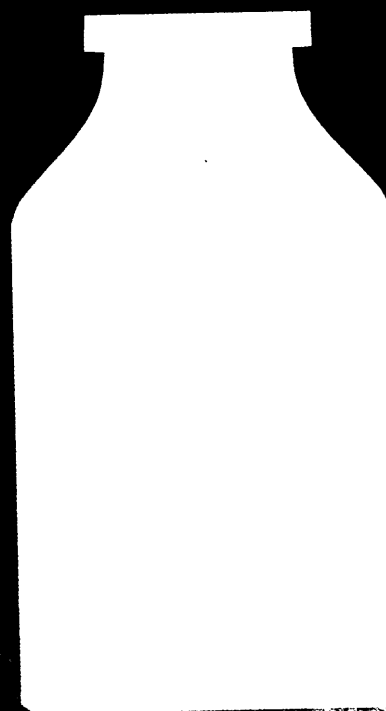
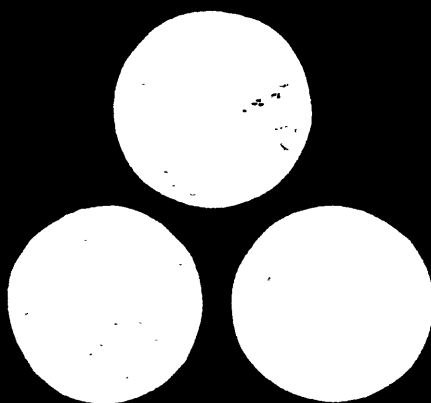
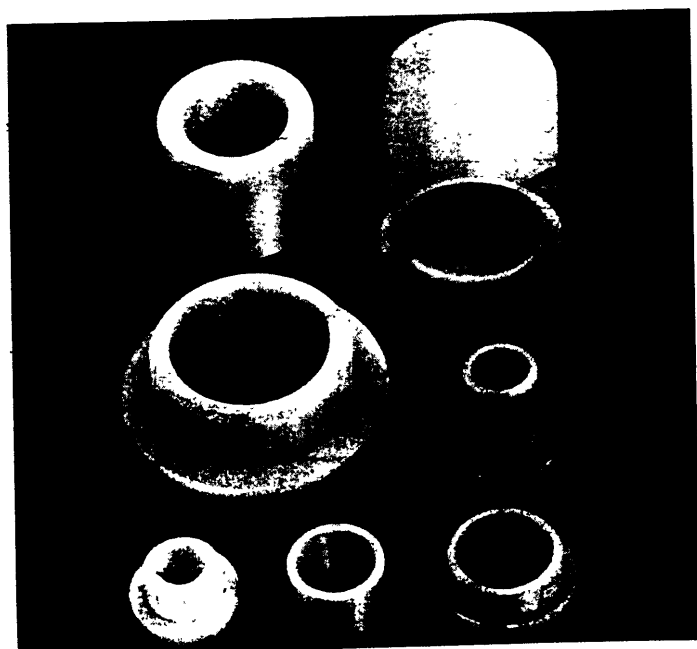




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iglidur® A200

Very Appetising

Suited for direct contact
with foods and pharmaceuticals

Approved by the
FOOD AND DRUG ADMINISTRATION of the USA

Excellent wear resistance

Suited for slow rotating, oscillating
and linear motion

Very Appetising

iglidur A200 bearings have been approved for direct contact with food and pharmaceuticals. They are therefore the ideal solution for bearing locations in machines for the foods and pharmaceutical industry, medical equipment, for small household appliances and many more.

The high level of abrasion and dirt resistance, and the capability to operate under dry conditions make it possible to perform without the expensive complex housings required for lubricated bearings.

iglidur A200 is based on a thermoplastic alloy, which is specifically designed for high abrasion resistance, because the possibility of food contact requires that it must operate without added solid lubricants. (Illustration 6.1) Additionally, iglidur A200 resists dirt ingress and is capable of very quiet operation.

Special Characteristics of iglidur A200

- Suited for direct contact with food and pharmaceuticals
- Approved by the FOOD AND DRUG ADMINISTRATION
- Impact resistant
- Excellent abrasion resistance
- Heavy wall thickness for arduous duties
- Resistant to dirt ingress
- Quiet operation
- Suited for slow rotating and oscillating as well as all linear motion
- Cost effective

p · v Values

iglidur A200 bearings are suited for low and medium loads during continuous operation. Illustration 6.3 shows the permissible p · v values for dry operation. iglidur A200 has a maximum load capacity of $0.3 \text{ N/mm}^2 \times \text{m/sec}$. Significantly higher operating speeds are possible for A200 if lubricated (water).

