**Characteristics**

1. Modified polyacetal (POM)	0,30 - 0,50 mm
2. Bronze poroso	0,20 - 0,30 mm
3. Steel backing	0,40 - 2,20 mm
4. Electro-plating Copper	~ 0,008 mm

**Structure:**

The porous bronze layer is sintered on the steel backing and has the function of bonding the sliding surface in polyacetalic resin and permitting thermal dispersion which presents sockets for collecting and gradually releasing the lubricant in order to reduce friction and protect the surface. In order to facilitate re-lubrication, the DX bushes have an external hole for that purpose. It is recommended to use a grease with lithium soap; on the contrary MoS<sub>2</sub> and grease with a graphite base are NOT suitable. The DX bushes have uses in multiple sectors, among which we find: mining industry and metallurgies, printing presses, hydroelectric machines and for cold lamination of steel; generally applications with periodic lubrication. The use of this type of bush is growing rapidly thanks to its principal characteristics listed as follows, which favour the elimination of diverse problems:

**Advantages:**

- low maintenance, due to long intervals of re-lubrication
- good adaptability to oscillating and rotating movements
- limited wear (if applied and used correctly)
- water repellent
- reduced sensibility to the loading on the edges
- good heat dispersion

### Technical features:

Load capacity	70 N/mm <sup>2</sup>
Speed limit v-max	2,5 m/s
Temperature limit	-40°C to +130°C
Friction coefficient dry	μ: 0,05 to 0,25
Pv limit	22 N/mm <sup>2</sup> * m/s

### Durability test:

The life of DX bush depends especially on the factor Pv, which is difficult to calculate, because it depends on several and environmental factors which can increase or decrease the operating life. These elements can be: the temperature, the finishing grade of the shaft, the alignment, the lubrication... DX bushes, thanks to their honey cones surface, can capture and retain more lubricants and require little maintenance compared to DU type bushes, but they must be periodically re-lubricated in order to guarantee a much longer duration. Once the lubricant has been distributed on the sliding surface, the wear remains relatively contained, even in the presence of specific loads up to 140 N/mm<sup>2</sup>; when the lubricant starts to decrease, the wear increases noticeably. That's why it is so important to relubricate before the wearing process begins. In the (fig. 4) below, line B indicates the duration of the interval of re-lubrication while line A the duration of the DX material.

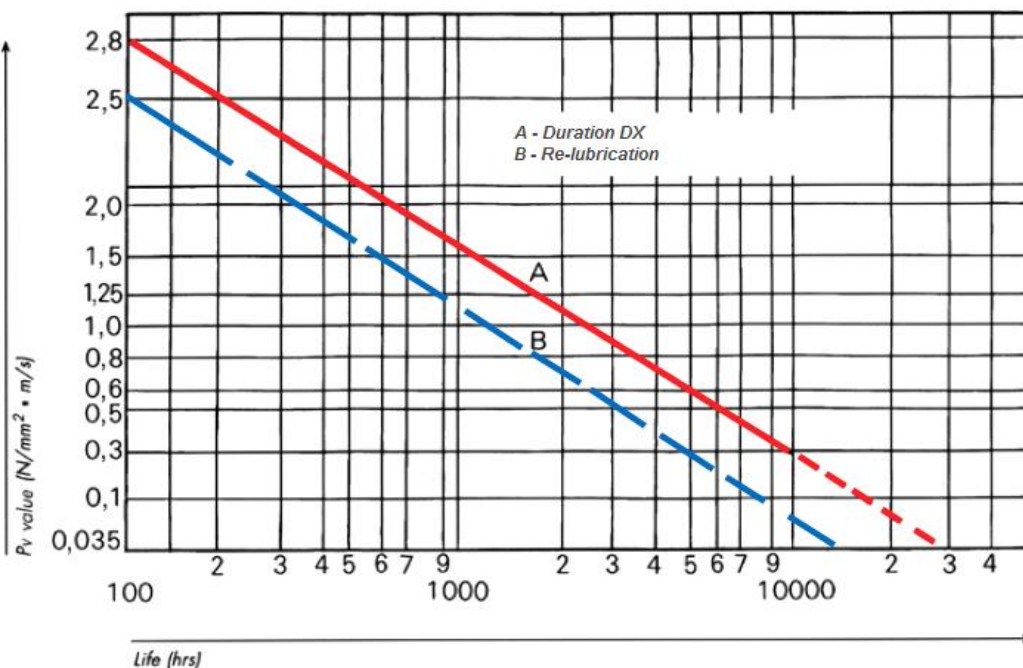


Fig. 4

When the bush reaches wear values equal to 0,15 mm it is considered depleted and therefore to be substituted.



