

# Self-aligning linear ball bearings

Light range – metric sizes



**”THE NEW KS”**  
Maximum benefit,  
minimum cost



## Features

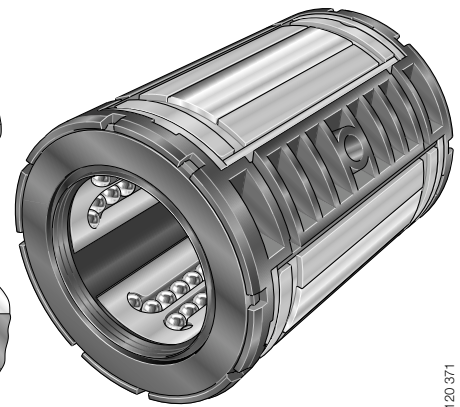
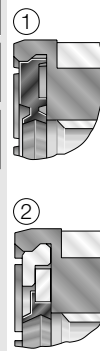
### Self-aligning linear ball bearings

- are units comprising a housing, movable segments and seals
  - housing in closed or open design
  - segments comprise a segment upper section, load plate, rolling elements (balls) and a segment lower section including the ball recirculation tracks
- automatically compensate misalignments of the bearing central axis due to the movable segments. Shaft misalignments of up to max.  $\pm 40$  angular minutes are therefore possible without impairing the bearing load carrying capacity or operating life
- have no reduction in load ratings due to edge pressure within the shaft misalignment tolerance, and can therefore support considerably higher loads than non-aligning linear ball bearings of the same diameter
- run very quietly and with very low friction due to
  - the automatic compensation of misalignments
  - ground rolling element raceways in the load plates
- run without stick-slip – as compared with plain bearings – and are therefore suitable even for applications requiring high positional accuracy
- allow high speeds up to 5 m/s and accelerations up to  $100 \text{ m/s}^2$
- allow the construction of linear guidance systems with unlimited travel
- are sealed on both sides by gap seals or contact seals with a floating support arrangement
  - open linear ball bearings also have integral sealing strips on both sides
- sealed versions are supplied greased and are maintenance-free in many applications due to the integral lubricant reservoir
- are dimensioned so that they can replace conventional linear ball bearings even in existing applications
- can be supplied combined with housings as housing units
- are suitable for use with supported shafts in the open version and with the appropriate housing
- have adjustable clearance and can be preloaded in conjunction with open, slotted housings
- can be combined with INA housings and shafts or shaft and support rail units to achieve optimally matched, ready-to-fit, particularly cost-effective complete linear solutions with a long operating life
- are also produced in inch dimensions (series KX, KXO, see *INA Market Information MAI 70*).

### Self-aligning linear ball bearings



**KS  
KS..PP**



120 371

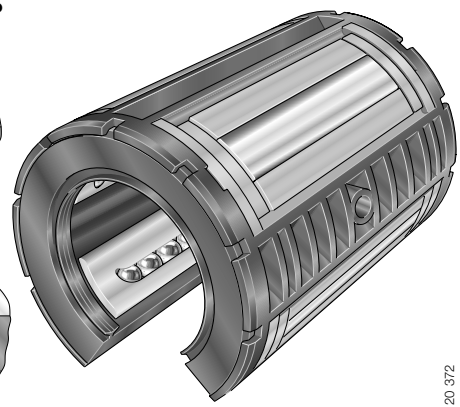
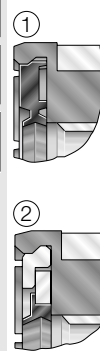
- self-aligning linear ball bearings, closed design
- KS with gap seals ① on both sides
- KS..PP with lip seals ② on both sides
- for operating temperatures up to  $+80 \text{ }^\circ\text{C}$
- for shaft diameters from 12 mm to 50 mm



6



**KSO  
KSO..PP**



120 372

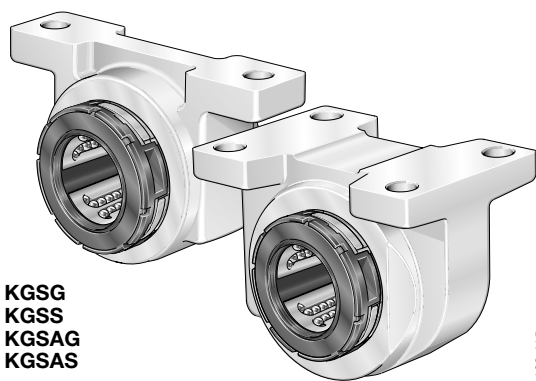
- self-aligning linear ball bearings, open design, for supported shafts
- KSO with gap seals ① on both sides
- KSO..PP with lip seals ② on both sides
- integral gap type sealing strips
- for operating temperatures up to  $+80 \text{ }^\circ\text{C}$
- for shaft diameters from 12 mm to 50 mm



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# Self aligning linear ball bearing and housing units

## Units



**KGSG  
KGSS  
KGSAG  
KGSAS**

120 415

- housing pressure diecast, fitted with self-aligning linear ball bearing KS..PP
- KGSS, KGSAS slotted and with adjustable clearance
- for operating temperatures up to +80 °C
- for shaft diameters from 12 mm to 50 mm

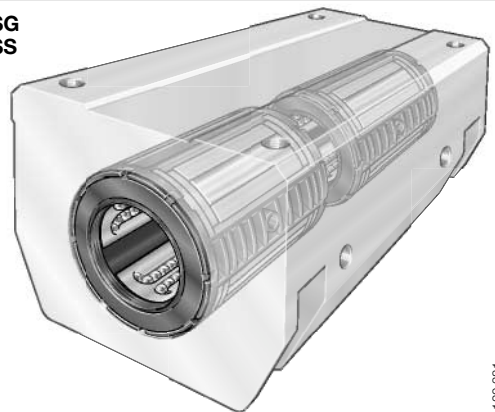


8/10

## Units – tandem arrangement



**KTSG  
KTSS**

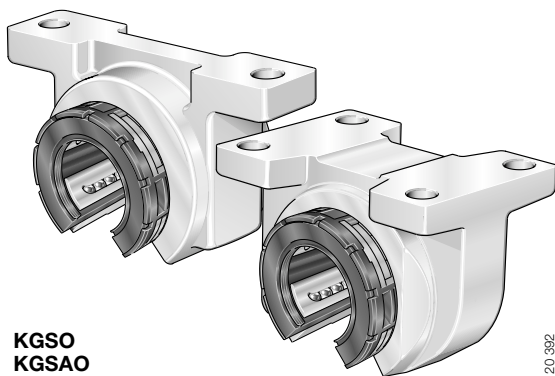


120 381

- housing made from high strength aluminium alloy, fitted with two self-aligning linear ball bearings KS..PP in tandem arrangement, bearings can be relubricated
- KTSS slotted and with adjustable clearance
- for operating temperatures up to +80 °C
- for shaft diameters from 12 mm to 30 mm



16



**KGSO  
KGSAO**

120 392

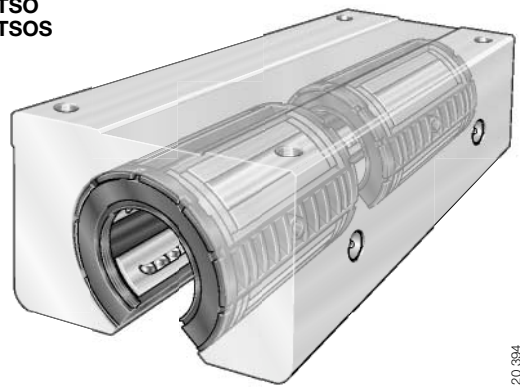
- housing pressure diecast, open design, suitable for supported shafts, fitted with self-aligning linear ball bearing KSO..PP
- for operating temperatures up to +80 °C
- for shaft diameters from 12 mm to 50 mm



8/10



**KTSO  
KTSOS**



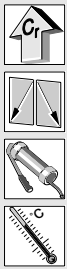
120 394

- housing made from high strength aluminium alloy, open design, suitable for supported shafts, fitted with two self-aligning linear ball bearings KSO..PP in tandem arrangement, bearings can be lubricated
- KTSOS slotted and with adjustable clearance
- for operating temperatures up to +80 °C
- for shaft diameters from 12 mm to 30 mm

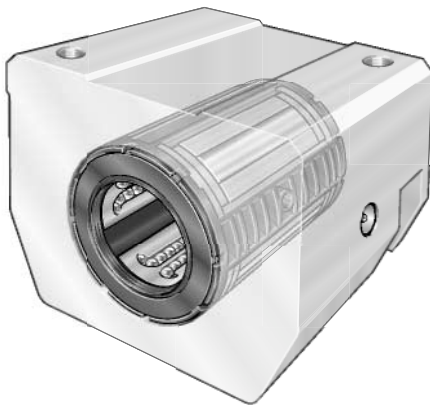


18

**Units**



**KGSNG  
KGSNS**



120.416

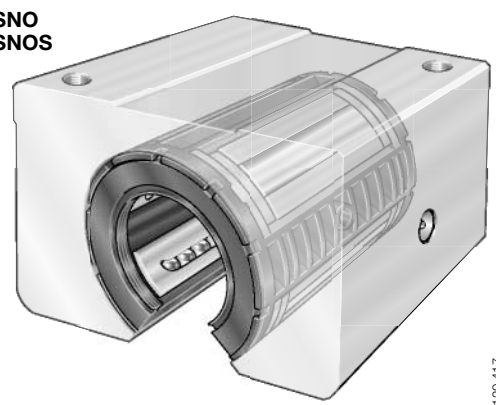
- housing made from high strength aluminium alloy, fitted with self-aligning linear ball bearing KS..PP, bearing can be relubricated
- KGSNS slotted and with adjustable clearance
- for operating temperatures up to +80 °C
- for shaft diameters from 12 mm to 50 mm



16



**KGSNO  
KGSNOS**



120.417

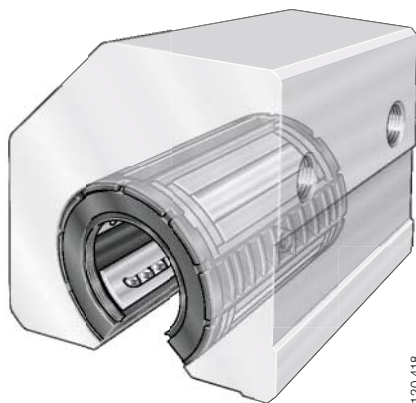
- housing made from high strength aluminium alloy, open design, suitable for supported shafts, fitted with self-aligning linear ball bearing KSO..PP, bearing can be lubricated
- KGSNOS slotted and with adjustable clearance
- for operating temperatures up to +80 °C
- for shaft diameters from 12 mm to 50 mm



18



**KGSC  
KGSCS**



120.418

- housing made from high strength aluminium alloy, open design, suitable for supported shafts, fitted with self-aligning linear ball bearing KSO..PP, bearing can be lubricated
- KGSCS slotted and with adjustable clearance
- for operating temperatures up to +80 °C
- for shaft diameters from 20 mm to 50 mm

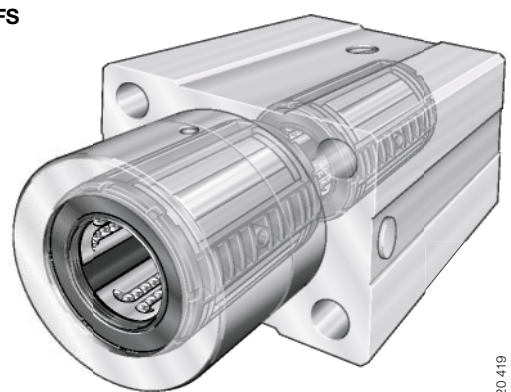


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**Units – tandem arrangement**



