

# Roller bearings

## HEAD OFFICE

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**SKF**

# 16 Bearing accessories

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## Adapter sleeves

Adapter sleeves are the most commonly used components for locating bearings with a tapered bore onto a cylindrical seat as they can be used on plain or stepped shafts († fig. 1). They are easy to install and require no additional location on the shaft. When adapter sleeves are used on plain shafts, the bearing can be located at any position on the shaft. When used on stepped shafts together with an L-shaped spacer ring, bearings can be accurately positioned axially thereby facilitating bearing mounting and dismounting.

### Designs and variants

#### Basic design

SKF supplies metric adapter sleeves with a metric or an inch bore and inch adapter sleeves. The sleeves are slit and supplied complete with a lock nut and locking device. Smaller sizes use a nut and a lock washer. Larger sizes use a nut and a locking clip or locking plate († fig. 2).

Metric sleeves with a bore diameter  $\leq 180$  mm (size  $\leq 40$ ) are phosphated. Larger metric sleeves and all inch sleeves are coated with a solventless rust inhibitor.

Adapter sleeves listed in this catalogue constitute the basic SKF assortment and are only part of the total assortment. For larger sizes (bore diameter  $\geq 1\ 060$  mm) and variants not listed in the product tables, contact SKF.

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#### SKF maintenance products

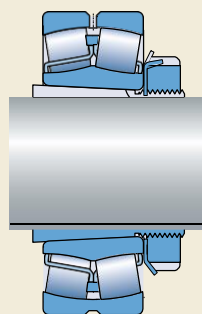
..... † [skf.com/mapro](http://skf.com/mapro)

#### Variants for oil injection

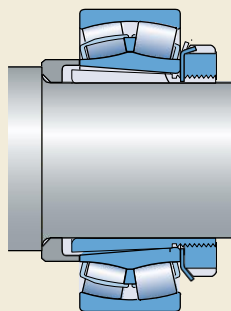
Adapter sleeves with oil supply ducts and distribution grooves are available to enable use of the oil injection method to mount and dismount bearings (OH, OSNW and OSNP series, † figs. 3 to 6, pages 1271 and 1272).

Thread details for the oil supply ducts and the appropriate hydraulic nut designations are listed in the product tables. For information about oil injection equipment, refer to the catalogue *SKF Maintenance and Lubrication Products* or visit [skf.com/mapro](http://skf.com/mapro).

Fig. 1

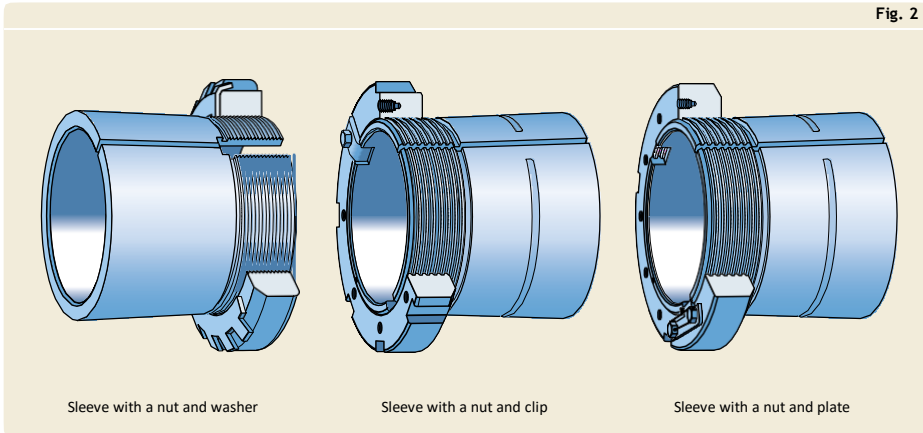


On a plain shaft



On a stepped shaft

Fig. 2

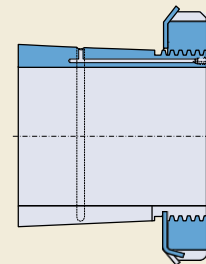


Metric sleeves with a bore diameter  $\geq 200$  mm (size  $\geq 44$ ) are equipped with the necessary ducts and grooves as standard. For metric sleeves with a bore diameter  $\geq 140$  mm (size  $\geq 32$ ) and inch sleeves with a bore diameter  $\geq 4 \frac{5}{16}$  in. (size  $\geq 26$ ), these features are available on request.

SKF manufactures oil injection sleeves in four variants that differ in the number and arrangement of the oil supply ducts and distribution grooves:

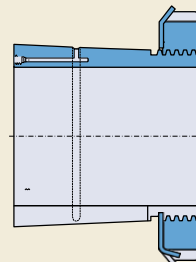
- designation suffix H († fig. 3)  
These are the SKF standard adapter sleeves for oil injection. These sleeves have an oil supply duct at the threaded end of the sleeve and a distribution groove on the outside surface.
- no designation suffix († fig. 4)  
These sleeves have an oil supply duct at the end opposite the threaded section and a distribution groove on the outside surface.

Fig. 3



OH .. H / OSNW .. H / OSNP .. H

Fig. 4

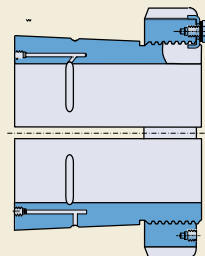


OH .. / OSNW .. / OSNP ..

## 16 Bearing accessories

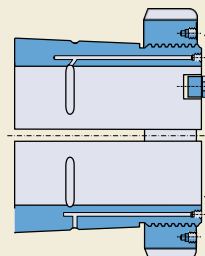
- designation suffix B († fig. 5)  
These sleeves have one or two oil supply ducts at the end opposite the threaded section and a distribution groove in the bore and on the outside surface. Metric and inch sleeves with a bore diameter < 200 mm (size ≤ 40) have one supply duct. Larger metric sleeves have two. Larger inch sleeves are made to order and can be supplied with one or two supply ducts on request. When sleeves have two supply ducts, each duct feeds one of the distribution grooves. An arrow on the sleeve side face, next to the duct inlet, indicates which groove the duct feeds.
- designation suffix HB († fig. 6)  
These sleeves have one or two oil supply ducts at the threaded end of the sleeve and a distribution groove in the bore and on the outside surface. Metric and inch sleeves with a bore diameter < 200 mm (size ≤ 40) have one supply duct. Larger metric sleeves have two. Larger inch sleeves are made to order and can be supplied with one or two supply ducts on request. When sleeves have two supply ducts, each duct feeds one of the distribution grooves. An arrow on the sleeve side face, next to the duct inlet, indicates which groove the duct feeds.

