5-1848-825		
72	5-1170-825	63	5-1852-825		
73	5-1172-825	64	5-1856-825		
74	5-1174-825	65	5-1860-825		
75	5-1176-825	66	5-1864-825		
76	5-1178-825	67	5-1868-825		
77	5-1180-825	68	5-1872-825		
78	5-1182-825	69	5-1876-825		
79	5-1184-825	70	5-1880-825		
80	5-1186-825	71	5-1884-825		
81	5-1188-825	72	5-1888-825		
82	5-1190-825	73	5-1892-825		
83	5-1192-825	74	5-1896-825		
84	5-1194-825	75	5-1900-825		
85	5-1196-825	76	5-1904-825		
86	5-1198-825	77	5-1908-825		
87	5-1200-825	78	5-1912-825		
88	5-1202-825	79	5-1916-825		
89	5-1204-825	80	5-1920-825		
90	5-1206-825	81	5-1924-825		
91	5-1208-825	82	5-1928-825		
92	5-1210-825	83	5-1932-825		
93	5-1212-825	84	5-1936-825		
94	5-1214-825	85	5-1940-825		
95	5-1216-825	86	5-1944-825		
96	5-1218-825	87	5-1948-825		
97	5-1220-825	88	5-1952-825		
98	5-1222-825	89	5-1956-825		
99	5-1224-825	90	5-1960-825		
100	5-1226-825	91	5-1964-825		
101	5-1228-825	92	5-1968-825		
102	5-1230-825	93	5-1972-825		
103	5-1232-825	94	5-1976-825		
104	5-1234-825	95	5-1980-825		
105	5-1236-825	96	5-1984-825		
106	5-1238-825	97	5-1988-825		
107	5-1240-825	98	5-1992-825		
108	5-1242-825	99	5-1996-825		
109	5-1244-825	100	5-2000-825		

Demountable Pin Selection Guide (-835)

Nominal Pin Diameter O	Flange B	Length E	Length F	Catalog Number	Nominal Pin Diameter O	Flange B	Length E	Length F	Catalog Number
1"	1.31	7/8"	4	5-0816-835	2"	2.50	1 15/16"	5	5-1620-835
			4 1/2	5-0818-835				5 1/2	5-1622-835
			5	5-0820-835				6	5-1624-835
			5 1/2	5-0822-835				6 1/2	5-1626-835
			6	5-0824-835				7	5-1628-835
			6 1/2	5-0826-835				7 1/2	5-1630-835
			7	5-0828-835				8	5-1632-835
			7 1/2	5-0830-835				8 1/2	5-1634-835
			8	5-0832-835				9	5-1636-835
			8 1/2	5-0834-835				9 1/2	5-1638-835
9	5-0836-835	10	5-1640-835						
1 1/4"	1.56	1 3/16"	4	5-1016-835				2 1/2"	3.00
			4 1/2	5-1018-835	5 1/2	5-2022-835			
			5	5-1020-835	6	5-2024-835			
			5 1/2	5-1022-835	6 1/2	5-2026-835			
			6	5-1024-835	7	5-2028-835			
			6 1/2	5-1026-835	7 1/2	5-2030-835			
			7	5-1028-835	8	5-2032-835			
			7 1/2	5-1030-835	8 1/2	5-2034-835			
			8	5-1032-835	9	5-2036-835			
			8 1/2	5-1034-835	9 1/2	5-2038-835			
9	5-1036-835	10	5-2040-835						
1 1/2"	1.87	1 7/16"	5	5-1220-835	3"	3.50	2 3/16"		
			5 1/2	5-1222-835				7	5-2428-835
			6	5-1224-835				8	5-2432-835
			6 1/2	5-1226-835				9	5-2436-835
			7	5-1228-835				10	5-2440-835
			7 1/2	5-1230-835				11	5-2444-835
			8	5-1232-835				12	5-2448-835
			8 1/2	5-1234-835				14	5-2456-835
			9	5-1236-835				16	5-2464-835
			9 1/2	5-1238-835				5	5-1420-835
10	5-1240-835	5 1/2	5-1422-835						
11									