**KTFS**



120.419

- housing made from high strength aluminium alloy, fitted with two self-aligning linear ball bearings KS..PP in tandem arrangement, bearings can be relubricated
- for operating temperatures up to +80 °C
- for shaft diameters from 12 mm to 30 mm



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# Shafts



## Features

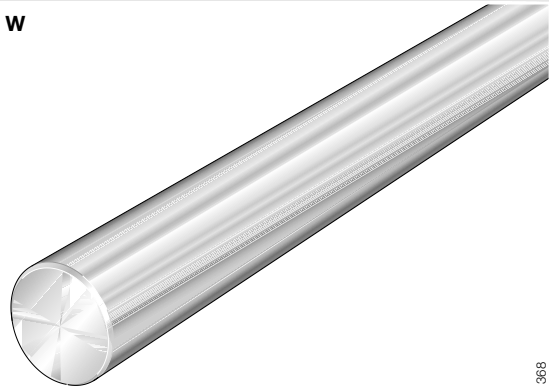
### Shafts

- are precision raceways for INA linear ball bearings
- are made from quenched and tempered steel with a surface hardness of 670 +170 HV (59 +6 HRC)
  - the uniform hardness depth ensures a smooth transition from the hardened surface layer to the tough core
- can be loaded up to the full basic load rating of INA self-aligning linear ball bearings
- are produced as standard in tolerance class h6
- have high accuracy (roundness and parallelism)
- can be supplied in single pieces up to 6 000 mm in length – depending on the diameter
  - longer lengths are available by agreement
  - the shaft ends are chamfered after cutting to length
- can also be supplied in a special version with ends that differ from the standard version
- can be produced with axial or radial threaded holes for fixing (see *Threaded holes*)
- allow the construction of linear guidance systems with high load carrying capacity, high rigidity, high accuracy and a long operating life
- can be combined with INA linear ball bearings or INA linear ball bearing units to achieve optimally matched, ready-to-fit, particularly cost-effective shaft guidance systems
- are used not only as raceways for INA linear ball bearings but also as:
  - guide rods for plain bushes
  - column guides for stud and yoke type track rollers
  - drawing and straightening rollers
  - shafts and axles in a wide variety of different applications.

### Shafts



W



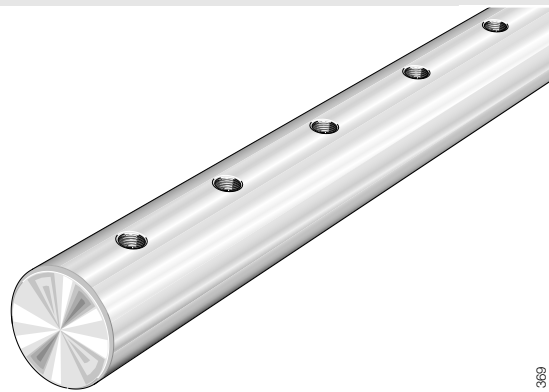
120 368

- high precision solid shaft made from quenched and tempered steel
- standard tolerance h6
  - special tolerances available by agreement
- diameters from 5 mm to 80 mm



24

### Threaded holes



120 369

- recommended radial and axial threaded holes for fixing of high precision solid shafts W
  - for possible combinations see *Dimension table*
- shaft diameters from 5 mm to 80 mm



25

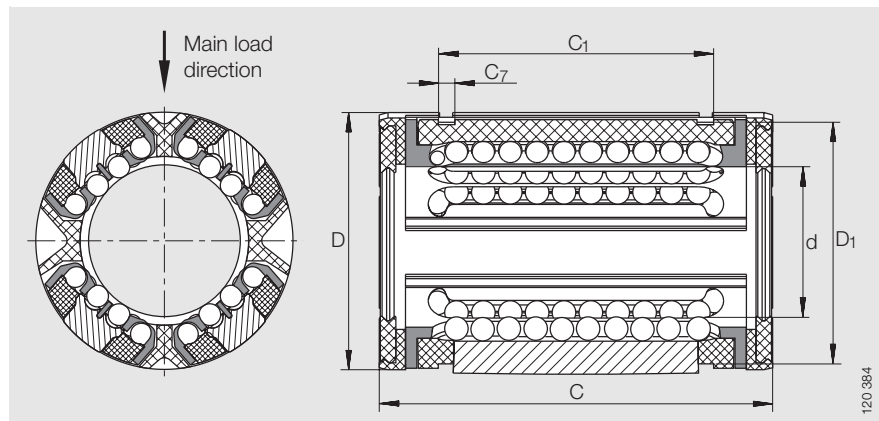
# Dimension tables

# Self-aligning linear ball bearings

## Light range – metric sizes

closed and open designs  
gap seals or  
contact seals on both sides

Series KS  
KS..PP  
KSO  
KSO..PP



KS, KS..PP

### Dimension table · Dimensions in mm

Shaft diameter d	Series				Mass ≈kg	Dimensions			Mounting dimensions	
	KS <sup>1)</sup>	KS..PP <sup>2)</sup>	KSO <sup>1)</sup>	KSO..PP <sup>2)</sup>		d	D	C	A <sub>6</sub> <sup>3)</sup>	C <sub>1</sub>
	Designation	Designation	Designation	Designation					H13	
12	<b>KS 12</b>	<b>KS 12 PP</b>	–	–	0,018	12	22	32	–	22,6
	–	–	<b>KSO 12</b>	<b>KSO 12 PP</b>	0,013	12	22	32	7,6	–
16	<b>KS 16</b>	<b>KS 16 PP</b>	–	–	0,028	16	26	36	–	24,6
	–	–	<b>KSO 16</b>	<b>KSO 16 PP</b>	0,019	16	26	36	10,1	–
20	<b>KS 20</b>	<b>KS 20 PP</b>	–	–	0,051	20	32	45	–	31,2
	–	–	<b>KSO 20</b>	<b>KSO 20 PP</b>	0,038	20	32	45	10	–
25	<b>KS 25</b>	<b>KS 25 PP</b>	–	–	0,102	25	40	58	–	43,7
	–	–	<b>KSO 25</b>	<b>KSO 25 PP</b>	0,075	25	40	58	12,5	–
30	<b>KS 30</b>	<b>KS 30 PP</b>	–	–	0,172	30	47	68	–	51,7
	–	–	<b>KSO 30</b>	<b>KSO 30 PP</b>	0,135	30	47	68	14,3	–
40	<b>KS 40</b>	<b>KS 40 PP</b>	–	–	0,335	40	62	80	–	60,3
	–	–	<b>KSO 40</b>	<b>KSO 40 PP</b>	0,259	40	62	80	18,2	–
50	<b>KS 50</b>	<b>KS 50 PP</b>	–	–	0,589	50	75	100	–	77,3
	–	–	<b>KSO 50</b>	<b>KSO 50 PP</b>	0,454	50	75	100	22,7	–

1) Gap seals on both sides.

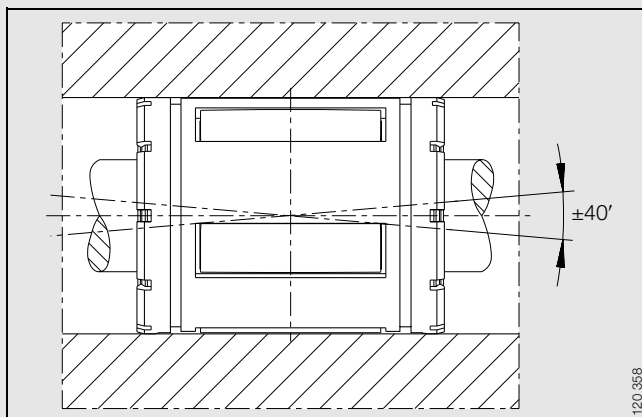
2) Contact seals on both sides.

3) Dimension A<sub>6</sub> on diameter d.

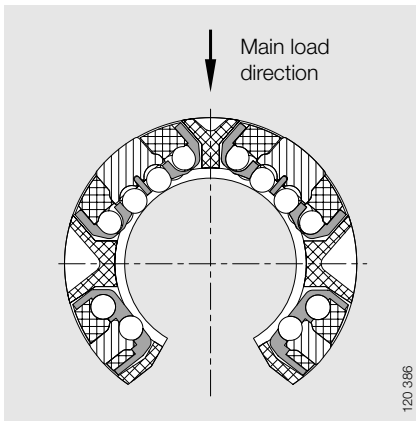
4) Hole arrangement symmetrical with bearing width C.

5) The basic load ratings apply only to hardened (670 +170 HV) and ground shaft raceways.  
Basic load ratings in accordance with DIN 636-1.

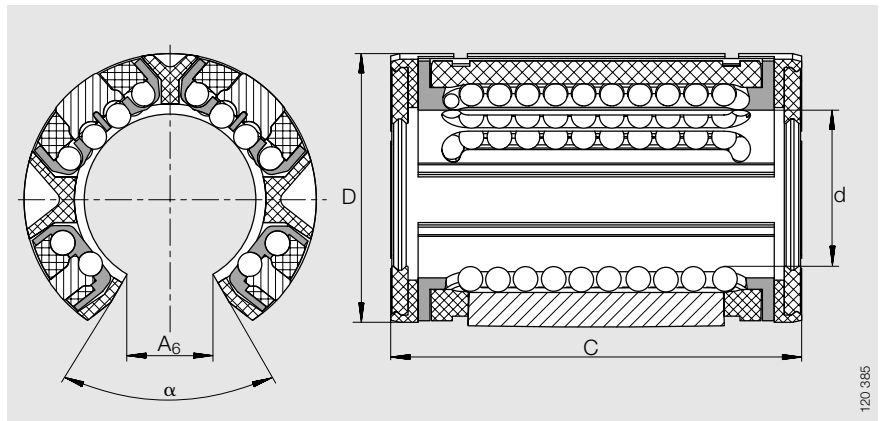
6) Basic load rating in main load direction.