Fig. 5



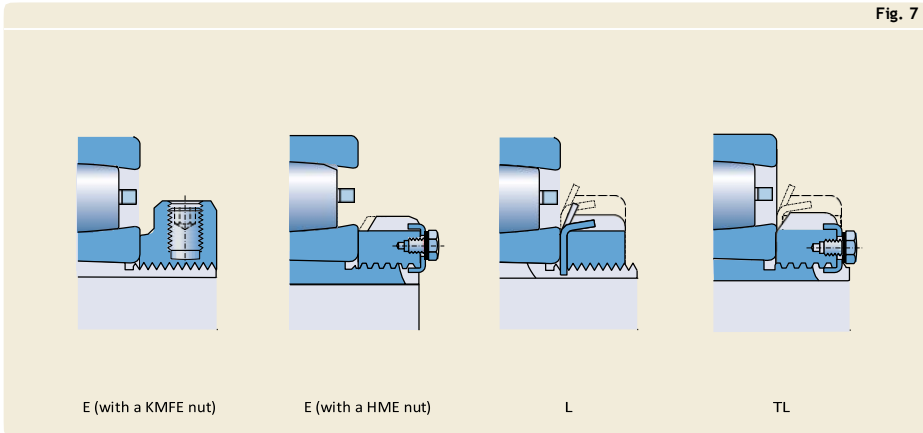
OH .. B / OSNW .. B / OSNP .. B

Fig. 6



OH .. HB / OSNW .. HB / OSNP .. HB

Fig. 7



### Variants for CARB toroidal roller bearings

Modified adapter sleeve assemblies with designation suffixes E, L and TL († fig. 7) are typically available for CARB bearings to prevent the locking device from interfering with the cage:

- Sleeves with a designation suffix E
  - The standard KM lock nut and MB lock washer are replaced with a KMFE lock nut.
  - The standard HM 30 or HM 31 lock nut is replaced with an HME lock nut.
- Sleeves with a designation suffix L
 

The standard KM lock nut and MB lock washer are replaced with a KML lock nut and MBL lock washer because both have a lower sectional height.
- Sleeves with a designation suffix TL
 

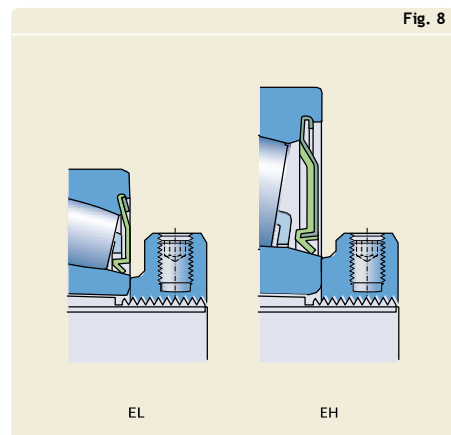
The standard HM .. T lock nut and MB lock washer are replaced with an HM 30 lock nut and an MS 30 locking clip because both have a lower sectional height.


When using CARB bearings on an adapter sleeve, check that there is sufficient space between the locking device and bearing to accommodate axial displacement († *Axial displacement*, page 968).

### Variants for sealed bearings

Modified adapter sleeve assemblies with designation suffixes E, EL, EH, L and TL are typically available for sealed spherical roller bearings and sealed self-aligning ball bearings to prevent the locking device from interfering with the seal († fig. 7 for designation suffixes E, L and TL). Adapter sleeve assemblies with a designation suffix EL or EH use either a KMFE .. L lock nut, which has a lower abutment diameter than the standard KMFE lock nut († fig. 8), or a KMFE .. H lock nut († fig. 8), which has a higher abutment diameter than the standard KMFE lock nut.

Fig. 8



Product data		
	Metric series	Inch series
<b>Dimension standards</b>	ISO 2982-1, except for the bore diameter of sleeves for inch shafts	ANSI/ABMA Std. 8.2
<b>Tolerances</b>	Bore diameter: JS9 Width: h15	
<b>External taper</b>	1:12 as standard 1:30 as standard in the 40 and 41 dimension series For additional information, contact the SKF application engineering service.	
<b>Thread</b>	<b>Bore diameter &lt; 200 mm</b> (size ≤ 40): metric thread in accordance with ISO 965-3, matching the appertaining SKF lock nut <b>Bore diameter ≥ 200 mm</b> (size ≥ 44): metric trapezoidal thread in accordance with ISO 2903, matching the appertaining SKF lock nut	<b>Bore diameter ≤ 12 in.</b> (size ≤ 64): ANSI/ABMA B1.1 Unified Form Special <b>Bore diameter ≥ 12 7/16 in.</b> (size ≥ 68): ACME thread class 3G
<b>Shaft tolerances</b>	h9  Cylindricity: IT5/2 – ISO 1101 Adapter sleeves adapt to the shaft diameter, so that wider diameter tolerances can be permitted compared to the seat of a bearing with a cylindrical bore. However, the form tolerances must be kept within narrow limits as the accuracy of form directly affects the running accuracy of the bearing.	



## Withdrawal sleeves

Withdrawal sleeves can be used to mount bearings with a tapered bore on the cylindrical seat of stepped shafts († fig. 9). The sleeve is pressed into the bore of the bearing inner ring, which abuts a shaft shoulder or similar fixed component. The sleeve is located on the shaft by a nut or an end plate. Lock nuts or end plates are not supplied with withdrawal sleeves. KM or HM lock nuts († page 1278) with appropriate locking devices are suitable, but must be ordered separately.

