



**DALON**  
MACHINERY

# DALON MACHINERY CO.,LTD

## SINTERED BUSHING SERIES



杭州聚龙机械有限公司  
DALON MACHINERY CO.,LTD

## Sintered Bushings

DALON self-lubricating sintered bushing is a metallic component with high porosity (20-25% in volume), impregnated in a lubricant oil. The oil contained in the porosity provides a constant lubrication between bearing and shaft, so the system does not need any additional external lubricant. Self-lubrication allows this type of sliding bearing to work under hydrodynamic conditions, resulting in a very low friction coefficient.

DALON Self-lubricating sintered bearings have some advantages compared to other types of dry sliding bearings:

- **Reliability.** The constant oil presence eliminates the risk of seizure, and allows the bearing to work during thousands of hours without wear.
- **Economy.** Maintenance-free, no need for lubricants.
- **Performance.** Able to work under loads of up to 10 MPa, and speeds up to 2.5 m/s. The maximum working PV is in the range of 2.45 N/mm<sup>2</sup>•m/s, but can be surpassed in special cases. The dimensional precision is very high (up to IT 5 in diameter), and produces extremely low noise.

### The main applications for DALON self-lubricating sintered bearings are:

1. Automotive electrical or mechanical equipment, such as:
  - Starters.
  - Active driving elements: Brakes, steering, transmission, shock absorbers, ...
  - Cooling: Radiator, fans, cooling systems, ....
  - EGR systems.
  - Fuel pumps.
  - Comfort and Security: Wipers, window regulation, mirrors, seats, sunroofs, ...
2. Universal or customized electric motors and gearboxes of medium-low power.
3. Linear and rotary actuators, pneumatic, hydraulic and electromagnetic.
4. Household appliances: Washing machines, fans, extractor fans, shaving machines, air conditioning, hand tools, coffee machines, washing machines, vacuum cleaners, lawnmowers, boilers, etc.
5. Home appliances: Locks, garage doors, awnings, roller shutters, sliding windows, office swivel chairs, trolley rolling wheels, hinges, furnitures, gardening, etc.
6. Industrial: Bottling machinery, carpenter machinery, assembly machinery in general, automation, key duplicating machines, sewing machines, industrial vehicles, electrical switch gears, mobility, medical, catering, farm machinery, toys, etc.

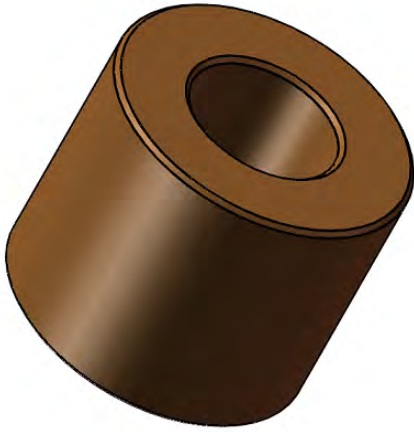
The manufacturing process of sintered components is certified as ecological, because the material waste is very low, the product is recyclable, and the energy efficiency is good because the material is not molten.

The dimensions of the bushing both in metric and imperial series are in accordance with DIN 1494/ISO 3547 standard sizes. according to special requirements. Relying on our experienced developing teams, DALON can always supply good solutions with stable quality and reasonable prices. Most Important, we try our best efforts to offering fast and good services in responding and delivery.

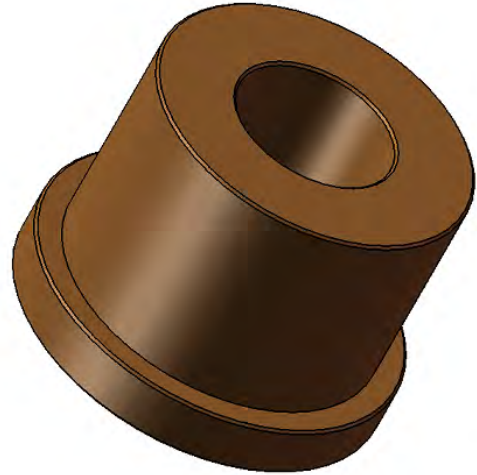
## SINTERED BUSHING BASIC FEATURES

General properties	Unit	BBZ9010
Density	g/cm <sup>3</sup>	6.4-7.0
Porosity	%(min)	>19
Strength Constant	"K" PSI / MPa	26500/180
Elongation	%,in 1"	1
Compressive Yield Strength	PSI / MPa	11000/75
Tensile strength at +20°C	MPa	100-150
Apparent Hardness	HRB	30-50
Working Temperature	°C	-40 to +220
Friction Value	μ	0.05 to 0.20
Max Load Capacity	PSI	3000
MAX. PV Value	N/mm <sup>2</sup> .m/s	1.6
Coefficient of thermal expansion ( at +23°C)	K <sup>-1</sup> . 10 <sup>-5</sup>	9