Compensation of misalignments ±40'

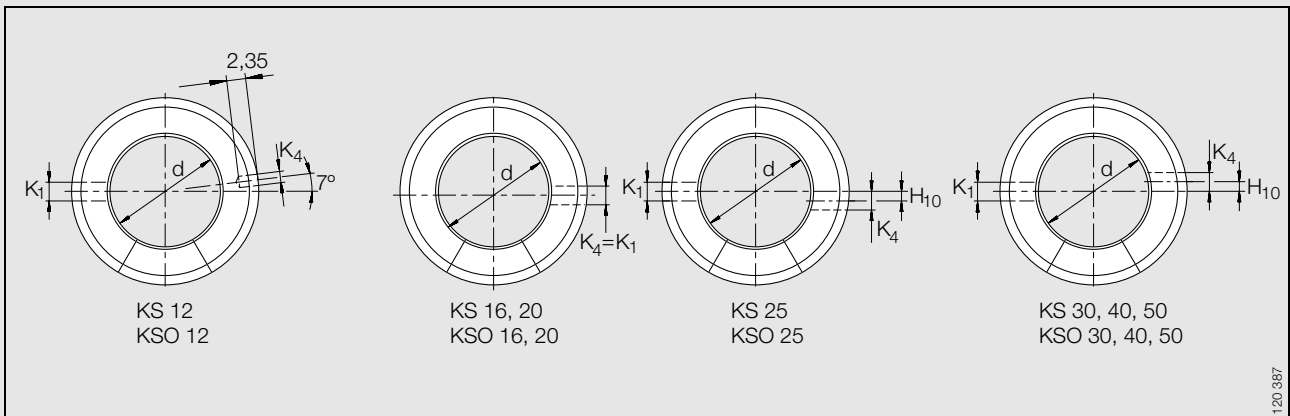


KSO, KSO..PP  
Main load direction



KSO, KSO..PP

C <sub>7</sub>	D <sub>1</sub>	H <sub>10</sub>	K <sub>1</sub> <sup>(4)</sup>	K <sub>4</sub> <sup>(4)</sup>	α Degrees	Ball rows Quantity	Basic load ratings <sup>5)6)</sup>		Suitable snap ring to DIN 471	Shaft diameter d
							dyn. C <sub>max</sub> kN	stat. C <sub>0 max</sub> kN		
1,3	21	–	3	–	–	8	0,9	0,81	22×1,2	<b>12</b>
–	–	–	3	3	78	6	0,9	0,81	–	
1,3	25	–	3	–	–	8	1,43	1,16	26×1,2	<b>16</b>
–	–	–	3	3	78	6	1,43	1,16	–	
1,6	30,7	–	3	–	–	8	2,2	1,73	32×1,5	<b>20</b>
–	–	–	3	3	60	6	2,2	1,73	–	
1,85	38	–	3,5	–	–	8	3,95	3,25	42×1,75	<b>25</b>
–	–	1,5	3,5	3	60	6	3,95	3,25	–	
1,85	44,7	–	3,5	–	–	8	5,9	4,5	48×1,75	<b>30</b>
–	–	2	3,5	3	57	6	5,9	4,5	–	
2,15	59,4	–	3,5	–	–	8	10,2	7,2	63×2	<b>40</b>
–	–	1,5	3,5	3	54	6	10,2	7,2	–	
2,65	71,4	–	4,5	–	–	8	15,1	10,4	75×2,5	<b>50</b>
–	–	2,5	4,5	5	54	6	15,1	10,4	–	

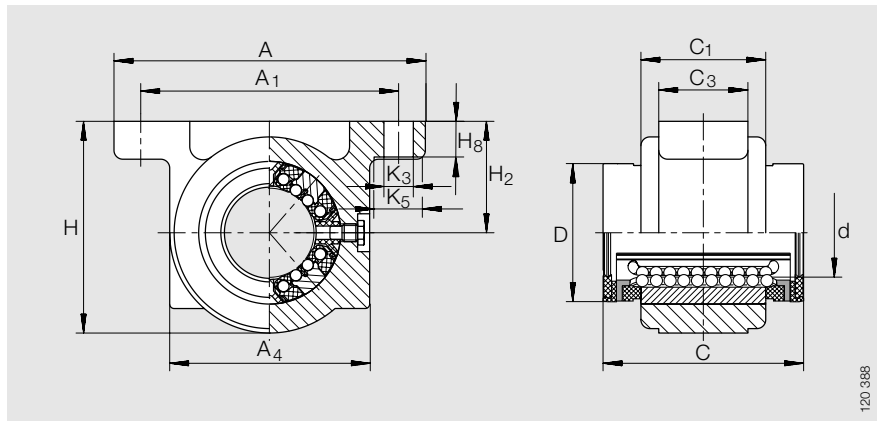


Fixing holes

# Linear ball bearing units

closed and open designs  
contact seals on both sides

Series KGSG..PP  
KGSS..PP  
KGSO..PP



KGSG..PP

120 388

Dimension table · Dimensions in mm

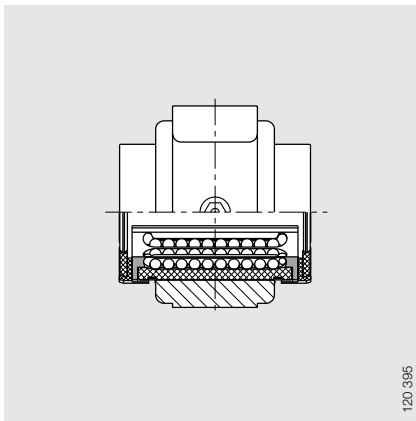
Shaft diameter d	Series			Mass ≈kg	Dimensions				Mounting dimensions		
	KGSG..PP Designation	KGSS..PP Designation	KGSO..PP Designation		d	A	C	H	A <sub>1</sub> ±0,15	A <sub>4</sub>	A <sub>6</sub> <sup>1)</sup>
12	<b>KGSG 12 PP</b>	–	–	0,08	12	52	32	35,8	42	31,6	–
	–	<b>KGSS 12 PP</b>	–	0,08	12	52	32	35,8	42	31,6	–
	–	–	<b>KGSO 12 PP</b>	0,07	12	52	32	–	42	31,6	7,6
16	<b>KGSG 16 PP</b>	–	–	0,13	16	56	36	37,5	46	35	–
	–	<b>KGSS 16 PP</b>	–	0,13	16	56	36	37,5	46	35	–
	–	–	<b>KGSO 16 PP</b>	0,12	16	56	36	–	46	35	10,1
20	<b>KGSG 20 PP</b>	–	–	0,27	20	70	45	47,5	58	45	–
	–	<b>KGSS 20 PP</b>	–	0,27	20	70	45	47,5	58	45	–
	–	–	<b>KGSO 20 PP</b>	0,23	20	70	45	–	58	45	10
25	<b>KGSG 25 PP</b>	–	–	0,51	25	80	58	57,5	68	55	–
	–	<b>KGSS 25 PP</b>	–	0,51	25	80	58	57,5	68	55	–
	–	–	<b>KGSO 25 PP</b>	0,44	25	80	58	–	68	55	12,5
30	<b>KGSG 30 PP</b>	–	–	0,83	30	88	68	66,5	76	63	–
	–	<b>KGSS 30 PP</b>	–	0,83	30	88	68	66,5	76	63	–
	–	–	<b>KGSO 30 PP</b>	0,73	30	88	68	–	76	63	13,6
40	<b>KGSG 40 PP</b>	–	–	1,21	40	108	80	83,5	94	77	–
	–	<b>KGSS 40 PP</b>	–	1,21	40	108	80	83,5	94	77	–
	–	–	<b>KGSO 40 PP</b>	1,05	40	108	80	–	94	77	18,2
50	<b>KGSG 50 PP</b>	–	–	2,53	50	135	100	98	116	96	–
	–	<b>KGSS 50 PP</b>	–	2,53	50	135	100	98	116	96	–
	–	–	<b>KGSO 50 PP</b>	1,98	50	135	100	–	116	96	22,7

1) Dimensions A<sub>6</sub> on diameter d.

2) For fixing screws to EN ISO 4762-8.8.  
If there is a possibility of settling, the fixing screws should be secured against rotation.

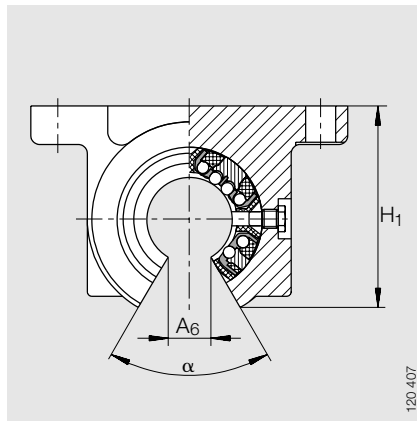
3) The basic load ratings apply only to hardened (670 +170 HV) and ground shaft raceways.  
Basic load ratings in accordance with DIN 636-1.





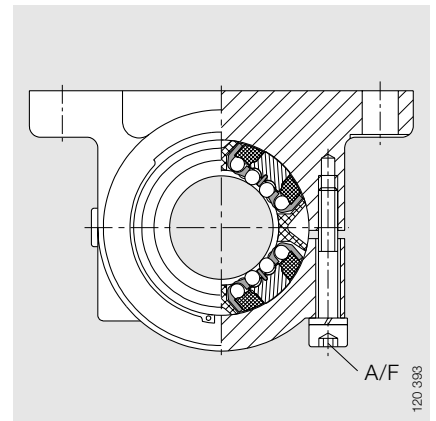
KGSO..PP

120 395



KGSO..PP

120 407



KGSS..PP

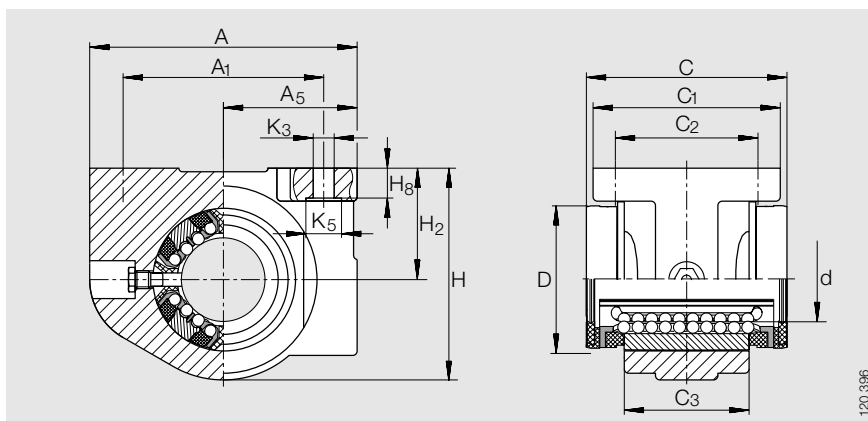
120 393

C <sub>1</sub>	C <sub>3</sub>	D	H <sub>1</sub>	H <sub>2</sub> ±0,015	H <sub>8</sub>	K <sub>3</sub> <sup>2)</sup>	K <sub>5</sub> <sup>2)</sup>	α Degrees	A/F	Ball rows Quantity	Basic load ratings <sup>3)</sup>		Shaft diameter d
											dyn. C <sub>max</sub> kN	stat. C <sub>0max</sub> kN	
20	12	22	–	20	6	5,5	10	–	–	8	0,9	0,81	<b>12</b>
20	12	22	–	20	6	5,5	10	–	2	8	0,9	0,81	
20	12	22	32,3	20	6	5,5	10	78	–	6	0,9	0,81	
22	15	26	–	20	6	5,5	10	–	–	8	1,43	1,16	<b>16</b>
22	15	26	–	20	6	5,5	10	–	2	8	1,43	1,16	
22	15	26	33,6	20	6	5,5	10	78	–	6	1,43	1,16	
28	20	32	–	25	8	6,6	11	–	–	8	2,2	1,73	<b>20</b>
28	20	32	–	25	8	6,6	11	–	3	8	2,2	1,73	
28	20	32	44,5	25	8	6,6	11	60	–	6	2,2	1,73	
40	28	40	–	30	10	6,6	11	–	–	8	3,95	3,25	<b>25</b>
40	28	40	–	30	10	6,6	11	–	3	8	3,95	3,25	
40	28	40	53,8	30	10	6,6	11	60	–	6	3,95	3,25	
48	32	47	–	35	10	6,6	11	–	–	8	5,9	4,5	<b>30</b>
48	32	47	–	35	10	6,6	11	–	4	8	5,9	4,5	
48	32	47	63,1	35	10	6,6	11	54	–	6	5,9	4,5	
56	40	62	–	45	12	9	15	–	–	8	10,2	7,2	<b>40</b>
56	40	62	–	45	12	9	15	–	4	8	10,2	7,2	
56	40	62	79,3	45	12	9	15	54	–	6	10,2	7,2	
72	52	75	–	50	14	11	18	–	–	8	15,1	10,4	<b>50</b>
72	52	75	–	50	14	11	18	–	5	8	15,1	10,4	
72	52	75	92,8	50	14	11	18	54	–	6	15,1	10,4	