To press the withdrawal sleeve into the bearing bore, a considerable amount of force is required to overcome the friction between the bearing, sleeve and shaft. To facilitate mounting and dismounting bearings on withdrawal sleeves, SKF recommends using a hydraulic nut († fig. 10).

Fig. 9

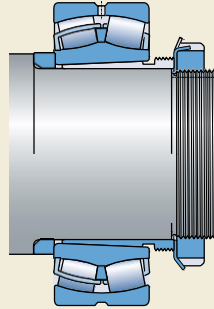
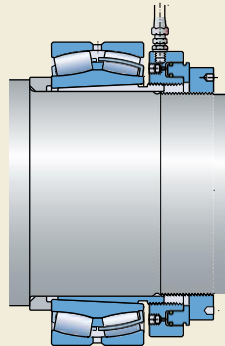


Fig. 10



## 16 Bearing accessories

### Designs and variants

#### Basic design

SKF withdrawal sleeves († fig. 11) are slit. Sleeves with a bore diameter  $\leq 190$  mm (size  $\leq 40$ ) are phosphated. Larger sleeves are coated with a solventless rust inhibitor.

The nut required to dismount a withdrawal sleeve must be ordered separately. Appropriate sizes of nuts are listed in the product tables.

Withdrawal sleeves listed in this catalogue constitute the basic SKF assortment. For larger sizes (bore diameter  $\geq 1\ 060$  mm), contact SKF.

#### Variant for oil injection

Withdrawal sleeves with oil supply ducts and distribution grooves, which enable use of the oil injection method to mount and dismount bearings (AOH series, † fig. 12), are available. These sleeves have two oil supply ducts at the threaded end that feed the distribution grooves. The distribution grooves are in the circumferential and axial directions, on both the outside surface and the sleeve bore. Thread details for the oil supply ducts are listed in the product tables.

SKF withdrawal sleeves with a bore diameter  $\geq 200$  mm (size  $\geq 44$ ) are equipped with the necessary ducts and grooves as standard. For sleeves with a bore diameter  $\geq 150$  mm (size  $\geq 32$ ), these features are available on request.

For information about oil injection equipment, refer to the catalogue *SKF Maintenance and Lubrication Products* or visit [skf.com/mapro](http://skf.com/mapro).

Fig. 11

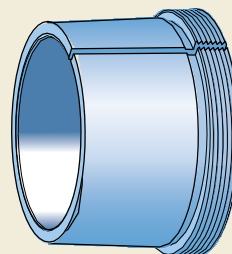
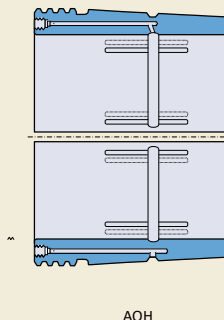



Fig. 12



<b>Product data</b>	
<b>Dimension standards</b>	ISO 2982-1
<b>Tolerances</b>	Bore diameter: JS9 Width: h13
<b>External taper</b>	1:12 as standard 1:30 as standard in the A(O)H 240 and A(O)H 241 series
<b>Thread</b>	<p><b>Bore diameter <math>\leq 180</math> mm</b> (size <math>\leq 38</math>): metric thread in accordance with ISO 965-3, matching the appropriate SKF nut for dismounting</p> <p><b>Bore diameter <math>\geq 190</math> mm</b> (size <math>\geq 40</math>): metric trapezoidal thread in accordance with ISO 2903, matching the appropriate SKF nut for dismounting</p> <hr/> <p>Thread requirements for other lock nuts than listed in the product tables:  <b>Bore diameter <math>\leq 180</math> mm</b> (size <math>\leq 38</math>):  Tolerance 5H – ISO 965-3  <b>Bore diameter <math>\geq 190</math> mm</b> (size <math>\geq 40</math>):  Tolerance 7H – ISO 2903</p>
<b>Shaft tolerances</b>	<p>h9 </p> <p>Cylindricity: IT5/2 – ISO 1101</p> <p>Withdrawal sleeves adapt to the shaft diameter, so that wider diameter tolerances can be permitted compared to the seat of a bearing with a cylindrical bore. However, the form tolerances must be kept within narrow limits as the accuracy of form directly affects the running accuracy of the bearing.</p>

## Lock nuts

Lock nuts are used to locate bearings and other components onto a shaft or adapter sleeve. They are also used for mounting bearings on tapered shaft seats and dismounting bearings from withdrawal sleeves. Lock nuts have to be secured to prevent unintentional loosening. This is done, either by a locking device that engages a keyway in the shaft or key slot in the adapter sleeve, or by a locking mechanism integrated in the nut. Lock nuts with an integrated locking mechanism reduce the cost of the shaft as no keyway is required. Installation is also quicker and easier because no separate locking device is necessary. However, the loosening torque of these lock nuts requires more attention († page 1284).

### Designs and variants

SKF lock nuts provide a variety of ways to secure the nut onto the shaft. The lock nuts listed in this catalogue constitute the basic SKF assortment. Lock nuts with other locking methods can be supplied on request. For additional information, contact the SKF application engineering service.

#### Lock nuts with a lock washer, locking clip or locking plate

These lock nuts are available in different series († fig. 13):

- KM and KML lock nuts have metric threads and use lock washers († fig. 14).
- HM .. T lock nuts have metric trapezoidal threads and use lock washers († fig. 14). For some sizes no lock washer is available, because these nuts are intended only for removal purposes.
- HM and HME lock nuts have metric trapezoidal threads and use locking clips († fig. 15).
- N and AN lock nuts have inch dimensions. Lock nuts with thread diameters  $\leq 8 \frac{5}{8}$  in. (size  $\leq 44$ ) use a lock washer († fig. 14). Lock nuts with thread diameters  $\geq 9 \frac{7}{16}$  in. (size  $\geq 48$ ) use a locking plate († fig. 16).

Lock washers, locking clips and locking plates are simple, stable and reliable fastening elements which engage a keyway in the shaft or key slot in the adapter sleeve. The washer locks the nut in position when one of the washer tabs is bent into one of the slots on the nut († fig. 17). Locking clips and locking plates are attached to the nut by bolts († figs. 18 and 19).