## DX series bushes (PAP ... P20 / EGB E50)

low-maintenance

### DX Bushes tolerances:

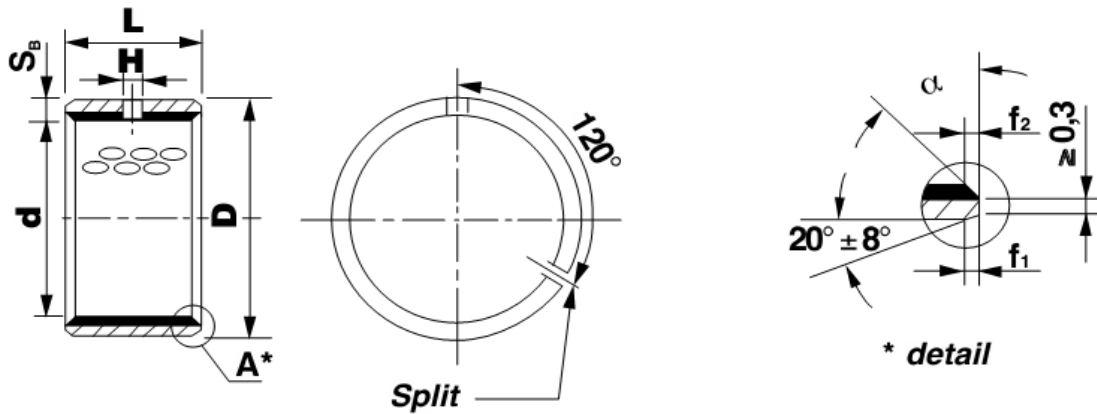
Outer Diameter D (mm)	Outer diameter tolerances D (mm)	Thickness tolerances		Chamfer dimensions		
		$S_B$ (mm)	$S_B$ (mm)	$S_B$ (mm)	$f_1$ (mm)	$f_2$ (mm)
$\leq 10$	+ 0,055 + 0,025	1	- 0,020 - 0,045	1	$0,6 \pm 0,4$	- 0,1 - 0,4
$10 < \leq 18$	+ 0,065 + 0,030	1	- 0,020 - 0,045	1	$0,6 \pm 0,4$	- 0,1 - 0,4
$18 < \leq 30$	+ 0,075 + 0,035	1,5	- 0,025 - 0,055	1,5	$0,6 \pm 0,4$	- 0,1 - 0,6
$30 < \leq 50$	+ 0,085 + 0,045	2	- 0,030 - 0,065	2	$1,2 \pm 0,4$	- 0,1 - 0,7
$50 < \leq 80$	+ 0,100 + 0,055	2,5	- 0,040 - 0,085	2,5	$1,8 \pm 0,6$	- 0,2 - 1,0
$80 < \leq 120$	+ 0,120 + 0,070	2,5	- 0,040 - 0,085	2,5	$1,8 \pm 0,6$	- 0,2 - 1,0
$120 < \leq 180$	+ 0,170 + 0,100	2,5	- 0,040 - 0,085	2,5	$1,8 \pm 0,6$	- 0,2 - 1,0
$180 < \leq 305$	+ 0,255 + 0,125	2,5	- 0,040 - 0,085	2,5	$1,8 \pm 0,6$	- 0,2 - 1,0