Table 6.1

Maximum surface speeds for iglidur A200 during dry operation

in m/ust	Rotating	Oscillating	Linear
Continuous	0,8	0,8	2
Short duration	1,5	1,5	3

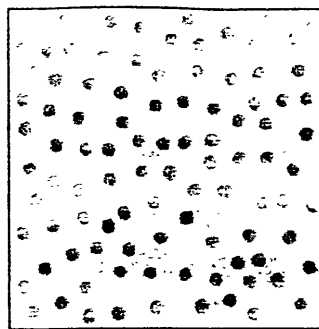


Illustration 6.1
Structure of iglidur A200
Abrasion and impact resistant thermoplastic alloy



Illustration 6.2.
iglidur A200 – Very Appetising
iglidur A200 plain bearings are approved for direct contact with food and drugs.

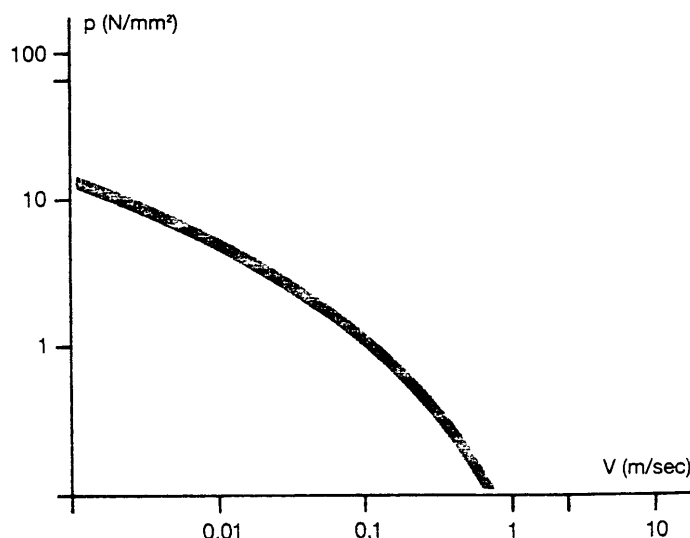


Illustration 6.3
Permissible p · v values for iglidur A200

Compressive Strength

During normal temperatures, iglidur A200 can withstand radial pressures up to 20 N/mm².

During operating temperatures up to 115 °C 12 N/mm² is possible. For limited short duration, load capacity is maintained up to 200 °C. (Illustration 6.4)

igidur A200 flanged bushings are capable of absorbing the same axial pressure. The flange is also used as a start-up disk.

Coefficients of Friction

During dry operation with hardened steel, the dynamic friction value for iglidur A200 falls between 0.30 and 0.40. Lower friction values are reached at slower speeds. Permanent lubrication with water and oil results in a reduction of the friction value to 0.04. (Table 6.2)

Table 6.2

Coefficient of friction for iglidur A200 with steel

	Dry	Grease	Oil	Water
igidur A200	0.30–0.40	0.09	0.04	0.04
Steel shaft: Hardness 50 HRC, Hrms = 1 µm				

igidur A200 features excellent “start-up” characteristics during dry operation.

Operating Temperatures

igidur A200 reaches its highest performance with operating temperatures of 80 °C. The recommended temperature for continuous operation is 115°C. Load carrying capability is maintained during cold temperature operation of –40 °C. (Table 6.3)

Table 6.3

Operating temperatures for iglidur A200

Wear limit °C	Continuous operation °C	Short duration °C
80	115	200

Vibration Dampening Characteristics

igidur A200 features good vibration dampening characteristics due to the thickness of the walls giving quiet operation even with larger tolerances.

Electrical Characteristics

igidur A200 is electrically isolating. The specific resistance is 10¹² Ω cm.