A locking clip consists of the clip, a hexagonal head bolt in accordance with EN ISO 4017 and a spring-lock washer in accordance with DIN 128 († fig. 15). A locking plate consists of the plate, two hexagonal head bolts and a wire († fig. 16).

The nut and the locking device must be ordered separately. The appropriate locking device is listed in the product tables. KM lock nuts can be locked either with the MB lock

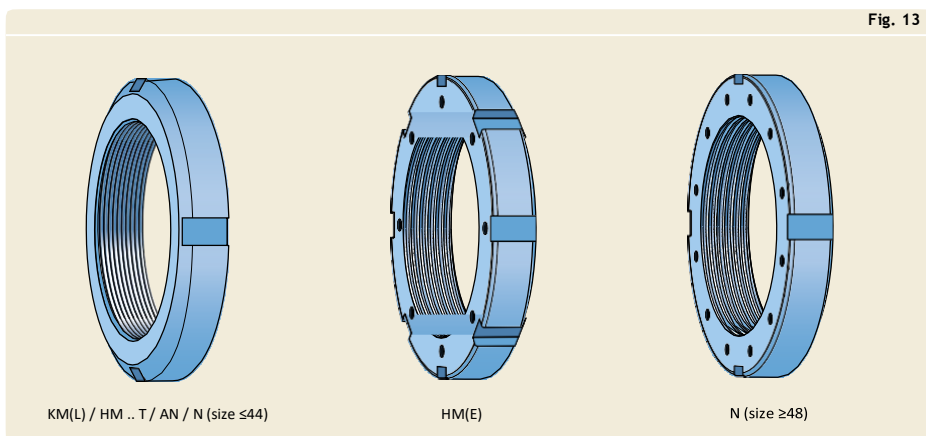
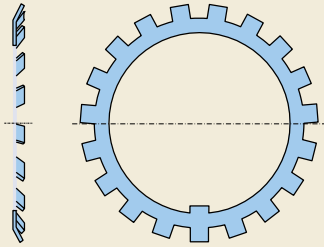


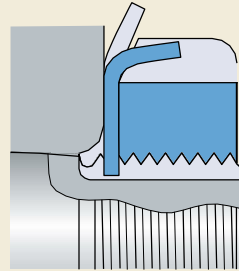
Fig. 13

Fig. 14



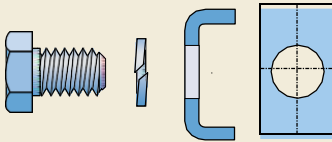
MB / W lock washer

Fig. 17



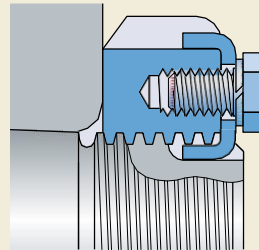
Locking with a washer

Fig. 15



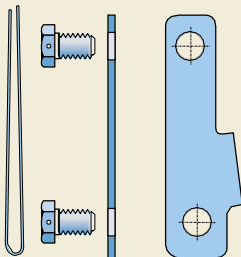
MS locking clip

Fig. 18



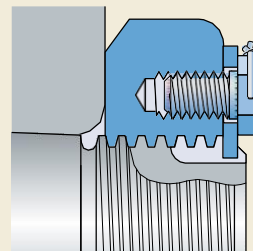
Locking with a clip

Fig. 16



PL locking plate

Fig. 19



Locking with a plate

## 16 Bearing accessories

washer listed in the product tables or with a stronger, MB .. A lock washer († product table, page 1318).

### Lock nuts with an integral locking device

KMK series lock nuts († fig. 20) have a threaded steel insert in their bore to lock the nut in place on the shaft or adapter sleeve. The threads on the insert match the locknut threads. The insert acts as a pressure plate when a grub screw, which runs through the body of the lock nut, is tightened. († fig. 21). KMK lock nuts are intended to locate radial bearings in less demanding applications.

KMK lock nuts should not be used on shafts with a keyway or on adapter sleeves with a key

slot. The locking device can be damaged if it aligns with a keyway or slot.

### Lock nuts with a locking screw

KMFE series lock nuts († fig. 22) use an integral grub screw (locking screw) to press the threads on the nut against the threads on a shaft († fig. 23) or sleeve. Lock nuts in the KMFE series are intended to axially locate CARB toroidal roller bearings, sealed spherical roller bearings and sealed self-aligning ball bearings on a shaft or an adapter sleeve.

KMFE lock nuts should not be used on shafts with a keyway or on adapter sleeves with a key slot. The locking screw can damage the nut if the screw aligns with a keyway or slot.

