

Planetary Screw Assemblies PLSA

Genel Avantajları:

- Bilyalı somunlara göre 4 kat daha dayanıklı,
- Ulaşılabilecek lineer hız değerleri bilyalı somunlarla yaklaşık aynı,
- T5, T7 ve T9 hassasiyet sınıflarında üretim,
- Planet Dişli Somun + Vidalı Mil + İşçilik şeklinde sevk,



Cylindrical Single Nut ZEM-E-S

- With standard seals
- With backlash max. 0.03 mm or preload
- For precision screws PSR in tolerance grade T5, T7, T9 (with backlash only)

Note: Delivered only as a complete unit.



Ordering code PLSA:

PLSA	20 x 5R	ZEM-E-S	00	4	0	T7	R	822Z150	412Z120	1250	1	1
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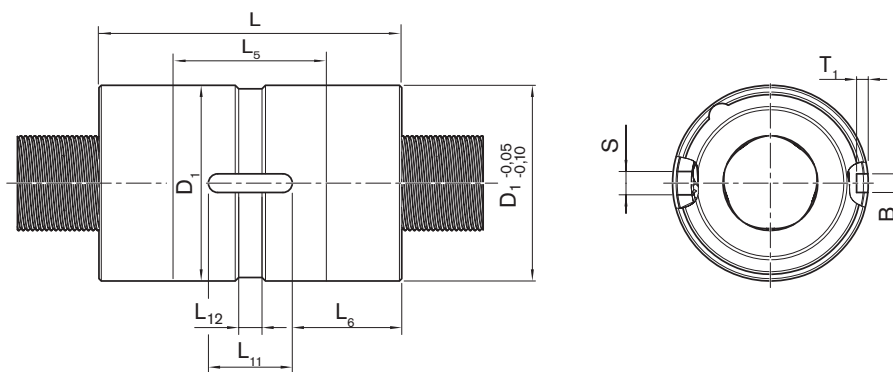
C = dynamic load rating
C₀ = static load rating
d₀ x P = size
d₀ = nominal diameter
no. = part number
P = lead (R = right-hand)
S = lube port
v_{max} = maximum linear speed

d ₀ x P	no.	C ¹⁾ (kN)	C ₀ ¹⁾ (kN)	v _{max} ²⁾ (m/min)
20 x 5R	R157C A10 03	55	80	37.5
30 x 5R	R157C 310 13	87	178	25.0
30 x 10R	R157C 330 03	101	174	50.0
39 x 5R	R157C 410 03	123	269	19.2
39 x 10R	R157C 430 03	145	271	38.4
48 x 5R	R157C 610 03	188	481	15.6
48 x 10R	R157C 630 03	220	475	31.2
60 x 10R	R157C 730 03	322	780	25.0
60 x 20R	R157C 770 03	375	786	50.0
75 x 10R	R157C 830 03	480	1 487	20.0
75 x 20R	R157C 870 03	544	1 496	40.0

1) The load ratings are valid for tolerance grade T5 only.

For other tolerance grades, please consider the correction factor f_{ac} on page 243.

2) See "Characteristic speed" on page 243 and "Critical speed n_{cr} " on page 260



d ₀ x P	(mm)									Weight
	B ^{P9}	D _{1 g6}	L	L ₅	L ₆	L ₁₁ ^{+0.2}	L ₁₂	T ₁ ^{+0.1}	S	m (kg)
20 x 5R	4	42	65	34	23.5	18	5.0	2.5	2	0.62
30 x 5R	6	64	85	53	26.5	32	5.0	3.5	5	1.25
30 x 10R	6	64	85	53	26.5	32	5.0	3.5	5	1.25
39 x 5R	8	80	100	64	30.0	40	7.0	4.0	5	2.00
39 x 10R	8	80	100	64	30.0	40	7.0	4.0	5	2.00
48 x 5R	8	100	127	87	41.0	45	7.0	4.0	5	4.20
48 x 10R	8	100	127	87	41.0	45	7.0	4.0	5	4.20
60 x 10R	10	122	152	99	53.5	45	10.5	5.0	5	6.82
60 x 20R	10	122	152	99	53.5	45	10.5	5.0	5	6.80
75 x 10R	10	150	191	129	64.0	63	10.5	5.0	5	14.00
75 x 20R	10	150	191	129	64.0	63	10.5	5.0	5	13.70

Flanged Single Nut FEM-E-S

- With standard seals
- With backlash max. 0.03 mm or preload
- For precision screws PSR in tolerance grade T5, T7, T9 (with backlash only)

Note: Delivered only as a complete unit.



