

AMES
AMES



SELFLOIL[®]

Self-Lubricating Sintered Bearings

bronfil

Sintered Silencers and Filters

PERMANENT STOCK



*Self-Lubricating
Sintered Bronze
Bearings*



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*Self-Lubricating
Sintered Iron
Bearings*



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*Sintered
Silencers and
Filters*



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Self-Lubricating Sintered Bearings



The SELFOIL® Self-Lubricating Bronze Bearings, manufactured by Sintering Technology, offer:

Reliability

- Elimination of the seizure risk.
- Permanent lubrication film.
- Low noise.
- Low friction coefficient.

Economy

- Elimination of lubricators.
- Maintenance-free.
- Permanent stock.
- Immediate shipping.
- More than 200 distributors worldwide.

Performance

- Very high dimensional precision.
- Dynamic loads up to 10MPa (100 kg./sq.cm).
- Allowable load $PV=2.5 \text{ MPa} \times \text{m/s}$.
- Speeds up to 30,000 r.p.m.
- Standard oil suitable for Temperatures from -20°C to $+120^{\circ}\text{C}$.

Service

- Permanent stock.
- Immediate delivery.
- Wide distribution network in Europe and America.

Packaging

- Packaging in plastic bags with bar code.
- The quantity per bag is the minimum order per piece.



Application

- Automotive Equipment: starters, electric windows, pedals, windscreen wiper motors, fuel systems, cooling systems, Exhaust Gas Recirculator, brakes, clutches, transmission, rear-view mirror systems, sunroof systems, seat systems.
- Medium and low power electrical motors.
- Medium and low power transfer case.
- Linear and rotary actuators. Pneumatic, hydraulic and electromagnetic types.
- Electrical and household appliances: washing machines, fans, extractor fans, shaving machines, epilators, juicers, roisserie, air conditioning, portable machine tools, coffee machines, whisking machines, vacuum cleaners, lawnmowers, boilers, etc.
- Home appliances: locks, garage doors, awnings, roller shutters, windows, sliding door/window, office swivel chairs, trolley rolling wheels, hinges, furnitures.
- Industrial sector: bottled machinery, wood machinery, anemometers, gardening, automatism, key duplicating machines, sewing machines, industrial vehicles, electrical switchgears.
- Other sectors: mobility, medical, catering industrial machines, farm machinery, toys.

It is also possible to manufacture bearings with different sizes, materials and lubricants from those indicated in this booklet.

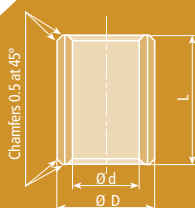
Please, for further information refer to our Technical Dpt.
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1.1