# Linear ball bearing units

closed and open designs  
contact seals on both sides

Series KGSAG..PP  
KGSAS..PP  
KGSAG..PP



KGSAG..PP

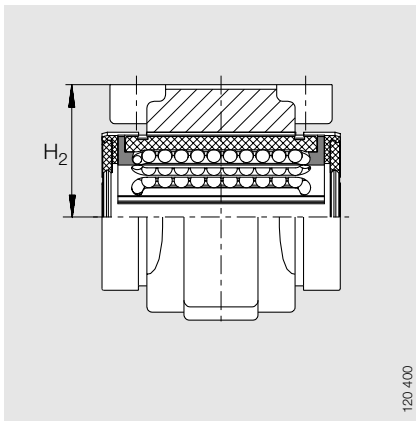
Dimension table · Dimensions in mm

Shaft diameter d	Series			Mass ≈kg	Dimensions				Mounting dimensions		
	KGSAG..PP Designation	KGSAS..PP Designation	KGSAG..PP Designation		d	A	C	H	A <sub>1</sub> ±0,15	A <sub>5</sub>	A <sub>6</sub> <sup>1)</sup>
<b>12</b>	<b>KGSAG 12 PP</b>	–	–	0,06	12	42	32	34	32	21	–
	–	<b>KGSAS 12 PP</b>	–	0,06	12	42	32	34	32	21	–
	–	–	<b>KGSAG 12 PP</b>	0,05	12	42	32	–	32	21	7,6
<b>16</b>	<b>KGSAG 16 PP</b>	–	–	0,11	16	50	36	41	40	25	–
	–	<b>KGSAS 16 PP</b>	–	0,11	16	50	36	41	40	25	–
	–	–	<b>KGSAG 16 PP</b>	0,1	16	50	36	–	40	25	10,1
<b>20</b>	<b>KGSAG 20 PP</b>	–	–	0,17	20	60	45	47,5	45	30	–
	–	<b>KGSAS 20 PP</b>	–	0,17	20	60	45	47,5	45	30	–
	–	–	<b>KGSAG 20 PP</b>	0,15	20	60	45	–	45	30	10
<b>25</b>	<b>KGSAG 25 PP</b>	–	–	0,34	25	74	58	60	60	37	–
	–	<b>KGSAS 25 PP</b>	–	0,34	25	74	58	60	60	37	–
	–	–	<b>KGSAG 25 PP</b>	0,3	25	74	58	–	60	37	12,5
<b>30</b>	<b>KGSAG 30 PP</b>	–	–	0,54	30	84	68	67	68	42	–
	–	<b>KGSAS 30 PP</b>	–	0,54	30	84	68	67	68	42	–
	–	–	<b>KGSAG 30 PP</b>	0,48	30	84	68	–	68	42	13,6
<b>40</b>	<b>KGSAG 40 PP</b>	–	–	0,98	40	108	80	87	86	54	–
	–	<b>KGSAS 40 PP</b>	–	0,98	40	108	80	87	86	54	–
	–	–	<b>KGSAG 40 PP</b>	0,84	40	108	80	–	86	54	18,2
<b>50</b>	<b>KGSAG 50 PP</b>	–	–	1,63	50	130	100	98	108	65	–
	–	<b>KGSAS 50 PP</b>	–	1,63	50	130	100	98	108	65	–
	–	–	<b>KGSAG 50 PP</b>	1,17	50	130	100	–	108	65	22,7

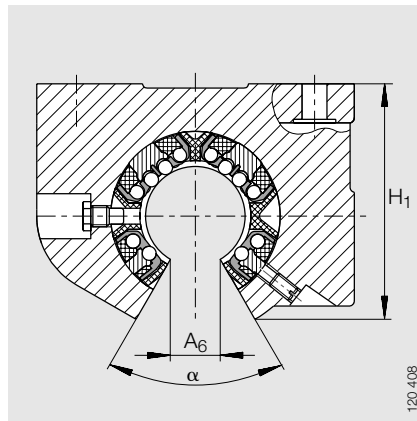
1) Dimensions A<sub>6</sub> on diameter d.

2) For fixing screws to EN ISO 4762-8.8.  
If there is a possibility of settling, the fixing screws should be secured against rotation.

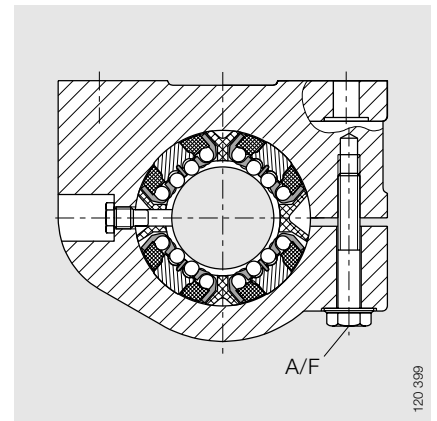
3) The basic load ratings apply only to hardened (670 +170 HV) and ground shaft raceways.  
Basic load ratings in accordance with DIN 636-1.



KGS AO..PP



KGS AO..PP



KGS AS..PP

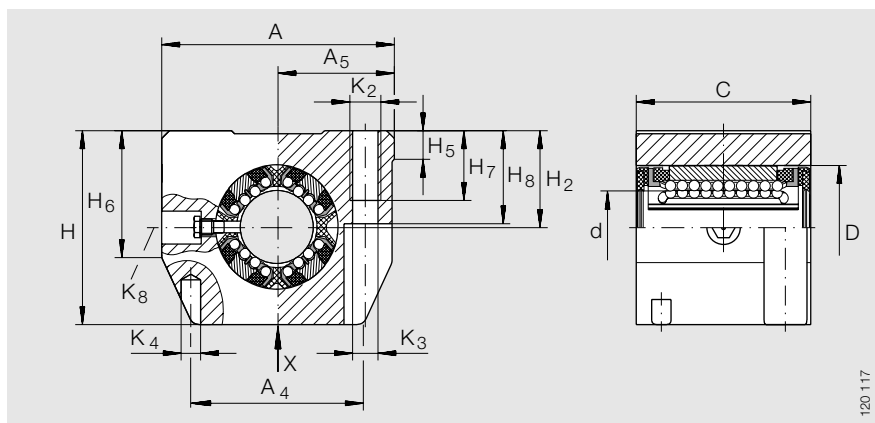
C <sub>1</sub>	C <sub>2</sub> ±0,15	C <sub>3</sub>	D h5	H <sub>1</sub>	H <sub>2</sub> ±0,01	H <sub>8</sub> -0,5	K <sub>3</sub> <sup>2)</sup>	K <sub>5</sub> <sup>2)</sup>	α Degrees	A/F	Ball rows Quantity	Basic load ratings <sup>3)</sup>		Shaft diameter d
												dyn. C <sub>max</sub> kN	stat. C <sub>0max</sub> kN	
32	23	20	22	-	18	4,8	4,7	8	-	-	8	0,9	0,81	<b>12</b>
32	23	20	22	-	18	4,8	4,7	8	-	7	8	0,9	0,81	
32	23	20	22	30,4	18	4,8	4,7	8	78	-	6	0,9	0,81	
35	26	22	26	-	22	5,4	4,7	8	-	-	8	1,43	1,16	<b>16</b>
35	26	22	26	-	22	5,4	4,7	8	-	7	8	1,43	1,16	
35	26	22	26	36,8	22	5,4	4,7	8	78	-	6	1,43	1,16	
42	32	28	32	-	25	6,7	4,7	8	-	-	8	2,2	1,73	<b>20</b>
42	32	28	32	-	25	6,7	4,7	8	-	7	8	2,2	1,73	
42	32	28	32	44,5	25	6,7	4,7	8	60	-	6	2,2	1,73	
54	40	40	40	-	30	7,8	5,7	10	-	-	8	3,95	3,25	<b>25</b>
54	40	40	40	-	30	7,8	5,7	10	-	8	8	3,95	3,25	
54	40	40	40	56	30	7,8	5,7	10	60	-	6	3,95	3,25	
60	45	48	47	-	35	8,7	6,8	11	-	-	8	5,9	4,5	<b>30</b>
60	45	48	47	-	35	8,7	6,8	11	-	10	8	5,9	4,5	
60	45	48	47	63,5	35	8,7	6,8	11	54	-	6	5,9	4,5	
78	58	56	62	-	45	11	9,2	15	-	-	8	10,2	7,2	<b>40</b>
78	58	56	62	-	45	11	9,2	15	-	13	8	10,2	7,2	
78	58	56	62	82,4	45	11	9,2	15	54	-	6	10,2	7,2	
70	50	72	75	-	50	12,5	9,2	15	-	-	8	15,1	10,4	<b>50</b>
70	50	72	75	-	50	12,5	9,2	15	-	13	8	15,1	10,4	
70	50	72	75	92,8	50	12,5	9,2	15	54	-	6	15,1	10,4	

# Linear ball bearing units

## Light range – metric sizes

sealed, greased,  
with relubrication facility

Series KGSNG..PP AS  
KGSNS..PP AS



KGSNG..PP AS

120 117

**Dimension table** · Dimensions in mm

Shaft diameter	Series		Mass	Dimensions				Mounting dimensions				
	KGSNG..PP AS	KGSNS..PP AS		d	A	C	H	A <sub>1</sub>	A <sub>4</sub>	A <sub>5</sub>	C <sub>2</sub> <sup>1)</sup>	D
d	Designation	Designation	≈kg					±0,15		±0,01	±0,15	
<b>12</b>	<b>KGSNG 12 PP AS</b>	–	0,1	12	43	32	35	32	34	21,5	23	22
	–	<b>KGSNS 12 PP AS</b>	0,1	12	43	32	35	32	34	21,5	23	22
<b>16</b>	<b>KGSNG 16 PP AS</b>	–	0,17	16	53	37	42	40	40	26,5	26	26
	–	<b>KGSNS 16 PP AS</b>	0,17	16	53	37	42	40	40	26,5	26	26
<b>20</b>	<b>KGSNG 20 PP AS</b>	–	0,27	20	60	45	50	45	44	30	32	32
	–	<b>KGSNS 20 PP AS</b>	0,27	20	60	45	50	45	44	30	32	32
<b>25</b>	<b>KGSNG 25 PP AS</b>	–	0,56	25	78	58	60	60	59,4	39	40	40
	–	<b>KGSNS 25 PP AS</b>	0,56	25	78	58	60	60	59,4	39	40	40
<b>30</b>	<b>KGSNG 30 PP AS</b>	–	0,83	30	87	68	70	68	63	43,5	45	47
	–	<b>KGSNS 30 PP AS</b>	0,83	30	87	68	70	68	63	43,5	45	47
<b>40</b>	<b>KGSNG 40 PP AS</b>	–	1,55	40	108	80	90	86	76	54	58	62
	–	<b>KGSNS 40 PP AS</b>	1,55	40	108	80	90	86	76	54	58	62
<b>50</b>	<b>KGSNG 50 PP AS</b>	–	2,7	50	132	100	105	108	90	66	50	75
	–	<b>KGSNS 50 PP AS</b>	2,7	50	132	100	105	108	90	66	50	75

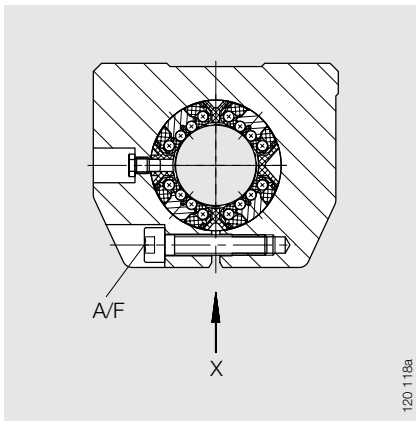
1) Dimension C<sub>2</sub> and lubrication hole symmetrical with bearing width C.