Ordering code PLSA:

PLSA	20 x 5R	FEM-E-S	00	4	0	T5	R	812Z150	412Z120	1100	1	1
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- C** = dynamic load rating
C₀ = static load rating
d₀ x P = size
d₀ = nominal diameter
no. = part number
P = lead (R = right-hand)
S = lube port
v_{max} = maximum linear speed

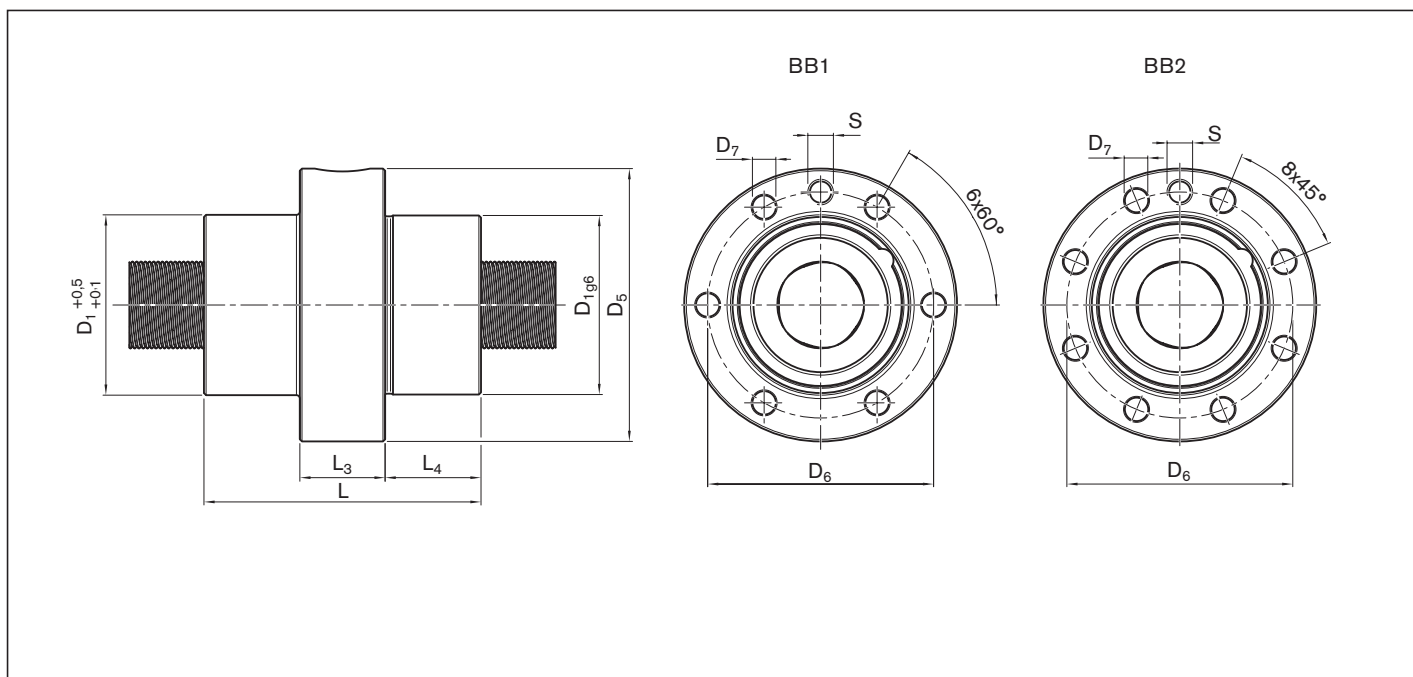
d ₀ x P	no.	C ¹⁾ (kN)	C ₀ ¹⁾ (kN)	v _{max} ²⁾ (m/min)
20 x 5R	R157C A10 01	55	80	37.5
30 x 5R	R157C 310 11	87	178	25.0
30 x 10R	R157C 330 01	101	174	50.0
39 x 5R	R157C 410 01	123	269	19.2
39 x 10R	R157C 430 01	145	271	38.4
48 x 5R	R157C 610 01	188	481	15.6
48 x 10R	R157C 630 01	220	475	31.2
60 x 10R	R157C 730 01	322	780	25.0
60 x 20R	R157C 770 01	375	786	50.0
75 x 10R	R157C 830 01	480	1 487	20.0
75 x 20R	R157C 870 01	544	1 496	40.0

1) The load ratings are valid for tolerance grade T5 only.

For other tolerance grades, please consider the correction factor f_{ac} on page 243.