Type A Cylindrical



Pre-fitting diameter (mm)		Lengths (mm) L (Tolerance js13)	Quantity per Bag
d inner Ø Tolerance G7	D outer Ø Tolerance s7		
2 ⁺¹² ₊₂	5 ⁺³¹ ₊₁₉	2 - 3	25
3 ⁺¹² ₊₂	6 ⁺³¹ ₊₁₉	4 - 5 - 6 - 10	25
4 ⁺¹⁶ ₊₄	6 ⁺³¹ ₊₁₉	5 - 8 - 10	25
4 ⁺¹⁶ ₊₄	7 ⁺³⁸ ₊₂₃	4 - 8 - 12	25
4 ⁺¹⁶ ₊₄	8 ⁺³⁸ ₊₂₃	4 - 5 - 6 - 8 - 10 - 12	25
5 ⁺¹⁶ ₊₄	8 ⁺³⁸ ₊₂₃	5 - 8 - 10 - 12 - 15 - 16	25
5 ⁺¹⁶ ₊₄	9 ⁺³⁸ ₊₂₃	4 - 5 - 8	25
5 ⁺¹⁶ ₊₄	10 ⁺³⁸ ₊₂₃	5 - 6 - 8 - 10 - 12 - 15	25
6 ⁺¹⁶ ₊₄	9 ⁺³⁸ ₊₂₃	4 - 6 - 10 - 12 - 16	25
6 ⁺¹⁶ ₊₄	10 ⁺³⁸ ₊₂₃	4 - 5 - 6 - 10 - 12 - 15 - 16	25
6 ⁺¹⁶ ₊₄	12 ⁺⁴⁶ ₊₂₈	5 - 6 - 8 - 10 - 12 - 15 - 16	25
7 ⁺²⁰ ₊₅	10 ⁺³⁸ ₊₂₃	5 - 8 - 10	25
8 ⁺²⁰ ₊₅	10 ⁺³⁸ ₊₂₃	6 - 10 - 15	25
8 ⁺²⁰ ₊₅	11 ⁺⁴⁶ ₊₂₈	6 - 8 - 12 - 16 - 20	25
8 ⁺²⁰ ₊₅	12 ⁺⁴⁶ ₊₂₈	6 - 8 - 10 - 12 - 15 - 16 - 20	25
8 ⁺²⁰ ₊₅	14 ⁺⁴⁶ ₊₂₈	8 - 10 - 12 - 15 - 16 - 20	25
9 ⁺²⁰ ₊₅	12 ⁺⁴⁶ ₊₂₈	6 - 10 - 14	25
9 ⁺²⁰ ₊₅	14 ⁺⁴⁶ ₊₂₈	10 - 12 - 15 - 20	25
10 ⁺²⁰ ₊₅	13 ⁺⁴⁶ ₊₂₈	10 - 12 - 15 - 16 - 20 - 25	25
10 ⁺²⁰ ₊₅	14 ⁺⁴⁶ ₊₂₈	8 - 10 - 16 - 20 - 25	25
10 ⁺²⁰ ₊₅	15 ⁺⁴⁶ ₊₂₈	10 - 12 - 15 - 16 - 20 - 25	10
10 ⁺²⁰ ₊₅	16 ⁺⁴⁶ ₊₂₈	8 - 10 - 12 - 15 - 16 - 20 - 25	10
10 ⁺²⁰ ₊₅	18 ⁺⁴⁶ ₊₂₈	10 - 12 - 15 - 20 - 25	10
12 ⁺²⁴ ₊₆	14 ⁺⁴⁶ ₊₂₈	10 - 12 - 15 - 20	10
12 ⁺²⁴ ₊₆	15 ⁺⁴⁶ ₊₂₈	10 - 12 - 15 - 16 - 20 - 25	10
12 ⁺²⁴ ₊₆	16 ⁺⁴⁶ ₊₂₈	8 - 10 - 12 - 15 - 16 - 20 - 25	10
12 ⁺²⁴ ₊₆	17 ⁺⁴⁶ ₊₂₈	12 - 15 - 16 - 20 - 25	10
12 ⁺²⁴ ₊₆	18 ⁺⁴⁶ ₊₂₈	8 - 10 - 12 - 15 - 16 - 20 - 25 - 30	10
12 ⁺²⁴ ₊₆	20 ⁺⁵⁶ ₊₃₅	12 - 15 - 20 - 25 - 30	10
14 ⁺²⁴ ₊₆	18 ⁺⁴⁶ ₊₂₈	10 - 14 - 15 - 18 - 20 - 22 - 25 - 28	10
14 ⁺²⁴ ₊₆	20 ⁺⁵⁶ ₊₃₅	10 - 12 - 14 - 15 - 18 - 20 - 22 - 25 - 28 - 30	10
14 ⁺²⁴ ₊₆	22 ⁺⁵⁶ ₊₃₅	15 - 20 - 25 - 30	10
15 ⁺²⁴ ₊₆	18 ⁺⁴⁶ ₊₂₈	15 - 20 - 25 - 30	10
15 ⁺²⁴ ₊₆	19 ⁺⁵⁶ ₊₃₅	10 - 15 - 16 - 20 - 25 - 32	10
15 ⁺²⁴ ₊₆	20 ⁺⁵⁶ ₊₃₅	10 - 12 - 15 - 20 - 25 - 30	10
15 ⁺²⁴ ₊₆	21 ⁺⁵⁶ ₊₃₅	10 - 15 - 16 - 20 - 25 - 32	10
15 ⁺²⁴ ₊₆	22 ⁺⁵⁶ ₊₃₅	15 - 16 - 20 - 25 - 30	10
16 ⁺²⁴ ₊₆	20 ⁺⁵⁶ ₊₃₅	12 - 15 - 16 - 20 - 25 - 30 - 32	10
16 ⁺²⁴ ₊₆	22 ⁺⁵⁶ ₊₃₅	12 - 15 - 16 - 20 - 25 - 30 - 32 - 35	10
17 ⁺²⁴ ₊₆	22 ⁺⁵⁶ ₊₃₅	15 - 20 - 25 - 30 - 35	10
18 ⁺²⁴ ₊₆	22 ⁺⁵⁶ ₊₃₅	12 - 15 - 18 - 20 - 22 - 25 - 28 - 30 - 36	10
18 ⁺²⁴ ₊₆	24 ⁺⁵⁶ ₊₃₅	12 - 18 - 22 - 28 - 30 - 36	10
18 ⁺²⁴ ₊₆	25 ⁺⁵⁶ ₊₃₅	16 - 18 - 20 - 22 - 25 - 28 - 30 - 35 - 36	10
20 ⁺²⁸ ₊₇	24 ⁺⁵⁶ ₊₃₅	16 - 20 - 25 - 32	10
20 ⁺²⁸ ₊₇	25 ⁺⁵⁶ ₊₃₅	15 - 16 - 20 - 25 - 30 - 32 - 35	10
20 ⁺²⁸ ₊₇	26 ⁺⁵⁶ ₊₃₅	15 - 16 - 20 - 25 - 30 - 32 - 35 - 40	10
20 ⁺²⁸ ₊₇	27 ⁺⁵⁶ ₊₃₅	16 - 20 - 25 - 32	10

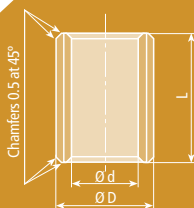
Tolerance in µ / Run-Out: IT-9 for D≤50 and IT-10 for D>50