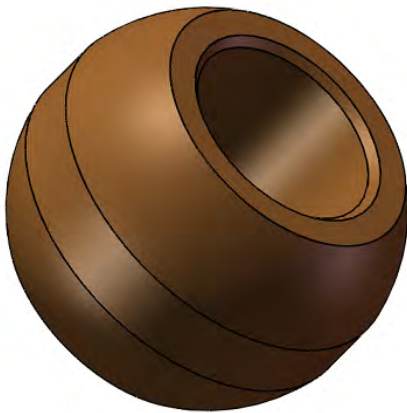
## SHAPE OF SINTERED BUSHING



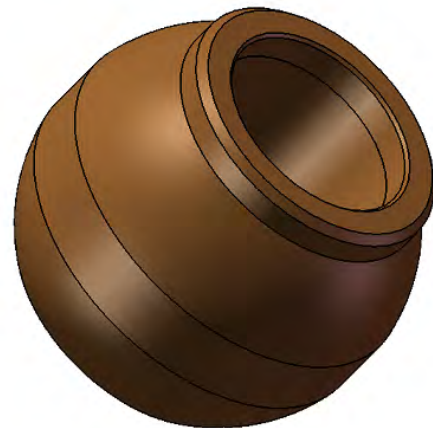
**CYLINDER BUSHING**



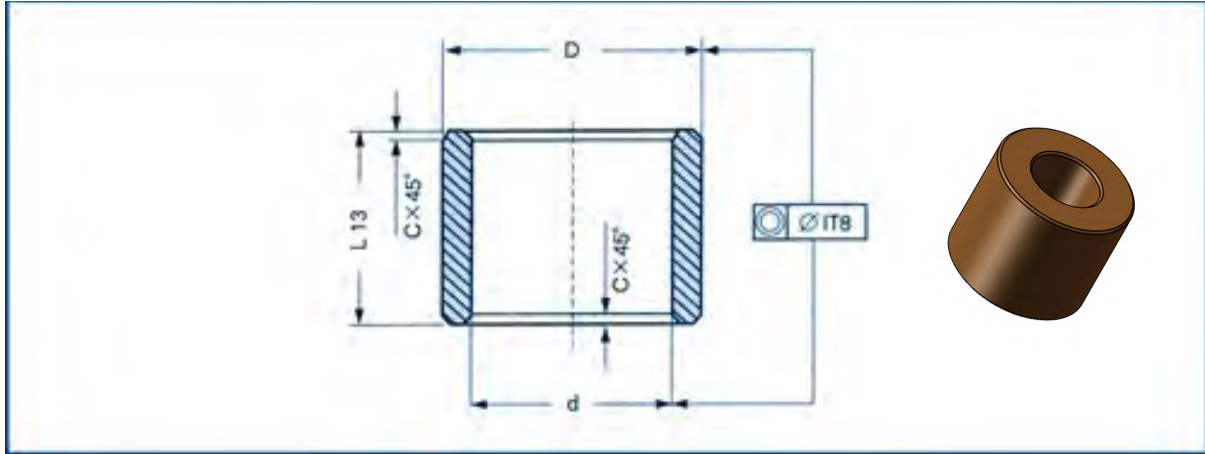
**FLANGE BUSHING**



**SPHERICAL BUSH**



**SPHERICAL WITH RING BUSHING**



PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 020502	2+0.016+0.006	5 +0.027 +0.015	2±0.100
BBZ 020503			3±0.100
BBZ 020503	2+0.016+0.006	5 +0.027 +0.015	3±0.100
BBZ 020504			4±0.100
BBZ 020506			6±0.100
BBZ 030603			3±0.100
BBZ 030604	3+0.016 +0.006	6 +0.027 +0.015	4±0.100
BBZ 030605			5±0.100
BBZ 030606			6±0.100
BBZ 030607			7±0.110
BBZ 030610			10±0.110
BBZ 040605	4+0.022+0.01	6 +0.027 +0.015	5±0.100
BBZ 040608			8±0.110
BBZ 040610			10±0.110
BBZ 040703	4+0.022 +0.01	7 +0.034 +0.019	3±0.100
BBZ 040704			4±0.100
BBZ 040706			6±0.100
BBZ 040708			8±0.110
BBZ 040712			12±0.135



PART NUMBER	ID <sub>F7</sub>	OD <sub>r7</sub>	LENGTH <sub>js13</sub>
BBZ 040804	4+0.022 +0.01	8 +0.034 +0.019	4±0.100
BBZ 040805			5±0.100
BBZ 040806			6±0.100
BBZ 040808			8±0.110
BBZ 040810			10±0.110
BBZ 040812			12±0.135
BBZ 050804	5+0.022 +0.01	8 +0.034 +0.019	4±0.100
BBZ 050805			5±0.100
BBZ 050808			8±0.110
BBZ 050810			10±0.110
BBZ 050812			12±0.135
BBZ 050815			15±0.135
BBZ 050816	16±0.135		
BBZ 050904	5+0.022 +0.01	9 +0.034 +0.019	4±0.100
BBZ 050905			5±0.100
BBZ 050908			8±0.110
BBZ 050910			10±0.110
BBZ 051005	5+0.022 +0.01	10 +0.034 +0.019	5±0.100
BBZ 051010			10±0.110
BBZ 051012			12±0.135
BBZ 051015			15±0.135
BBZ 060904	6+0.022 +0.01	9 +0.034 +0.019	4±0.100
BBZ 060906			6±0.100
BBZ 060910			10±0.110
BBZ 060912			12±0.135
BBZ 060916			16±0.135
BBZ 061004	6+0.022 +0.01	10 +0.034 +0.019	4±0.100
BBZ 061005			5±0.100
BBZ 061006			6±0.100
BBZ 061010			10±0.110
BBZ 061012			12±0.135
BBZ 061015			15±0.135
BBZ 061016			16±0.135



PART NUMBER	ID <sub>F7</sub>	OD <sub>r7</sub>	LENGTH <sub>js13</sub>
BBZ 061205	6+0.022 +0.01	12 +0.041 +0.023	5±0.100
BBZ 061206			6±0.100
BBZ 061210			10±0.110
BBZ 061212			12±0.135
BBZ 061215			15±0.135
BBZ 061216			16±0.135
BBZ 071005	7+0.028 +0.013	10 +0.034 +0.019	5±0.100
BBZ 071008			8±0.110
BBZ 071010			10±0.110
BBZ 071108	7+0.028 +0.013	11 +0.041 +0.023	8±0.110
BBZ 071110			10±0.110
BBZ 081006	8+0.028 +0.013	10 +0.034 +0.019	6±0.100
BBZ 081010			10±0.110
BBZ 081015			15±0.135
BBZ 081106	8+0.028 +0.013	11 +0.041 +0.023	6±0.100
BBZ 081108			8±0.110
BBZ 081112			12±0.135
BBZ 081116			16±0.135
BBZ 081120			20±0.165
BBZ 081206			8+0.028 +0.013
BBZ 081208	8±0.110		
BBZ 081210	10±0.110		
BBZ 081212	12±0.135		
BBZ 081215	15±0.135		
BBZ 081216	16±0.135		
BBZ 081220	20±0.165		
BBZ 081408	8+0.028 +0.013	14 +0.041 +0.023	
BBZ 081410			10±0.110
BBZ 081412			12±0.135
BBZ 081415			15±0.135
BBZ 081416			16±0.135



PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 081420	8+0.028 +0.013	14 +0.041 +0.023	20±0.165
BBZ 091206	9+0.028 +0.013	12 +0.041 +0.023	6±0.100
BBZ 091210			10±0.110
BBZ 091214			14±0.135
BBZ 091406			6±0.100
BBZ 091410	9+0.028 +0.013	14 +0.041 +0.023	10±0.110
BBZ 091412			12±0.135
BBZ 091414			14±0.135
BBZ 091415			15±0.135
BBZ 091420			20±0.165
BBZ 101310			10+0.028 +0.013
BBZ 101312	12±0.135		
BBZ 101315	15±0.135		
BBZ 101316	16±0.135		
BBZ 101320	20±0.165		
BBZ 101325	25±0.165		
BBZ 101408	10+0.028 +0.013	14+0.041 +0.023	8±0.110
BBZ 101410			10±0.110
BBZ 101416			16±0.135
BBZ 101420			20±0.165
BBZ 101425			25±0.165
BBZ 101510	10+0.028 +0.013	15+0.041 +0.023	10±0.110
BBZ 101512			12±0.135
BBZ 101515			15±0.135
BBZ 101516			16±0.135
BBZ 101520			20±0.165
BBZ 101525			25±0.165