2) See "Characteristic speed" on page 243 and "Critical speed n_{cr} " on page 260

Dinamik Yük Karşılaştırmaları:				
Planet Somun	Bilyalı Somun	Bilyalı Somun	Planet Somun	Dinamik Yük Karşılaştırması
20x5	20x5	14300 N	55000 N	3.84 kat daha dayanıklı
30x5	32x5	21600 N	87000 N	4.03 kat daha dayanıklı
30x10	32x10	31700 N	101000 N	3.19 kat daha dayanıklı
39x5	40x5	29100 N	123000 N	4.23 kat daha dayanıklı
...	...	...	...	
60x10	63x10	88800 N	322000 N	3.63 kat daha dayanıklı
75x10	80x10	108400 N	480000 N	4.43 kat daha dayanıklı



d ₀ x P	(mm)										Weight m (kg)
	D ₁	D ₅	Hole pattern	L	D ₆	D ₇	L ₃	L ₄	L ₅	S	
20 x 5R	42	64	BB1	65	53	5.5	20.0	22.5	11.0	M6	0.65
30 x 5R	64	98	BB1	85	81	9.0	27.0	29.0	13.0	M6	2.10
30 x 10R	64	98	BB1	85	81	9.0	27.0	29.0	13.0	M6	2.10
39 x 5R	80	124	BB1	100	102	11.0	33.0	33.5	15.5	M8 x 1	3.70
39 x 10R	80	124	BB1	100	102	11.0	33.0	33.5	15.5	M8 x 1	3.70
48 x 5R	105	150	BB1	127	127	13.5	37.0	45.0	25.0	M8 x 1	7.60
48 x 10R	105	150	BB1	127	127	13.5	37.0	45.0	25.0	M8 x 1	7.60
60 x 10R	122	180	BB1	152	150	17.5	45.0	53.5	27.0	M8 x 1	11.30
60 x 20R	122	180	BB1	152	150	17.5	45.0	53.5	27.0	M8 x 1	11.30
75 x 10R	150	210	BB2	191	180	17.5	45.0	73.0	42.0	M8 x 1	19.40
75 x 20R	150	210	BB2	191	180	17.5	45.0	73.0	42.0	M8 x 1	20.20

Flanged Single Nut, split FDM-E-S

- With standard seals
- With preload
- For precision screws PSR in tolerance grade T5, T7

Note: Delivered only as a complete unit.



Ordering code PLSA:

PLSA	20 x 5R	FDM-E-S	00	4	0	T5	R	812Z150	412Z120	1100	1	1
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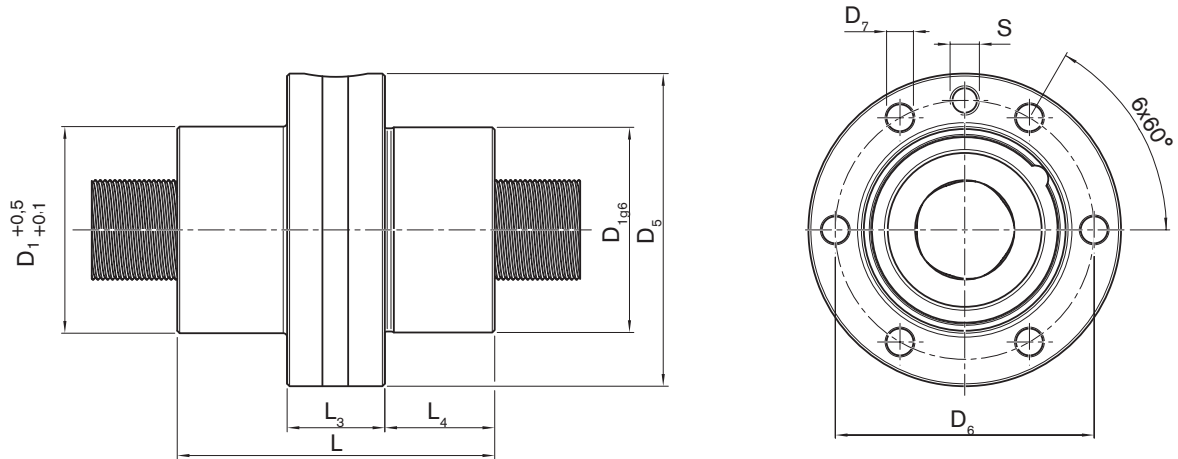
C = dynamic load rating
C₀ = static load rating
d₀ x P = size
d₀ = nominal diameter
no. = part number
P = lead (R = right-hand)
S = lube port
v_{max} = maximum linear speed

d ₀ x P	no.	C ¹⁾ (kN)	C ₀ ¹⁾ (kN)	v _{max} ²⁾ (m/min)
20 x 5R	R157C A10 02	32	40	37.5
30 x 5R	R157C 310 12	50	89	25.0
30 x 10R	R157C 330 02	58	87	50.0
39 x 5R	R157C 410 02	71	134	19.2
39 x 10R	R157C 430 02	84	135	38.4
48 x 5R	R157C 610 02	109	240	15.6
48 x 10R	R157C 630 02	127	237	31.2
60 x 10R	R157C 730 02	187	390	25.0
60 x 20R	R157C 770 02	218	393	50.0

1) The load ratings are valid for tolerance grade T5 only.