1.2



Type A Cylindrical



Pre-fitting diameter (mm)		Lengths (mm) L (Tolerance js13)	Quantity per Bag
d inner Ø Tolerance G7	D outer Ø Tolerance s7		
20 ⁺²⁸ ₊₇	28 ⁺⁵⁶ ₊₃₅	16 - 20 - 25 - 30 - 32 - 35 - 40	10
20 ⁺²⁸ ₊₇	30 ⁺⁵⁶ ₊₃₅	20 - 25 - 30 - 35 - 40	10
22 ⁺²⁸ ₊₇	27 ⁺⁵⁶ ₊₃₅	15 - 18 - 20 - 22 - 25 - 28 - 30 - 35 - 36 - 40	10
22 ⁺²⁸ ₊₇	28 ⁺⁵⁶ ₊₃₅	18 - 20 - 22 - 25 - 28 - 30 - 35 - 36 - 40	10
22 ⁺²⁸ ₊₇	29 ⁺⁵⁶ ₊₃₅	18 - 22 - 28 - 36	10
25 ⁺²⁸ ₊₇	30 ⁺⁵⁶ ₊₃₅	20 - 25 - 30 - 32 - 35 - 40	10
25 ⁺²⁸ ₊₇	32 ⁺⁶⁸ ₊₄₃	20 - 25 - 30 - 32 - 35 - 40 - 45	10
25 ⁺²⁸ ₊₇	35 ⁺⁶⁸ ₊₄₃	25 - 30 - 35 - 40 - 45 - 50	5
28 ⁺²⁸ ₊₇	32 ⁺⁶⁸ ₊₄₃	20 - 22 - 25 - 28 - 32 - 36 - 40	5
28 ⁺²⁸ ₊₇	33 ⁺⁶⁸ ₊₄₃	20 - 22 - 25 - 28 - 32 - 36 - 40 - 45	5
28 ⁺²⁸ ₊₇	35 ⁺⁶⁸ ₊₄₃	25 - 30 - 35 - 40 - 45 - 50	5
28 ⁺²⁸ ₊₇	36 ⁺⁶⁸ ₊₄₃	22 - 28 - 36 - 45	5
30 ⁺²⁸ ₊₇	35 ⁺⁶⁸ ₊₄₃	20 - 25 - 30 - 35 - 40 - 45 - 50	5
30 ⁺²⁸ ₊₇	38 ⁺⁶⁸ ₊₄₃	20 - 24 - 25 - 30 - 35 - 38 - 40 - 45 - 50	5
30 ⁺²⁸ ₊₇	40 ⁺⁶⁸ ₊₄₃	20 - 25 - 30 - 35 - 40 - 45 - 50	5
32 ⁺³⁴ ₊₉	38 ⁺⁶⁸ ₊₄₃	20 - 25 - 32 - 40 - 50	5
32 ⁺³⁴ ₊₉	40 ⁺⁶⁸ ₊₄₃	20 - 25 - 30 - 32 - 35 - 40 - 45 - 50	5
35 ⁺³⁴ ₊₉	40 ⁺⁶⁸ ₊₄₃	20 - 25 - 30 - 35 - 40 - 45 - 50	5
35 ⁺³⁴ ₊₉	41 ⁺⁶⁸ ₊₄₃	25 - 35 - 40	5
35 ⁺³⁴ ₊₉	44 ⁺⁶⁸ ₊₄₃	22 - 28 - 35	5
35 ⁺³⁴ ₊₉	45 ⁺⁶⁸ ₊₄₃	25 - 30 - 35 - 40 - 45 - 50 - 60	5
36 ⁺³⁴ ₊₉	42 ⁺⁶⁸ ₊₄₃	22 - 28 - 36 - 45	5
36 ⁺³⁴ ₊₉	45 ⁺⁶⁸ ₊₄₃	22 - 28 - 36 - 45	5
38 ⁺³⁴ ₊₉	44 ⁺⁶⁸ ₊₄₃	25 - 35 - 45	5
40 ⁺³⁴ ₊₉	45 ⁺⁶⁸ ₊₄₃	35 - 40 - 45 - 50	5
40 ⁺³⁴ ₊₉	46 ⁺⁶⁸ ₊₄₃	25 - 30 - 32 - 40 - 50	5
40 ⁺³⁴ ₊₉	50 ⁺⁶⁸ ₊₄₃	25 - 32 - 40 - 45 - 50 - 60	5
45 ⁺³⁴ ₊₉	51 ⁺⁸³ ₊₅₃	28 - 36 - 45 - 56	5
45 ⁺³⁴ ₊₉	55 ⁺⁸³ ₊₅₃	30 - 35 - 40 - 45 - 50 - 55 - 60	5
45 ⁺³⁴ ₊₉	56 ⁺⁸³ ₊₅₃	28 - 36 - 45 - 56	5
45 ⁺³⁴ ₊₉	60 ⁺⁸³ ₊₅₃	40 - 45 - 50 - 60	2
50 ⁺³⁴ ₊₉	56 ⁺⁸³ ₊₅₃	32 - 40 - 50 - 63	2
50 ⁺³⁴ ₊₉	60 ⁺⁸³ ₊₅₃	32 - 40 - 45 - 50 - 60	2
55 ⁺⁴⁰ ₊₁₀	65 ⁺⁸³ ₊₅₃	40 - 55 - 70	2
60 ⁺⁴⁰ ₊₁₀	70 ⁺⁸⁹ ₊₅₉	50 - 60 - 90 - 120	2
60 ⁺⁴⁰ ₊₁₀	72 ⁺⁸⁹ ₊₅₉	50 - 60 - 70	1
60 ⁺⁴⁰ ₊₁₀	80 ⁺⁸⁹ ₊₅₉	90 - 120	1
63 ⁺⁴⁰ ₊₁₀	70 ⁺⁸⁹ ₊₅₉	40 - 50	1
70 ⁺⁴⁰ ₊₁₀	80 ⁺⁸⁹ ₊₅₉	90 - 120	1
80 ⁺⁶⁶ ₊₁₂	100 ⁺¹²⁵ ₊₇₁	80 - 120	1
100 ⁺⁶⁶ ₊₁₂	120 ⁺¹⁶³ ₊₇₉	80 - 120	1

Selfoil® HIGH PERFORMANCE

Tolerance in µ

Run-Out: IT-9 for D≤50 and IT-10 for D>50

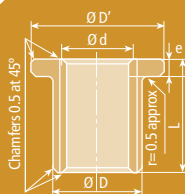
Selfoil® HIGH PERFORMANCE Characteristics: See page 1.7