Tolerance values of metric bushings DX comply with standard ISO 3547-1:2006

### Recommended mounting tolerances:

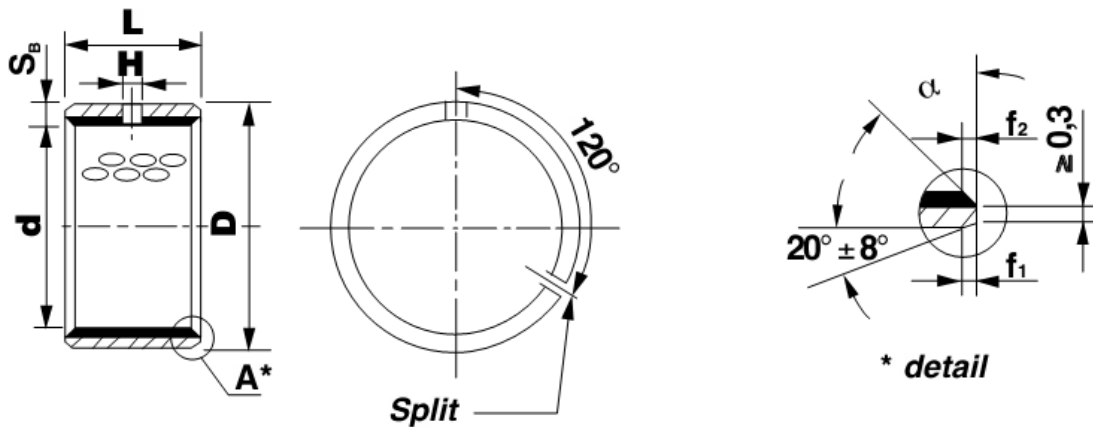
Shaft: h8

Bore: H7



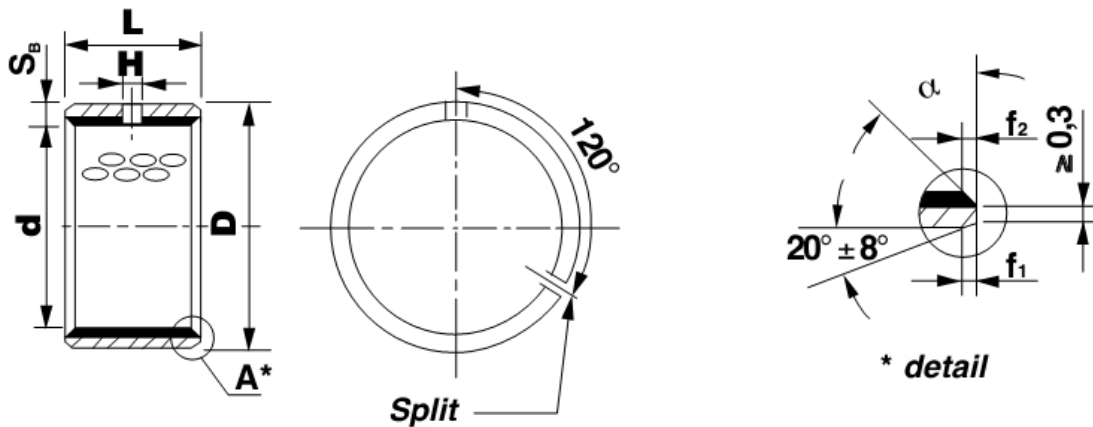
Dimensions (mm)				
Product No.	d	D	L <sup>±0,25</sup>	H
DX0608	6	8	8	*
DX0610	6	8	10	*
DX0710	7	9	10	*
DX0808	8	10	8	4
DX0810	8	10	10	4
DX0812	8	10	12	4
DX1008	10	12	8	4
DX1010	10	12	10	4
DX1012	10	12	12	4
DX1015	10	12	15	4
DX1020	10	12	20	4
DX1210	12	14	10	4
DX1212	12	14	12	4
DX1215	12	14	15	4
DX1220	12	14	20	4
DX1225	12	14	25	4
DX1310	13	15	10	4
DX1414	14	16	14	4
DX1415	14	16	15	4
DX1420	14	16	20	4
DX1422	14	16	22	4
DX1425	14	16	25	4
DX1432	14	16	32	4
DX1510	15	17	10	4
DX1512	15	17	12	4
DX1515	15	17	15	4
DX1520	15	17	20	4
DX1525	15	17	25	4
DX1610	16	18	10	4
DX1612	16	18	12	4
DX1615	16	18	15	4
DX1616	16	18	16	4
DX1620	16	18	20	4
DX1625	16	18	25	4
DX1815	18	20	15	4
DX1818	18	20	18	4
DX1820	18	20	20	4
DX1825	18	20	25	4

Dimensions (mm)				
Product No.	d	D	L <sup>±0,25</sup>	H
DX2010	20	23	10	4
DX2012	20	23	12	4
DX2015	20	23	15	4
DX2017	20	23	17	4
DX2020	20	23	20	4
DX2025	20	23	25	4
DX2030	20	23	30	4
DX2215	22	25	15	6
DX2220	22	25	20	6
DX2222	22	25	22	6
DX2225	22	25	25	6
DX2230	22	25	30	6
DX2415	24	27	15	6
DX2420	24	27	20	6
DX2425	24	27	25	6
DX2430	24	27	30	6
DX2510	25	28	10	6
DX2515	25	28	15	6
DX2520	25	28	20	6
DX2530	25	28	30	6
DX2540	25	28	40	6
DX2550	25	28	50	6
DX2820	28	32	20	6
DX2825	28	32	25	6
DX2828	28	32	28	6
DX2830	28	32	30	6
DX3015	30	34	15	6
DX3020	30	34	20	6
DX3025	30	34	25	6
DX3030	30	34	30	6
DX3040	30	34	40	6
DX3220	32	36	20	6
DX3225	32	36	25	6
DX3230	32	36	30	6
DX3235	32	36	35	6
DX3240	32	36	40	6
DX3515	35	39	15	6
DX3520	35	39	20	6