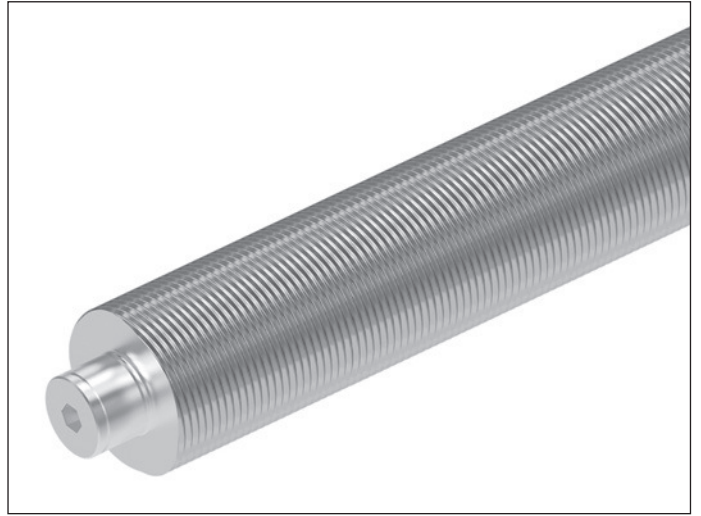
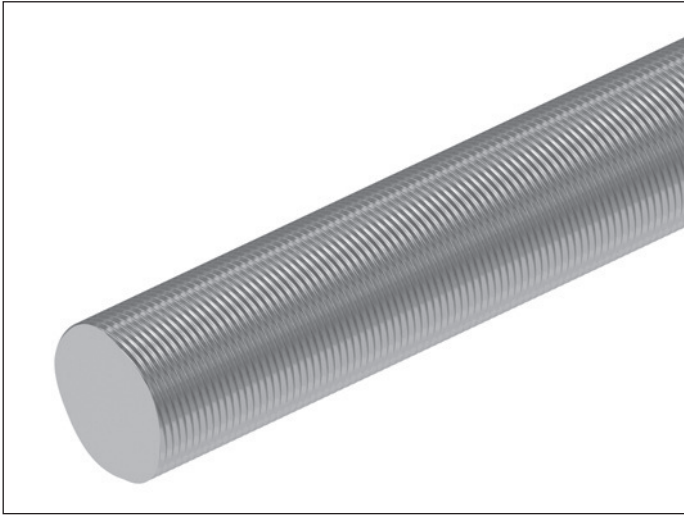
For other tolerance grades, please consider the correction factor f_{ac} on page 243.

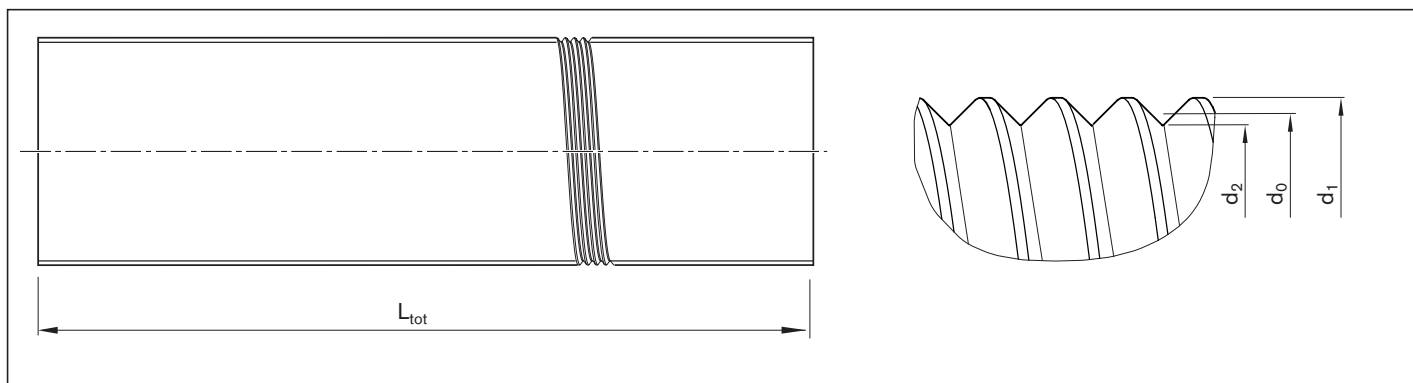
2) See "Characteristic speed" on page 243 and "Critical speed n_{cr} " on page 260