1.3



Type B Flanged



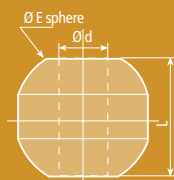
Pre-fitting diameter (mm)		D'= Ø Flange (mm)	e= Thickness (mm)	Lengths (mm) L (Tolerance js13)	Quantity per Bag
d inner Ø Tolerance G8	D outer Ø Tolerance s8				
3 ⁺¹⁶ ₊₂	6 ⁺³⁷ ₊₁₉	9	1.5	4 - 5 - 6 - 10	25
4 ⁺²² ₊₄	8 ⁺⁴⁵ ₊₂₃	12	2	4 - 5 - 8 - 10 - 12	25
6 ⁺²² ₊₄	10 ⁺⁴⁵ ₊₂₃	14	2	6 - 10 - 15 - 16	25
8 ⁺²⁷ ₊₅	12 ⁺⁵⁵ ₊₂₈	16	2	8 - 10 - 12 - 15 - 16	25
9 ⁺²⁷ ₊₅	14 ⁺⁵⁵ ₊₂₈	19	2.5	6 - 10 - 14	10
10 ⁺²⁷ ₊₅	13 ⁺⁵⁵ ₊₂₈	16	1.5	10 - 16 - 20	10
10 ⁺²⁷ ₊₅	14 ⁺⁵⁵ ₊₂₈	18	2	10 - 15 - 20	10
10 ⁺²⁷ ₊₅	15 ⁺⁵⁵ ₊₂₈	20	3	10 - 15 - 16 - 20	10
10 ⁺²⁷ ₊₅	16 ⁺⁵⁵ ₊₂₈	22	3	8 - 10 - 16	10
12 ⁺³³ ₊₆	15 ⁺⁵⁵ ₊₂₈	18	1.5	12 - 16 - 20	10
12 ⁺³³ ₊₆	17 ⁺⁵⁵ ₊₂₈	22	3	10 - 12 - 15 - 16 - 20 - 25	10
12 ⁺³³ ₊₆	18 ⁺⁵⁵ ₊₂₈	24	3	8 - 12 - 20	10
14 ⁺³³ ₊₆	18 ⁺⁵⁵ ₊₂₈	22	2	14 - 18 - 22	10
14 ⁺³³ ₊₆	20 ⁺⁶⁸ ₊₃₅	25	3	14 - 15 - 18 - 20 - 22 - 25 - 28 - 30	10
15 ⁺³³ ₊₆	19 ⁺⁶⁸ ₊₃₅	23	2	16 - 20 - 25	10
15 ⁺³³ ₊₆	20 ⁺⁶⁸ ₊₃₅	25	3	15 - 20 - 25 - 30	10
15 ⁺³³ ₊₆	21 ⁺⁶⁸ ₊₃₅	27	3	16 - 20 - 25 - 32	10
16 ⁺³³ ₊₆	20 ⁺⁶⁸ ₊₃₅	24	2	16 - 20 - 25	10
16 ⁺³³ ₊₆	22 ⁺⁶⁸ ₊₃₅	28	3	15 - 16 - 20 - 25 - 30 - 32	10
18 ⁺³³ ₊₆	22 ⁺⁶⁸ ₊₃₅	26	2	18 - 22 - 28	10
18 ⁺³³ ₊₆	24 ⁺⁶⁸ ₊₃₅	30	3	18 - 22 - 28	10
18 ⁺³³ ₊₆	25 ⁺⁶⁸ ₊₃₅	32	4	20 - 25 - 30 - 35	10
20 ⁺⁴⁰ ₊₇	24 ⁺⁶⁸ ₊₃₅	28	2	10 - 16 - 20 - 25	10
20 ⁺⁴⁰ ₊₇	26 ⁺⁶⁸ ₊₃₅	32	3	15 - 16 - 20 - 25 - 30 - 32	10
20 ⁺⁴⁰ ₊₇	28 ⁺⁶⁸ ₊₃₅	35	4	20 - 25 - 30 - 35	10
22 ⁺⁴⁰ ₊₇	27 ⁺⁶⁸ ₊₃₅	32	2.5	18 - 22 - 28	10
22 ⁺⁴⁰ ₊₇	28 ⁺⁶⁸ ₊₃₅	33	4	15 - 20 - 25 - 30 - 35 - 40	10
22 ⁺⁴⁰ ₊₇	29 ⁺⁶⁸ ₊₃₅	36	3.5	18 - 22 - 28 - 36	10
25 ⁺⁴⁰ ₊₇	30 ⁺⁶⁸ ₊₃₅	35	2.5	20 - 25 - 32	10
25 ⁺⁴⁰ ₊₇	32 ⁺⁸² ₊₄₃	40	4	20 - 25 - 30 - 32 - 35 - 40	10
25 ⁺⁴⁰ ₊₇	35 ⁺⁸² ₊₄₃	45	5	16 - 25 - 30	10
28 ⁺⁴⁰ ₊₇	33 ⁺⁸² ₊₄₃	38	2.5	22 - 28 - 36	10
28 ⁺⁴⁰ ₊₇	36 ⁺⁸² ₊₄₃	44	4	22 - 25 - 28 - 30 - 35 - 36 - 40	10
30 ⁺⁴⁰ ₊₇	38 ⁺⁸² ₊₄₃	46	4	20 - 25 - 30	10
30 ⁺⁴⁰ ₊₇	40 ⁺⁸² ₊₄₃	48	4	25 - 30 - 35 - 40	10
32 ⁺⁴⁸ ₊₉	38 ⁺⁸² ₊₄₃	44	3	20 - 25 - 32	10
32 ⁺⁴⁸ ₊₉	40 ⁺⁸² ₊₄₃	48	4	20 - 25 - 30 - 32 - 35 - 40	10
35 ⁺⁴⁸ ₊₉	45 ⁺⁸² ₊₄₃	55	5	20 - 25 - 30 - 35 - 40	10
36 ⁺⁴⁸ ₊₉	42 ⁺⁸² ₊₄₃	48	3	22 - 28 - 36	10
36 ⁺⁴⁸ ₊₉	45 ⁺⁸² ₊₄₃	54	4.5	22 - 28 - 36	10
40 ⁺⁴⁸ ₊₉	46 ⁺⁸² ₊₄₃	52	3	25 - 32 - 40	5
40 ⁺⁴⁸ ₊₉	50 ⁺⁸² ₊₄₃	60	5	25 - 30 - 32 - 35 - 40	5
45 ⁺⁴⁸ ₊₉	51 ⁺⁹⁹ ₊₅₃	57	3	28 - 36 - 45	5
45 ⁺⁴⁸ ₊₉	56 ⁺⁹⁹ ₊₅₃	67	5.5	28 - 36 - 45	5
50 ⁺⁴⁸ ₊₉	56 ⁺⁹⁹ ₊₅₃	62	3	32 - 40 - 50	5
50 ⁺⁴⁸ ₊₉	60 ⁺⁹⁹ ₊₅₃	70	5	32 - 40 - 50	5
60 ⁺⁵⁶ ₊₁₀	70 ⁺¹⁰⁵ ₊₅₉	80	5	50 - 60	5

Selfoil® HIGH PERFORMANCE

Tolerance in μ / Run-Out: IT-9 for $D \leq 50$ and IT-10 for $D > 50$
 Selfoil® HIGH PERFORMANCE Characteristics: See page 1.7



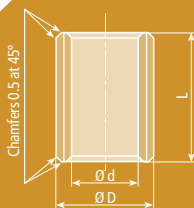
1.4



Type C
Spherical

d inner Ø (mm) Tolerance H7	E sphere (mm) Tolerance $\pm 0,05$	Lengths -L (mm) Tolerance $\pm 0,15$	Quantity per Bag
4	10	8	25
5	12	9	25
6	14	11	25
7	16	12	25
8	18	13	25
9	20	14.5	25
10	22	16	25
12	23	16	25