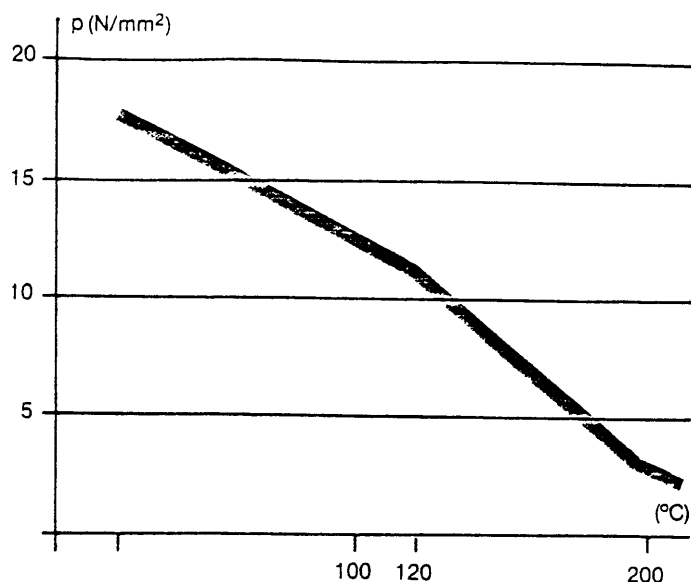


Illustration 6.4

Permissible static unit pressure P as a function of the operating temperature °C for iglidur A200

Radiation Resistance

Certain restrictions must be observed if iglidur A200 is to be used in radioactive environments. Radiation of 10 MRad will affect the material and can result in a 50% reduction of significant mechanical properties.

Vacuum

igidur A200 plain bearings can only be used in a vacuum to a limited degree.

Weather Resistance

igidur A200 is resistant to UV radiation.

Chemical Resistance

igidur A200 is resistant to cleaning agents, benzene, oil, grease, alkaline solutions and acid solution of weak concentration. Refer to page 1.22 for detailed information on resistance values.

Shaft Materials

igidur A200 shows optimum results relative to friction value and wear in conjunction with hardened steel, 50 HRC with average shaft surface finish of Hrms = 1.5 to 3 µm.

igidur A200 bearings may be used in conjunction with stainless steel shafts if surface stresses are relatively low.

Table 6.4 provides an overview of installation dimensions.

Table 6.4
Tolerance fields for iglidur A200

Diameter d1		Shaft (h9)	igidur A200 (D11) ¹⁾
from	1 mm	0	+ 80
to	3 mm	-25 µm	+ 20 µm
over	3 mm	0	+105
to	6 mm	-30 µm	+ 30 µm
over	6 mm	0	+130
to	10 mm	-36 µm	+ 40 µm
over	10 mm	0	+160
to	18 mm	-43 µm	+ 50 µm
over	18 mm	0	+195
to	30 mm	-52 µm	+ 65 µm
over	30 mm	0	+240
to	50 mm	-62 µm	+ 80 µm

¹⁾ After being press-fitted into housing bore H7

igidur A200 bearings require relatively high tolerances for optimum performance. The tolerances ensure reliable performance of the bearings even during temperature deviations and water absorption, 3% in the case of iglidur A200.

igidur A200 bearing bushings are very suitable for being mechanically reworked by boring or turning if the application requires this.

(Dimensions following DIN 1850)

Recommended tolerances for installation

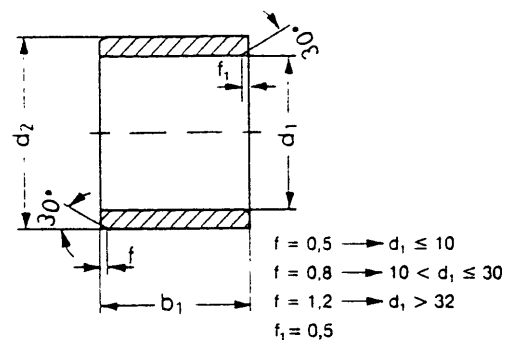
Housing bore H7

Shaft h9

Construction of order number:

A S M - 0 1 0 3 - 0 2
 | | | | |
 d1 d2 b1 (in mm)
 Metric dimension
 Type
 Material