PART NUMBER	ID <sub>F7</sub>	OD <sub>r7</sub>	LENGTH <sub>js13</sub>
BBZ 101608	10+0.028 +0.013	16+0.041 +0.023	8±0.110
BBZ 101610			10±0.110
BBZ 101612			12±0.135
BBZ 101615			15±0.135
BBZ 101616			16±0.135
BBZ 101620			20±0.165
BBZ 101625			25±0.165
BBZ 101810	10+0.028 +0.013	18+0.041 +0.023	10±0.110
BBZ 101812			12±0.135
BBZ 101815			15±0.135
BBZ 101820			20±0.165
BBZ 101825			25±0.165
BBZ 121410	12+0.034 +0.016	14+0.041 +0.023	10±0.110
BBZ 121412			12±0.135
BBZ 121415			15±0.135
BBZ 121420			20±0.165
BBZ 121510	12+0.034 +0.016	15+0.041 +0.023	10±0.110
BBZ 121512			12±0.135
BBZ 121515			15±0.135
BBZ 121516			16±0.135
BBZ 121520			20±0.165
BBZ 121525			25±0.165
BBZ 121608	12+0.034 +0.016	16+0.041 +0.023	8±0.110
BBZ 121610			10±0.110
BBZ 121612	12+0.034 +0.016	16+0.041 +0.023	12±0.135
BBZ 121615			15±0.135
BBZ 121616			16±0.135
BBZ 121620			20±0.165
BBZ 121625			25±0.165



PART NUMBER	ID <sub>F7</sub>	OD <sub>r7</sub>	LENGTH <sub>js13</sub>
BBZ 121712	12+0.034 +0.016	17+0.041 +0.023	12±0.135
BBZ 121715			15±0.135
BBZ 121716			16±0.135
BBZ 121720			20±0.165
BBZ 121725			25±0.165
BBZ 121808	12+0.034 +0.016	18+0.041 +0.023	8±0.110
BBZ 121810			10±0.110
BBZ 121812			12±0.135
BBZ 121815			15±0.135
BBZ 121816			16±0.135
BBZ 121820			20±0.165
BBZ 121825			25±0.165
BBZ 121830		30±0.165	
BBZ 122012	12+0.034 +0.016	20+0.049 +0.028	12±0.135
BBZ 122015			15±0.135
BBZ 122020			20±0.165
BBZ 122025			25±0.165
BBZ 122030			30±0.165
BBZ 141810	14+0.034 +0.016	18+0.041 +0.023	10±0.110
BBZ 141814			14±0.135
BBZ 141815			15±0.135
BBZ 141818			18±0.135
BBZ 141820			20±0.165
BBZ 141822			22±0.165
BBZ 141825			25±0.165
BBZ 141828			28±0.165
BBZ 142010	14+0.034 +0.016	20+0.049 +0.028	10±0.110
BBZ 142014			14±0.135
BBZ 142015			15±0.135
BBZ 142018			18±0.135
BBZ 142020			20±0.165
BBZ 142022			22±0.165



PART NUMBER	ID <sub>F7</sub>	OD <sub>r7</sub>	LENGTH <sub>js13</sub>
BBZ 142025	14+0.034 +0.016	20+0.049 +0.028	25±0.165
BBZ 142028			28±0.165
BBZ 142030			30±0.165
BBZ 142215	14+0.034 +0.016	22+0.049 +0.028	15±0.135
BBZ 142220			20±0.165
BBZ 142225			25±0.165
BBZ 142230			30±0.165
BBZ 151815	15+0.034 +0.016	18+0.041 +0.023	15±0.135
BBZ 151820			20±0.165
BBZ 151825			25±0.165
BBZ 151830			30±0.165
BBZ 151910	15+0.034 +0.016	19+0.049 +0.028	10±0.110
BBZ 151915			15±0.135
BBZ 151916			16±0.135
BBZ 151920	15+0.034 +0.016	19+0.049 +0.028	20±0.165
BBZ 151925			25±0.165
BBZ 151930			30±0.165
BBZ 151932			32±0.195
BBZ 152015	15+0.034 +0.016	20+0.049 +0.028	15±0.135
BBZ 152020			20±0.165
BBZ 152025			25±0.165
BBZ 152030			30±0.165
BBZ 152115	15+0.034 +0.016	21+0.049 +0.028	15±0.135
BBZ 152116			16±0.135
BBZ 152120			20±0.165
BBZ 152125			25±0.165
BBZ 152132			32±0.195
BBZ 152215	15+0.034 +0.016	22+0.049 +0.028	15±0.135
BBZ 152220			20±0.165
BBZ 152225			25±0.165
BBZ 152230			30±0.165



PART NUMBER	ID <sub>F7</sub>	OD <sub>r7</sub>	LENGTH <sub>js13</sub>
BBZ 162012	16+0.034 +0.016	20 +0.049 +0.028	12±0.135
BBZ 162015			15±0.135
BBZ 162016			16±0.135
BBZ 162020			20±0.165
BBZ 162025			25±0.165
BBZ 162030			30±0.165
BBZ 162032			32±0.195
BBZ 162212	16+0.034 +0.016	22 +0.049 +0.028	12±0.135
BBZ 162215			15±0.135
BBZ 162216			16±0.135
BBZ 162220			20±0.165
BBZ 162225			25±0.165
BBZ 162230			30±0.165
BBZ 162232			32±0.195
BBZ 162235	35±0.195		
BBZ 172215	17+0.034 +0.016	22 +0.049 +0.028	15±0.135
BBZ 172220			20±0.165
BBZ 172225			25±0.165
BBZ 172230			30±0.165
BBZ 172235			35±0.195
BBZ 182212	18+0.034 +0.016	22 +0.049 +0.028	12±0.135
BBZ 182215			15±0.135
BBZ 182218			18±0.135
BBZ 182220			20±0.165
BBZ 182222			22±0.165
BBZ 182225			25±0.165
BBZ 182228			28±0.165
BBZ 182230			30±0.165
BBZ 182236			36±0.195



PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 182418	18+0.034 +0.016	24 +0.049 +0.028	18±0.135
BBZ 182420			20±0.165
BBZ 182422			22±0.165
BBZ 182425			25±0.165
BBZ 182428			28±0.165
BBZ 182430	18+0.034 +0.016	24 +0.049 +0.028	30±0.165
BBZ 182435			35±0.195
BBZ 182436			36±0.195
BBZ 182518	18+0.034 +0.016	25 +0.049 +0.028	18±0.135
BBZ 182522			22±0.165
BBZ 182525			25±0.165
BBZ 182528			28±0.165
BBZ 182530			30±0.165
BBZ 182536			36±0.195
BBZ 202416	20+0.041 +0.02	24 +0.049 +0.028	16±0.135
BBZ 202420			20±0.165
BBZ 202425			25±0.165
BBZ 202432			32±0.195
BBZ 202515	20+0.041 +0.02	25 +0.049 +0.028	15±0.135
BBZ 202516			16±0.135
BBZ 202520			20±0.165
BBZ 202525			25±0.165
BBZ 202530			30±0.165
BBZ 202532			32±0.195
BBZ 202535			35±0.195
BBZ 202615	20+0.041 +0.02	26 +0.049 +0.028	15±0.135
BBZ 202616			16±0.135
BBZ 202620			20±0.165
BBZ 202625			25±0.165
BBZ 202630			30±0.165
BBZ 202632			32±0.195
BBZ 202635			35±0.195
BBZ 202640			40±0.195



PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 202716	20+0.041 +0.02	27 +0.049 +0.028	16±0.135
BBZ 202720			20±0.165
BBZ 202725			25±0.165
BBZ 202732			32±0.195
BBZ 202816	20+0.041 +0.02	28 +0.049 +0.028	16±0.135
BBZ 202820			20±0.165
BBZ 202825			25±0.165
BBZ 202830			30±0.165
BBZ 202832			32±0.195
BBZ 202835			35±0.195
BBZ 202850		50±0.195	
BBZ 203020	20+0.041 +0.02	30 +0.049 +0.028	20±0.165
BBZ 203025			25±0.165
BBZ 203030			30±0.165
BBZ 203035			35±0.195
BBZ 203040			40±0.195
BBZ 222715	22+0.041 +0.02	27 +0.049 +0.028	15±0.135
BBZ 222718			18±0.135
BBZ 222720			20±0.165
BBZ 222722			22±0.165
BBZ 222725			25±0.165
BBZ 222728			28±0.165
BBZ 222730			30±0.165
BBZ 222735	22+0.041 +0.02	27 +0.049 +0.028	35±0.195
BBZ 222736			36±0.195
BBZ 222740			40±0.195



PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 222815	22+0.041 +0.02	28 +0.049 +0.028	15±0.135
BBZ 222818			18±0.135
BBZ 222820			20±0.165
BBZ 222822			22±0.165
BBZ 222825			25±0.165
BBZ 222828			28±0.165
BBZ 222830			30±0.165
BBZ 222835			35±0.195
BBZ 222836			36±0.195
BBZ 222840			40±0.195
BBZ 222918	22+0.041 +0.02	29 +0.049 +0.028	18±0.135
BBZ 222922			22±0.165
BBZ 222928			28±0.165
BBZ 222936			36±0.195
BBZ 223220	22+0.041 +0.02	32 +0.059 +0.034	20±0.135
BBZ 223250			50±0.195
BBZ 253020	25+0.041 +0.02	30 +0.049 +0.028	20±0.165
BBZ 253025			25±0.165
BBZ 253030			30±0.165
BBZ 253032			32±0.195
BBZ 253035			35±0.195
BBZ 253040			40±0.195
BBZ 253050			50±0.195



PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 253220	25+0.041 +0.02	32 +0.059 +0.034	20±0.165
BBZ 253225			25±0.165
BBZ 253230			30±0.165
BBZ 253232			32±0.195
BBZ 253235			35±0.195
BBZ 253240			40±0.195
BBZ 253245			45±0.195
BBZ 253525	25+0.041 +0.02	35 +0.059 +0.034	25±0.165
BBZ 253530			30±0.165
BBZ 253535			35±0.195
BBZ 253540			40±0.195
BBZ 253545			45±0.195
BBZ 253550			50±0.195
BBZ 283222	28+0.041 +0.02	32 +0.059 +0.034	22±0.165
BBZ 283228			28±0.165
BBZ 283236			36±0.195
BBZ 283245			45±0.195
BBZ 283320	28+0.041 +0.02	33 +0.059 +0.034	20±0.165
BBZ 283322			22±0.165
BBZ 283328			28±0.165
BBZ 283330			30±0.165
BBZ 283336			36±0.195
BBZ 283345			45±0.195
BBZ 283525	28+0.041 +0.02	35 +0.059 +0.034	25±0.165
BBZ 283530			30±0.165





PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 283535	28+0.041 +0.02	35 +0.059 +0.034	35±0.195
BBZ 283540			40±0.195
BBZ 283545			45±0.195
BBZ 283550			50±0.195
BBZ 283620	28+0.041 +0.02	36 +0.059 +0.034	20±0.165
BBZ 283622			22±0.165
BBZ 283625			25±0.165
BBZ 283628			28±0.165
BBZ 283630			30±0.165
BBZ 283635			35±0.195
BBZ 283636			36±0.195
BBZ 283640			40±0.195
BBZ 283645			45±0.195
BBZ 283650			50±0.195
BBZ 303520	30+0.041 +0.02	35 +0.059 +0.034	20±0.165
BBZ 303525			25±0.165
BBZ 303530			30±0.165
BBZ 303535			35±0.195
BBZ 303540			40±0.195
BBZ 303545			45±0.195
BBZ 303550			50±0.195
BBZ 303630	30+0.041 +0.02	36 +0.059 +0.034	30±0.165
BBZ 303635			35±0.195
BBZ 303640			40±0.195
BBZ 303645			45±0.195
BBZ 303650			50±0.195



PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 303820	30+0.041 +0.02	38 +0.059 +0.034	20±0.165
BBZ 303824			24±0.165
BBZ 303825			25±0.165
BBZ 303830			30±0.165
BBZ 303835			35±0.195
BBZ 303838			38±0.195
BBZ 303840			40±0.195
BBZ 303845			45±0.195
BBZ 303850			50±0.195
BBZ 304020			30+0.041 +0.02
BBZ 304025	25±0.165		
BBZ 304030	30±0.165		
BBZ 304035	35±0.195		
BBZ 304040	40±0.195		
BBZ 304045	45±0.195		
BBZ 304050	50±0.195		
BBZ 323820	32+0.05+0.025	38 +0.059 +0.034	20±0.165
BBZ 323825			25±0.165
BBZ 323830			30±0.165
BBZ 323832			32±0.195
BBZ 323840			40±0.195
BBZ 323850			50±0.195
BBZ 324020			32+0.05+0.025
BBZ 324025	25±0.165		
BBZ 324030	30±0.165		



PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 324032	32+0.05+0.025	40 +0.059 +0.034	32±0.195
BBZ 324035			35±0.195
BBZ 324040			40±0.195
BBZ 324045			45±0.195
BBZ 324050			50±0.195
BBZ 354020	35+0.05+0.025	40 +0.059 +0.034	20±0.165
BBZ 354025			25±0.165
BBZ 354030			30±0.165
BBZ 354035			35±0.195
BBZ 354040			40±0.195
BBZ 354045			45±0.195
BBZ 354050	50±0.195		
BBZ 354125	35+0.05+0.025	41 +0.059 +0.034	25±0.165
BBZ 354135			35±0.195
BBZ 354140			40±0.195
BBZ 354422	35+0.05+0.025	44 +0.059 +0.034	22±0.165
BBZ 354428			28±0.165
BBZ 354435			35±0.195
BBZ 354525	35+0.05+0.025	45 +0.059 +0.034	25±0.165
BBZ 354530			30±0.165
BBZ 354535			35±0.195
BBZ 354540			40±0.195
BBZ 354545			45±0.195
BBZ 354550			50±0.195
BBZ 354560			60±0.230



PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 364222	36+0.05+0.025	42 +0.059 +0.034	22±0.165
BBZ 364228			28±0.165
BBZ 364236			36±0.195
BBZ 364245			45±0.195
BBZ 364522	36+0.05+0.025	45 +0.059 +0.034	22±0.165
BBZ 364528			28±0.165
BBZ 364536			36±0.195
BBZ 364545			45±0.195
BBZ 384425	38+0.05+0.025	44 +0.059 +0.034	25±0.165
BBZ 384435			35±0.195
BBZ 384445			45±0.195
BBZ 384835	38+0.05+0.025	48 +0.059 +0.034	35±0.195
BBZ 384845			45±0.195
BBZ 384855			55±0.230
BBZ 404535	40+0.05+0.025	45 +0.059 +0.034	35±0.195
BBZ 404540			40±0.195
BBZ 404545			45±0.195
BBZ 404550			50±0.195
BBZ 404625	40+0.05+0.025	46 +0.059 +0.034	25±0.165
BBZ 404630			30±0.165
BBZ 404632			32±0.195
BBZ 404640			40±0.195
BBZ 404650			50±0.195
BBZ 405025	40+0.05+0.025	50 +0.059 +0.034	25±0.165
BBZ 405030			30±0.165
BBZ 405032			32±0.195