Fig. 20

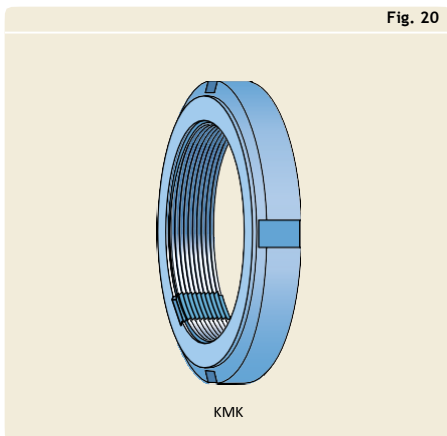


Fig. 22

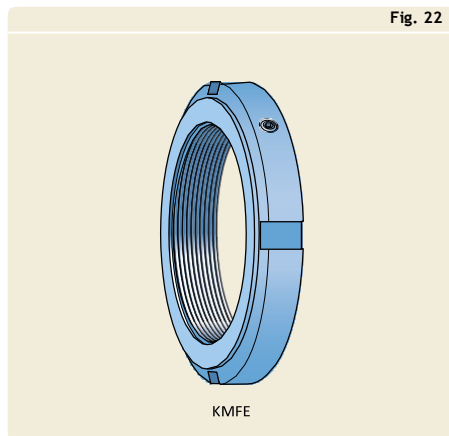


Fig. 21

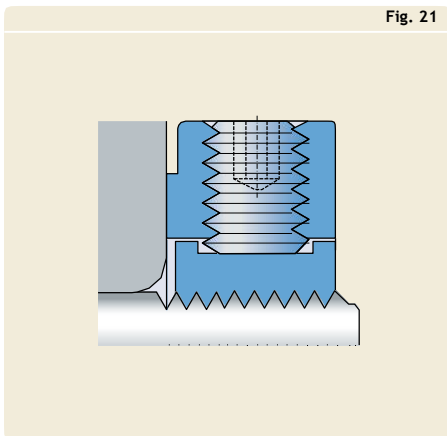
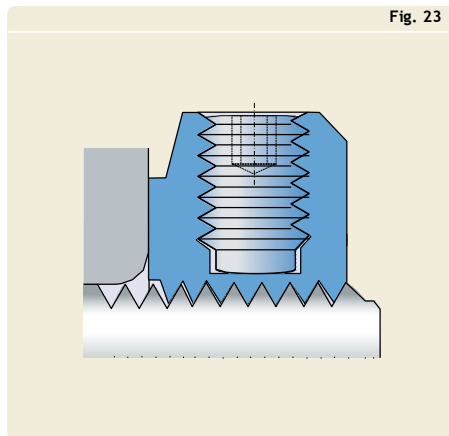


Fig. 23



### Precision lock nuts with locking pins

KMT and KMTA series precision lock nuts († fig. 24) have three locking pins equally spaced around the circumference of the nut to lock it onto the shaft. The locking pins are pressed into the shaft thread with grub screws. The end face of each pin is machined to match the shaft thread († fig. 25). The holes for the locking pins and grub screws are drilled at an angle to the shaft thread to avoid backlash.

SKF KMT and KMTA series precision lock nuts are intended for applications where high precision, simple assembly and reliable locking are required. They should not be used on shafts with a keyway or on adapter sleeves with a key slot. The locking pin can be damaged if it aligns with a keyway or slot.

KMT lock nuts with a thread ranging from 260 to 420 mm (sizes 52 to 84) can be supplied on request. For additional information, contact the SKF application engineering service.

KMTA lock nuts have a full cylindrical outside surface and a different thread pitch than KMT nuts for some sizes. They are intended primarily for applications where space is limited. The nut can be used to establish a gap-type seal.

Fig. 25

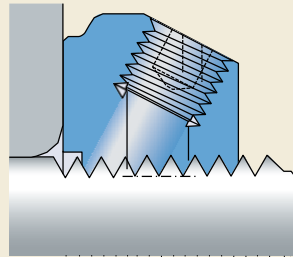
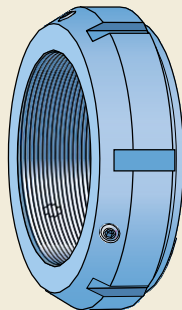
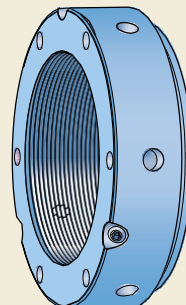


Fig. 24



KMT



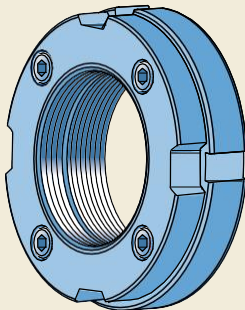
KMTA

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### Precision lock nuts with axial locking screws

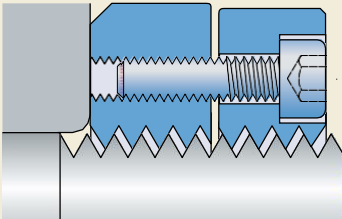
Precision lock nuts in the KMD series († fig. 26) are two-piece nuts connected by axial locking screws. Once the lock nut is in place against the component, the locking screws are tightened. This pulls the rear threads forward, locking the nut in place († fig. 27).

Fig. 26



KMD

Fig. 27







Product data		
	<b>Lock nuts</b> with a lock washer or a locking clip (locking plate)	
	Metric series, KM(L) and HM(E)	Inch series, N and AN
<b>Dimension standards</b>	ISO 2982-2	ANSI/ABMA Std. 8.2
<b>Tolerances</b>	<b>KM(L):</b> metric thread 5H: ISO 965-3 Axial run-out locating face / thread: 0,04 to 0,06 mm max., depending on the lock nut size <b>HM(E) and HM .. T:</b> metric trapezoidal thread 7H: ISO 2903 Axial run-out locating face / thread: 0,06 to 0,16 mm max., depending on the lock nut size	ANSI/ABMA Std. 8.2  Axial run-out locating face / thread: 0,05 to 0,30 mm ( <i>0.002 to 0.012 in.</i> ) max., depending on the lock nut size
<b>Mating shaft threads</b> (Recommendation)	Metric thread: Tolerance 6g – ISO 965-3 Metric trapezoidal thread: Tolerance 7e – ISO 2903	ANSI/ABMA Std. 8.2
<b>Loosening torque</b>	–	
For additional information, contact the SKF application engineering service.		

<b>Precision lock nuts</b>			
with an integral locking device	with a locking screw	with locking pins	with axial locking screws
KMK series	KMFE series	KMT(A) series	KMD series
ISO 2982-2, except for the width Grub screw: ISO 4026, material class 45H		ISO 965-3	ISO 965-3 Locking screws: ISO 4762
Metric thread: 5H: ISO 965-3		Metric thread: 5H: ISO 965-3	Metric thread: 5H: ISO 965-3
		Axial run-out locating face / thread: 0,005 mm max., when size ≤ 26	Axial run-out locating face / thread: 0,005 mm max.
Tolerance 6g: ISO 965-3		Tolerance 6g: ISO 965-3 <b>Thread ≥ 220 mm</b> (size ≥ 44): Trapezoidal thread tolerance 7e – ISO 2903	Tolerance 6g: ISO 965-3
<p>Lock nuts are locked on the shaft (sleeve) by friction. The friction, and therefore the loosening torque, varies as a result of the accuracy of the tightening torque of the grub screw (locking screws), the surface finish of the shaft (sleeve) thread, the amount of lubricant on the thread, etc. The lock nuts should be properly mounted and there should be only a limited amount of lubricant on the thread.</p>			
Sufficient locking for intended bearing applications. Full locking effect is obtained when the nut is not pressed against the locked component.	Sufficient locking for intended bearing applications.	Sufficient locking for precision and general bearing applications.	