Type S



Order No.	d1 ¹⁾	d2	b1 ²⁾	Order No.	d1 ¹⁾	d2	b1 ²⁾
ASM-0103-02	1 +0,020 +0,080	3	2	ASM-0814-06	8 +0,040 +0,130	14	6
ASM-0104-02	1,5 +0,020 +0,080	4	2	ASM-0814-10	8 +0,040 +0,130	14	10
ASM-0205-02	2 +0,020 +0,080	5	2	ASM-0912-14	9 +0,040 +0,130	12	14
ASM-0205-03	2 +0,020 +0,080	5	3	ASM-1014-06	10 +0,040 +0,130	14	6
ASM-0206-03	2,5 +0,020 +0,080	6	3	ASM-1014-08	10 +0,040 +0,130	14	8
ASM-0305-03	3 +0,020 +0,080	5	3	ASM-1014-10	10 +0,040 +0,130	14	10
ASM-0305-04	3 +0,020 +0,080	5	4	ASM-1014-16	10 +0,040 +0,130	14	16
ASM-0306-03	3 +0,020 +0,080	6	3	ASM-1016-06	10 +0,040 +0,130	16	6
ASM-0306-04	3 +0,020 +0,080	6	4	ASM-1016-10	10 +0,040 +0,130	16	10
ASM-0407-03	4 +0,030 +0,105	7	3	ASM-1016-16	10 +0,040 +0,130	16	16
ASM-0407-04	4 +0,030 +0,105	7	4	ASM-1016-50	10 +0,040 +0,130	16	50
ASM-0407-06	4 +0,030 +0,105	7	6	ASM-1214-20	12 +0,050 +0,160	14	20
ASM-0408-06	4 +0,030 +0,105	8	6	ASM-1216-15	12 +0,050 +0,160	16	15
ASM-0508-04	5 +0,030 +0,105	8	4	ASM-1216-20	12 +0,050 +0,160	16	20
ASM-0508-05	5 +0,030 +0,105	8	5	ASM-1218-08	12 +0,050 +0,160	18	8
ASM-0508-08	5 +0,030 +0,105	8	8	ASM-1218-10	12 +0,050 +0,160	18	10
ASM-0509-05	5 +0,030 +0,105	9	5	ASM-1218-15	12 +0,050 +0,160	18	15
ASM-0509-08	5 +0,030 +0,105	9	8	ASM-1218-20	12 +0,050 +0,160	18	20
ASM-0608-10	6 +0,030 +0,105	8	10	ASM-1416-10	14 +0,050 +0,160	16	10
ASM-0609-06	6 +0,030 +0,105	9	6	ASM-1416-15	14 +0,050 +0,160	16	15
ASM-0610-04	6 +0,030 +0,105	10	4	ASM-1416-20	14 +0,050 +0,160	16	20
ASM-0610-06	6 +0,030 +0,105	10	6	ASM-1420-10	14 +0,050 +0,160	20	10
ASM-0610-10	6 +0,030 +0,105	10	10	ASM-1420-15	14 +0,050 +0,160	20	15
ASM-0612-06	6 +0,030 +0,105	12	6	ASM-1420-20	14 +0,050 +0,160	20	20
ASM-0612-10	6 +0,030 +0,105	12	10	ASM-1517-10	15 +0,050 +0,160	17	10
ASM-0710-05	7 +0,040 +0,130	10	5	ASM-1517-15	15 +0,050 +0,160	17	15
ASM-0710-08	7 +0,040 +0,130	10	8	ASM-1521-10	15 +0,050 +0,160	21	10
ASM-0810-06	8 +0,040 +0,130	10	6	ASM-1521-15	15 +0,050 +0,160	21	15
ASM-0810-08	8 +0,040 +0,130	10	8	ASM-1521-20	15 +0,050 +0,160	21	20
ASM-0810-10	8 +0,040 +0,130	10	10	ASM-1618-12	16 +0,050 +0,160	18	12
ASM-0811-08	8 +0,040 +0,130	11	8	ASM-1618-20	16 +0,050 +0,160	18	20
ASM-0811-12	8 +0,040 +0,130	11	12	ASM-1620-20	16 +0,050 +0,160	20	20
ASM-0812-06	8 +0,040 +0,130	12	6	ASM-1620-25	16 +0,050 +0,160	20	25
ASM-0812-08	8 +0,040 +0,130	12	8	ASM-1622-12	16 +0,050 +0,160	22	12
ASM-0812-10	8 +0,040 +0,130	12	10	ASM-1622-15	16 +0,050 +0,160	22	15
ASM-0812-12	8 +0,040 +0,130	12	12	ASM-1622-16	16 +0,050 +0,160	22	16