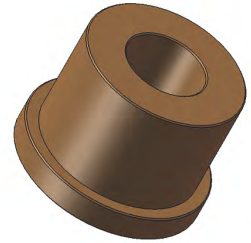
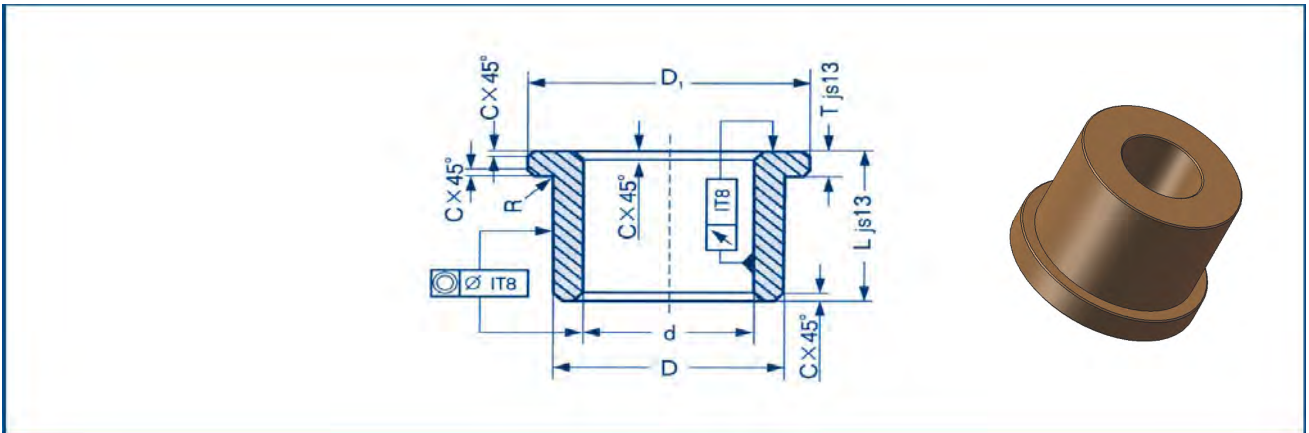
PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 405035	40+0.05+0.025	50 +0.059 +0.034	35±0.195
BBZ 405040			40±0.195
BBZ 405045			45±0.195
BBZ 405050			50±0.195
BBZ 405060			60±0.230
BBZ 424840	42+0.05+0.025	48 +0.059 +0.034	40±0.195
BBZ 424850			50±0.195
BBZ 425240	42+0.05+0.025	52 +0.071 +0.041	40±0.195
BBZ 425250			50±0.195
BBZ 455128	45+0.05+0.025	51 +0.071 +0.041	28±.0165
BBZ 455135			35±0.195
BBZ 455136			36±0.195
BBZ 455145			45±0.195
BBZ 455155			55±0.230
BBZ 455156			56±0.230
BBZ 455530	45+0.05+0.025	55 +0.071 +0.041	30±0.165
BBZ 455535			35±0.195
BBZ 455540			40±0.195
BBZ 455545			45±0.195
BBZ 455550			50±0.195
BBZ 455555			55±0.230
BBZ 455560			60±0.230
BBZ 455565			65±0.230



PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 455628	45+0.05+0.025	56 +0.071 +0.041	28±0.165
BBZ 455635			35±0.195
BBZ 455636			36±0.195
BBZ 455645			45±0.195
BBZ 455656			56±0.230
BBZ 456040	45+0.05+0.025	60 +0.071 +0.041	40±0.195
BBZ 456045			45±0.195
BBZ 456050			50±0.195
BBZ 456060	45+0.05+0.025	60 +0.071 +0.041	60±0.230
BBZ 485550	48+0.05+0.025	55 +0.071 +0.041	50±0.195
BBZ 485850	48+0.05+0.025	58 +0.071 +0.041	50±0.195
BBZ 505632	50+0.05+0.025	56 +0.071 +0.041	32±0.195
BBZ 505640			40±0.195
BBZ 505650			50±0.195
BBZ 505663			63±0.230
BBZ 506030	50+0.05+0.025	60 +0.071 +0.041	30±0.165
BBZ 506032			32±0.195
BBZ 506035			35±0.195
BBZ 506040			40±0.195
BBZ 506045			45±0.195
BBZ 506050			50±0.195
BBZ 506060			60±0.230
BBZ 506063			63±0.230
BBZ 506070			70±0.230
BBZ 506075			75±0.230
BBZ 556340	55+0.06 +0.03	63 +0.071 +0.041	40±0.195
BBZ 556355			55±0.230
BBZ 556540	55+0.06 +0.03	65 +0.071 +0.041	40±0.195



PART NUMBER	ID F7	OD r7	LENGTH js13
BBZ 556555	55+0.06 +0.03	65 +0.071 +0.041	55±0.230
BBZ 556570			70±0.230
BBZ 606850	60+0.06 +0.03	68 +0.073 +0.043	50±0.195
BBZ 606860			60±0.230
BBZ 607050	60+0.06 +0.03	70 +0.073 +0.043	50±0.195
BBZ 607060			60±0.230
BBZ 607090			90±0.270
BBZ 6070120			120±0.270
BBZ 607250	60+0.06 +0.03	72 +0.073 +0.043	50±0.195
BBZ 607260			60±0.230
BBZ 607270			70±0.230
BBZ 608090	60+0.06 +0.03	80 +0.073 +0.043	90±0.270
BBZ 6080120			120±0.270
BBZ 637040	63+0.06 +0.03	70 +0.073 +0.043	40±0.195
BBZ 637050			50±0.195
BBZ 708090	70+0.06 +0.03	80 +0.073 +0.043	90±0.270
BBZ 7080120			120±0.270
BBZ 8010080	80 +0.06 +0.03	100 +0.086 +0.051	80±0.230
BBZ 80100120			120±0.270
BBZ 10012080	100 +0.071 +0.036	120 +0.089 +0.054	80±0.230
BBZ 100120120			120±0.270
BBZ 110125120	110+0.071 +0.036	125 +0.103 +0.063	120±0.270
BBZ 125150120	125+0.071 +0.036	150 +0.105 +0.065	120±0.270