1.5

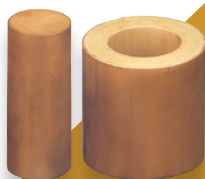


Type A
Cylindrical

DIMENSIONS IN INCHES

Pre-fitting diameter		Lengths L (Tolerance js13)	Quantity per Bag
d inner Ø Tolerance G7	D outer Ø Tolerance s7		
1/4"	1/2"	1/4" - 3/8" - 1/2" - 5/8" - 3/4"	25
3/8"	5/8"	3/8" - 1/2" - 5/8" - 3/4" - 1"	25
1/2"	11/16"	1/2" - 5/8" - 3/4" - 1" - 1 1/4"	10
1/2"	3/4"	1/2" - 5/8" - 3/4" - 1" - 1 1/4"	10
5/8"	3/4"	1/2" - 5/8" - 3/4" - 1" - 1 1/4"	10
5/8"	7/8"	1/2" - 5/8" - 3/4" - 1" - 1 1/4"	10
3/4"	7/8"	5/8" - 3/4" - 7/8" - 1" - 1 1/4"	10
3/4"	1"	5/8" - 3/4" - 7/8" - 1" - 1 1/4"	10
3/4"	1 1/4"	5/8" - 3/4" - 7/8" - 1" - 1 1/4"	10
1"	1 1/8"	3/4" - 1" - 1 1/4" - 1 1/2"	10
1"	1 1/2"	3/4" - 1" - 1 1/4" - 1 1/2" - 2"	5
1 1/2"	2"	1 1/2" - 2" - 2 1/4" - 2 1/2"	5
2"	2 1/2"	1 1/2" - 2" - 2 1/4" - 2 1/2"	2
2 1/2"	3"	1 1/2" - 2" - 2 1/4" - 2 1/2"	1

1.6



Machining Rods

	d inner Ø (mm)	D outer Ø (mm)	Length (mm)	Quantity per Bag
Solid	—	15 $\pm 0,8$	30 $\pm 1,5$	5
	—	20 $\pm 0,8$	25 $\pm 1,5$	5
	—	20 $\pm 0,8$	50 $\pm 1,5$	2
	—	25 $\pm 0,8$	25 $\pm 1,5$	2
	—	25 $\pm 0,8$	50 $\pm 1,5$	2
	—	32 $\pm 0,8$	40 $\pm 1,5$	2
	—	32 $\pm 0,8$	80 $\pm 1,5$	1
	—	42 $\pm 0,8$	50 $\pm 1,5$	1
	—	42 $\pm 0,8$	100 ± 2	1
	—	45 ± 1	90 ± 2	1
	—	52 ± 1	60 ± 2	1
	—	52 ± 1	120 ± 2	1
	—	62 $\pm 1,5$	120 ± 2	1
	—	70 $\pm 1,5$	120 ± 2	1
	—	80 $\pm 1,5$	120 ± 2	1
	—	105 ± 2	120 ± 2	1
Hollow	38 ± 1	66 $\pm 1,5$	65 ± 2	1
	38 ± 1	66 $\pm 1,5$	120 ± 2	1
	45 ± 1	105 $\pm 1,5$	120 ± 2	1
	53 ± 1	85 $\pm 1,5$	65 ± 2	1
	53 ± 1	85 $\pm 1,5$	120 ± 2	1
	68 ± 1	104 $\pm 1,5$	65 ± 2	1
	68 ± 1	104 $\pm 1,5$	120 ± 2	1
	83 ± 1	123 $\pm 1,5$	65 ± 2	1
	83 ± 1	123 $\pm 1,5$	120 ± 2	1
	98 ± 1	142 $\pm 1,5$	65 ± 2	1
	98 ± 1	142 $\pm 1,5$	120 ± 2	1

Tolerance in mm

EXTRA LARGE RODS (enquire stocks availability)

	d inner Ø max. (mm)	D outer Ø min. (mm)	Length min. (mm)	Quantity per Bag
Solid	—	125	80	1
	—	125	140	1
	—	149	80	1
	—	149	140	1
	—	178	140	1
	—	202	80	1
Hollow	59	125	80	1
	59	125	140	1
	79	149	80	1
	79	149	140	1
	110	178	80	1
	110	178	140	1
	150	202	140	1

The solid machining rods weighing more than 14Kg. are delivered with a lifting eye inside the wooden box.

After machining, we suggest the reimpregnation with oil available at AMES in order to fulfil the technical specifications.





Self-Lubricating Sintered Bronze Bearings

Technical Information

Material

Sintered Tin Bronze	C-T8Z4-K140 according to UNE 96002-2006.
Equivalent in dimensions	ISO 2795.

Oil

Selfoil®: AMES-01 oil is a paraffin mineral Oil of ISO-VG-68 viscosity grade. It is suitable for temperatures from -20°C to +120°C.

Selfoil® High Performance - AMES-02 oil: Type A and B bearings with inner diameter ≥ 30 mm. The impregnation oil is AMES-02, which increases the bearings capability to resist works with higher loads or lower speeds. It is suitable for temperatures from -20°C to +120°C.

Mechanical characteristics

	Typical values	Limiting Values	
		Min.	Max.
Density in g/cm ³	—	6.4	6.8
Oil content in %	—	19	—
Porosity (indicative) in %	22	—	—
Radial crushing strength in N/mm ²	170	150	—
Hardness (indicative) in HB	35	—	—

Dimensional characteristics

	Type A	Type B
Outer diameter tolerance D	s7	s8
Inner diameter tolerance d	G7	G8
Run-out	IT9 D $\leq$ 50 IT10D $>$ 50 min. (0.05 mm)	

Operating conditions

Shaft speed in m/s	Allowable load in MPa	
	Selfoil®	Selfoil® High Performance
Low or intermittent	10	12
Up to 0.25	10	12
0.25 - 0.50	3.5	4
0.50 - 4.0	2.5	2.5

Assembly recommendations

Assembly and tolerance conditions are indicated in AMES brochure "Selfoil® Self-Lubricating Sintered Bearings", in the chapter "Assembly of Self-Lubricating Bearings".