2) For fixing screws to EN ISO 4762-8.8.

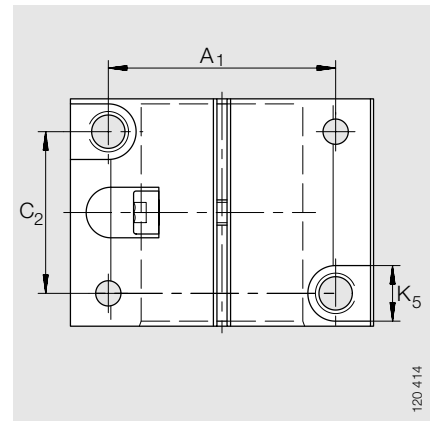
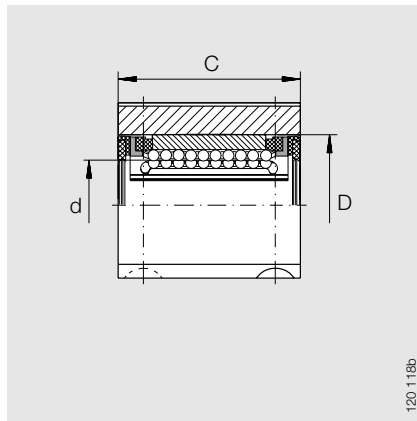
If there is a possibility of settling, the fixing screws should be secured against rotation.

3) Centring for dowel hole.

4) The basic load ratings apply only to hardened (670 +170 HV) and ground shaft raceways.



KGSNS..PP AS



View X (rotated 90°)

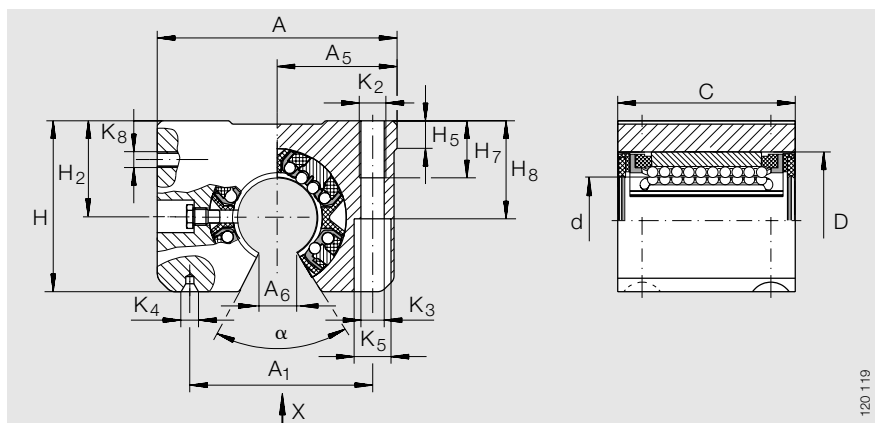
H <sub>2</sub> +0,008 -0,016	H <sub>5</sub>	H <sub>6</sub>	H <sub>7</sub>	H <sub>8</sub>	K <sub>2</sub>	K <sub>3</sub> <sup>2)</sup>	K <sub>4</sub> <sup>3)</sup>	K <sub>5</sub> <sup>2)</sup>	K <sub>8</sub> <sup>1)</sup>	A/F	Ball rows Quantity	Basic load ratings <sup>4)</sup>		Shaft diameter d
												dyn. C <sub>max</sub> kN	stat. C <sub>0max</sub> kN	
18	5,4	25,3	11	16,5	M 5	4,3	4	8	NIP 4 MZ	–	8	0,9	0,81	<b>12</b>
18	5,4	25,3	11	16,5	M 5	4,3	4	8	NIP 4 MZ	2,5	8	0,9	0,81	
22	6,9	28	13	21	M 6	5,3	4	10	NIP 4 MZ	–	8	1,43	1,16	<b>16</b>
22	6,9	28	13	21	M 6	5,3	4	10	NIP 4 MZ	3	8	1,43	1,16	
25	7,4	32,8	18	24	M 8	6,6	5	11	NIP 4 MZ	–	8	2,2	1,73	<b>20</b>
25	7,4	32,8	18	24	M 8	6,6	5	11	NIP 4 MZ	4	8	2,2	1,73	
30	8,3	40	22	29	M10	8,4	6	15	NIP 5 MZ	–	8	3,95	3,25	<b>25</b>
30	8,3	40	22	29	M10	8,4	6	15	NIP 5 MZ	5	8	3,95	3,25	
35	9,3	44,7	22	34	M10	8,4	6	15	NIP 5 MZ	–	8	5,9	4,5	<b>30</b>
35	9,3	44,7	22	34	M10	8,4	6	15	NIP 5 MZ	5	8	5,9	4,5	
45	11,7	55,9	26	44	M12	10,5	8	18	NIP 5 MZ	–	8	10,2	7,2	<b>40</b>
45	11,7	55,9	26	44	M12	10,5	8	18	NIP 5 MZ	6	8	10,2	7,2	
50	10,6	60	35	49	M16	13,5	10	20	NIP 6 MZ	–	8	15,1	10,4	<b>50</b>
50	10,6	60	35	49	M16	13,5	10	20	NIP 6 MZ	8	8	15,1	10,4	

# Linear ball bearing units

## Light range – metric sizes

sealed, greased,  
with relubrication facility

Series KGSNO..PP AS  
KGSNOS..PP AS



KGSNO..PP AS

120 119

Dimension table · Dimensions in mm

Shaft diameter	Series		Mass	Dimensions				Mounting dimensions				
	KGSNO..PP AS	KGSNOS..PP AS		d	A	C	H	A <sub>1</sub>	A <sub>5</sub>	A <sub>6</sub> <sup>1)</sup>	C <sub>2</sub> <sup>2)</sup>	D
d	Designation	Designation	≈kg					±0,15	±0,01		±0,15	
<b>12</b>	<b>KGSNO 12 PP AS</b>	–	0,09	12	43	32	28	32	21,5	7,6	23	22
	–	<b>KGSNOS 12 PP AS</b>	0,09	12	43	32	28	32	21,5	7,6	23	22
<b>16</b>	<b>KGSNO 16 PP AS</b>	–	0,15	16	53	37	35	40	26,5	8,9	26	26
	–	<b>KGSNOS 16 PP AS</b>	0,15	16	53	37	35	40	26,5	8,9	26	26
<b>20</b>	<b>KGSNO 20 PP AS</b>	–	0,25	20	60	45	42	45	30	9,2	32	32
	–	<b>KGSNOS 20 PP AS</b>	0,25	20	60	45	42	45	30	9,2	32	32
<b>25</b>	<b>KGSNO 25 PP AS</b>	–	0,52	25	78	58	51	60	39	11,9	40	40
	–	<b>KGSNOS 25 PP AS</b>	0,52	25	78	58	51	60	39	11,9	40	40
<b>30</b>	<b>KGSNO 30 PP AS</b>	–	0,76	30	87	68	60	68	43,5	14,3	45	47
	–	<b>KGSNOS 30 PP AS</b>	0,76	30	87	68	60	68	43,5	14,3	45	47
<b>40</b>	<b>KGSNO 40 PP AS</b>	–	1,4	40	108	80	77	86	54	18,8	58	62
	–	<b>KGSNOS 40 PP AS</b>	1,4	40	108	80	77	86	54	18,8	58	62
<b>50</b>	<b>KGSNO 50 PP AS</b>	–	2,4	50	132	100	88	108	66	22,7	50	75
	–	<b>KGSNOS 50 PP AS</b>	2,4	50	132	100	88	108	66	22,7	50	75

1) Dimension A<sub>6</sub> on diameter d.

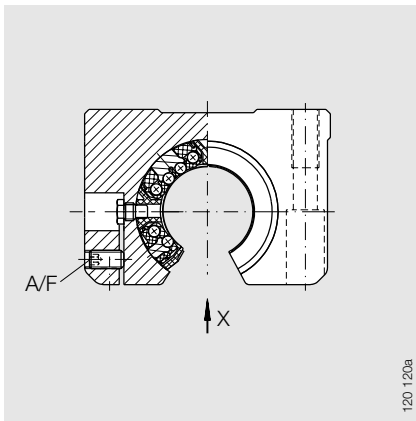
2) Dimension C<sub>2</sub> and lubrication hole symmetrical with bearing width C.

3) For fixing screws to EN ISO 4762-8.8.

If there is a possibility of settling, the fixing screws should be secured against rotation.

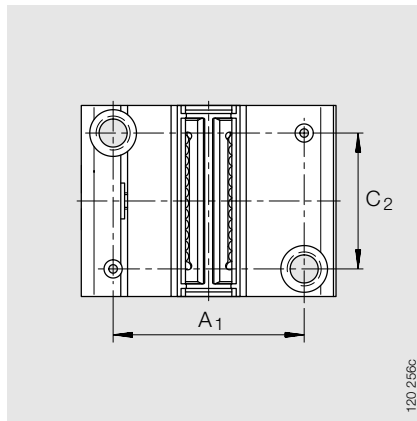
4) The basic load ratings apply only to hardened (670 +170 HV) and ground shaft raceways.

5) Centring hole to DIN 332, type A.