### Installation and removal

Except for KMTA lock nuts, all SKF lock nuts have slots around their circumference to accommodate a hook or impact spanner. The designations of the appropriate spanners are listed in the product tables. For additional information about spanners, refer to the catalogue *SKF Maintenance and Lubrication Products* or visit [skf.com/mapro](http://skf.com/mapro).

KMTA lock nuts have holes around their circumference and in one side face. They can be tightened with a pin wrench, a pin-type face spanner or a tommy bar. Appropriate spanners in accordance with DIN 1810 are listed in the product tables.

In addition to the slots, KMT lock nuts with a thread  $\leq 75$  mm (size  $\leq 15$ ) have two opposed flats to accommodate a spanner.

All SKF lock nuts can be reused, provided they are not damaged. A new lock washer, locking clip or locking plate should be used each time the corresponding lock nut is installed. KMT(A) and KMD lock nuts are designed for frequent installation and removal.

### HM(E) and N lock nuts with a locking clip or locking plate

The bolts of the locking clips or locking plates must be secured to prevent them from turning. Locking clips are supplied with a spring-lock washer, which must be placed between the bolt and clip. The wire supplied with the locking plate should be put through the holes in the bolt heads and tightened.

### KMK and KMFE lock nuts

A hexagonal wrench is needed to tighten KMK grub screws and KMFE locking screws. Screw sizes are listed in the product tables. The screws should be tightened to the torque value listed in the product tables.

### KMT and KMTA precision lock nuts

#### Locking

KMT and KMTA precision lock nuts should be locked in two phases:

- 1 Tighten the grub screws carefully until the locking pin engages the shaft thread.
- 2 Alternately tighten the grub screws with a torque wrench until the recommended torque value is achieved (**T** product tables).

#### Adjusting

KMT and KMTA series precision lock nuts are adjustable. The three equally spaced locking pins enable the nut to be accurately positioned at right angles to the shaft or they can be used to adjust for misalignment between the abutment surface and the adjacent component. Adjustments can be made using the following procedure:

- 1 Loosen the grub screw at the position showing the greatest deviation.
- 2 Tighten the two remaining screws equally.
- 3 Retighten the screw that was loosened.
- 4 Check the accuracy of the installation with a dial gauge.
- 5 Repeat the procedure if the result is not adequate.

#### Removal

When removing KMT and KMTA lock nuts, the locking pins can still engage the shaft thread even after the grub screws have been loosened. Using a rubber hammer, tap the nut lightly in the vicinity of the pins to disengage the pins from the shaft.

**KMD precision lock nuts**

KMD lock nuts are supplied with the locking screws gently tightened and with a protector between the front and rear part of the lock nut. KMD lock nuts should be installed according to the following procedure:

- 1 Loosen the locking screws half a turn. Do not remove them.
- 2 Remove the protector between the two halves of the lock nut.
- 3 Press the front and rear halves together and screw the lock nut onto the shaft thread. When the rear half grabs onto the shaft thread, a gap occurs between the two parts.
- 4 Screw the lock nut to its final position on the shaft thread. When tightening the lock nut, put the spanner in the slots on the front half of the nut.
- 5 Alternately tighten the locking screws in a criss-cross pattern until the recommended torque value is obtained (**T product tables**). Use a hexagonal wrench to tighten the locking screws. Screw sizes are listed in the product tables.

For precision positioning, screw the lock nut to the approximate position on the shaft and tighten the locking screws to half of the recommended tightening torque. Then screw the nut to its final position and fully tighten the locking screws.

## Designation system

### Product type

#### Sleeves

H	Adapter sleeve dimensions in accordance with ISO standard, basic design
HA	Adapter sleeve dimensions in accordance with ISO standard, except the bore, in $1/16$ in.
HE	Adapter sleeve dimensions in accordance with ISO standard, except the bore, in $1/4$ in.
HS	Adapter sleeve dimensions in accordance with ISO standard, except the bore, in $1/8$ in.
OH	Adapter sleeve dimensions in accordance with ISO standard, prepared for oil injection
OSNP	Adapter sleeve dimensions in accordance with ANSI standard, prepared for oil injection, with a locking plate
OSNW	Adapter sleeve dimensions in accordance with ANSI standard, prepared for oil injection, with a lock washer
SNP	Adapter sleeve dimensions in accordance with ANSI standard, with a locking plate
SNW	Adapter sleeve dimensions in accordance with ANSI standard, with a lock washer
AH	Withdrawal sleeve dimensions in accordance with ISO standard, basic design
AHX	Withdrawal sleeve dimensions in accordance with ISO standard, basic design
AOHX	Withdrawal sleeve dimensions in accordance with ISO standard, prepared for oil injection
AOHX	Withdrawal sleeve dimensions in accordance with ISO standard, prepared for oil injection
KH	Unthreaded sleeve, basic design
KOH	Unthreaded sleeve, prepared for oil injection

#### Lock nuts and locking devices

AN	Lock nut dimensions in accordance with ANSI standard
HM	Lock nut with a trapezoidal thread
HME	HM lock nut with a recessed outsidediameter
HML	HM lock nut, light series
HMLL	HML lock nut with a lower sectional height
KM	Lock nut dimensions in accordance with ISO standard
KMD	Two part precision lock nut with axial locking screws
KMFE	Lock nut with a locking screw, with an extended nose
KMK	Lock nut with an integral locking device
KML	Lock nut with a lower sectional height
KMT	Precision lock nut with locking pins
KMTA	Precision lock nut with locking pins, different thread pitch
N	Lock nut dimensions in accordance with ANSI standard
N 0	Lock nut dimensions in accordance with ANSI standard, light section
MB	Lock washer dimensions in accordance with ISO standard, for a KM lock nut
MBL	Lock washer dimensions in accordance with ISO standard, for a KML lock nut
MS 30	Locking clip dimensions in accordance with ISO standard, for an HM 30 lock nut
MS 31	Locking clip dimensions in accordance with ISO standard, for an HM 31 lock nut
PL	Locking plate dimensions in accordance with ANSI standard
W	Lock washer for N or AN lock nut, with an axial tab, dimension in accordance with ANSI standard
W 0	Lock washer for N 0 lock nut (light series), without an axial tab, dimensions in accordance with ANSI standard