(Dimensions following DIN 1850)

Recommended tolerances for installation

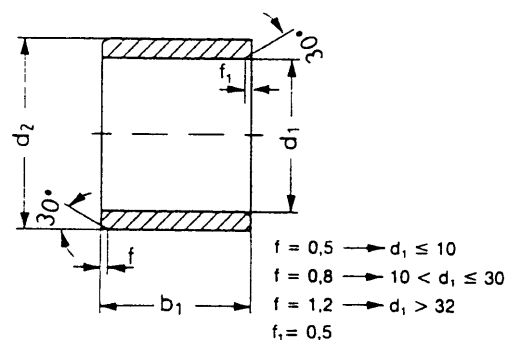
Housing bore H7

Shaft h9

Construction of order number:

A S M - 0 6 0 8 - 0 8
 | | | | |
 d1 d2 b1 (in mm)
 Metric dimension
 Type
 Material

Type S



Order No.	d1 ¹⁾	d2	b1 ²⁾	Order No.	d1 ¹⁾	d2	b1 ²⁾
ASM-1622-20	16 +0,050 +0,160	22	20	ASM-2836-40	28 +0,065 +0,195	36	40
ASM-1622-25	16 +0,050 +0,160	22	25	ASM-3038-20	30 +0,065 +0,195	38	20
ASM-1824-12	18 +0,050 +0,160	24	12	ASM-3038-30	30 +0,065 +0,195	38	30
ASM-1824-20	18 +0,050 +0,160	24	20	ASM-3038-40	30 +0,065 +0,195	38	40
ASM-1824-30	18 +0,050 +0,160	24	30	ASM-3240-20	32 +0,080 +0,240	40	20
ASM-2023-15	20 +0,065 +0,195	23	15	ASM-3240-30	32 +0,080 +0,240	40	30
ASM-2023-20	20 +0,065 +0,195	23	20	ASM-3240-40	32 +0,080 +0,240	40	40
ASM-2025-20	20 +0,065 +0,195	25	20				
ASM-2025-30	20 +0,065 +0,195	25	30				
ASM-2026-15	20 +0,065 +0,195	26	15				
ASM-2026-20	20 +0,065 +0,195	26	20				
ASM-2026-30	20 +0,065 +0,195	26	30				
ASM-2226-15	22 +0,065 +0,195	26	15				
ASM-2228-10	22 +0,065 +0,195	28	10				
ASM-2228-15	22 +0,065 +0,195	28	15				
ASM-2228-20	22 +0,065 +0,195	28	20				
ASM-2228-30	22 +0,065 +0,195	28	30				
ASM-2430-15	24 +0,065 +0,195	30	15				
ASM-2430-20	24 +0,065 +0,195	30	20				
ASM-2430-30	24 +0,065 +0,195	30	30				
ASM-2528-12	25 +0,065 +0,195	28	12				
ASM-2528-20	25 +0,065 +0,195	28	20				
ASM-2530-20	25 +0,065 +0,195	30	20				
ASM-2530-30	25 +0,065 +0,195	30	30				
ASM-2530-40	25 +0,065 +0,195	30	40				
ASM-2532-20	25 +0,065 +0,195	32	20				
ASM-2532-30	25 +0,065 +0,195	32	30				
ASM-2532-40	25 +0,065 +0,195	32	40				
ASM-2630-20	26 +0,065 +0,195	30	20				
ASM-2632-30	26 +0,065 +0,195	32	30				
ASM-2734-20	27 +0,065 +0,195	34	20				
ASM-2734-30	27 +0,065 +0,195	34	30				
ASM-2734-40	27 +0,065 +0,195	34	40				
ASM-2833-20	28 +0,065 +0,195	33	20				
ASM-2836-20	28 +0,065 +0,195	36	20				
ASM-2836-30	28 +0,065 +0,195	36	30				

¹⁾ Tolerance for d1 after being press-fitted in housing H7

²⁾ Tolerance h13 for b1

(Dimensions following DIN 1850)