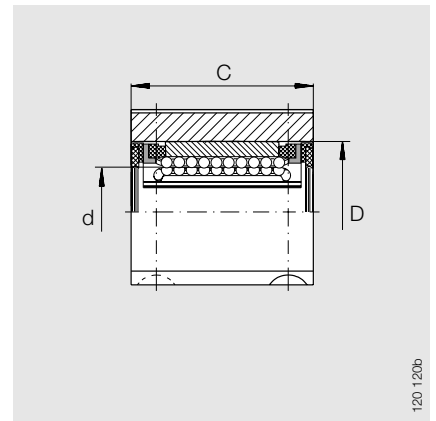
KGSNOS..PP AS

120 120a



View X (rotated 90°)

120 256c



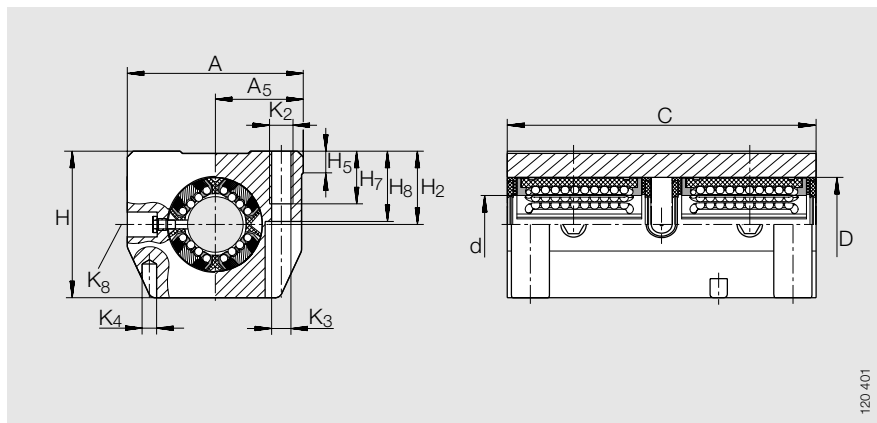
120 120b

H <sub>2</sub> +0,008 -0,016	H <sub>5</sub>	H <sub>7</sub>	H <sub>8</sub>	K <sub>2</sub>	K <sub>3</sub> <sup>3)</sup>	K <sub>4</sub> <sup>5)</sup>	K <sub>5</sub> <sup>3)</sup>	K <sub>8</sub> <sup>2)</sup>	A/F	α Degrees	Ball rows Quantity	Basic load ratings <sup>4)</sup>		Shaft diameter d
												dyn. C <sub>max</sub> kN	stat. C <sub>0max</sub> kN	
18	6,1	11	16,5	M 5	4,3	1,6 × 3,35	8	NIP 4 MZ	–	78	6	0,9	0,81	<b>12</b>
18	6,1	11	16,5	M 5	4,3	1,6 × 3,35	8	NIP 4 MZ	2,5	78	6	0,9	0,81	
22	7,5	13	21	M 6	5,3	1,6 × 3,35	10	NIP 4 MZ	–	68	6	1,43	1,16	<b>16</b>
22	7,5	13	21	M 6	5,3	1,6 × 3,35	10	NIP 4 MZ	2,5	68	6	1,43	1,16	
25	8	18	24	M 8	6,6	2 × 4,25	11	NIP 4 MZ	–	55	6	2,2	1,73	<b>20</b>
25	8	18	24	M 8	6,6	2 × 4,25	11	NIP 4 MZ	2,5	55	6	2,2	1,73	
30	8,8	22	29	M10	8,4	2,5 × 5,3	15	NIP 5 MZ	–	57	6	3,95	3,25	<b>25</b>
30	8,8	22	29	M10	8,4	2,5 × 5,3	15	NIP 5 MZ	3	57	6	3,95	3,25	
35	9,7	22	34	M10	8,4	2,5 × 5,3	15	NIP 5 MZ	–	57	6	5,9	4,5	<b>30</b>
35	9,7	22	34	M10	8,4	2,5 × 5,3	15	NIP 5 MZ	3	57	6	5,9	4,5	
45	12,4	26	44	M12	10,5	3,15 × 6,7	18	NIP 5 MZ	–	56	6	10,2	7,2	<b>40</b>
45	12,4	26	44	M12	10,5	3,15 × 6,7	18	NIP 5 MZ	4	56	6	10,2	7,2	
50	11,1	35	49	M16	13,5	4 × 8,5	20	NIP 6 MZ	–	54	6	15,1	10,4	<b>50</b>
50	11,1	35	49	M16	13,5	4 × 8,5	20	NIP 6 MZ	5	54	6	15,1	10,4	

# Linear ball bearing units

closed and open designs  
contact seals on both sides

Series KTSG..PP AS  
KTSS..PP AS



KTSG..PP AS

**Dimension table** · Dimensions in mm

Shaft diameter d	Series		Mass ≈kg	Dimensions				Mounting dimensions				
	KTSG..PP AS	KTSS..PP AS		d	A	C	H	A <sub>1</sub>	A <sub>5</sub>	C <sub>2</sub> <sup>1)</sup>	C <sub>3</sub> <sup>1)</sup>	D
	Designation	Designation						±0,15	±0,01	±0,15		
<b>12</b>	<b>KTSG 12 PP AS</b>	–	0,21	12	43	70	35	32	21,5	56	24	22
	–	<b>KTSS 12 PP AS</b>	0,21	12	43	70	35	32	21,5	56	24	22
<b>16</b>	<b>KTSG 16 PP AS</b>	–	0,38	16	53	78	42	40	26,5	64	26	26
	–	<b>KTSS 16 PP AS</b>	0,38	16	53	78	42	40	26,5	64	26	26
<b>20</b>	<b>KTSG 20 PP AS</b>	–	0,55	20	60	96	50	45	30	76	33	32
	–	<b>KTSS 20 PP AS</b>	0,55	20	60	96	50	45	30	76	33	32
<b>25</b>	<b>KTSG 25 PP AS</b>	–	1,13	25	78	122	60	60	39	94	44	40
	–	<b>KTSS 25 PP AS</b>	1,13	25	78	122	60	60	39	94	44	40
<b>30</b>	<b>KTSG 30 PP AS</b>	–	1,78	30	87	142	70	68	43,5	106	54	47
	–	<b>KTSS 30 PP AS</b>	1,78	30	87	142	70	68	43,5	106	54	47

1) Dimensions and lubrication hole symmetrical with bearing width C.

2) For fixing screws to EN ISO 4762-8.8.

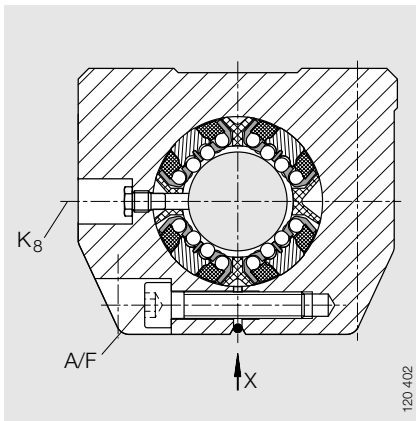
If there is a possibility of settling, the fixing screws should be secured against rotation.

3) Centring for dowel hole.

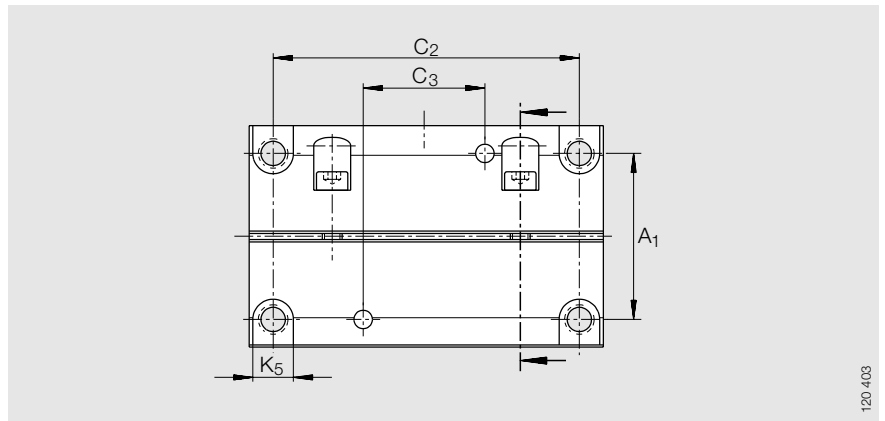
4) Lubrication nipple.

5) The basic load ratings apply only to hardened (670 +170 HV) and ground shaft raceways.  
Basic load ratings in accordance with DIN 636-1.





KTSS..PP AS  
(same dimensions as KTSG..PP AS)



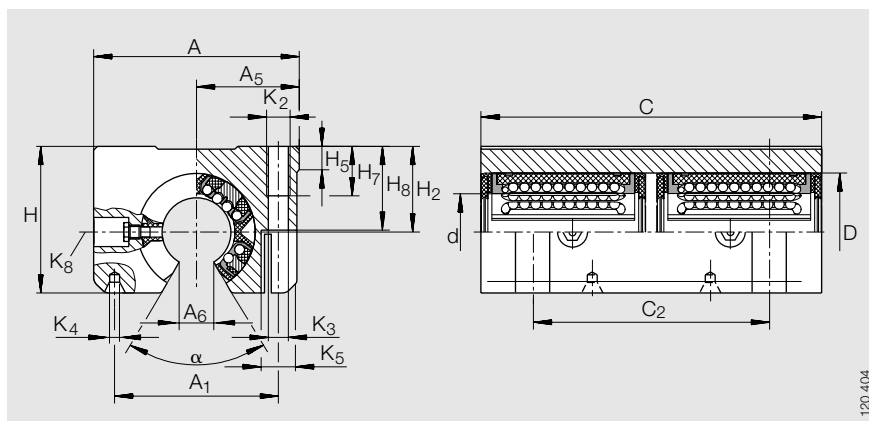
View X (rotated 90°)

H <sub>2</sub> +0,008 -0,016	H <sub>5</sub>	H <sub>6</sub>	H <sub>7</sub>	H <sub>8</sub>	K <sub>2</sub>	K <sub>3</sub> <sup>(2)</sup>	K <sub>4</sub> <sup>(3)</sup>	K <sub>5</sub> <sup>(2)</sup>	K <sub>8</sub> <sup>(4)</sup>	A/F	Ball rows Quantity	Basic load ratings <sup>(5)</sup>		Shaft diameter d
												dyn. C <sub>max</sub> kN	stat. C <sub>0max</sub> kN	
18	6	25,3	11	16,5	M 5	4,3	4	8	NIP 4 MZ	-	8	1,46	1,62	<b>12</b>
18	6	25,3	11	16,5	M 5	4,3	4	8	NIP 4 MZ	2,5	8	1,46	1,62	
22	7,5	28	13	21	M 6	5,3	4	10	NIP 4 MZ	-	8	2,33	2,32	<b>16</b>
22	7,5	28	13	21	M 6	5,3	4	10	NIP 4 MZ	3	8	2,33	2,32	
25	8	32,8	18	24	M 8	6,6	5	11	NIP 4 MZ	-	8	3,65	3,45	<b>20</b>
25	8	32,8	18	24	M 8	6,6	5	11	NIP 4 MZ	4	8	3,65	3,45	
30	9	40	22	29	M10	8,4	6	15	NIP 5 MZ	-	8	6,4	6,5	<b>25</b>
30	9	40	22	29	M10	8,4	6	15	NIP 5 MZ	5	8	6,4	6,5	
35	10	44,7	22	34	M10	8,4	6	15	NIP 5 MZ	-	8	9,6	9	<b>30</b>
35	10	44,7	22	34	M10	8,4	6	15	NIP 5 MZ	5	8	9,6	9	

# Linear ball bearing units

open design  
contact seals on both sides

Series KTSO..PP AS  
KTSOS..PP AS



KTSO..PP AS

120 404

**Dimension table** · Dimensions in mm

Shaft diameter d	Series		Mass ≈kg	Dimensions				Mounting dimensions					
	KTSO..PP AS	KTSOS..PP AS		d	A	C	H	A <sub>1</sub>	A <sub>5</sub>	A <sub>6</sub> <sup>1)</sup>	C <sub>2</sub> <sup>2)</sup>	C <sub>3</sub> <sup>2)</sup>	D
	Designation	Designation						±0,15	±0,01		±0,15		
<b>12</b>	<b>KTSO 12 PP AS</b>	–	0,176	12	43	70	28	32	21,5	6,5	56	24	22
	–	<b>KTSOS 12 PP AS</b>	0,18	12	43	70	28	32	21,5	6,5	56	24	22
<b>16</b>	<b>KTSO 16 PP AS</b>	–	0,34	16	53	78	35	40	26,5	8,9	64	26	26
	–	<b>KTSOS 16 PP AS</b>	0,34	16	53	78	35	40	26,5	8,9	64	26	26
<b>20</b>	<b>KTSO 20 PP AS</b>	–	0,51	20	60	96	42	45	30	9,2	76	33	32
	–	<b>KTSOS 20 PP AS</b>	0,51	20	60	96	42	45	30	9,2	76	33	32
<b>25</b>	<b>KTSO 25 PP AS</b>	–	1,03	25	78	122	51	60	39	11,9	94	44	40
	–	<b>KTSOS 25 PP AS</b>	1,03	25	78	122	51	60	39	11,9	94	44	40
<b>30</b>	<b>KTSO 30 PP AS</b>	–	1,8	30	87	142	60	68	43,5	14,3	106	54	47
	–	<b>KTSOS 30 PP AS</b>	1,8	30	87	142	60	68	43,5	14,3	106	54	47

1) Dimensions A<sub>6</sub> on diameter d.