**Suffix****Sleeves**

<b>B</b>	One or two oil supply ducts at the end opposite the threaded section
<b>D</b>	Split sleeve
<b>E</b>	Adapter sleeve without key slot, with a KMFE lock nut or standard adapter sleeve with a HME lock nut
<b>EH</b>	Adapter sleeve without key slot, with a KMFE ..H lock nut
<b>EL</b>	Adapter sleeve without key slot, with a KMFE ..L lock nut
<b>G</b>	Thread diameter changed according to revised ISO standard
<b>H</b>	One oil supply duct at the threaded end
<b>HB</b>	One or two oil supply ducts at the threaded end
<b>L</b>	Adapter sleeve with a lock nut with lower sectional height
<b>TL</b>	Same as L, but with key slot positions for a locking clip

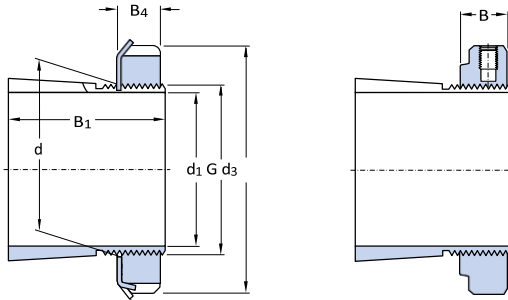
**Lock nuts and locking devices**

<b>B</b>	Whitworth thread
<b>H</b>	KMFE lock nut with a bigger contact diameter
<b>L</b>	KMFE lock nut with a smaller contact diameter
<b>P</b>	Sintered material
<b>T</b>	Trapezoidal thread
<b>A</b>	Increased plate thickness for MB lockwashers

**Size identification**

Listed in the product tables

## 16.1 Adapter sleeves for metric shafts d<sub>1</sub> 17 - 100 mm



H

H .. E, H ..EL

Principal dimensions						Mass	Designations Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	Appro- priate hydraulic nut
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B, B <sub>4</sub>	G					
mm						kg	-			
17	20	32	24	7	M 20x1	0,036	<b>H 204</b>	KM 4	MB 4	-
	20	32	28	7	M 20x1	0,04	<b>H 304</b>	KM 4	MB 4	-
	20	32	28	9,5	M 20x1	0,047	<b>H 304 E</b>	KMFE 4	-	-
20	25	38	26	8	M 25x1,5	0,064	<b>H 205</b>	KM 5	MB 5	-
	25	38	29	8	M 25x1,5	0,071	<b>H 305</b>	KM 5	MB 5	-
	25	38	29	10,5	M 25x1,5	0,076	<b>H 305 E</b>	KMFE 5	-	-
	25	38	35	8	M 25x1,5	0,085	<b>H 2305</b>	KM 5	MB 5	-
25	30	45	27	8	M 30x1,5	0,086	<b>H 206</b>	KM 6	MB 6	-
	30	45	31	8	M 30x1,5	0,095	<b>H 306</b>	KM 6	MB 6	-
	30	45	31	10,5	M 30x1,5	0,11	<b>H 306 E</b>	KMFE 6	-	-
	30	45	38	8	M 30x1,5	0,11	<b>H 2306</b>	KM 6	MB 6	-
30	35	52	29	9	M 35x1,5	0,12	<b>H 207</b>	KM 7	MB 7	-
	35	52	35	9	M 35x1,5	0,14	<b>H 307</b>	KM 7	MB 7	-
	35	52	35	11,5	M 35x1,5	0,15	<b>H 307 E</b>	KMFE 7	-	-
	35	52	35	11,5	M 35x1,5	0,16	<b>H 307 EL</b>	KMFE 7 L	-	-
	35	52	43	9	M 35x1,5	0,16	<b>H 2307</b>	KM 7	MB 7	-
35	40	58	31	10	M 40x1,5	0,16	<b>H 208</b>	KM 8	MB 8	-
	40	58	36	10	M 40x1,5	0,17	<b>H 308</b>	KM 8	MB 8	-
	40	58	36	13	M 40x1,5	0,19	<b>H 308 E</b>	KMFE 8	-	-
	40	58	46	10	M 40x1,5	0,22	<b>H 2308</b>	KM 8	MB 8	-
	40	58	46	13	M 40x1,5	0,24	<b>H 2308 E</b>	KMFE 8	-	-
40	45	65	33	11	M 45x1,5	0,21	<b>H 209</b>	KM 9	MB 9	-
	45	65	39	11	M 45x1,5	0,23	<b>H 309</b>	KM 9	MB 9	-
	45	65	39	13	M 45x1,5	0,24	<b>H 309 E</b>	KMFE 9	-	-
	45	65	50	11	M 45x1,5	0,27	<b>H 2309</b>	KM 9	MB 9	-
45	50	70	35	12	M 50x1,5	0,24	<b>H 210</b>	KM 10	MB 10	HMV 10E
	50	70	42	12	M 50x1,5	0,27	<b>H 310</b>	KM 10	MB 10	HMV 10E
	50	70	42	14	M 50x1,5	0,3	<b>H 310 E</b>	KMFE 10	-	HMV 10E
	50	70	55	12	M 50x1,5	0,34	<b>H 2310</b>	KM 10	MB 10	HMV 10E
50	55	75	37	12,5	M 55x2	0,28	<b>H 211</b>	KM 11	MB 11	HMV 11E
	55	75	45	12,5	M 55x2	0,32	<b>H 311</b>	KM 11	MB 11	HMV 11E
	55	75	45	14	M 55x2	0,34	<b>H 311 E</b>	KMFE 11	-	HMV 11E
	55	75	59	12,5	M 55x2	0,39	<b>H 2311</b>	KM 11	MB 11	HMV 11E