PART NUMBER	ID $F_7$	OD $r_7$	FLANGE OD	FLANGE THICKNESS	LENGTH $js_{13}$
BBZ-F020503	2 +0.016 +0.006	5 +0.027 +0.015	8 ± 0.110	1.5±0.100	3+0.100
BBZ-F030604	3 +0.016 +0.006	6 +0.027 +0.015			4±0.100
BBZ-F030605					5+0.100
BBZ-F030606					6±0.100
BBZ-F030610					10±0.110
BBZ-F040803					4 +0.022 +0.01
BBZ-F040804	4±0.100				
BBZ-F040805	5±0.100				
BBZ-F040806	6±0.100				
BBZ-F040808	8±0.110				
BBZ-F040810	10±0.110				
BBZ-F040812	12±0.135				
BBZ-F050904	5 +0.022 +0.01	9 +0.034 +0.019	13±0.135	2±0.100	4±0.100
BBZ-F050905					5±0.100
BBZ-F050908					8±0.110





PART NUMBER	ID $F_7$	OD $r_7$	FLANGE $OD$	FLANGE THICKNESS	LENGHT $js_{13}$
BBZ-F061004	6 +0.022 +0.01	10 +0.034 +0.019	14±0.135	2±0.100	4±0.100
BBZ-F061005					5±0.100
BBZ-F061006					6±0.100
BBZ-F061010					10±0.110
BBZ-F061012					12±0.135
BBZ-F061015					15±0.135
BBZ-F061016					16±0.135
BBZ-F071105	7 +0.028 +0.013	11 +0.041 +0.023	15±0.135	2±0.100	5±0.100
BBZ-F071108					8±0.110
BBZ-F071110					10±0.110
BBZ-F081206	8 +0.028 +0.013	12 +0.041 +0.023	16±0.135	2±0.100	6±0.100
BBZ-F081208					8±0.110
BBZ-F081210					10±0.110
BBZ-F081212					12±0.135
BBZ-F081215					15±0.135
BBZ-F081216					16±0.135
BBZ-F081220					20±0.165
BBZ-F091406	9+0.028 +0.013	14+0.041 +0.023	19±0.165	2.5±0.100	6±0.100
BBZ-F091410					10±0.110
BBZ-F091414	10 +0.028 +0.013	13+0.041 +0.023	17±0.135	2.5±0.100	14±0.135
BBZ-F101310					10±0.110



PART NUMBER	ID $F_7$	OD $r_7$	FLANGE OD	FLANGE THICKNESS	LENGHT $js_{13}$
BBZ-F101316	10 +0.028 +0.013	13 +0.041 +0.023	17±0.135	2.5±0.100	16±0.135
BBZ-F101320					20±0.165
BBZ-F101410	10 +0.028 +0.013	14 +0.041 +0.023	18±0.135	2±0.100	10±0.110
BBZ-F101415					15±0.135
BBZ-F101420					20±0.165
BBZ-F101508	10 +0.028 +0.013	15 +0.041 +0.023	21±0.165	3±0.100	8±0.110
BBZ-F101510					10±0.110
BBZ-F101515					15±0.135
BBZ-F101516					16±0.135
BBZ-F101520					20±0.165
BBZ-F101608	10 +0.028 +0.013	16 +0.041 +0.023	22±0.165	3±0.100	8±0.110
BBZ-F101610					10±0.110
BBZ-F101616					16±0.135
BBZ-F121512	12 +0.024 +0.006	15 +0.041 +0.023	21±0.165	3±0.100	12±0.135
BBZ-F121516					16±0.135
BBZ-F121520					20±0.165
BBZ-F121620	12 +0.034 +0.016	16 +0.041 +0.023	18±0.135	2±0.100	20±0.165
BBZ-F121712	12 +0.034 +0.016	17 +0.041 +0.023	23±0.165	3±0.100	12±0.135
BBZ-F121716					16±0.135
BBZ-F121720					20±0.165
BBZ-F121725					25±0.165
BBZ-F121808	12 +0.034 +0.016	18 +0.041 +0.023	24±0.165	3±0.100	8±0.110
BBZ-F121812					12±0.135
BBZ-F121820					20±0.165



PART NUMBER	ID F7	OD r7	FLANGE OD	FLANGE THICKNESS	LENGHT js13
BBZ-F141814	14 +0.034 +0.016	18 +0.041 +0.023	22±0.165	2±0.100	14±0.135
BBZ-F141818					18±0.135
BBZ-F141822					22±0.165
BBZ-F142010	14 +0.034 +0.016	20 +0.049 +0.028	26±0.165	3±0.100	10±0.110
BBZ-F142014					14±0.135
BBZ-F142015					15±0.135
BBZ-F142018					18±0.135
BBZ-F142020					20±0.165
BBZ-F142022					22±0.165
BBZ-F142028					28±0.165
BBZ-F151916	15 +0.034 +0.016	19 +0.049 +0.028	25±0.165	3±0.100	16±0.135
BBZ-F151920					20±0.165
BBZ-F151925					25±0.165
BBZ-F152015	15 +0.034 +0.016	20 +0.049 +0.028	25±0.165	3±0.100	15±0.135
BBZ-F152020					20±0.165
BBZ-F152025					25±0.165
BBZ-F152030					30±0.165
BBZ-F152110	15 +0.034 +0.016	21 +0.049 +0.028	27±0.165	3±0.100	10±0.110
BBZ-F152115					15±0.135
BBZ-F152116					16±0.135
BBZ-F152120					20±0.165
BBZ-F152125					25±0.165
BBZ-F152132					32±0.165
BBZ-F162016	16 +0.034 +0.016	20 +0.049 +0.028	27±0.165	3±0.100	16±0.135
BBZ-F162020					20±0.165
BBZ-F162025					25±0.165
BBZ-F162212	16 +0.034 +0.016	22 +0.049 +0.028	28±0.165	3±0.100	12±0.135
BBZ-F162215					15±0.135
BBZ-F162216					16±0.135
BBZ-F162220					20±0.165



PART NUMBER	ID F7	OD r7	FLANGE OD	FLANGE THICKNESS	LENGHT js13
BBZ-F162225	16 +0.034 +0.016	22 +0.049 +0.028	28 ± 0.165	3 ± 0.100	25±0.165
BBZ-F162230					30±0.165
BBZ-F162232					32±0.195
BBZ-F182218	18 +0.034 +0.016	22 +0.049 +0.028	26 ± 0.165	2 ± 0.100	18±0.135
BBZ-F182222					22±0.165
BBZ-F182228					28±0.165
BBZ-F182412	18 +0.034 +0.016	24 +0.049 +0.028	30 ± 0.165	3 ± 0.100	12±0.135
BBZ-F182418					18±0.135
BBZ-F182422					22±0.165
BBZ-F182428					28±0.165
BBZ-F182430					30±0.165
BBZ-F182520	18 +0.034 +0.016	25 +0.049 +0.028	32 ± 0.195	4 ± 0.100	20±0.165
BBZ-F182525					25±0.165
BBZ-F182530					30±0.165
BBZ-F182535					35±0.195
BBZ-F202416	20 +0.041 +0.02	24 +0.049 +0.028	30 ± 0.165	3 ± 0.100	16±0.135
BBZ-F202420					20±0.165
BBZ-F202425					25±0.165
BBZ-F202615	20 +0.041 +0.02	26 +0.049 +0.028	32±0.195	3±0.100	15±0.135
BBZ-F202616					16±0.135
BBZ-F202620					20±0.165
BBZ-F202625					25±0.165
BBZ-F202630					30±0.165
BBZ-F202632					32±0.195