2) Dimensions and lubrication hole symmetrical with bearing width C.

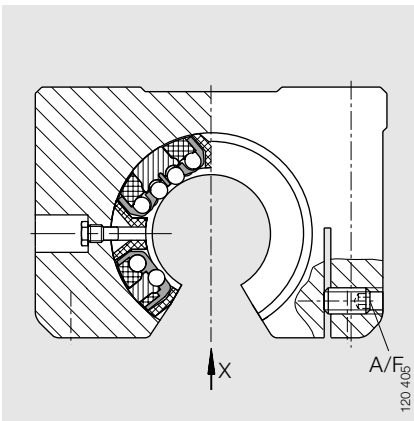
3) For fixing screws to EN ISO 4762-8.8.

If there is a possibility of settling, the fixing screws should be secured against rotation.

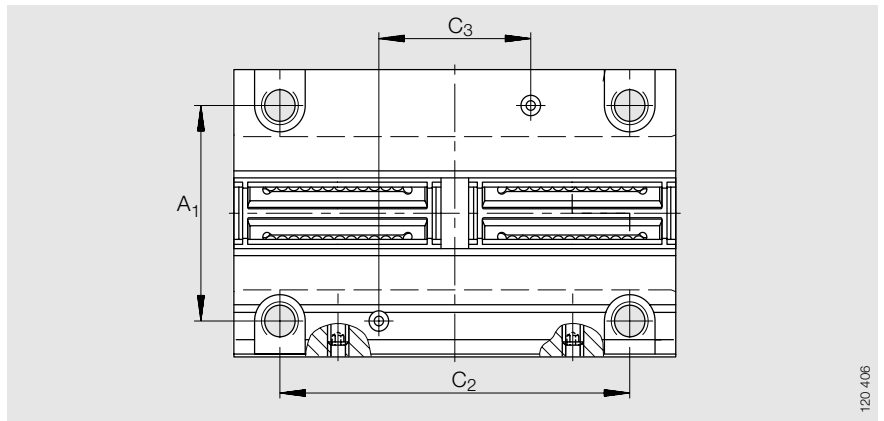
4) Lubrication nipple.

5) The basic load ratings apply only to hardened (670 +170 HV) and ground shaft raceways.  
Basic load ratings in accordance with DIN 636-1.

6) Centring hole to DIN 332, type A.



KTSOS..PP AS  
(same dimensions as KTSO..PP AS)



View X (rotated 90°)

120 406

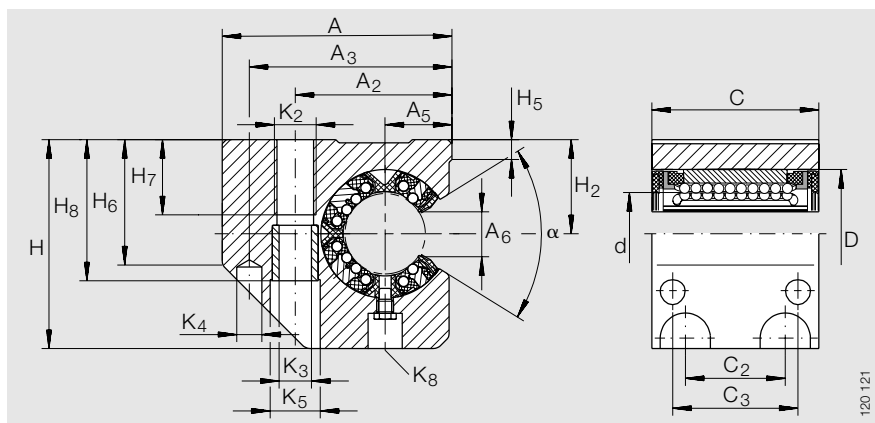
H <sub>2</sub> +0,008 -0,016	H <sub>5</sub>	H <sub>7</sub>	H <sub>8</sub>	K <sub>2</sub>	K <sub>3</sub> <sup>3)</sup>	K <sub>4</sub> <sup>6)</sup>	K <sub>5</sub> <sup>3)</sup>	K <sub>8</sub> <sup>4)</sup>	A/F	α Degrees	Ball rows Quantity	Basic load ratings <sup>5)</sup>		Shaft diameter d
												dyn. C <sub>max</sub> kN	stat. C <sub>0 max</sub> kN	
18	6,1	11	16,5	M 5	4,3	1,6×3,35	8	NIP 4 MZ	–	66	6	1,46	1,62	<b>12</b>
18	6,1	11	16,5	M 5	4,3	1,6×3,35	8	NIP 4 MZ	2,5	66	6	1,46	1,62	
22	7,5	13	21	M 6	5,3	1,6×3,35	10	NIP 4 MZ	–	68	6	2,33	2,32	<b>16</b>
22	7,5	13	21	M 6	5,3	1,6×3,35	10	NIP 4 MZ	2,5	68	6	2,33	2,32	
25	8	18	24	M 8	6,6	2,0×4,25	11	NIP 4 MZ	–	55	6	3,65	3,45	<b>20</b>
25	8	18	24	M 8	6,6	2,0×4,25	11	NIP 4 MZ	2,5	55	6	3,65	3,45	
30	8,8	22	29	M10	8,4	2,5×5,3	15	NIP 5 MZ	–	57	6	6,4	6,5	<b>25</b>
30	8,8	22	29	M10	8,4	2,5×5,3	15	NIP 5 MZ	3	57	6	6,4	6,5	
35	9,7	22	34	M10	8,4	2,5×5,3	15	NIP 5 MZ	–	57	6	9,6	9	<b>30</b>
35	9,7	22	34	M10	8,4	2,5×5,3	15	NIP 5 MZ	3	57	6	9,6	9	

# Linear ball bearing units

## Light range – metric sizes

sealed, greased,  
with relubrication facility

Series KGSC..PP AS  
KGSCS..PP AS



KGSC..PP AS

Dimension table · Dimensions in mm

Shaft diameter	Series		Mass	Dimensions				Mounting dimensions					
	KGSC..PP AS	KGSCS..PP AS		d	A	C	H	A <sub>2</sub>	A <sub>3</sub>	A <sub>5</sub>	A <sub>6</sub> <sup>1)</sup>	C <sub>2</sub> <sup>2)</sup>	C <sub>3</sub> <sup>2)</sup>
d	Designation	Designation	≈kg					±0,15		±0,01		±0,15	
20	<b>KGSC 20 PP AS</b>	–	0,35	20	60	47	60	39	51	17	9,2	30	36
	–	<b>KGSCS 20 PP AS</b>	0,35	20	60	47	60	39	51	17	9,2	30	36
25	<b>KGSC 25 PP AS</b>	–	0,68	25	75	58	72	49	64	21	12	36	45
	–	<b>KGSCS 25 PP AS</b>	0,68	25	75	58	72	49	64	21	12	36	45
30	<b>KGSC 30 PP AS</b>	–	1	30	86	68	82	59	76	25	14,3	42	52
	–	<b>KGSCS 30 PP AS</b>	1	30	86	68	82	59	76	25	14,3	42	52
40	<b>KGSC 40 PP AS</b>	–	1,8	40	110	80	100	75	97	32	18,8	48	60
	–	<b>KGSCS 40 PP AS</b>	1,8	40	110	80	100	75	97	32	18,8	48	60
50	<b>KGSC 50 PP AS</b>	–	2,9	50	127	100	115	88	109	38	22,7	62	80
	–	<b>KGSCS 50 PP AS</b>	2,9	50	127	100	115	88	109	38	22,7	62	80

1) Dimension A<sub>6</sub> on diameter d.

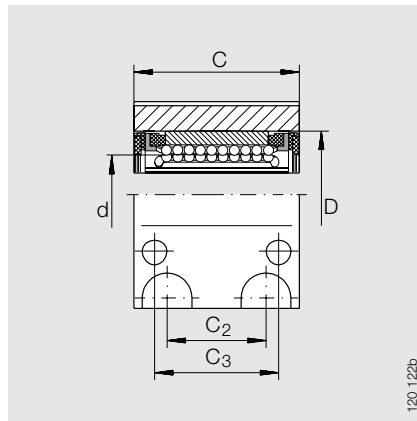
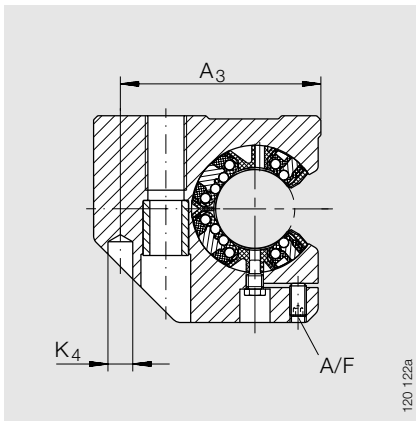
2) Dimension C<sub>2</sub> and lubrication hole symmetrical with bearing width C.

3) Centring for dowel hole.

4) For fixing screws to EN ISO 4762-8.8.

If there is a possibility of settling, the fixing screws should be secured against rotation.

5) The basic load ratings apply only to hardened (670 +170 HV) and ground shaft raceways.



KGSCS..PP AS

D	H <sub>2</sub> +0,008 -0,016	H <sub>5</sub>	H <sub>6</sub>	H <sub>7</sub>	H <sub>8</sub>	K <sub>2</sub>	K <sub>3</sub> <sup>(3)</sup>	K <sub>4</sub> <sup>(4)</sup>	K <sub>5</sub> <sup>(3)</sup>	K <sub>8</sub> <sup>(2)</sup>	A/F	α Degrees	Ball rows	Basic load ratings <sup>(5)</sup>		Shaft diameter d
													Quantity	dyn. C <sub>max</sub> kN	stat. C <sub>0max</sub> kN	
32	30	8,3	37,5	18	42,6	M10	8,4	6	15	NIP 4 MZ	-	55	6	2,2	1,73	<b>20</b>
32	30	8,3	37,5	18	42,6	M10	8,4	6	15	NIP 4 MZ	2,5	55	6	2,2	1,73	
40	35	8,2	45	22	50,6	M12	10,5	8	18	NIP 5 MZ	-	57	6	3,95	3,25	<b>25</b>
40	35	8,2	45	22	50,6	M12	10,5	8	18	NIP 5 MZ	3	57	6	3,95	3,25	
47	40	9	52	29	55,6	M16	13,5	10	20	NIP 5 MZ	-	57	6	5,9	4,5	<b>30</b>
47	40	9	52	29	55,6	M16	13,5	10	20	NIP 5 MZ	3	57	6	5,9	4,5	
62	45	9,5	60	36	67,6	M20	15,5	12	24	NIP 5 MZ	-	56	6	10,2	7,2	<b>40</b>
62	45	9,5	60	36	67,6	M20	15,5	12	24	NIP 5 MZ	4	56	6	10,2	7,2	
75	50	8,6	70	36	78,8	M20	17,5	12	26	NIP 6 MZ	-	54	6	15,1	10,4	<b>50</b>
75	50	8,6	70	36	78,8	M20	17,5	12	26	NIP 6 MZ	5	54	6	15,1	10,4	

# Linear ball bearing units

## Light range – metric sizes

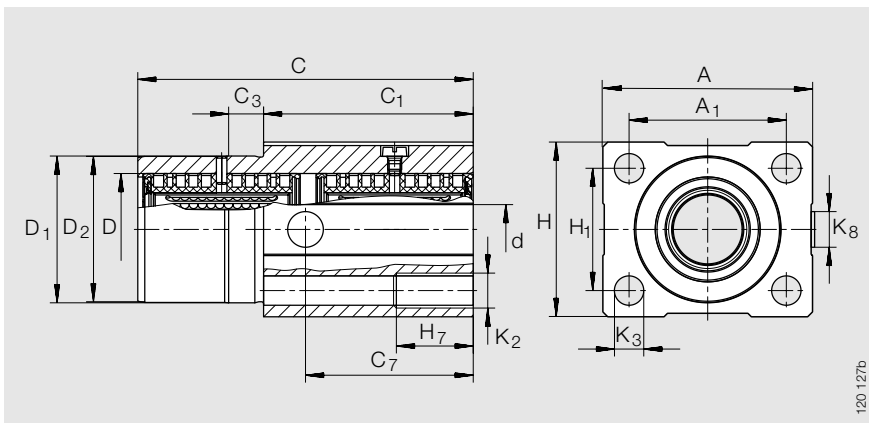
sealed, greased,  
with relubrication facility

Series KTFS..PP AS

Dimension table · Dimensions in mm											
Shaft diameter	Series KTFS..PP AS	Mass	Dimensions				Mounting dimensions				
			d	A	C	H	A <sub>1</sub>	C <sub>1</sub>	C <sub>3</sub>	C <sub>7</sub>	D
d	Designation	≈kg					±0,15				
<b>12</b>	<b>KTFS 12 PP AS</b>	0,2	12	41	70	34	32	40	10	35	22
<b>16</b>	<b>KTFS 16 PP AS</b>	0,3	16	50	78	40	38	50	10	39	26
<b>20</b>	<b>KTFS 20 PP AS</b>	0,5	20	60	96	50	45	60	10	48	32
<b>25</b>	<b>KTFS 25 PP AS</b>	1	25	74	122	60	56	73	10	61	40
<b>30</b>	<b>KTFS 30 PP AS</b>	1,4	30	84	142	70	64	82	10	71	47

1) Recommendation: locating bore D<sub>1</sub> H7.

2) The basic load ratings apply only to hardened (670 +170 HV) and ground shaft raceways.

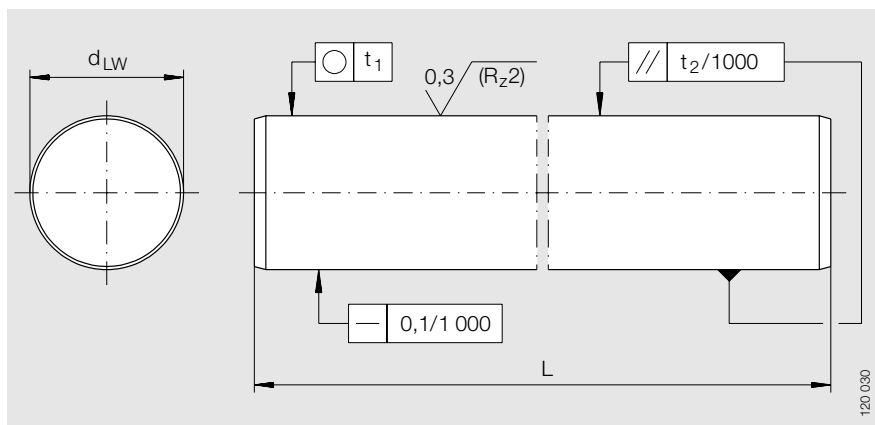


KTFS..PP AS

$D_1^{1)}$	$D_2$	$H_1$	$H_7$	$K_2$	$K_3$	$K_8$	Ball rows Quantity	Basic load ratings <sup>2)</sup>		Shaft diameter $d$
								dyn. $C_{max}$ kN	stat. $C_{0max}$ kN	
g7	-0,1 -0,3	$\pm 0,15$								
30	30	24	13	M 6	5,3	M8×1	8	1,46	1,62	<b>12</b>
35	35	28	18	M 8	6,6	M8×1	8	2,33	2,32	<b>16</b>
42	42	35	22	M10	8,4	M8×1	8	3,65	3,45	<b>20</b>
52	52	42	26	M12	10,5	M8×1	8	6,4	6,5	<b>25</b>
61	61	50	35	M16	13,5	M8×1	8	9,6	9	<b>30</b>

# Shafts

Series W



W

**Dimension table** · Dimensions in mm

Shaft diameter $d_{LW}$	Designation	Mass kg/m	Length $L_{max}$	Tolerances in $\mu\text{m}$			Roundness $t_1$ $\mu\text{m}$	Parallelism $t_2^{2)}$ $\mu\text{m}$	Surface hardness depth $R_{ht}^{3)}$ min.
				Standard tolerance h6	Special tolerances <sup>1)</sup>				
					j5	f7			
5	W 5	0,15	3 600	0- 8	-	-	4	5	0,4
6	W 6	0,22	4 000	0- 8	-	-	4	5	0,4
8	W 8	0,39	4 000	0- 9	-	-	4	6	0,4
10	W 10	0,61	4 000	0- 9	-	-	4	6	0,4
12	W 12	0,89	6 000	0-11	+5-3	-16-34	5	8	0,6
14	W 14	1,21	6 000	0-11	+5-3	-16-34	5	8	0,6
15	W 15	1,37	6 000	0-11	-	-16-34	5	8	0,6
16	W 16	1,57	6 000	0-11	+5-3	-16-34	5	8	0,6
18	W 18	1,98	6 000	0-11	-	-16-34	5	8	0,6
20	W 20	2,45	6 000	0-13	+5-4	-20-41	6	9	0,9
24	W 24	3,55	6 000	0-13	-	-	6	9	0,9
25	W 25	3,83	6 000	0-13	+5-4	-20-41	6	9	0,9
30	W 30	5,51	6 000	0-13	+5-4	-20-41	6	9	0,9
32	W 32	6,3	6 000	0-16	-	-25-50	7	11	1,5
40	W 40	9,8	6 000	0-16	+6-5	-	7	11	1,5
50	W 50	15,3	6 000	0-16	+6-5	-	7	11	1,5
60	W 60	22,1	6 000	0-19	-	-	8	13	2,2
80	W 80	39,2	6 000	0-19	-	-	8	13	2,2

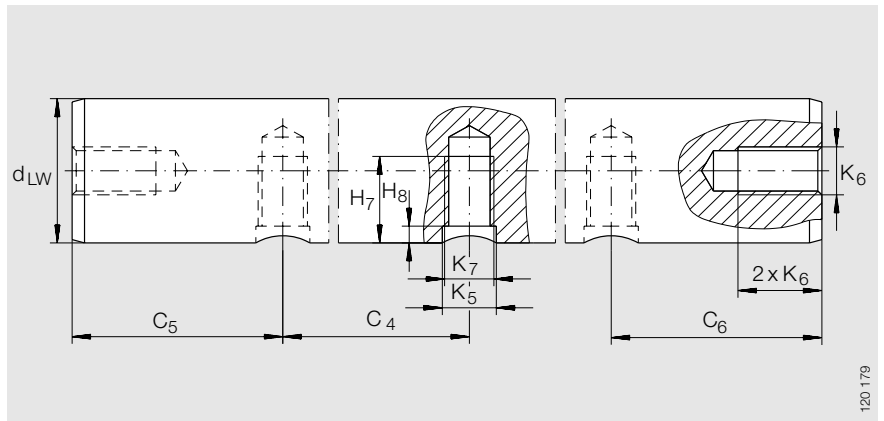
<sup>1)</sup> Only for shafts made from quenched and tempered steel.

<sup>2)</sup> Measured diameter variation.

<sup>3)</sup> According to DIN 6 773, Part 3.



# Recommended threaded holes

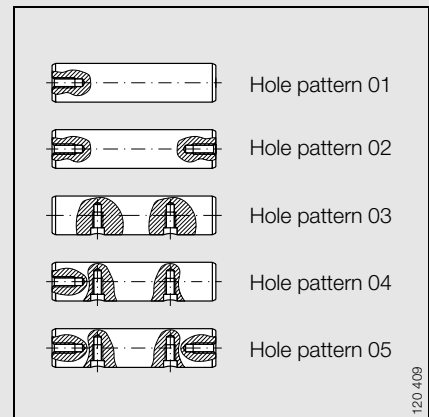


Recommended threaded holes for shafts W

Dimension table · Dimensions in mm																	
Shaft diameter <sup>1)</sup>	Axial threaded hole										Radial threaded hole						
	K <sub>6</sub>										Dimensions						
											C <sub>4</sub>				C <sub>5 min</sub> , C <sub>6 min</sub> <sup>2)</sup>		H <sub>7</sub>
W 8	M3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W 10	M3	M4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
W 12	-	M4	M5	-	-	-	-	-	-	75	-	120	10	-	7	2	5
W 14	-	M4	M5	M6	-	-	-	-	-	-	-	-	-	-	-	-	-
W 15	-	-	M5	M6	M8	-	-	-	-	-	-	-	-	-	-	-	-
W 16	-	-	M5	M6	M8	-	-	-	-	75	100	150	15	-	9	2,5	6
W 18	-	-	-	M6	M8	M10	-	-	-	-	-	-	-	-	-	-	-
W 20	-	-	-	-	-	-	-	-	-	-	-	150	15	-	9	2,5	6
W 20	-	-	-	M6	M8	M10	-	-	-	75	100	150	15	-	11	3	7
W 24	-	-	-	-	M8	M10	M12	-	-	-	-	-	-	-	-	-	-
W 25	-	-	-	-	-	-	-	-	-	-	-	150	15	-	11	3	7
W 25	-	-	-	-	M8	M10	M12	-	-	75	120	200	15	3 × K <sub>6</sub> + K <sub>7</sub>	15	3	9
W 30	-	-	-	-	-	-	-	-	-	-	-	150	15	-	11	3	7
W 30	-	-	-	-	-	M10	M12	M16	-	100	150	200	20	-	17	3,5	11
W 32	-	-	-	-	-	M10	M12	M16	-	-	-	-	-	-	-	-	-
W 40	-	-	-	-	-	M10	M12	M16	-	150	200	300	20	-	19	4	11
W 40	-	-	-	-	-	M10	M12	M16	-	100	-	-	20	-	21	4	13
W 50	-	-	-	-	-	-	-	-	-	-	-	150	20	-	19	4	11
W 50	-	-	-	-	-	-	M12	M16	M20	-	-	200	20	-	21	4	13
W 50	-	-	-	-	-	-	M12	M16	M20	-	100	-	20	-	25	4	15
W 60	-	-	-	-	-	-	-	M16	M20	M24	-	-	-	-	-	-	-
W 80	-	-	-	-	-	-	-	M16	M20	M24	-	-	-	-	-	-	-

<sup>1)</sup> For dimensions, see page 24.

<sup>2)</sup> C<sub>5</sub> and C<sub>6</sub> are dependent on the shaft length. For versions with hole patterns 04 and 05, the axial threaded hole must be taken into consideration.



120 409















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