

Special Double-row Bottom Bracket Bearings

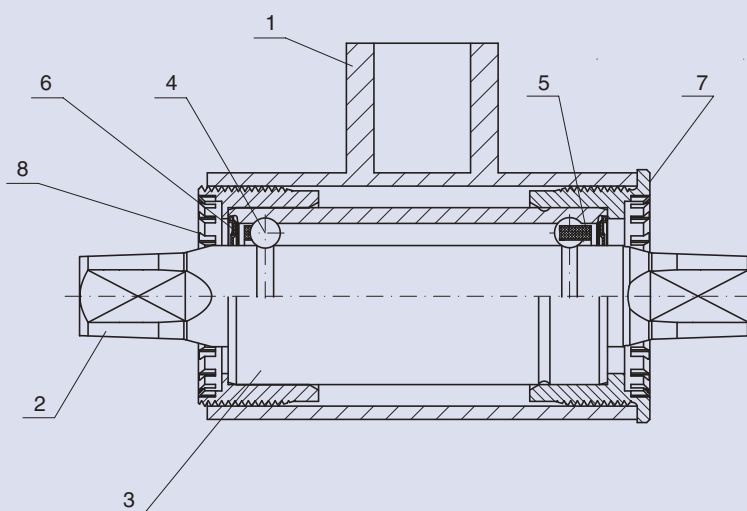


Bearing construction

Bottom bracket bearing create a non separable unit consisting of carburized and hardened steel shaft made by cold forming and cylindrical bushing made of bearing steel. The raceway for two rows of balls are created by grinding directly to shaft and in the cylindrical bushing. The unit is filled with a special grease which provides reliable lubrication during the whole life of the bearing. The balls are arranged into the light one-sided cages made of quality polyamide. The bearing compact is sealed with contact rubber sealing which prevents penetration of impurities and water. Up to agreement is possible to supply the design without sealing.

Bearing characteristics in operation

When the compact bearing is fixed in the bicycle frame, it no clearance in the bearing will be noticeable as well as no slope of foot pedal crank sets. The necessary rigidity of the bearing is given by the large distance between two rows of balls, big balls diameter and extremely small clearance set in the production of bearings. The bearing shows permanently light run during all operating life.



1. Frame of the bicycle
2. Shaft – made by cold forming
3. Bushing – made of quality steel
4. Balls – non-sensitivity on shocks
5. Cages – used for balls arrangement, made of polyamide and guarantee steady and smooth running of the bearing
6. Contact rubber sealing – against penetration of impurities and water
7. Fixed cup – fixed in outer ring
8. Loose cup – the fastening system for the proper width of frame

Environmental Protection

The bottom bracket bearing doesn't require neither the maintenance or the refuelling of the grease. The bearing compact is sealed with contact rubber sealing which prevents penetration of impurities as well as the grease leakage. These characteristics are given for the bearing life. All steel, plastic or light alloy components can be returned back to production – they are recyclable.

Tightening of the bearing into the bearing frame

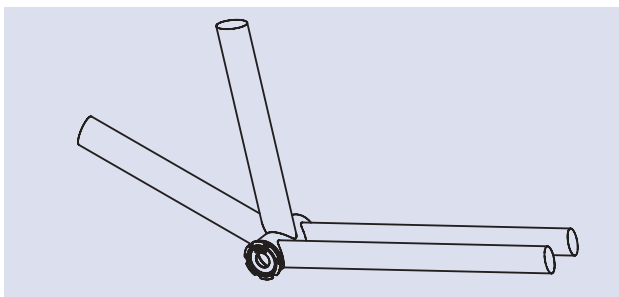
For tightening of the double row bottom bracket bearing into the bicycle frame are used the caps made of quality plastic, zinc coated steel or aluminium alloy. The right cap builds the unit with bearing from the chain system side, the left cap is independent, supporting the bearing radially and creates the fastening system for the proper frame width. By the such design the unit can be used universally for bicycles with a various frame width. Kinex, a. s., produces cups for fastening into the bicycle frame with the thread 1,37" * 24 mm (BSA), 36 * 24 tpi (Italian) and cups for pressing with diameter of Ø 35 mm and Ø 40 mm (Thompson).

Identification symbol of the producer: E

Mounting and dismounting

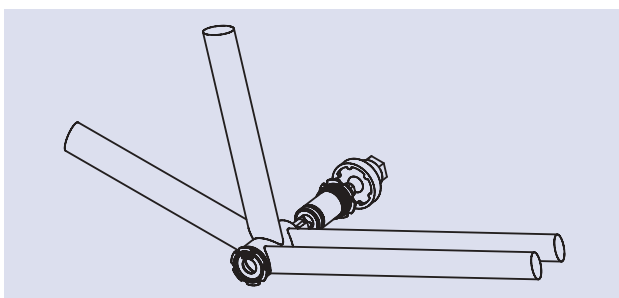
The mounting of the bearing is simple, fast and doesn't require any effort for the threaded cups as well as for the cups designed for pressing.

Cups with thread



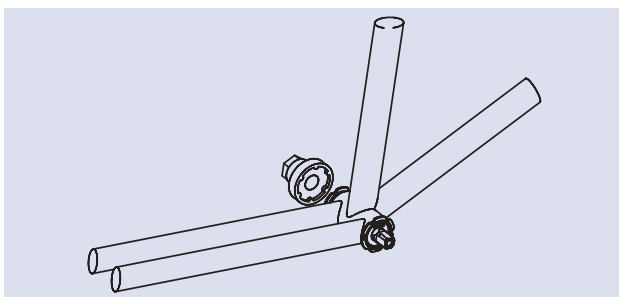
Position 1

To screw the loose cup manually into the bicycle frame and to tighten it so that the distance between the inner face of the cup and the bicycle frame is approximately 5 mm.



Position 2

To screw the bearing together with pressed fixed cup manually into the bicycle frame on 2 - 3 threads. Then to tight by the recommended tightening torque.



Position 3

To tight the loose cup by the recommended tightening torque

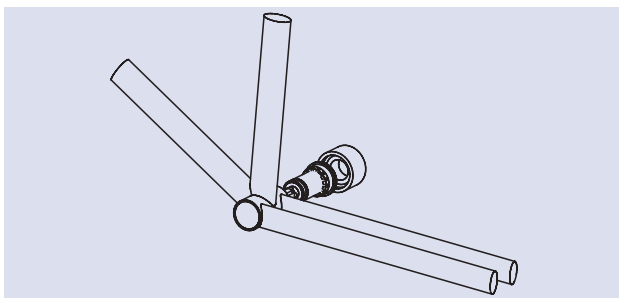
Recommended tightening torque

- Plastic cups = max 30 Nm
- Aluminium cups = max 40 Nm
- Steel cups = max 50 Nm

Dismounting

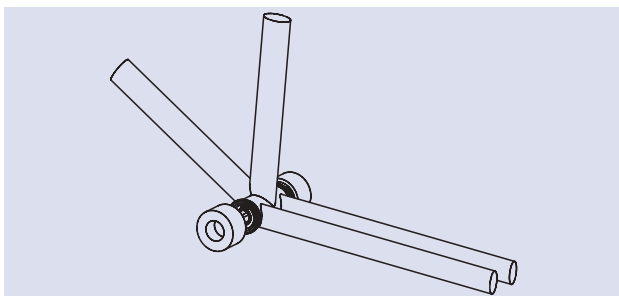
The bearing with fixed cup is unscrewed from the side of the chain wheel. Finally the loose cup is unscrewed.

Thompson cups



Position 1

To press the bearing together with the fixed cup into the bicycle frame by the pressing tool. The pressing tool must assure the pressing through the cup, not through the shaft of bearing.



Position 2

To press the loose cup by using of the pressing tool while the mounted bearing is bolstered up from the oposite side.

Dismounting

By the dismounting tool is pushed the bearing with one cup out of the frame and then is pushed out the another cup.

Special Double Row Bottom Bracket Bearings



BLAL

The bearings with aluminium cups to suit the frame width of 68 – 72 mm

The thread:

- 1,37" x 24 tpi
- 36 x 24 tpi



BLO

The bottom bracket bearings with steel cups to suit the frame width of 64 – 68 mm

The thread:

- 1,37" x 24 tpi
- 36 x 24 tpi



BLOS

The bottom bracket bearings with steel cups to suit the frame width of 68 – 72 mm

The thread

- 1,37" x 24 tpi
- 36 x 24 tpi



BLP

The bottom bracket bearings with plastics cups to suit the frame width of 64 – 68 mm

The thread:

- 1,37" x 24 tpi
- 36 x 24 tpi



BLPS

The bottom bracket bearings with plastic cups to suit the frame width of 68 – 72 mm

The thread:

- 1,37" x 24 tpi



BLN

The bottom bracket bearings with plastic cups to suit the frame width 68 – 70 mm
Cups diameter: 35 mm



BLNA

The bottom bracket bearings with plastic cups to suit the frame width of 68 – 70 mm

Cups diameter: 40 mm



BLPK

The bottom bracket bearings with plastic cups designed for fastening the pedal cranks with a wedge to suit the frame width of 64 – 68 mm

The thread:

- 1,37" x 24 tpi
- 36 x 24 tpi



BLPSK

The bottom bracket bearings with plastic cups designed for fastening the pedal cranks with wedge to suit the frame width of 68 – 72 mm

The thread:

- 1,37" x 24 tpi



BLOSK

The bottom bracket with steel cups designed for fastening the pedal cranks with a wedge to suit the frame width of 68 – 72 mm

The thread:

- 1,37" x 24 tpi
- 36 x 24 tpi



BLNK

The bottom bracket bearings with plastic cups designed for pedal cranks with a wedge to suit the frame width of 68 – 70 mm

Cups diameter: 35 mm.



BLNAK

The bottom bracket bearings with cups designed for fastening pedal cranks with a wedge to suit the frame width of 68 – 70 mm

Cups diameter: 40 mm.



BLEO

The blackened bottom bracket bearings with steel cups to suit frame width of 68 – 72 mm.

The thread:

- 1,37" x 24 tpi
- 36 x 24 tpi

The design with RS sealing



BLEP. 1, BLEP. 2

The blackened bottom bracket bearings with plastic cups to suit the frame width of 64 – 68 mm

The thread:

- 1,37" x 24 tpi
- 36 x 24 tpi

BLEP. 1 – the design with RS sealing

BLEP. 2 – the design without sealing



BLEPS. 1, BLEPS. 2

The bottom bracket bearings with plastic cups to suit frame width of 68 – 72 mm

The thread:

- 1,37" x 24 tpi

BLEPS. 1 – the design with RS sealing

BLEPS. 2 – the design without sealing



BLEN. 1, BLEN. 2

The bottom bracket bearings with plastic cups to suit the frame width of 68 – 70 mm

Cups diameter: 35 mm.

BLEN. 1 – the design with RS sealing

BLEN. 2 – the design without sealing



BLENA. 1, BLENA. 2

The blackened bottom brackets with plastic cups to suit the frame width of 68 – 70 mm.

Cups diameter: 40 mm

BLENA. 1 – the design with RS sealing

BLENA. 2 – the design without RS sealing



BLEPK. 1, BLEPK. 2

The blackened bottom bracket bearings with plastic cups designed for fastening the pedal cranks with wedge to suit frame width of 68 – 70 mm.

The thread:

- 1,37" x 24 tpi
- 36 x 24 tpi

BLEPK. 1 - the design with RS sealing

BLEPK. 2 - the design without RS sealing



BLEOK. 1, BLEOK. 2

The blackened bottom bracket bearings with steel cups designed for fastening the pedal cranks with a wedge to suit frame width of 68 – 72 mm.

The thread:

1,37" x 24 tpi

36 x 24 tpi

BLEOK. 1 – the design with the RS sealing

BLEOK. 2 – the design without sealing



BLENK. 1, BLENK. 2

The blackened bottom bracket bearings with plastic cups designed for fastening the pedal cranks with a wedge to suit frame width of 68 – 70 mm.

Cups diameter: 35 mm

BLENK. 1 – design with RS sealing

BLENK. 2 – design without sealing



BLENAK. 1, BLENAK. 2

The blackened bottom bracket bearing with plastic cups designed for fastening the pedal cranks with a wedge to suit frame width of 68 – 80 mm.

Cups diameter: 40 mm

BLENAK. 1 – design with RS sealing

BLENAK. 2 – design without sealing

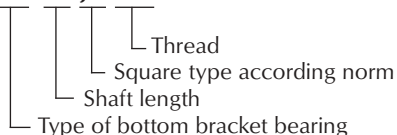
Characteristic of the Special Double Row Bottom Bracket Bearings

Designation	Surface treatment	Seals	Cups			
			Material	Thread	Mounting tool	
BLAL	Shaft zinc coated, bushing in natural state	yes	Al	1,37" x 24 tpi, 36 x 24 tpi	Key 20 teeth	
BLO		yes	Steel	1,37" x 24 tpi, 36 x 24 tpi	Key 6 teeth	
BLOS		yes	Steel	1,37" x 24 tpi, 36 x 24 tpi	Key 20 teeth	
BLP		yes	PA6+GF30	1,37" x 24 tpi, 36 x 24 tpi	Key 6 teeth	
BLPS		yes	PA6+GF30	1,37" x 24 tpi	Key 20 teeth	
BLN		yes	PA6+GF30	Diameter Ø 35	Pressing tool	
BLNA		yes	PA6+GF30	Diameter Ø 40	Pressing tool	
BLPK		yes	PA6+GF30	1,37" x 24 tpi, 36 x 24 tpi	Key 6 teeth	
BLPSK		yes	PA6+GF30	1,37" x 24 tpi	Key 20 teeth	
BLOSK		yes	Steel	1,37" x 24 tpi, 36 x 24 tpi	Key 20 teeth	
BLNK		yes	PA6+GF30	Diameter Ø 35	Pressing tool	
BLNAK		yes	PA6+GF30	Diameter Ø 40	Pressing tool	
BLEO		Shaft and bushing blackened	yes	Steel	1,37" x 24 tpi, 36 x 24 tpi	Key 20 teeth
BLEP. 1, BLEP. 2			yes/no	PA6+GF30	1,37" x 24 tpi, 36 x 24 tpi	Key 6 teeth
BLEPS. 1, BLEPS. 2	yes/no		PA6+GF30	1,37" x 24 tpi	Key 20 teeth	
BLEN. 1, BLEN. 2	yes/no		PA6+GF30	Diameter Ø 35	Pressing tool	
BLENA. 1, BLENA. 2	yes/no		PA6+GF30	Diameter Ø 40	Pressing tool	
BLEPK. 1, BLEPK. 2	yes/no		PA6+GF30	1,37" x 24 tpi, 36 x 24 tpi	Key 6 teeth	
BLEOK. 1, BLEOK. 2	yes/no		Steel	1,37" x 24 tpi, 36 x 24 tpi	Key 20 teeth	
BLENK. 1, BLENK. 2	yes/no		PA6+GF30	Diameter Ø 35	Pressing tool	
BLENAK. 1, BLENAK. 2	yes/no		PA6+GF31	Diameter Ø 40	Pressing tool	

Ordering of Bottom Bracket Bearings with Cups

Example:

BLP 110 JIS BSA



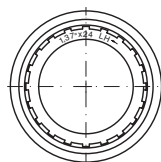
Type	Shaft length	Square type according standard	Thread
BLP	107,0	JIS	BSA (1,37" x 24 tpi)
BLO	110,0	ISO	ITA (36 x 24 tpi)
BLAL	113,0		Thompson Ø 35 mm
BLPE	115,5		Thompson Ø 40 mm
BLN	119,0		
BLPK	122,5		
BLEO	127,0		
BLEP. 1	131,0		
BLEP. 2	136,0		
BLEPS. 1			
BLEPS. 2			

Each bearing supply contains: 2 pcs of screw M 8 x 1 x 18 mm, 2 pcs of washer Ø 8 mm

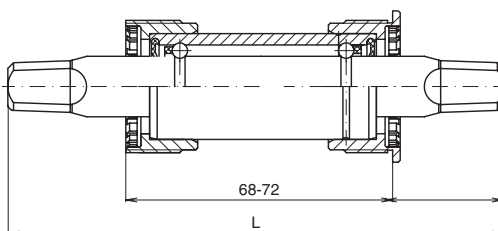
Non-standard types can be supplied when agreed upon.

Special Double Row Bottom Bracket Bearings

BLAL



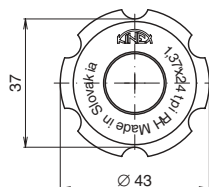
Cup with thread:
1,37" x 24 tpi or 36 x 24 tpi



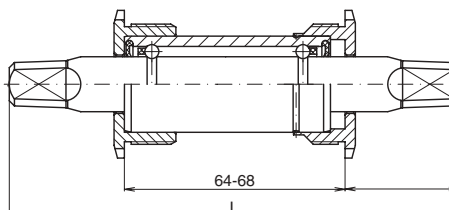
12,6(ISO) or 12,73(JIS)



BLO



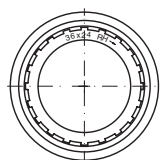
Cup with thread:
1,37" x 24 tpi or 36 x 24 tpi



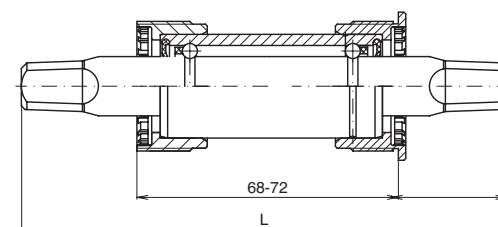
12,6(ISO) or 12,73(JIS)



BLOS



Cup with thread:
1,37" x 24 tpi or 36 x 24 tpi



12,6(ISO) or 12,73(JIS)



Shaft length L	BLAL Frame width (68 - 72)		BLO Frame width (64 - 68)	BLOS Frame width (68 - 72)						
	A	A*	A	A	A*					
mm	mm		mm	mm						
107	19,2	18,2	19,5	19,2	18,2					
110	20,7	19,7	21,0	20,7	19,7					
113	21,7	20,7	22,0	21,7	20,7					
115,5	23,2	22,2	23,5	23,2	22,2					
119	26,7	25,7	27,0	26,7	25,7					
122,5	28,2	27,2	28,5	28,2	27,2					
127	29,2	28,2	29,5	29,2	28,2					
131	33,2	32,2	33,5	33,2	32,2					
136	-	-	-	33,2	32,2					

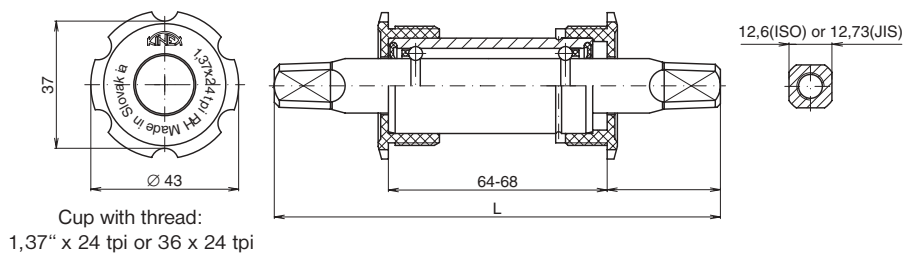
A - distance from the cup inner face to the shaft end (chainline side)

A* - valid for thread 36 x 24, distance from the cup inner face to the shaft end (chainline side)

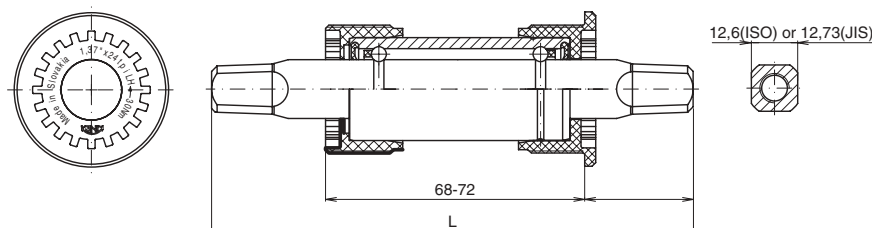
Surface treatment: BLAL - shaft zinc coated, bushing in natural state, cups eloxa coated
 BLO - shaft zinc coated, bushing in natural state, cups zinc coated
 BLOS - shaft zinc coated, bushing in natural state, cups zinc coated

Special Double Row Bottom Bracket Bearings

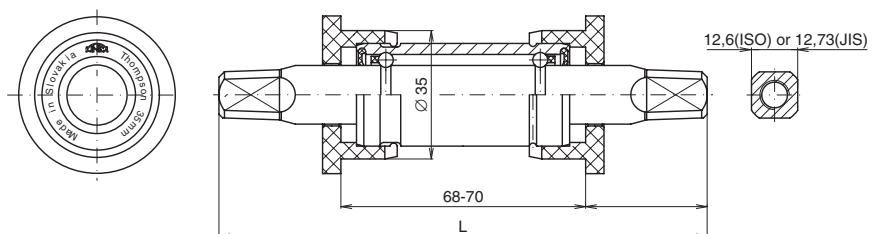
BLP



BLPS



BLN



Shaft length L	BLP Frame width (64 - 68)		BLSP Frame width (68 - 72)		BLN Frame width (68 - 70)						
	A	A*	A	A*	A	A*					
mm	mm		mm		mm						
107	19,5	19,5	19,5	-	-	-					
110	21,0	21,0	21,0	-	-	-					
113	22,0	22,0	22,0	-	22,0	-					
115,5	23,5	23,5	23,5	-	23,5	-					
119	27,0	27,0	27,0	-	27,5	-					
122,5	28,5	28,5	28,5	-	28,5	-					
127	29,5	29,5	29,5	-	29,5	-					
131	33,5	33,5	33,5	-	33,5	-					
136	-	-	-	-	-	-					

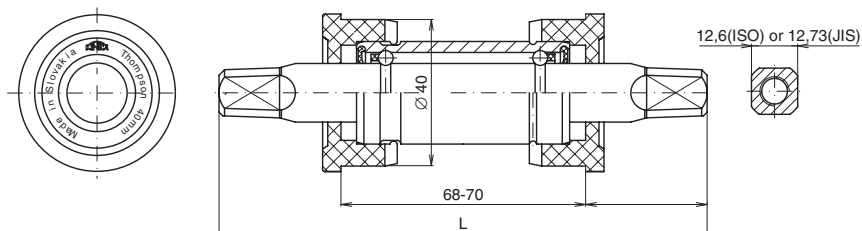
A - distance from the cup inner face to the shaft end (chainline side)

A* - valid for thread 36 x 24, distance from the cup inner face to the shaft end (chainline side)

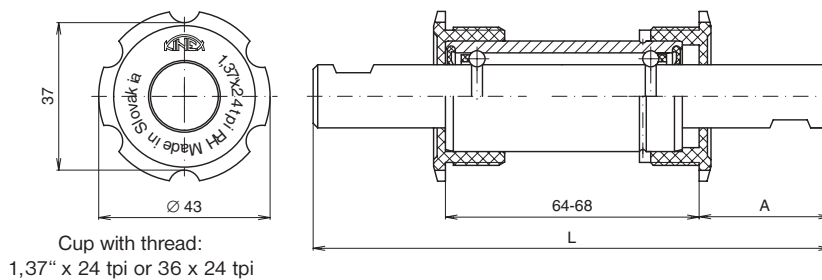
Surface treatment: shaft zinc coated, bushing in natural state

Special Double Row Bottom Bracket Bearings

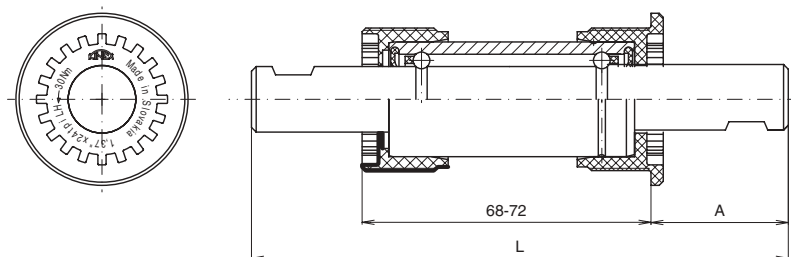
BLNA



BLPK



BLPSK



Shaft length	BLNA Frame width (68 - 70)		BLPK Frame width (64 - 68)		BLPSK Frame width (68 - 72)							
	L	A	A*	A	A*	A						
mm	mm		mm		mm							
107	-	-	-	-	-	-						
110	-	-	-	-	-	-						
113	22,0	-	-	-	-	-						
115,5	23,5	-	-	-	-	-						
119	27,0	-	-	-	-	-						
122,5	28,5	-	-	-	-	-						
127	29,5	-	-	-	-	-						
131	33,5	-	-	-	-	-						
136	-	-	37,0	37,0	37,0	-						

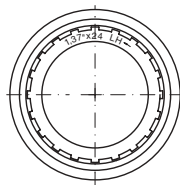
A - distance from the cup inner face to the shaft end (chainline side)

A* - valid for thread 36 x 24, distance from the cup inner face to the shaft end (chainline side)

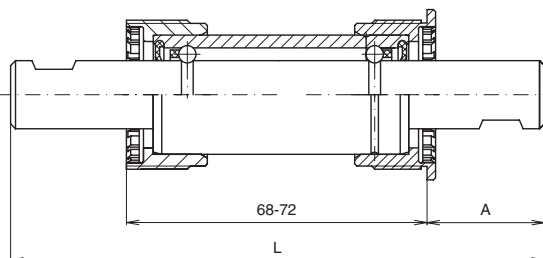
Surface treatment: shaft zinc coated, bushing in natural state

Special Double Row Bottom Bracket Bearings

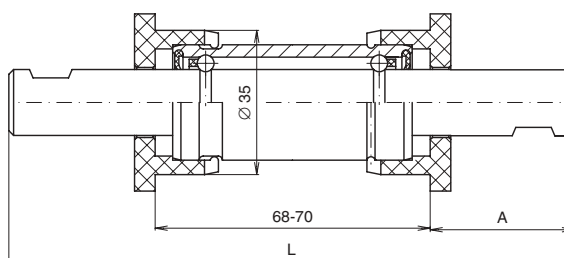
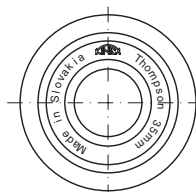
BLOSK



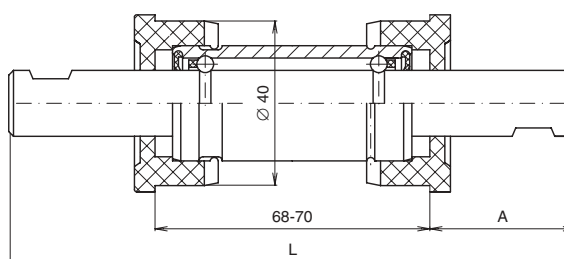
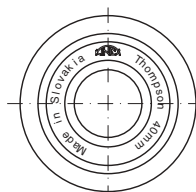
Cup with thread:
1,37" x 24 tpi or 36 x 24 tpi



BLNK



BLNAK



Shaft length L	BLOSK Frame width (68 - 72)		BLNK Frame width (68 - 70)		BLNAK Frame width (68 - 72)						
	A	A*	A	A*	A	A*					
mm	mm		mm		mm						
107	-	-	-	-	-	-					
110	-	-	-	-	-	-					
113	-	-	-	-	-	-					
115,5	-	-	-	-	-	-					
119	-	-	-	-	-	-					
122,5	-	-	-	-	-	-					
127	-	-	-	-	-	-					
131	-	-	-	-	-	-					
136	36,7	35,7	37,0	-	37,0	-					

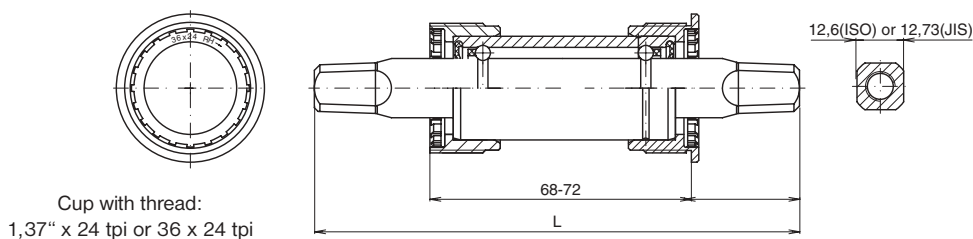
A - distance from the cup inner face to the shaft end (chainline side)

A* - valid for thread 36 x 24, distance from the cup inner face to the shaft end (chainline side)

Surface treatment: shaft zinc coated, bushing in natural state, cups zinc coated

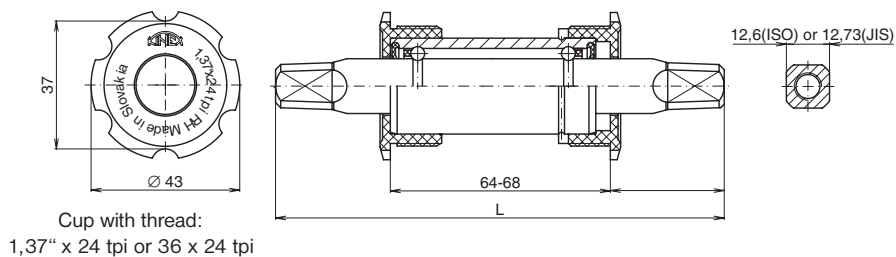
Special Double Row Bottom Bracket Bearings

BLEO



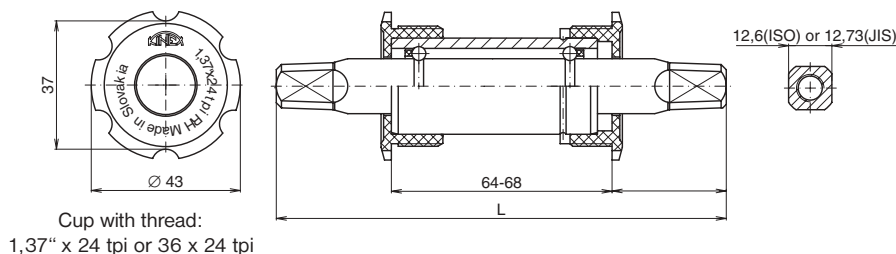
Cup with thread:
1,37" x 24 tpi or 36 x 24 tpi

BLEP. 1



Cup with thread:
1,37" x 24 tpi or 36 x 24 tpi

BLEP. 2



Cup with thread:
1,37" x 24 tpi or 36 x 24 tpi

Shaft length L	BLEO Frame width (68 - 72)		BLEP. 1 Frame width (64 - 68)		BLEP. 2 Frame width (64 - 68)						
	A	A*	A	A*	A	A*					
mm	mm		mm		mm						
107	19,2	18,2	19,5	19,5	19,5	19,5					
110	20,7	19,7	21,0	21,0	21,0	21,0					
113	21,7	20,7	22,0	22,0	22,0	22,0					
115,5	23,2	22,2	23,5	23,5	23,5	23,5					
119	26,7	25,7	27,0	27,0	27,0	27,0					
122,5	28,2	27,2	28,5	28,5	28,5	28,5					
127	29,2	28,2	29,5	29,5	29,5	29,5					
131	33,2	32,2	33,5	33,5	33,5	33,5					
136	-	-	-	-	-	-					

A - distance from the cup inner face to the shaft end (chainline side)

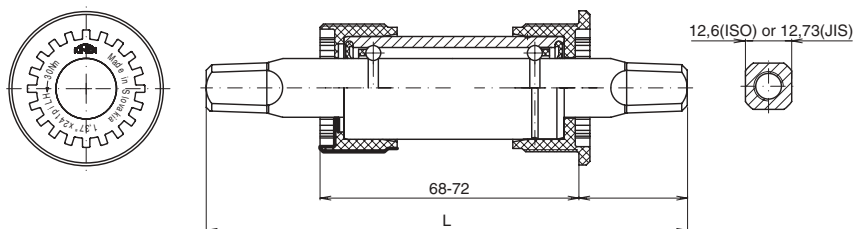
A* - valid for thread 36 x 24, distance from the cup inner face to the shaft end (chainline side)

Surface treatment: BLEO - shaft and bushing blackened, cups zinc coated

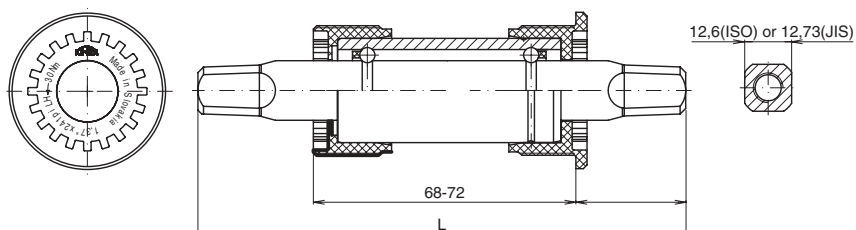
BLEP. 1, BLEP. 2 - shaft and bushing blackened

Special Double Row Bottom Bracket Bearings

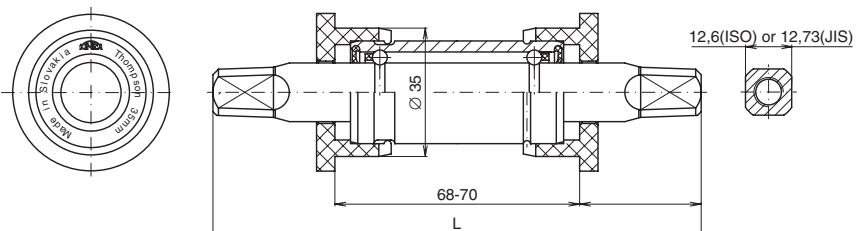
BLEPS. 1



BLEPS. 2



BLEN. 1



Shaft length L	BLEPS. 1 Frame width (68 - 72)		BLEPS. 2 Frame width (68 - 72)		BLEN. 1 Frame width (68 - 70)						
	A	A*	A	A*	A	A*					
mm	mm		mm		mm						
107	19,5	-	19,5	-	-	-					
110	21,0	-	21,0	-	-	-					
113	22,0	-	22,0	-	-	22,0					
115,5	23,5	-	23,5	-	23,5	-					
119	27,0	-	27,0	-	27,0	-					
122,5	28,5	-	28,5	-	28,5	-					
127	29,5	-	29,5	-	29,5	-					
131	33,5	-	33,5	-	33,5	-					
136	-	-	-	-	-	-					

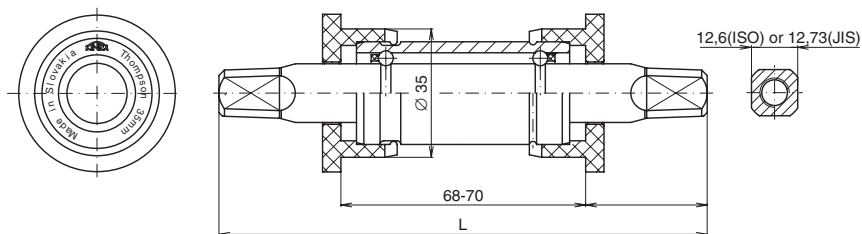
A - distance from the cup inner face to the shaft end (chainline side)

A* - valid for thread 36 x 24, distance from the cup inner face to the shaft end (chainline side)

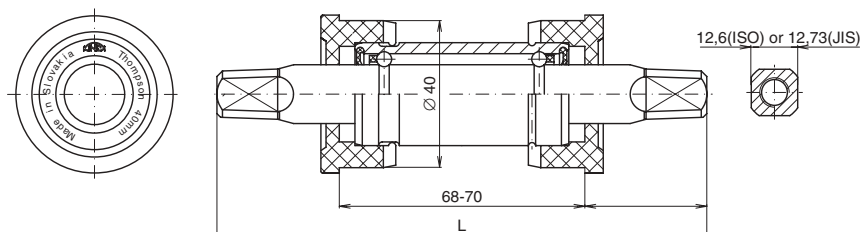
Surface treatment: shaft and bushing blackened

Special Double Row Bottom Bracket Bearings

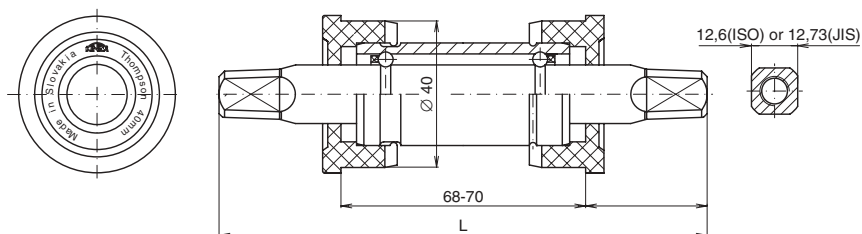
BLEN. 2



BLENA. 1



BLENA. 2



Shaft length L	BLEN. 2 Frame width (68 - 70)		BLENA. 1 Frame width (68 - 70)		BLENA. 2 Frame width (68 - 70)							
	A	A*	A	A*	A	A*						
mm	mm		mm		mm							
107	-	-	-	-	-	-						
110	-	-	-	-	-	-						
113	-	22,0	-	22,0	-	22,0						
115,5	23,5	-	23,5	-	23,5	-						
119	27,0	-	27,0	-	27,0	-						
122,5	28,5	-	28,5	-	28,5	-						
127	29,5	-	29,5	-	29,5	-						
131	33,5	-	33,5	-	33,5	-						
136	-	-	-	-	-	-						

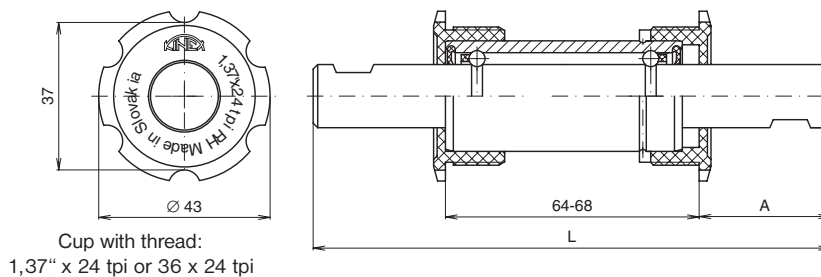
A - distance from the cup inner face to the shaft end (chainline side)

A* - valid for thread 36 x 24, distance from the cup inner face to the shaft end (chainline side)

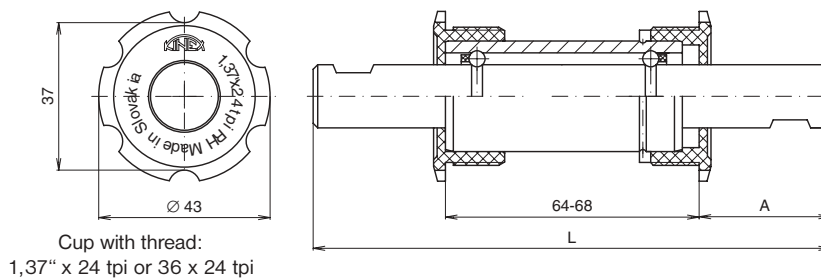
Surface treatment: shaft and bushing blackened

Special Double Row Bottom Bracket Bearings

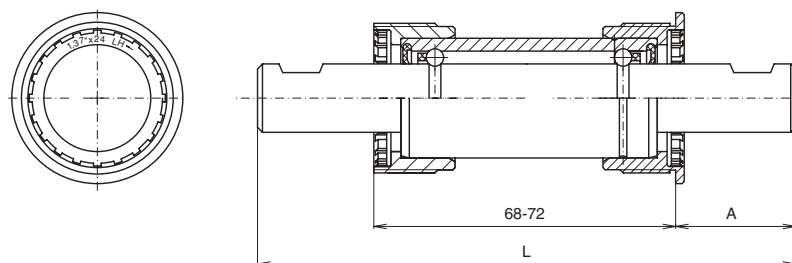
BLEPK. 1



BLEPK. 2



BLEOK. 1



Shaft length L	BLEPK. 1 Frame width (68 - 70)		BLEPK. 2 Frame width (68 - 70)		BLEOK. 1 Frame width (68 - 72)						
	A	A*	A	A*	A	A*					
mm	mm		mm		mm						
107	-	-	-	-	-	-					
110	-	-	-	-	-	-					
113	-	-	-	-	-	-					
115,5	-	-	-	-	-	-					
119	-	-	-	-	-	-					
122,5	-	-	-	-	-	-					
127	-	-	-	-	-	-					
131	-	-	-	-	-	-					
136	37,0	37,0	37,0	37,0	36,7	35,7					

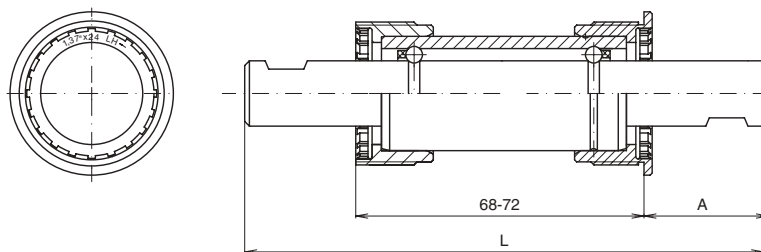
A - distance from the cup inner face to the shaft end (chainline side)

A* - valid for thread 36 x 24, distance from the cup inner face to the shaft end (chainline side)

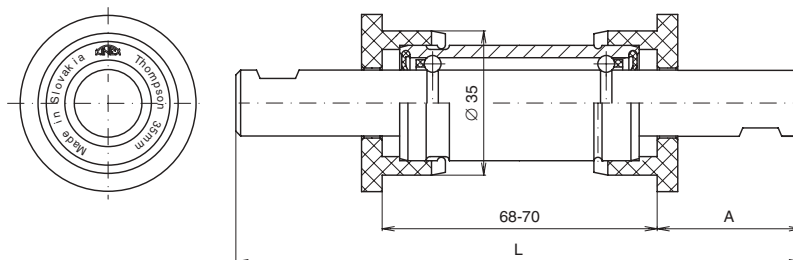
Surface treatment: shaft and bushing blackened

Special Double Row Bottom Bracket Bearings

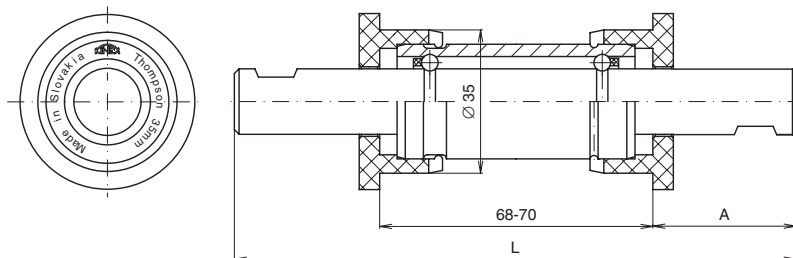
BLEOK. 2



BLENK. 1



BLENK. 2



Shaft length L	BLEOK. 2 Frame width (68 - 72)		BLENK. 1 Frame width (68 - 70)		BLENK. 2 Frame width (68 - 70)						
	A	A*	A	A*	A	A*					
mm	mm		mm		mm						
107	-	-	-	-	-	-					
110	-	-	-	-	-	-					
113	-	-	-	-	-	-					
115,5	-	-	-	-	-	-					
119	-	-	-	-	-	-					
122,5	-	-	-	-	-	-					
127	-	-	-	-	-	-					
131	-	-	-	-	-	-					
136	36,7	35,7	37,0	-	37,0	-					

A - distance from the cup inner face to the shaft end (chainline side)

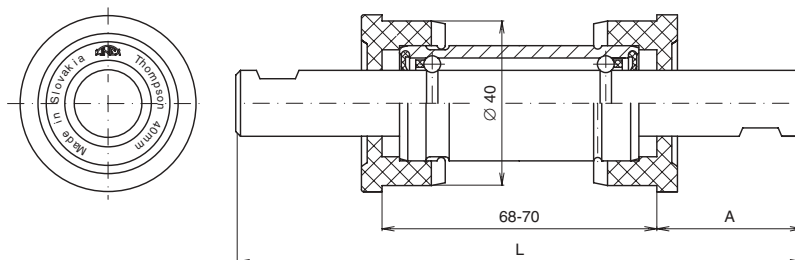
A* - valid for thread 36 x 24, distance from the cup inner face to the shaft end (chainline side)

Surface treatment: BLEOK. 2 - shaft and bushing blackened, cups zinc coated

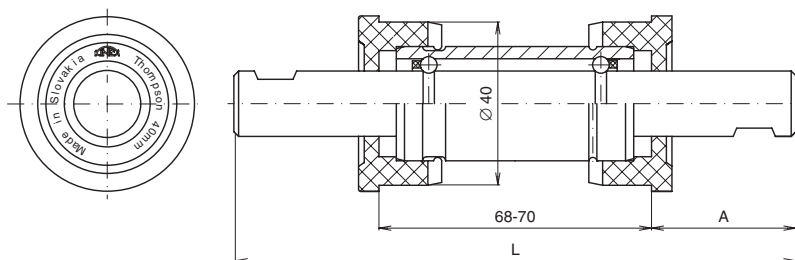
BLENK. 1, BLENK. 2 - shaft and bushing blackened

Special Double Row Bottom Bracket Bearings

BLENAK. 1



BLENAK. 2



Shaft length L	BLENAK. 1 Frame width (68 - 72)		BLENAK. 2 Frame width (68 - 72)							
	A	A*	A	A*						
mm	mm		mm							
107	-	-	-	-						
110	-	-	-	-						
113	-	-	-	-						
115,5	-	-	-	-						
119	-	-	-	-						
122,5	-	-	-	-						
127	-	-	-	-						
131	-	-	-	-						
136	37,0	-	37,0	-						

A - distance from the cup inner face to the shaft end (chainline side)

A* - valid for thread 36 x 24, distance from the cup inner face to the shaft end (chainline side)

Surface treatment: shaft and bushing blackened