d ₀ x P	(mm)										Weight
	D ₁	D ₅	L	D ₆	D ₇	L ₃	L ₄	L ₅	S	m (kg)	
20 x 5R	42	64	65	53	5.5	20.0	22.5	11.0	M6	0.65	
30 x 5R	64	98	85	81	9.0	27.0	29.0	13.0	M6	2.10	
30 x 10R	64	98	85	81	9.0	27.0	29.0	13.0	M6	2.10	
39 x 5R	80	124	100	102	11.0	33.0	33.5	15.5	M6	3.65	
39 x 10R	80	124	100	102	11.0	33.0	33.5	15.5	M6	3.65	
48 x 5R	105	150	127	127	13.5	37.0	45.0	25.0	M8 x 1	7.60	
48 x 10R	105	150	127	127	13.5	37.0	45.0	25.0	M8 x 1	7.60	
60 x 10R	122	180	152	150	17.5	45.0	53.5	27.0	M8 x 1	11.10	
60 x 20R	122	180	152	150	17.5	45.0	53.5	27.0	M8 x 1	11.10	

Precision Screw PSR





$d_0 \times P$	(mm)		Length		J_s (kgcm ² /m)	Weight m (kg/m)
	d_1	d_2	Standard	on request		
20 x 5R	20.3	19.5	3 000	1 500	1.22	2.45
30 x 5R	30.3	29.5		2 500	6.21	5.54
30 x 10R	30.5	29.1			6.15	5.51
39 x 5R	39.3	38.5			17.64	9.36
39 x 10R	39.5	38.1			17.64	9.33
48 x 5R	48.3	47.5			40.88	14.21
48 x 10R	48.5	47.1		5 000	40.62	14.16
60 x 10R	60.5	59.1			99.38	22.15
60 x 20R	61.1	58.1			98.38	22.03
75 x 10R	75.5	74.1			243.37	34.67
75 x 20R	76.1	73.1			241.32	34.51

Precision screws PSR, with mechanically connected screw ends

These screws consist of

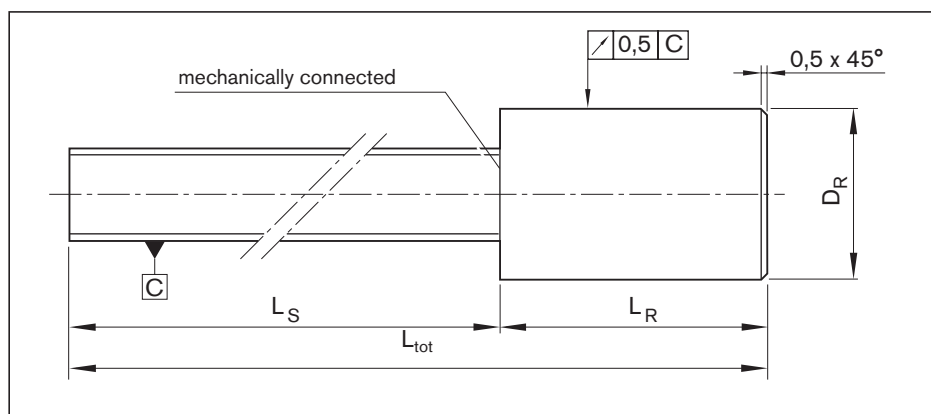
- a precision screw part and
- an unmachined spigot (as the screw journal).

The spigot is mechanically connected on one side and is available in different sizes.

We have a solution to prevent problems arising from big end bearing diameters (e.g. visible thread grooves or axial contact faces which are too small for the fixed bearing). Please consult us.

Separate delivery of a screw without end machining and without nut is not planned.

$d_0 \times P$ = size
 d_0 = nominal diameter
 J_s = moment of inertia
 P = lead (R = right-hand)



$d_0 \times P$ (mm)	Tolerance grade	(mm)			
		D_R -1	L_R +2	L_{tot}	L_S
20 x 5R	T5	36.40	200	1 700	1 500
30 x 5R/10R		46.10	250	2 050	1 800
39 x 5R/10R		76.25	275	2 175	1 900
48 x 5R/10R		80.40	400	2 300	1 900
60 x 10R/20R		98.30	400	3 300	2 900
75 x 10R/20R		110.40	465	3 365	2 900