Recommended tolerances for installation

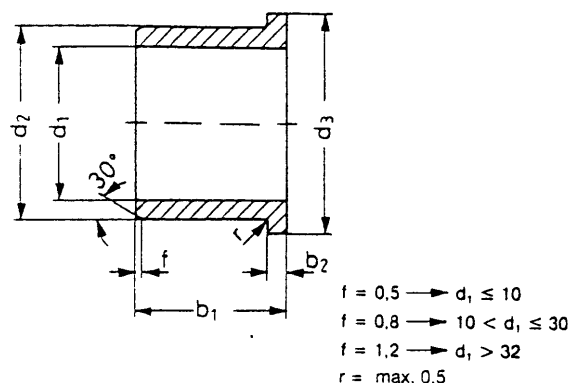
Housing bore H7

Shaft h9

Construction of order number:

A F M - 0 6 0 8 - 0 8
 | | | | |
 d1 d2 b1 (in mm)
 Metric dimension
 Type
 Material

Type F



Order No.	d1 ¹⁾	d2	d3 ²⁾	b1 ³⁾	b2 ⁴⁾	Order No.	d1 ¹⁾	d2	d3 ²⁾	b1 ³⁾	b2 ⁴⁾
AFM-0103-02	1 +0,020 +0,080	3	5	2	1	AFM-1521-15	15 +0,050+0,160	21	27	15	3
AFM-0104-02	1,5 +0,020 +0,080	4	6	2	1	AFM-1521-20	15 +0,050+0,160	21	27	20	3
AFM-0205-03	2 +0,020 +0,080	5	8	3	1,5	AFM-1521-25	15 +0,050+0,160	21	27	25	3
AFM-0206-03	2,5 +0,020 +0,080	6	9	3	1,5	AFM-1622-12	16 +0,050+0,160	22	28	12	3
AFM-0306-04	3 +0,020 +0,080	6	9	4	1,5	AFM-1622-15	16 +0,050+0,160	22	28	15	3
AFM-0408-04	4 +0,030 +0,105	8	12	4	2	AFM-1622-20	16 +0,050+0,160	22	28	20	3
AFM-0408-06	4 +0,030 +0,105	8	12	4	2	AFM-1622-25	16 +0,050+0,160	22	28	25	3
AFM-0509-05	5 +0,030 +0,105	9	13	5	2	AFM-1824-12	18 +0,050+0,160	24	30	12	3
AFM-0509-06	5 +0,030 +0,105	9	13	6	2	AFM-1824-18	18 +0,050+0,160	24	30	18	3
AFM-0509-08	5 +0,030 +0,105	9	13	8	2	AFM-1824-20	18 +0,050+0,160	24	30	20	3
AFM-0610-04	6 +0,030 +0,105	10	14	4	2	AFM-1824-30	18 +0,050+0,160	24	30	30	3
AFM-0610-06	6 +0,030 +0,105	10	14	6	2	AFM-2026-15	20 +0,065+0,195	26	32	15	3
AFM-0610-10	6 +0,030 +0,105	10	14	6	2	AFM-2026-20	20 +0,065+0,195	26	32	20	3
AFM-0612-06	6 +0,030 +0,105	12	14	6	3	AFM-2026-30	20 +0,065+0,195	26	32	30	3
AFM-0612-10	6 +0,030 +0,105	12	14	10	3	AFM-2228-15	22 +0,065+0,195	28	34	15	3
AFM-0711-08	7 +0,040 +0,130	11	15	8	2	AFM-2228-20	22 +0,065+0,195	28	34	20	3
AFM-0811-08	8 +0,040 +0,130	11	13	8	1	AFM-2228-30	22 +0,065+0,195	28	34	30	3
AFM-0811-08	8 +0,040 +0,130	11	13	8	2	AFM-2430-15	24 +0,065+0,195	30	36	15	3
AFM-0812-06	8 +0,040 +0,130	12	16	6	2	AFM-2430-20	24 +0,065+0,195	30	36	20	3
AFM-0812-08	8 +0,040 +0,130	12	16	8	2	AFM-2430-30	24 +0,065+0,195	30	36	30	3
AFM-0812-12	8 +0,040 +0,130	12	16	12	2	AFM-2532-20	25 +0,065+0,195	32	38	20	4
AFM-0814-06	8 +0,040 +0,130	14	18	6	3	AFM-2532-30	25 +0,065+0,195	32	38	30	4
AFM-0814-10	8 +0,040 +0,130	14	18	10	3	AFM-2532-40	25 +0,065+0,195	32	38	40	4
AFM-0914-09	9 +0,040 +0,130	14	19	6	2	AFM-2734-20	27 +0,065+0,195	34	40	20	4
AFM-0914-10	9 +0,040 +0,130	14	19	10	2	AFM-2734-30	27 +0,065+0,195	34	40	30	4
AFM-0914-14	9 +0,040 +0,130	14	19	14	2	AFM-2734-40	27 +0,065+0,195	34	40	40	4
AFM-101620-10	10 +0,040 +0,130	16	20	10	3	AFM-2836-20	28 +0,065+0,195	36	42	20	4
AFM-1016-08	10 +0,040 +0,130	16	22	8	3	AFM-2836-30	28 +0,065+0,195	36	42	30	4
AFM-1016-10	10 +0,040 +0,130	16	22	10	3	AFM-2836-40	28 +0,065+0,195	36	42	40	4
AFM-1016-16	10 +0,040 +0,130	16	22	16	3	AFM-3038-20	30 +0,065+0,195	38	44	20	4
AFM-1218-10	12 +0,050 +0,160	18	22	10	3	AFM-3038-30	30 +0,065+0,195	38	44	30	4
AFM-1218-15	12 +0,050 +0,160	18	22	15	3	AFM-3038-40	30 +0,065+0,195	38	44	40	4
AFM-1218-20	12 +0,050 +0,160	18	22	20	3	AFM-3240-20	32 +0,080+0,240	40	46	20	4
AFM-1218-08	12 +0,050 +0,160	18	24	8	3	AFM-3240-30	32 +0,080+0,240	40	46	30	4
AFM-1218-12	12 +0,050 +0,160	18	24	12	3	AFM-3240-40	32 +0,080+0,240	40	46	40	4
AFM-1420-10	14 +0,050 +0,160	20	25	10	3						
AFM-1420-15	14 +0,050 +0,160	20	25	15	3						
AFM-1420-20	14 +0,050 +0,160	20	25	20	3						
AFM-1521-10	15 +0,050 +0,160	21	27	10	3						