To obtain optimum performance from bronze bearings, we recommend to use shafts with the following conditions:

Shaft hardness	>20 HRC
Surface roughness	<0.3 Ra
Housing tolerances	H7
Shaft tolerances	f7/g6
Tolerances after assembling the bearing	
Cylindrical	H7
Flanged	H8

Machining

See guidelines given in the AMES brochure "Self-Lubricating Sintered Bearings" in the chapter "How to machine sintered bronze and iron bearings".

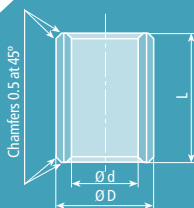
Recommendations for use

- Keep Selfoil® bearings in the original packaging until assembling.
- Do not place Selfoil® bearings in contact with absorbent materials (cardboard, paper, rag...).
- Avoid shocks during handling.
- Do not leave bearings in contact with water.
- Use of bearings after unfitting is strongly discouraged.

2.1



Type AF Cylindrical



Pre-fitting diameter (mm)		Lengths (mm) L (Tolerance js13)	Quantity per Bag	
d inner Ø _{Tolerance G7}	D outer Ø _{Tolerance s7}			
3 ⁺¹² ₊₂	6 ⁺³¹ ₊₁₉	4 - 10	25	
4 ⁺¹⁶ ₊₄	8 ⁺³⁸ ₊₂₃	8	25	
6 ⁺¹⁶ ₊₄	9 ⁺³⁸ ₊₂₃	6 - 10 - 12 - 16	25	
6 ⁺¹⁶ ₊₄	10 ⁺³⁸ ₊₂₃	6 - 10 - 16	25	
6 ⁺¹⁶ ₊₄	12 ⁺⁴⁶ ₊₂₈	6	25	
8 ⁺²⁰ ₊₅	11 ⁺⁴⁶ ₊₂₈	8 - 12 - 16	25	
8 ⁺²⁰ ₊₅	12 ⁺⁴⁶ ₊₂₈	8 - 12 - 16 - 20	25	
10 ⁺²⁰ ₊₅	13 ⁺⁴⁶ ₊₂₈	10 - 20 - 25	25	
10 ⁺²⁰ ₊₅	14 ⁺⁴⁶ ₊₂₈	10 - 16 - 20	25	
10 ⁺²⁰ ₊₅	15 ⁺⁴⁶ ₊₂₈	10	10	
12 ⁺²⁴ ₊₆	15 ⁺⁴⁶ ₊₂₈	12 - 16 - 20	10	
12 ⁺²⁴ ₊₆	16 ⁺⁴⁶ ₊₂₈	12 - 16 - 20 - 25	10	
12 ⁺²⁴ ₊₆	17 ⁺⁴⁶ ₊₂₈	12	10	
14 ⁺²⁴ ₊₆	18 ⁺⁴⁶ ₊₂₈	14 - 22	10	
14 ⁺²⁴ ₊₆	20 ⁺⁵⁶ ₊₃₅	14 - 28	10	
15 ⁺²⁴ ₊₆	19 ⁺⁵⁶ ₊₃₅	16 - 20	10	
16 ⁺²⁴ ₊₆	20 ⁺⁵⁶ ₊₃₅	16 - 20 - 25 - 32	10	
16 ⁺²⁴ ₊₆	22 ⁺⁵⁶ ₊₃₅	16 - 20 - 25	10	
18 ⁺²⁴ ₊₆	22 ⁺⁵⁶ ₊₃₅	18 - 22	10	
18 ⁺²⁴ ₊₆	24 ⁺⁵⁶ ₊₃₅	22	10	
20 ⁺²⁸ ₊₇	24 ⁺⁵⁶ ₊₃₅	16 - 20 - 25 - 32	10	
20 ⁺²⁸ ₊₇	26 ⁺⁵⁶ ₊₃₅	16 - 20 - 25 - 32	10	
22 ⁺²⁸ ₊₇	27 ⁺⁵⁶ ₊₃₅	18 - 22	10	
25 ⁺²⁸ ₊₇	30 ⁺⁵⁶ ₊₃₅	20 - 25 - 32	10	
25 ⁺²⁸ ₊₇	32 ⁺⁶⁸ ₊₄₃	20 - 25 - 32	10	
Selfoil® HIGH PERFORMANCE	30 ⁺²⁸ ₊₇	38 ⁺⁶⁸ ₊₄₃	24 - 30 - 38	5
	32 ⁺³⁴ ₊₉	38 ⁺⁶⁸ ₊₄₃	32	5
	35 ⁺³⁴ ₊₉	44 ⁺⁶⁸ ₊₄₃	22 - 28 - 35	5
	36 ⁺³⁴ ₊₉	42 ⁺⁶⁸ ₊₄₃	22	5
	40 ⁺³⁴ ₊₉	46 ⁺⁶⁸ ₊₄₃	25 - 32 - 40	5
	40 ⁺³⁴ ₊₉	50 ⁺⁶⁸ ₊₄₃	25 - 32 - 40 - 50	5
	45 ⁺³⁴ ₊₉	51 ⁺⁸³ ₊₅₃	28 - 45	5
	45 ⁺³⁴ ₊₉	55 ⁺⁸³ ₊₅₃	35	5
	45 ⁺³⁴ ₊₉	56 ⁺⁸³ ₊₅₃	36	5
	50 ⁺³⁴ ₊₉	56 ⁺⁸³ ₊₅₃	32	2
	50 ⁺³⁴ ₊₉	60 ⁺⁸³ ₊₅₃	32 - 50	2
	60 ⁺⁴⁰ ₊₁₀	70 ⁺⁸⁹ ₊₅₉	60 - 90	2
	70 ⁺⁴⁰ ₊₁₀	80 ⁺⁸⁹ ₊₅₉	120	1
	80 ⁺⁶⁶ ₊₁₂	100 ⁺¹²⁵ ₊₇₁	120	1
	100 ⁺⁶⁶ ₊₁₂	120 ⁺¹⁶³ ₊₇₉	120	1

Tolerance in µ

Run-Out: IT-9 for D≤50 and IT-10 for D>50

Selfoil® HIGH PERFORMANCE Characteristics: See page 2.4

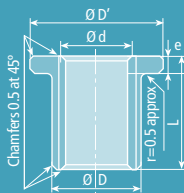
Use of bearings after unfitting is strongly discouraged.