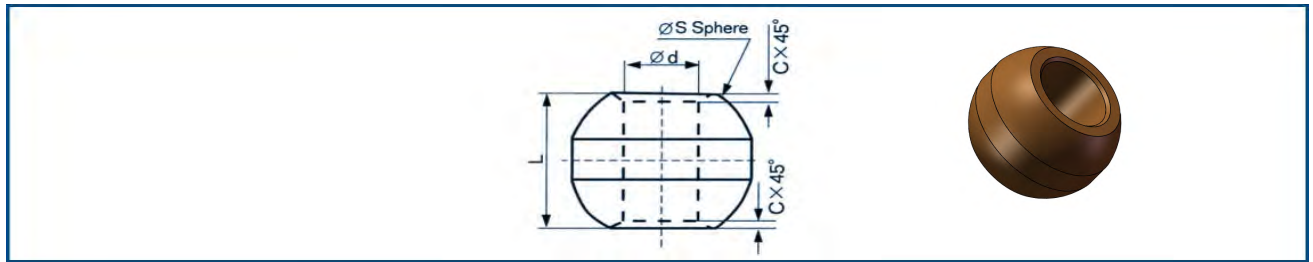
PART NUMBER	ID $F_7$	OD $r_7$	FLANGE OD	FLANGE THICKNESS	LENGHT $js_{13}$
BBZ-F202820	20 +0.041 +0.02	28 +0.049 +0.028	35 ± 0.195	4 ± 0.100	20±0.165
BBZ-F202825					25±0.165
BBZ-F202830					30±0.165
BBZ-F202835					35±0.195
BBZ-F222718	22 +0.041 +0.02	27 +0.049 +0.028	32 ± 0.195	2.5 ± 0.100	18±0.135
BBZ-F222722					22±0.165
BBZ-F222728					28±0.165
BBZ-F222815	22 +0.041 +0.02	28 +0.049 +0.028	34±0.195	3 ± 0.100	15±0.135
BBZ-F222820					20±0.165
BBZ-F222825					25±0.165
BBZ-F222830					30±0.165
BBZ-F222918	22 +0.041 +0.02	29 +0.049 +0.028	36 ± 0.195	3.5 ± 0.100	18±0.135
BBZ-F222922					22±0.165
BBZ-F222928					28±0.165
BBZ-F222936					36±0.195
BBZ-F253020	25 +0.041 +0.02	30 +0.049 +0.028	39 ± 0.195	3.5 ± 0.100	20±0.165
BBZ-F253025					25±0.195
BBZ-F253032					32±0.195
BBZ-F253220	25 +0.041 +0.02	32 +0.059 +0.034	39 ± 0.195	3.5 ± 0.100	20±0.165
BBZ-F253225					25±0.165
BBZ-F253230					30±0.165
BBZ-F253232					32±0.195
BBZ-F283322	28 +0.041 +0.02	33 +0.059 +0.034	38 ± 0.195	2.5 ± 0.100	22±0.165
BBZ-F283328					28±0.165
BBZ-F282236					36±0.195
BBZ-F283620	28 +0.041 +0.02	36 +0.059 +0.034	44 ± 0.195	4 ± 0.100	20±0.165
BBZ-F283622					22±0.165
BBZ-F283625					25±0.165
BBZ-F283628					28±0.165
BBZ-F283630					30±0.195



PART NUMBER	ID $F_7$	OD $r_7$	FLANGE OD	FLANGE THICKNESS	LENGHT $js_{13}$
BBZ-F283635	28 +0.041 +0.02	36 +0.059 +0.034	44±0.195	4±0.100	35±0.195
BBZ-F283636					36±0.195
BBZ-F283640					40±0.195
BBZ-F303820	30 +0.041 +0.02	38 +0.059 +0.034	46±0.195	4±0.100	20±0.165
BBZ-F303825					25±0.165
BBZ-F303830					30±0.165
BBZ-F304025	30 +0.041 +0.02	40 +0.059 +0.034	48±0.195	4±0.100	25±0.165
BBZ-F304030					30±0.165
BBZ-F304035					35±0.195
BBZ-F304040					40±0.195
BBZ-F323820	32 +0.05 +0.025	38 +0.059 +0.034	46±0.195	4±0.100	20±0.165
BBZ-F323825					25±0.165
BBZ-F323832					32±0.195
BBZ-F324020	32 +0.05 +0.025	40 +0.059 +0.034	48±0.195	4±0.100	20±0.165
BBZ-F324025					25±0.165
BBZ-F324028					28±0.165
BBZ-F324030					30±0.165
BBZ-F324032					32±0.195
BBZ-F324035					35±0.195
BBZ-F324036					36±0.165
BBZ-F324040					40±0.195
BBZ-F354525	35 +0.05 +0.025	45 +0.059 +0.034	55±0.230	5±0.100	25±0.165
BBZ-F354530					30±0.165
BBZ-F354535					35±0.195
BBZ-F354540					40±0.195