¹⁾ Tolerance for d1 after being press-fitted in housing H7

²⁾ Tolerance d13 for d3

³⁾ Tolerance h13 for b1

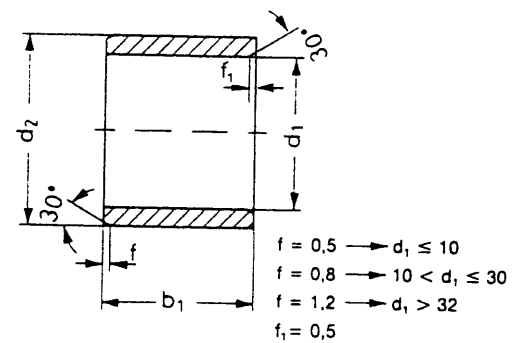
⁴⁾ Tolerance h13 for b2

Dimensions in inches

Construction of order number:

A S I - 0 2 0 3 - 0 3
 | | | | |
 d1 d2 b1 (as 1/16 inch)
 Imperial Dimension
 Type
 Material

Type S



Order No.	Nominal dimensions			d1 after being press-fitted		Housing bore		Shaft dimensions	
	d1	d2	b1	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.
ASI-0204-02	1/8	1/4	1/4	.1280	.1262	.2515	.2510	.1250	.1241
ASI-0305-04	3/16	5/16	1/4	.1905	.1887	.3140	.3135	.1875	.1866
ASI-0406-04	1/4	3/8	1/4	.2539	.2516	.3765	.3760	.2500	.2491
ASI-0406-06	1/4	3/8	3/8	.2539	.2516	.3765	.3760	.2500	.2491
ASI-0507-08	5/16	7/16	1/2	.3164	.3141	.4390	.4385	.3125	.3116
ASI-0608-04	3/8	1/2	1/4	.3789	.3766	.5015	.5010	.3750	.3741
ASI-0608-08	3/8	1/2	1/2	.3789	.3766	.5015	.5010	.3750	.3741
ASI-0810-08	1/2	5/8	1/2	.5047	.5020	.6260	.6250	.5000	.4990
ASI-0810-12	1/2	5/8	3/4	.5047	.5020	.6260	.6250	.5000	.4990
ASI-1013-12	5/8	13/16	3/4	.6297	.6270	.8135	.8125	.6250	.6240
ASI-1216-12	3/4	1	3/4	.7559	.7525	1.0010	.1000	.7500	.7490
ASI-1216-16	3/4	1	1	.7559	.7525	1.0010	.1000	.7500	.7490
ASI-1418-16	7/8	1-1/8	1	.8809	.8775	1.1260	.1250	.8750	.8740
ASI-1620-12	1	1-1/4	3/4	1.0059	1.0025	1.2510	1.2500	1.000	.9990
ASI-1620-16	1	1-1/4	1	1.0059	1.0025	1.2510	1.2500	1.000	.9990