2.2

SELFOIL®

Type **BF** Flanged



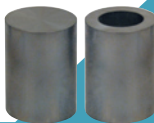
	Pre-fitting diameter (mm)		D' = Ø Flange (mm)	e = Thickness (mm)	Lengths (mm) L (Tolerance js13)	Quantity per Bag
	d inner Ø Tolerance G8	D outer Ø Tolerance s8				
	3 ⁺¹⁶ ₋₂	6 ⁺³⁷ ₊₁₉	9	1.5	4	25
	6 ⁺²² ₊₄	10 ⁺⁴⁵ ₊₂₃	14	2	6 - 10 - 16	25
	8 ⁺²⁷ ₊₅	12 ⁺⁵⁵ ₊₂₈	16	2	8 - 12 - 16	25
	10 ⁺²⁷ ₊₅	13 ⁺⁵⁵ ₊₂₈	16	1.5	10 - 16	10
	10 ⁺²⁷ ₊₅	15 ⁺⁵⁵ ₊₂₈	20	2.5	10 - 16 - 20	10
	12 ⁺³³ ₊₆	15 ⁺⁵⁵ ₊₂₈	18	1.5	12 - 16 - 20	10
	12 ⁺³³ ₊₆	17 ⁺⁵⁵ ₊₂₈	22	2.5	12 - 16	10
	14 ⁺³³ ₊₆	18 ⁺⁵⁵ ₊₂₈	22	2	14 - 18 - 22	10
	16 ⁺³³ ₊₆	20 ⁺⁶⁸ ₊₃₅	24	2	16 - 20	10
	16 ⁺³³ ₊₆	22 ⁺⁶⁸ ₊₃₅	28	3	16 - 20 - 25	10
	18 ⁺³³ ₊₆	24 ⁺⁶⁸ ₊₃₅	30	3	18 - 22	10
	20 ⁺⁴⁰ ₊₇	24 ⁺⁶⁸ ₊₃₅	28	2	16 - 20 - 25	10
	20 ⁺⁴⁰ ₊₇	26 ⁺⁶⁸ ₊₃₅	32	3	16 - 20 - 25	10
	22 ⁺⁴⁰ ₊₇	29 ⁺⁶⁸ ₊₃₅	36	3.5	18 - 22 - 28 - 36	10
	25 ⁺⁴⁰ ₊₇	30 ⁺⁶⁸ ₊₃₅	35	2.5	20 - 32	10
	25 ⁺⁴⁰ ₊₇	32 ⁺⁸² ₊₄₃	39	3.5	25 - 32	10
Selfoil® HIGH PERFORMANCE	30 ⁺⁴⁰ ₊₇	38 ⁺⁸² ₊₄₃	46	4	30	10
	32 ⁺⁴⁸ ₊₉	40 ⁺⁸² ₊₄₃	48	4	20 - 32	10
	36 ⁺⁴⁸ ₊₉	45 ⁺⁸² ₊₄₃	54	4.5	22 - 36	10
	40 ⁺⁴⁸ ₊₉	50 ⁺⁸² ₊₄₃	60	5	25 - 32 - 40	5
	50 ⁺⁴⁸ ₊₉	60 ⁺⁹⁹ ₊₅₃	70	5	50	5
	60 ⁺⁵⁶ ₊₁₀	70 ⁺¹⁰⁵ ₊₅₉	80	5	60	5

Tolerance in μ / Run-Out: IT-9 for $D \leq 50$ and IT-10 for $D > 50$

Selfoil® HIGH PERFORMANCE Characteristics: See page 2.4

2.3

SELFOIL®



Type **TF** Machining Rods

	d inner Ø (mm)	D outer Ø (mm)	Length (mm)	Quantity per Bag
Solid	—	15 ± 1	30 ± 2	5
	—	20 ± 1	25 ± 2	5
	—	20 ± 1	50 ± 2	2
	—	25 ± 1	25 ± 2	2
	—	25 ± 1	50 ± 2	2
	—	32 ± 1	40 ± 2	2
	—	32 ± 1	80 ± 2	1
	—	42 ± 1	50 ± 2	1
	—	42 ± 1	100 ± 2	1
	—	45 ± 1	90 ± 2	1
	—	52 ± 1	60 ± 2	1
	—	52 ± 1	120 ± 2	1
	—	62 ± 1	120 ± 2	1
	—	70 ± 1	120 ± 2	1
	—	80 ± 1	120 ± 2	1
Hollow	38 ± 1	66 ± 1.5	65 ± 2	1
	38 ± 1	66 ± 1.5	120 ± 2	1
	53 ± 1	85 ± 1.5	65 ± 2	1
	53 ± 1	85 ± 1.5	120 ± 2	1

Tolerance in mm / Run-Out: IT-9 for $D \leq 50$ and IT-10 for $D > 50$





Technical Information

Self-Lubricating Sintered Iron Bearings

Material

Sintered Iron	F-00C2-K200 according to UNE 5755
	FC-0200-K20 according to MPIF SINT A 10
Equivalent in dimensions	ISO 2795.

Oil

Selfoil®: AMES-01 oil is a paraffin mineral Oil of ISO-VG-68 viscosity grade. It is suitable for temperatures from -20°C to +120°C.

Selfoil® High Performance - AMES-02 oil: Type A and B bearings with inner diameter ≥ 30 mm. The impregnation oil is AMES-02, which increases the bearings capability to resist works with higher loads or lower speeds. It is suitable for temperatures from -20°C to +120°C.