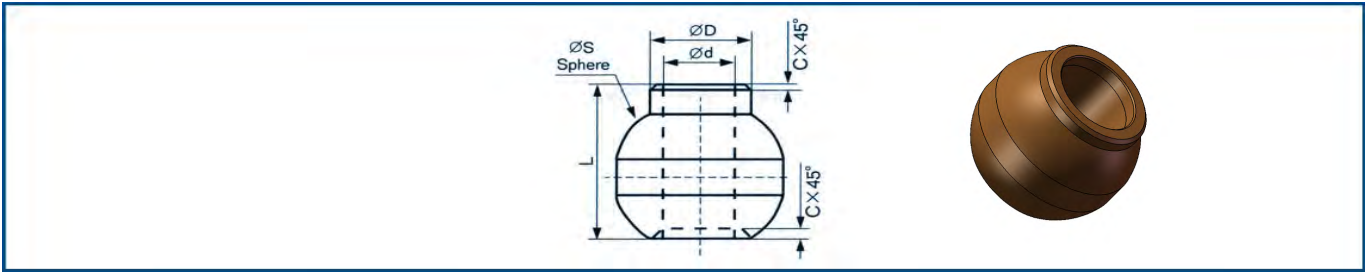


PART NUMBER	ID $F_7$	OD $r_7$	FLANGE OD	FLANGE THICKNESS	LENGHT $js_{13}$
BBZ-F364522	36 +0.05 +0.025	45 +0.059 +0.034	48±0.195	4.5±0.10	22±0.165
BBZ-F384825	38 +0.05 +0.025	48 +0.059 +0.034	58±0.230	5±0.100	25±0.165
BBZ-F384835					35±0.195
BBZ-F404625	40 +0.05 +0.025	46 +0.059 +0.034	56±0.230	5±0.100	25±0.165
BBZ-F404632					32±0.195
BBZ-F404640					40±0.195
BBZ-F405025	40 +0.05 +0.025	50 +0.059 +0.034	60±0.230	5±0.100	25±0.165
BBZ-F405030					30±0.165
BBZ-F405032					32±0.195
BBZ-F405035					35±0.195
BBZ-F405040					40±0.195
BBZ-F405050					50±0.195
BBZ-F425230	42 +0.05 +0.025	52 +0.071 +0.041	62±0.230	5±0.100	30±0.165
BBZ-F425240					40±0.195
BBZ-F425250					50±0.195
BBZ-F455128	45 +0.05 +0.025	51 +0.071 +0.041	57±0.230	3±0.100	28±0.165
BBZ-F455136					36±0.195
BBZ-F455145					45±0.195
BBZ-F455535	45 +0.05 +0.025	55 +0.071 +0.041	65±0.230	5±0.100	35±0.195
BBZ-F455545					45±0.195
BBZ-F455555					55±0.230
BBZ-F455628	45 +0.05 +0.025	56 +0.071 +0.041	67±0.230	5.5±0.10	28±0.165
BBZ-F455636					36±0.195
BBZ-F455645					45±0.195
BBZ-F505632	50 +0.05 +0.025	56 +0.071 +0.041	62±0.230	3±0.100	32±0.195
BBZ-F505640					40±0.195
BBZ-F505650					50±0.195
BBZ-F506032	50 +0.05 +0.025	60 +0.071 +0.041	70±0.230	5±0.100	32±0.195
BBZ-F506040					40±0.195
BBZ-F506050					50±0.195
BBZ-F607050	60 +0.06 +0.03	70 +0.073 +0.043	80±0.230	5±0.100	50±0.195
BBZ-F607060					60±0.230



PART NUMBER	ID $F_7$	SPHERE	LENGHT $js_{13}$	CHAMFER
BBZ-B 0408	4+0.022 +0.010	10±0.05	8±0.15	0.3
BBZ-B 0509	4+0.022 +0.010	12±0.05	9±0.15	0.5
BBZ-B 0611	6+0.022 +0.010	14±0.05	11 ±0.15	0.5
BBZ-B 0712	7+0.028 +0.013	16±0.05	12±0.15	0.5
BBZ-B 0813	8+0.028 +0.013	18±0.05	13±0.15	0.5
BBZ-B 0914.5	9+0.028 +0.013	20±0.05	14.5±0.15	0.5
BBZ-B 1016	10+0.028 +0.013	22±0.05	16±0.15	0.5
BBZ-B 1216	12+0.034 +0.016	23±0.05	16±0.15	0.5





PART NUMBER	ID F7	OD	SPHERE	LENGHT $js_{13}$	CHAMFER
BBZ-BC 0410	4+0.022 +0.01	6±0.05	10±0.05	10±0.15	0.3
BBZ-BC 0511	5+0.022 +0.01	8±0.05	12±0.05	11 ±0.15	0.5
BBZ-BC 0613	6+0.022 +0.01	9±0.05	14±0.05	13±0.15	0.5
BBZ-BC 0714	7+0.028 +0.013	10.5±0.05	16±0.05	14±0.15	0.5
BBZ-BC 0816	8+0.028 +0.013	12.5±0.05	18±0.05	16±0.15	0.5
BBZ-BC 0917	9+0.028 +0.013	14±0.05	20±0.05	17±0.15	0.5
BBZ-BC 1018	10+0.028 +0.013	15±0.05	22±0.05	18±0.15	0.5
BBZ-BC 1218	12+0.034 +0.016	17.5±0.05	23±0.05	18±0.15	0.5

## Inspection method for bush size

**Example: wall thickness S=2 mm**

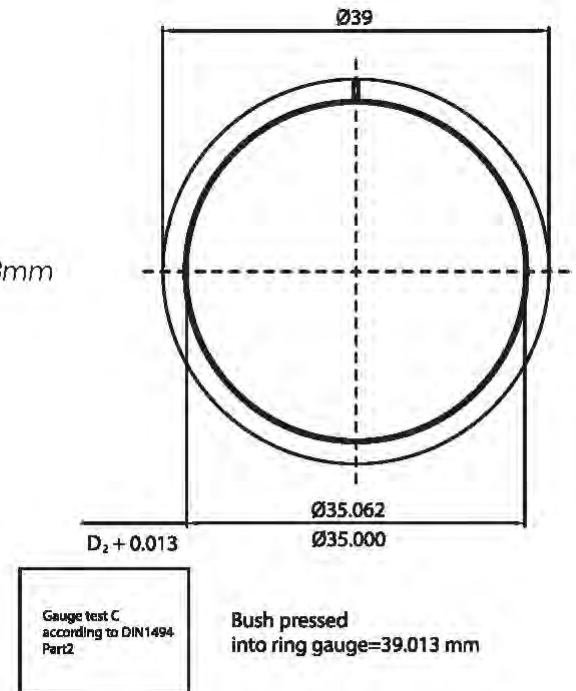
Inspecting gauge bore  $D_2=39,013$  mm

plug gauge (go)  $d=35,00$  mm

plug gauge (no go)  $d=35,070$  mm

$d=35,062 \sim 35,00$  When bush is pressed into ring gauge  $D_2=39,013$ mm

$D_2=+0,13$  mm gauge test C acc.to DIN 1494, part 2



### Tolerance of inspecting gauge bore $D_2$

Nominal sizes(mm)	10	18	30	50	80	120
	18	30	50	80	120	180
Housing bore gauge tolerance	$D_2+0,009$	$D_2+0,011$	$D_2+0,013$	$D_2+0,015$	$D_2+0,018$	$D_2+0,020$

### Tolerances of the bushings and the way to supply goods

The inside diameter tolerance of standard and flanged bushing is H9 ( when pressed in H7 standard seat). We also provide different kinds of washers strips and products designed according to customers special requirement both in metric and imperial systems, but available are only those with outside diameter within 300mm, wall thickness within 20mm and length within 250mm.

# QUALITY CERTIFICATES



杭州聚龙机械有限公司  
DALON MACHINERY CO.,LTD

电话/ Tel: 0086-571-88836312 (12 lines) ; 0086-571-88365029

传真/ Fax: 0086-571-88396427

电邮/E-mail: [info@topchoicehz.com](mailto:info@topchoicehz.com)

网页/ Web: [www.dalonmachinery.com](http://www.dalonmachinery.com) ; [www.dalonmachinery.com.cn](http://www.dalonmachinery.com.cn)

# DALON MACHINERY CO.,LTD

## SINTERED BUSHING SERIES



# DALON MACHINERY

杭州聚龙机械有限公司

DALON MACHINERY CO.,LTD

地址/ 中国 浙江省 杭州市 西湖区 文一西路 通普路北 中天MCC B-706  
B-706 ZHONGTIAN MCC , WENYI WEST ROAD ( TONGPU NORTHBOUND),  
HANGZHOU,CHINA 310012

电话/ Tel: 0086-571-88836312 (12 lines) ; 0086-571-88365029

传真/ Fax: 0086-571-88396427

电邮/E-mail: [info@topchoicehz.com](mailto:info@topchoicehz.com)

网页/ Web: [www.dalonmachinery.com](http://www.dalonmachinery.com) ; [www.dalonmachinery.com.cn](http://www.dalonmachinery.com.cn)