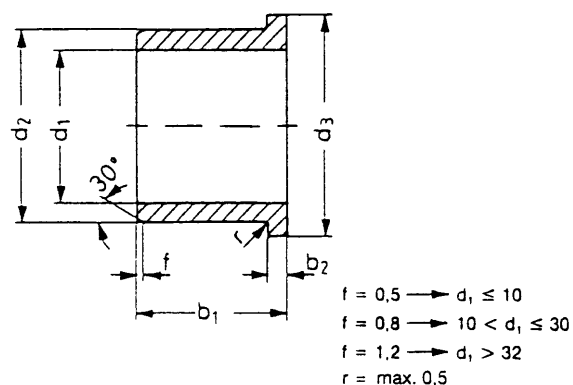
Dimensions in inches

Construction of order number:

A F I - 0 2 0 3 - 0 3

Imperial Dimension

Type F



Order No.	Nominal dimensions					d1 after being press-fitted		Housing bore		Shaft dimensions	
	d1	d2	b1	d3	b2	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.
AFI-0204-02	1/8	1/4	1/4	.360	.047	.1280	.1262	.2515	.2510	.1250	.1241
AFI-0305-04	3/16	5/16	1/4	.370	.047	.1905	.1887	.3140	.3135	.1875	.1866
AFI-0406-04	1/4	3/8	1/4	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
AFI-0406-06	1/4	3/8	3/8	.560	.047	.2539	.2516	.3765	.3760	.2500	.2491
AFI-0507-08	5/16	7/16	1/2	.560	.062	.3164	.3141	.4390	.4385	.3125	.3116
AFI-0608-04	3/8	1/2	1/4	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
AFI-0608-08	3/8	1/2	1/2	.625	.062	.3789	.3766	.5015	.5010	.3750	.3741
AFI-0810-08	1/2	5/8	1/2	.875	.062	.5047	.5020	.6260	.6260	.5000	.4990
AFI-0810-12	1/2	5/8	3/4	.875	.062	.5047	.5020	.6260	.6260	.5000	.4990
AFI-1013-16	5/8	13/16	1	1.063	.156	.6297	.6270	.8135	.8125	.6250	.6240
AFI-1216-12	3/4	1	3/4	1.250	.156	.7559	.7525	1.0010	1.000	.7500	.7490
AFI-1216-16	3/4	1	1	1.250	.156	.7559	.7525	1.0010	1.000	.7500	.7490
AFI-1418-24	7/8	1-1/8	1-1/2	1.375	.156	.8809	.8775	1.1260	1.1250	.8750	.8740
AFI-1620-16	1	1-1/4	1	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.000	.9990
AFI-1620-24	1	1-1/4	1-1/2	1.500	.188	1.0059	1.0025	1.2510	1.2500	1.000	.9990

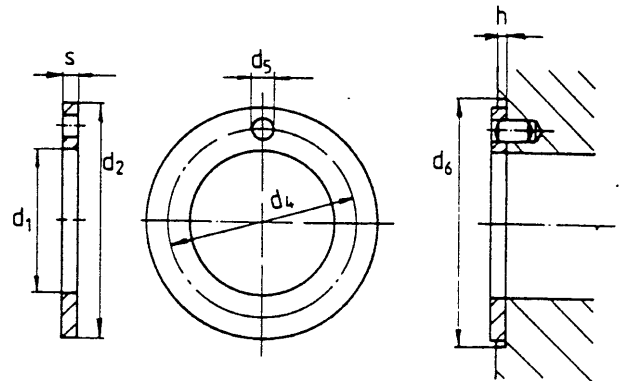
Dimensions in inches

Construction of order number:

ATI-04

| | |
 | | | d1 (as 1/16 inch)
 | | | Imperial Dimension
 | | | Type
 | | | Material

Type T

[illegible]