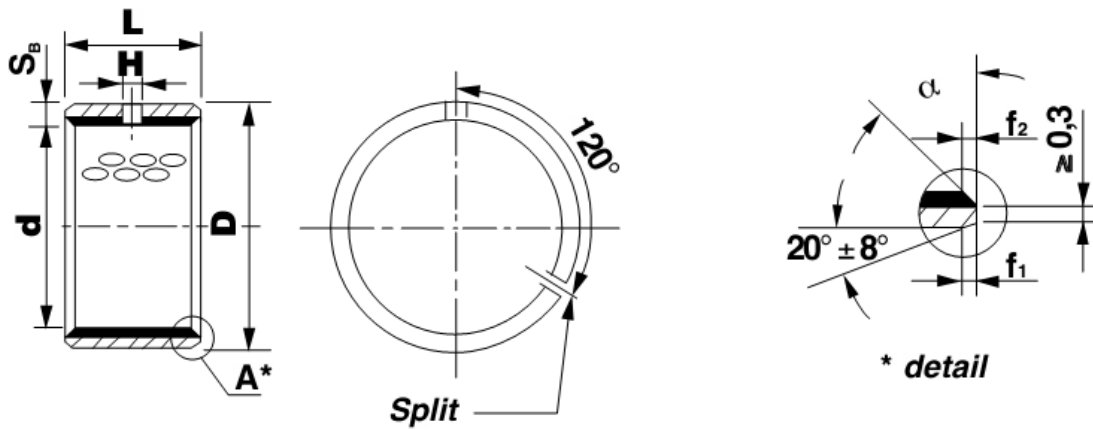
Dimensions (mm)				
Product No.	d	D	L <sup>±0,25</sup>	H
DX3525	35	39	25	6
DX3530	35	39	30	6
DX3535	35	39	35	6
DX3540	35	39	40	6
DX3550	35	39	50	6
DX3635	36	40	35	6
DX3720	37	41	20	6
DX3730	37	41	30	6
DX4020	40	44	20	8
DX4025	40	44	25	8
DX4030	40	44	30	8
DX4040	40	44	40	8
DX4050	40	44	50	8
DX4520	45	50	20	8
DX4525	45	50	25	8
DX4530	45	50	30	8
DX4535	45	50	35	8
DX4540	45	50	40	8
DX4545	45	50	45	8
DX4550	45	50	50	8
DX5020	50	55	20	8
DX5025	50	55	25	8
DX5030	50	55	30	8
DX5040	50	55	40	8
DX5050	50	55	50	8
DX5055	50	55	55	8
DX5060	50	55	60	8
DX5520	55	60	20	8
DX5525	55	60	25	8
DX5530	55	60	30	8
DX5540	55	60	40	8
DX5550	55	60	50	8
DX5555	55	60	55	8
DX5560	55	60	60	8
DX6030	60	65	30	8
DX6040	60	65	40	8
DX6050	60	65	50	8
DX6060	60	65	60	8

Dimensions (mm)				
Product No.	d	D	L <sup>±0,25</sup>	H
DX6070	60	65	70	8
DX6530	65	70	30	8
DX6540	65	70	40	8
DX6550	65	70	50	8
DX6560	65	70	60	8
DX6565	65	70	65	8
DX6570	65	70	70	8
DX7030	70	75	30	8
DX7040	70	75	40	8
DX7050	70	75	50	8
DX7060	70	75	60	8
DX7065	70	75	65	8
DX7070	70	75	70	8
DX7080	70	75	80	8
DX7540	75	80	40	9,5
DX7560	75	80	60	9,5
DX7575	75	80	75	9,5
DX7580	75	80	80	9,5
DX8040	80	85	40	9,5
DX8050	80	85	50	9,5
DX8055	80	85	55	9,5
DX8060	80	85	60	9,5
DX8080	80	85	80	9,5
DX80100	80	85	100	9,5
DX8530	85	90	30	9,5
DX8540	85	90	40	9,5
DX8550	85	90	50	9,5
DX8560	85	90	60	9,5
DX8580	85	90	80	9,5
DX8585	85	90	85	9,5
DX85100	85	90	100	9,5
DX9040	90	95	40	9,5
DX9060	90	95	60	9,5
DX9080	90	95	80	9,5
DX9090	90	95	90	9,5
DX90100	90	95	100	9,5
DX9530	95	100	30	9,5
DX9560	95	100	60	9,5



Dimensions (mm)				
Product No.	d	D	L <sup>±0,25</sup>	H
DX95100	95	100	100	9,5
DX10030	100	105	30	9,5
DX10040	100	105	40	9,5
DX10050	100	105	50	9,5
DX10060	100	105	60	9,5
DX10080	100	105	80	9,5
DX10090	100	105	90	9,5
DX10095	100	105	95	9,5
DX100100	100	105	100	9,5
DX100115	100	105	115	9,5
DX10550	105	110	50	9,5
DX10560	105	110	60	9,5
DX10580	105	110	80	9,5
DX10595	105	110	95	9,5
DX105105	105	110	105	9,5
DX105110	105	110	110	9,5
DX105115	105	110	115	9,5
DX11030	110	115	30	9,5
DX11050	110	115	50	9,5
DX11060	110	115	60	9,5
DX11080	110	115	80	9,5
DX11095	110	115	95	9,5
DX110110	110	115	110	9,5
DX110115	110	115	115	9,5
DX11550	115	120	50	9,5
DX11570	115	120	70	9,5
DX12040	120	125	40	9,5
DX12060	120	125	60	9,5
DX12080	120	125	80	9,5
DX120100	120	125	100	9,5
DX120110	120	125	110	9,5
DX120120	120	125	120	9,5
DX12550	125	130	50	9,5
DX12560	125	130	60	9,5
DX12580	125	130	80	9,5
DX125100	125	130	100	9,5
DX125110	125	130	110	9,5
DX125125	125	130	125	9,5

Dimensions (mm)				
Product No.	d	D	L <sup>±0,25</sup>	H
DX13050	130	135	50	9,5
DX13060	130	135	60	9,5
DX13080	130	135	80	9,5
DX130100	130	135	100	9,5
DX130130	130	135	130	9,5
DX13530	135	140	30	9,5
DX13560	135	140	60	9,5
DX13580	135	140	80	9,5
DX14050	140	145	50	9,5
DX14060	140	145	60	9,5
DX14080	140	145	80	9,5
DX140100	140	145	100	9,5
DX140140	140	145	140	9,5
DX15050	150	155	50	9,5
DX15060	150	155	60	9,5
DX15080	150	155	80	9,5
DX150100	150	155	100	9,5
DX150150	150	155	150	9,5
DX16050	160	165	50	11
DX16060	160	165	60	11
DX16080	160	165	80	11
DX160100	160	165	100	11
DX160160	160	165	160	11
DX17050	170	175	50	11
DX17060	170	175	60	11
DX17080	170	175	80	11
DX170100	170	175	100	11
DX170170	170	175	170	11
DX18050	180	185	50	11
DX18060	180	185	60	11
DX18080	180	185	80	11
DX180100	180	185	100	11
DX180180	180	185	180	11
DX19050	190	195	50	11
DX19060	190	195	60	11
DX19080	190	195	80	11
DX190100	190	195	100	11
DX190120	190	195	120	11



Product No.	Dimensions (mm)			
	d	D	L <sup>±0,25</sup>	H
DX190190	190	195	190	11
DX20050	200	205	50	11
DX20060	200	205	60	11
DX20080	200	205	80	11
DX200100	200	205	100	11
DX200120	200	205	120	11
DX200200	200	205	200	11
DX22050	220	225	50	12
DX22060	220	225	60	12
DX22080	220	225	80	12
DX220100	220	225	100	12
DX220120	220	225	120	12
DX220220	220	225	220	12
DX24050	240	245	50	12
DX24060	240	245	60	12
DX24080	240	245	80	12
DX240100	240	245	100	12
DX240120	240	245	120	12
DX240240	240	245	240	12
DX25050	250	255	50	12
DX25060	250	255	60	12
DX25080	250	255	80	12

Product No.	Dimensions (mm)			
	d	D	L <sup>±0,25</sup>	H
DX250100	250	255	100	12
DX250120	250	255	120	12
DX250250	250	255	250	12
DX26050	260	265	50	12
DX26060	260	265	60	12
DX26080	260	265	80	12
DX260100	260	265	100	12
DX260120	260	265	120	12
DX260260	260	265	260	12
DX28050	280	285	50	12
DX28060	280	285	60	12
DX28080	280	285	80	12
DX280100	280	285	100	12
DX280120	280	285	120	12
DX280280	280	285	280	12
DX30050	300	305	50	12
DX30060	300	305	60	12
DX30080	300	305	80	12
DX300100	300	305	100	12
DX300120	300	305	120	12
DX300300	300	305	300	12