Mechanical characteristics

	Typical values	Limiting Values	
		Min.	Max.
Density in g/cm ³	–	5.6	6
Oil content in %	–	19	–
Porosity (indicative) in %	22	–	–
Radial crushing strength in MPa	200	160	–
Hardness (indicative) in HB	40	–	–

Dimensional characteristics

	Type A	Type B
Outer diameter tolerance D	s7	s8
Inner diameter tolerance d	G7	G8
Run-out	IT9 D $\leq$ 50 IT-10 D $>$ 50 min. (0.05mm)	

Operating conditions

Shaft speed in m/s	Allowable load in MPa	
	Selfoil	Selfoil High Performance
Low or intermittent	8	12
Up to 0.25	8	12
0.25 a 0.50	3	3.5
0.50 a 4.0	2	2

Assembly recommendations

Assembly and tolerance conditions are indicated in AMES brochure "Selfoil® Self-Lubricating Sintered Bearings", in the chapter "Assembly of Self-Lubricating Bearings".

To obtain optimum performance from iron bearings, we recommend to use shafts with the following conditions:

Shaft hardness	>50 HRC
Surface roughness	<0.3 Ra
Housing tolerances	H7
Shaft tolerances	f7/g6
Tolerances after assembling the bearing	
Cylindrical	H7
Flanged	H8

Machining

See guidelines given in the AMES brochure "Self-Lubricating Sintered Bearings" in the chapter "How to machine sintered bronze and iron bearings".

Recommendations for use

- Keep Selfoil® bearings in the original packaging until assembling.
- Do not place Selfoil® bearings in contact with absorbent materials (cardboard, paper, rag...).
- Avoid shocks during handling.
- Do not leave bearings in contact with water.
- Use of bearings after unfitting is strongly discouraged.



BRONFIL® filtering elements from AMES are state-of-the-art products, effective in multiple applications. BRONFIL® products feature a friendly-cleaning design, mechanical strength and resistance to extreme temperatures.

Metallic filters are manufactured by sintering metallic particles of homogeneous dimensions, which were previously classified.

The chemical composition of the spherical bronze used for the manufacture of the BRONFIL® filters is 90% Cu and 10% Sn.

Properties of BRONFIL® filtering elements

Repeatability

A careful classification of raw materials, together with a steady production process, allows to obtain large production series of filters having invariable permeability throughout all of their points.

Filtering efficiency

BRONFIL® filtering elements are called "depth filters" because of their unique structure. Fluids are obliged to follow a winding way. This allows to retain particles with needle shape that would otherwise pass in the direction of their smaller size.

Easy cleaning

Filtering elements are cleaned by means of solvents or by reverse circulation (using the same fluid or another adequate one) with no need to remove the filtering element.

After cleaning, the filter recovers its initial characteristics. This property is maintained even after several washings.

Machining

BRONFIL® filters are ready for any machining process, i.e., turning, milling, drilling, etc.

It is not recommended to machine flow surfaces, as it causes pore blinding.

Welding

Welding conditions are similar to equivalent solid materials, except for the inconveniences caused by a large number of pores.

Bronze can be welded by resistance, tin welding or arch welding as required.

Easy machining and welding, as well as a self-supporting structure allow the production of composite or large sized filters.

Corrosion resistance

BRONFIL® elements are resistant to most adverse environments, in accordance with their base material.

Temperature resistance

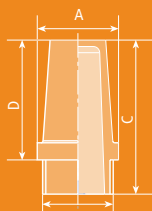
AMES sintered filters are incombustible, having a rated operation range, from -250°C through +200°C (+450° under a reducing atmosphere).

3.1

bronfil

Silencers

with Thread



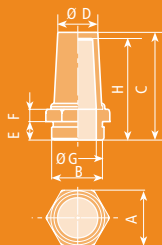
Type	A	B	C	D	Working surface in sq.cm	Air Flow Rate L/min*
1/8"	11	1/8"	24	17.5	3.50	875
1/8" BPC	11	1/8"	30	23.5	4.40	1,835
1/4"	14	1/4"	27	18.5	6.00	1,500
1/4" BPC	14	1/4"	38	29.5	9.10	3,410
3/8"	17.5	3/8"	35	25	10.00	2,500
3/8" BPC	17.5	3/8"	46	36	14.80	5,550
1/2"	21	1/2"	44	33	18.00	4,500
1/2" BPC	21	1/2"	58	47	23.66	8,875
3/4"	26.8	3/4"	60	46.6	32.00	8,000
3/4" BPC	26.8	3/4"	69	55.5	37.00	13,875
1"	38	1"	71	56	45.00	15,500

*With these flow rates, the pressure drop of the Silencers will be of 0.5 bar.

3.2

bronfil

Silencers with Solid Brass Thread "RL"

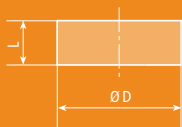


Type	A	B	C	D	E	F	G	H	Working surface in sq.cm	Air Flow Rate L/min*
M5	8	M5	19	5.4	4	3	3	17.3	1.50	630
1/8"	12	1/8"	23.5	7.8	5	3.5	5.1	21.5	3.10	1,100
1/8" BPC	12	1/8"	28.9	7.8	5	3.5	5.1	26.9	4.20	2,210
1/4"	15	1/4"	29	9.5	6	4	8.9	26.7	5.10	2,225
1/4" BPC	15	1/4"	36.4	9.5	6	4.6	7.1	34.1	6.90	3,040
3/8"	19	3/8"	36.8	12.6	7	5.5	9	34.2	8.60	2,905
3/8" BPC	19	3/8"	45.7	12.6	7	5.5	9	43.1	11.70	4,205
1/2"	22	1/2"	45.5	16	9.6	5	13.2	42.5	15.85	4,620
1/2" BPC	23	1/2"	57.1	16	8.5	6.2	13.2	54.1	21.40	7,225
3/4"	29	3/4"	56.3	20.4	10	7	17.6	52.8	26.10	7,075
3/4" BPC	29	3/4"	71.5	20.4	10	7	17.6	68	35.20	11,535
1"	36	1"	70	26	12	8	24	66	41.80	16,935

*With these flow rates, the pressure drop of the Silencers will be of 0.5 bar.

3.3

bronfil



Filter Discs

D	L
4	4
6	3
6	6
8	10
10	4
10	10
12	10
12	12
12	15
14	10
16	10
28	3





ISO/TS 16949 - ISO 14001 Certified
Our Selfoil® Bearings fulfil the European Directives:
ELV (2000/53/EC)
RoHS (2002/95/EC)
European Directive 2003/11/EC



Official distributor: