

Poulibloc 2000

Reducer with exclusive taper bushing feature



LEROY-SOMER™

Shaft mount speed reducer

Available in 8 sizes up to 55 kW - 4 standard reduction ratios : 1/5 - 1/12 - 1/20 - 1/25



Unique taper bushing design for easy and versatile mounting on driven shaft.

A wide range of bushing bore sizes is available for each type of reducer.



Easily installed backs-top.



Magnetic plug as standard.

Torque arm bracket can be mounted in three positions.



Torque arm with tensioner and bushing spanner wrench are supplied as standard.

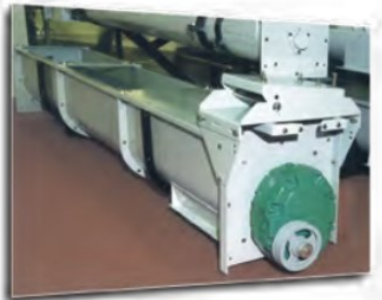
Ribbed housing is precision machined in matched pairs for maximum strength, rigidity and permanent gear alignment.

Hollow shaft protected by removable cap.

Case carbonized gears to 60/64 Rockwell C.
Ground, crown shaved or skived helical gears.

Oversized taper roller and ball bearings.
Standard double lip seals on ground and polished shafts.

Examples of applications



Screw conveyor drive



Belt conveyor drive

Other product available in POULIBLOC range

POULIBLOC 3000

Single reduction gearbox.

Reduction ratio 1/5 and 1/8.

Cylindrical bore.

Economical series.

Available in 3 sizes up to 11 kW, with oil or grease lubrication.



Selection

Poulibloc (Pb) gearbox : RK plain form, with TB taper bush (Pb 2005 to Pb 2720)

10 à 355 min⁻¹

Input shaft mounting AP

Class I
(Kp=1)

LS, LSES motors, power kW

Output speed	0,37	0,55	0,75	0,9	1,1	1,5	1,8	2,2	3	4	5,5	7,5	9	11	15	18,5	22	30	37	45	55'	
min ⁻¹	4 pole																					
	71	80		90				100	112		132		160		180	200		225		250		
	2 stages, reductions 12, 15, 20 and 25 ²																					
25									2225					2525		2625						
28		2025						2125			2325		2425									
31,5									2220				2420									
35,5			2020										2325		2520		2620					
40								2120														
45					2015								2315		2420	2515		2615		2720		
50									2115	2215					2412							
56										2212												
63													2312									
71												2215			2315							
80					2012												2512		2612		2712	
90													2215			2412						
100										2112					2312							
112													2212									
125																						
140															2212							

1 stage, reduction : 5²

112																						
125																						
140																						
160																						
180										2005			2105	2205		2405						
200															2305				2505			
225																					2605	
250																						
280																						
315																						

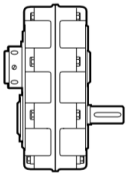
1. LSES B35 obligatory

2. i Poulibloc selected depending on the pulley Ø ratio of 1/1, 1/2 or 1/3

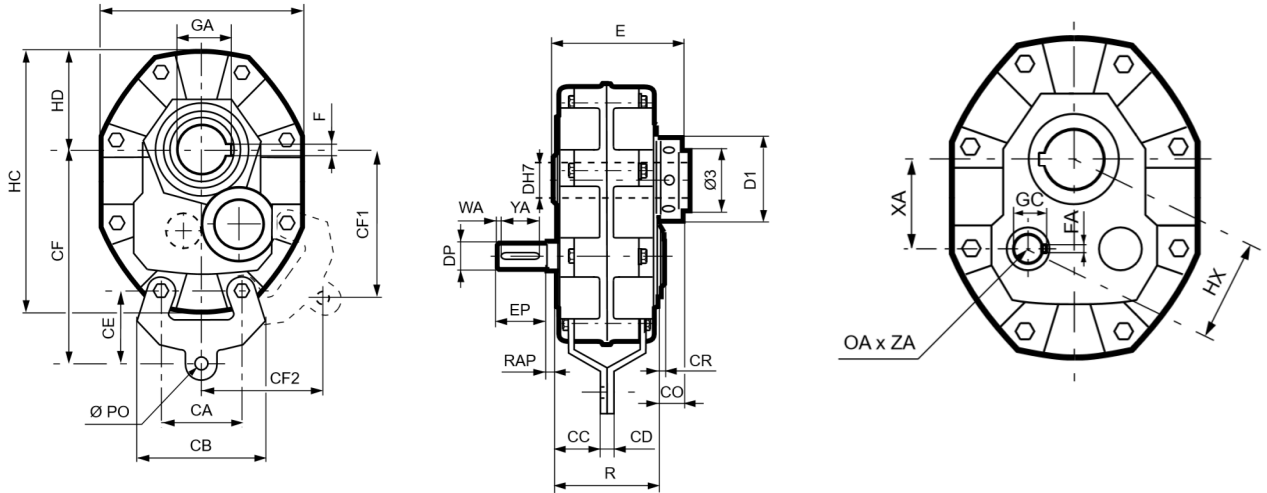
Selection

Required power :	4 kW
Required speed :	60 min ⁻¹
Duty factor necessary for the application :	Kp = 1
Diameter of driven shaft :	45
Mounting :	taper bush

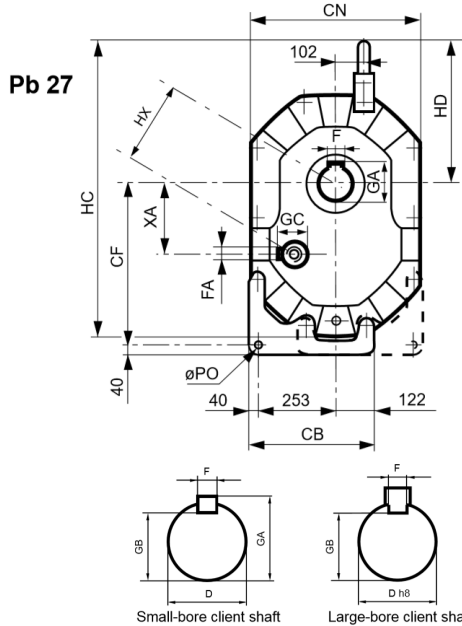
Designation : Pb 2112 i : 11,5 RK W TB Ø 45H7 M AP (motor LSES 112M 4 kW - pulley ratio 1/2)
or Pb 2120 i : 20,6 RK W TB Ø 45H7 M AP (motor LSES 112M 4kW - pulley ratio 1/1,2)



Dimensions (mm)



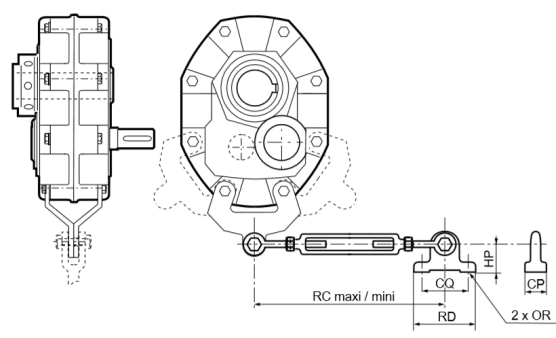
Typ	Reducers										Output shaft and taper bush						Input shaft						kg							
	CA	CB	CC	CD	CE	CF	CF1	CF2	CN	CO	CR	HC	HD	HX	PO	R	XA	Ø3	D1	E	DP	EP		FA	GC	OA	ZA	RAP	WA	YA
Pb 27--	-	416	121,3	38	-	521,5	-	-	550	80	13	890	405	273	32	231	253	M175x3	215	312,5	65	130	18	69	M20	40	0	-	0	295
Pb 2612 to 2625	179	277	122	20	130	440	307	247	410	58	23	522	191	192	17	238	172,2	M135x3	165	300,5	55	120	16	59	M16	36	0	5	105	158
Pb 2605	179	277	122	20	130	440	307	247	410	58	23	522	191	192	17	238	172,2	M135x3	165	300,5	48	120	14	51,5	M16	36	0	5	105	158
Pb 2512 to 2525	156	234	109	16	110	377	264	212	357	44	13	452	165	164	17	210	147,7	M108x3	135	259	50	110	14	53,5	M16	36	0	5	100	106
Pb 2505	156	234	109	16	110	377	264	212	357	44	13	452	165	164	17	210	147,7	M108x3	135	259	38	80	10	41	M12	26	0	5	100	106
Pb 24--	136	213	75	10	100	332	233	191	316	36	13	395	146	145	16	170	131,8	M97x3	121	207	50	110	14	53,5	M16	36	0	5	100	68
Pb 23--	123	190	67	10	80	290	204	156	284	36	13	361	133	126	16	147	112	M80x2	106	184	35	80	10	38	M12	26	0	3	72	52
Pb 22--	108	172	61	10	75	260	177	139	252	36	13	320	118	107	16	131	95,8	M68x2	96	171	32	80	10	35	M10	22	0	4	72	32
Pb 21--	90,5	162	55	10	72	227	157	130	214	36	13	269	100	92	16	120	84,3	M64x2	86	158	28	60	8	31	M10	22	0	6	48	24
Pb 20	82,5	140	48	10	68	210	140	112	198	36	13	245	90	85	16	109	76,6	M52x2	75	138	24	60	8	27,5	M8	19	0	6	48	19



Standard bores				Taper bush TB for Pb							
D ^{H7}	F	GB	GA	20	21	22	23	24	25	26	27
20	6	16,5	22,5	◇							
25	8	21	28	◇	◇						
30	8	26	33	◇	◇	◇					
35	10	30	38	◇◇	◇	◇	◇				
40	12	35	43	◇◇	◇	◇	◇				
45	14	39,5	48,5		◇◇	◇	◇	◇			
50	14	44,5	53,5		◇◇	◇◇	◇	◇			
55	16	49	59			◇◇	◇◇	◇			
60	18	53	64				◇◇	◇	◇		
65	18	58	69					◇	◇		
70	20	62,5	74,5					◇◇	◇	◇	
75	20	67,5	79,5					◇◇	◇	◇	
80	22	71	85						◇◇	◇	
85	22	76	90						◇◇	◇	
90	25	81	95							◇	
95	25	86	100							◇◇	
100	28	90	106							◇◇	◇
110	28	100	116								◇
120	32	109	127								◇

Minimum length of client shaft 80 82 105 116 134 153 194 260

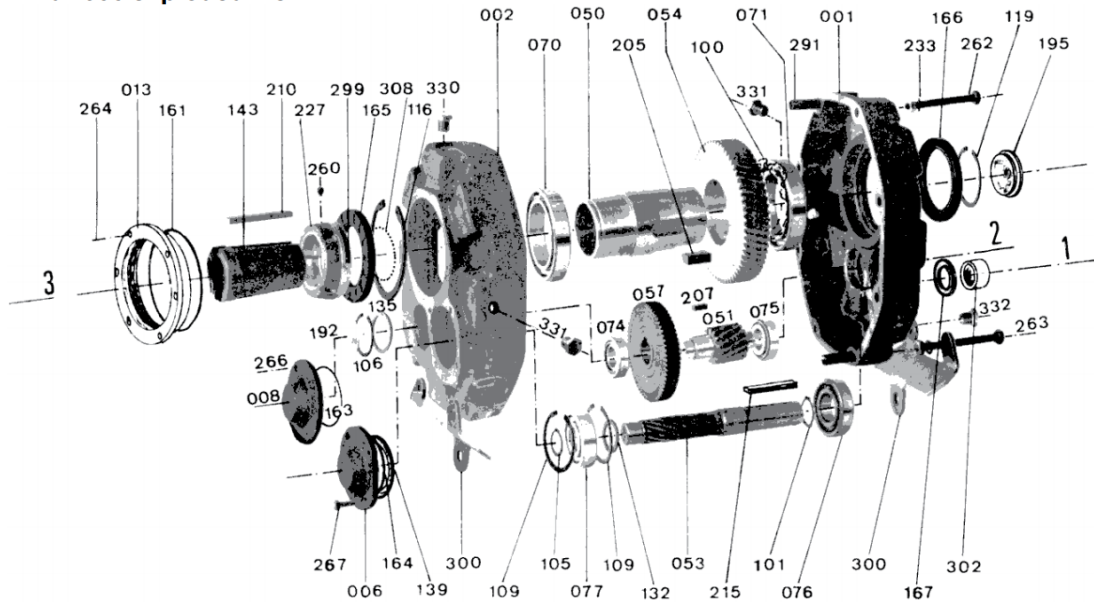
◇ : Client key with small bores, dimensions GA shown
 ◇◇ : Key supplied, dimensions GA not shown
 For tapered bush adaptation, please consult maintenance manual.



Typ	Torque arm						
	CP	CQ	HP	OR	RC maxi	RC mini	RD
Pb 27--	80	210	80	32	840	670	280
Pb 26--	50	105	45	17	540	440	144
Pb 25--	50	105	45	17	540	440	144
Pb 24--	53	95	38	15	450	365	150
Pb 23--	53	95	38	15	450	365	150
Pb 22--	53	95	38	15	450	365	150
Pb 21--	53	95	38	15	450	365	150
Pb 20--	53	95	38	15	450	365	150

The torque arm should be positioned in line with the mounting bracket.
 3 positions are possible (Pb27 : 2 positions).

Pb 2000 exploded view



Pb 2000 parts list

Ref.	Description	Qty	Ref.	Description	Qty	Ref.	Description	Qty
001	housing-rear	1	106	retaining ring axis 2	1	213	sealing joint ring	1
002	housing-front	1	109	retaining ring axis 1	2	215	input shaft key	1
006	input shaft cap axis 1	1	116	retaining ring axis 3	1	227	bushing collar	1
008	intermediate shaft cap axis 2	1	119	retaining ring axis 3	1	228	nuts	8/10
013	output shaft cap axis 3	1	132	input shaft spacer ring axis 1	1	233	assembly washer	8/10
050	output shaft axis 3	1	135	adjustment gages axis 3	1	260	bushing set screw	1
051	intermediate pinion shaft axis 2	1	139	adjustment gages axis 1	1	262	fixing screws	7/6
053	input shaft axis 1	1	143	tapered bushing	1	263	screws	2/3
054	output gear axis 3	1	161	"O" ring seal axis 3	1	264	input cap screws (013)	6
057	intermediate gear axis 2	1	163	"O" ring seal axis 2	1	266	input cap screws (008)	4
070	output shaft bearing axis 3	1	164	"O" ring seal axis 1	1	267	input cap screws (006)	4
071	output shaft bearing axis 3	1	165	output shaft seal axis 3	1	291	centering pins	2
074	intermediate shaft bearing axis 2	1	166	input shaft seal axis 3	1	299	screw and washers	1
075	intermediate shaft bearing axis 2	1	167	input shaft seal axis 1	1	300	torque arm housing bracket	2
076	input shaft bearing axis 1	1	192	intermediate shaft cap axis 2	1	302	spacer	1
077	input shaft bearing axis 1	1	195	output shaft cap	1	308	ball set	1
100	retaining ring axis 3	1	205	output gear key axis 3	1	330	filling plug	1
101	retaining ring axis 1	1	207	intermediate gear key axis 2	1	331	level plug	2
105	retaining ring axis 1	1	210	hub key	1	332	drain plug	1

Pb 2000 1 stage maintenance parts

Pb type		2605	2505	2405	2305	2205	2105	2005
drawing		215028	215030	224186	224189	224191	224193	224195
Description	Ref.							
Bearings	70	16030	6024	6020	6017	6015	6013	6011
	71	16030	6024	6020	6017	6015	6013	6011
	76	T2 ED 050	32308	30210	22207	30207	22206	22205
	77	T2 ED 050	32308	30308	6306	30306	6305	6205
Seals	163	88,6x1,78	69,6x1,78	-	-	-	-	-
	164	101,3x1,78	88,6x1,78	88,6x1,78	69,6x1,78	69,6x1,78	62x3	48x2
	165	150x180x15 AS	120x150x15 AS	100x150x13 AS	85x130x13 AS	75x115x10 AS	65x100x10 AS	55x90x10 AS
	166	150x180x15 AS	120x150x15 AS	100x120x12 AS	85x110x12 AS	75x100x10 AS	65x85x13 AS	55x72x10 AS
	167	60x85x13 AS	50x80x13 AS	55x68x8	40x55x8	40x52x7 AS	30x50x10 AS	25x40x8 AS

Pb 2000 2 stage maintenance parts

Pb type		27--	26--	25--	24--	23--	22--	21--	20--
drawing		215031	215027	215029	224187	224188	224190	224192	224194
Description	Ref.								
Bearings	70	6038	16030	6024	6020	6017	6015	6013	6011
	71	6038	16030	6024	6020	6017	6015	6013	6011
	74	33214	33210	33207	33206	30306	30205	30204	6304
	75	33214	33210	33207	33206	30306	30205	30204	6304
	76	33114	33211	33210	NJ 210 ECP	NJ 207 ECP	NJ 207 ECP	NJ 206 ECP	6205
	77	30311	30309	30308	6308	21306 CC	6306	6305	6205
	161	280x3	-	-	-	-	-	-	-
Seals	163	125x3	88,6x1,78	69,6x1,78	-	-	-	-	-
	164	160x3	101,3x1,78	88,6x1,78	88,6x1,78	69,6x1,78	69,6x1,78	62x3	48x2
	165	190x220x12 AS	150x180x15 AS	120x180x15 AS	100x150x13 AS	85x130x13 AS	75x115x10 AS	65x100x10 AS	55x90x10 AS
	166	190x220x12 AS	150x180x15 AS	120x150x15 AS	100x120x12 AS	85x110x12 AS	75x100x10 AS	65x85x13 AS	55x72x10 AS
	167	70x90x10 AS	60x85x13 AS	55x80x8 AS	55x68x8	40x55x8	35x52x10 AS	30x50x10 AS	25x40x8 AS

Lubrication

⚠ Gearbox Poulibloc is supplied without oil. Before running it is necessary to:

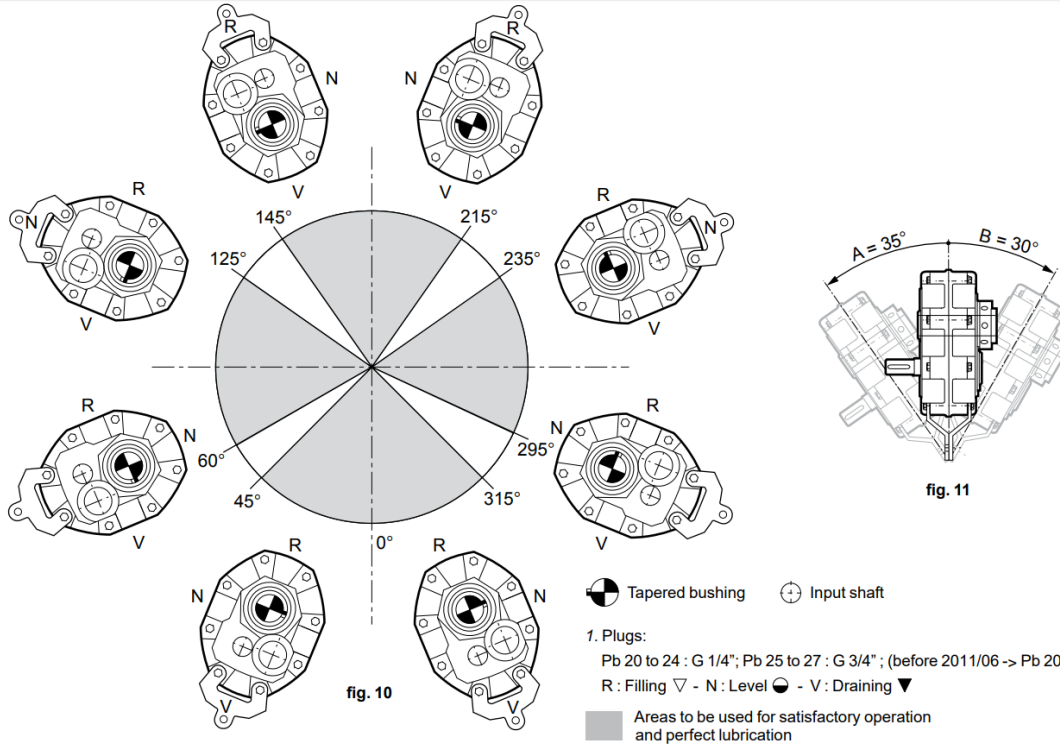
- 1 - determine mounting position (see table § 1.2.2) ;
- 2 - install drain plug (magnetic) to lowest gearbox point ;
- 3 - fill gearbox up to level plug ;
- 4 - place the breather plug to highest gearbox point.

Recommended oil

Gearbox with or without backstop, for operation:

- between -10 and +50°C: mineral oil extreme pressure ISO VG 220 (Mobilgear 600 XP 220, Shell Omala S2 G 220) ;
- between -30 and +50°C: synthetic oil PAO ISO VG 150 (Mobil SHC SIBUS 150).

Plugs position (R, N, V)¹



Oil Capacities

The oil capacities shown in table are approximative values and should be used only as reference in determining how much oil to provide. The proper oil levels can only be determined by **filling the reducer to the level of the plug (fig. 10)**.

Note: For proper oil level other than horizontal position, maximum inclination allowed is A=35° and B=30° (fig. 11).

For special mounting position not shown, please consult HMA Flow & Industrial.

⚠ Place the breather plug at the top of the gearbox

Operating position	Pb 20	Pb 21	Pb 22	Pb 23	Pb 24	Pb 25	Pb 26	Pb 27
	G 1/4" litre ¹	G 1/4" litre ¹	G 1/4" litre ¹	G 1/4" litre ¹	G 1/4" litre ¹	G 3/4" litre ¹	G 3/4" litre ¹	G 3/4" litre ¹
B3	0.75	1	1.75	2.5	4	5	8.5	14
B6	0.75	0.9	1.75	2.3	3.55	5.2	8.3	13
B7	0.75	0.9	1.75	2.3	3.55	5.2	8.3	13
B8	0.7	0.75	1.4	2	3.3	4.9	7.6	12
V5	1.25	1.5	2.25	3.5	4.5	6.5	9.5	17

1. Tolerance: ± 0.05 litre for oil quantity < 5 litre
 ± 2% for oil quantity ≥ 5 litre