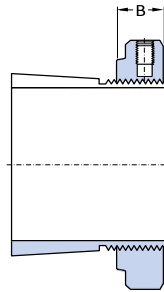
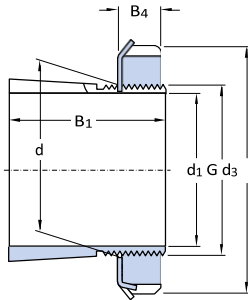


Principal dimensions						Mass	Designations	Adapter sleeve	Appertaining	locking device	Appropriate
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B, B <sub>4</sub>	G		with nut and locking device	lock nut			hydraulic nut
mm						kg	–				
55	60	80	38	13	M 60x2	0,31	H 212	KM 12	MB 12	HMV 12E	
	60	80	47	13	M 60x2	0,36	H 312	KM 12	MB 12	HMV 12E	
	60	80	47	14	M 60x2	0,4	H 312 E	KMFE 12	–	HMV 12E	
	60	80	62	13	M 60x2	0,45	H 2312	KM 12	MB 12	HMV 12E	
60	65	85	40	13,5	M 65x2	0,36	H 213	KM 13	MB 13	HMV 13E	
	65	85	50	13,5	M 65x2	0,42	H 313	KM 13	MB 13	HMV 13E	
	65	85	50	15	M 65x2	0,43	H 313 E	KMFE 13	–	HMV 13E	
	65	85	65	13,5	M 65x2	0,52	H 2313	KM 13	MB 13	HMV 13E	
	65	85	65	15	M 65x2	0,53	H 2313 E	KMFE 13	–	HMV 13E	
	70	92	52	13,5	M 70x2	0,67	H 314	KM 14	MB 14	HMV 14E	
	70	92	52	15	M 70x2	0,67	H 314 E	KMFE 14	–	HMV 14E	
	70	92	68	13,5	M 70x2	0,88	H 2314	KM 14	MB 14	HMV 14E	
65	75	98	43	14,5	M 75x2	0,66	H 215	KM 15	MB 15	HMV 15E	
	75	98	55	14,5	M 75x2	0,78	H 315	KM 15	MB 15	HMV 15E	
	75	98	55	16	M 75x2	0,82	H 315 E	KMFE 15	–	HMV 15E	
	75	98	73	14,5	M 75x2	1,1	H 2315	KM 15	MB 15	HMV 15E	
70	80	105	46	17	M 80x2	0,81	H 216	KM 16	MB 16	HMV 16E	
	80	105	59	17	M 80x2	0,95	H 316	KM 16	MB 16	HMV 16E	
	80	105	59	18	M 80x2	1	H 316 E	KMFE 16	–	HMV 16E	
	80	105	78	17	M 80x2	1,2	H 2316	KM 16	MB 16	HMV 16E	
75	85	110	50	18	M 85x2	0,94	H 217	KM 17	MB 17	HMV 17E	
	85	110	63	18	M 85x2	1,1	H 317	KM 17	MB 17	HMV 17E	
	85	110	63	19	M 85x2	1,15	H 317 E	KMFE 17	–	HMV 17E	
	85	110	82	18	M 85x2	1,35	H 2317	KM 17	MB 17	HMV 17E	
80	90	120	52	18	M 90x2	1,1	H 218	KM 18	MB 18	HMV 18E	
	90	120	65	18	M 90x2	1,3	H 318	KM 18	MB 18	HMV 18E	
	90	120	65	19	M 90x2	1,45	H 318 E	KMFE 18	–	HMV 18E	
	90	120	73	19	M 90x2	1,5	H 2318 E/L73 <sup>1)</sup>	KMFE 18	–	HMV 18E	
	90	120	86	18	M 90x2	1,6	H 2318	KM 18	MB 18	HMV 18E	
85	95	125	55	19	M 95x2	1,25	H 219	KM 19	MB 19	HMV 19E	
	95	125	68	19	M 95x2	1,4	H 319	KM 19	MB 19	HMV 19E	
	95	125	68	20	M 95x2	1,45	H 319 E	KMFE 19	–	HMV 19E	
	95	125	90	19	M 95x2	1,8	H 2319	KM 19	MB 19	HMV 19E	
	95	125	90	20	M 95x2	1,85	H 2319 EL	KMFE 19 L	–	HMV 19E	
90	100	130	58	20	M 100x2	1,4	H 220	KM 20	MB 20	HMV 20E	
	100	130	71	20	M 100x2	1,6	H 320	KM 20	MB 20	HMV 20E	
	100	130	71	21	M 100x2	1,7	H 320 E	KMFE 20	–	HMV 20E	
	100	130	76	20	M 100x2	1,8	H 3120	KM 20	MB 20	HMV 20E	
	100	130	76	21	M 100x2	1,8	H 3120 E	KMFE 20	–	HMV 20E	
	100	130	97	20	M 100x2	2	H 2320	KM 20	MB 20	HMV 20E	
	100	130	97	21	M 100x2	2	H 2320 E	KMFE 20	–	HMV 20E	
	100	110	145	63	21	M 110x2	1,8	H 222	KM 22	MB 22	HMV 22E
		110	145	77	21	M 110x2	2,05	H 322	KM 22	MB 22	HMV 22E
		110	145	77	21,5	M 110x2	2,1	H 322 E	KMFE 22	–	HMV 22E
110		145	81	21	M 110x2	2,1	H 3122	KM 22	MB 22	HMV 22E	
110		145	81	21,5	M 110x2	2,15	H 3122 E	KMFE 22	–	HMV 22E	
110		145	105	21	M 110x2	2,75	H 2322	KM 22	MB 22	HMV 22E	
110		145	105	21,5	M 110x2	2,75	H 2322 E	KMFE 22	–	HMV 22E	

<sup>1)</sup> Width reduced to 73 mm

## 16.1 Adapter sleeves for metric shafts

$d_1$  110 - 180 mm



H, H .. L

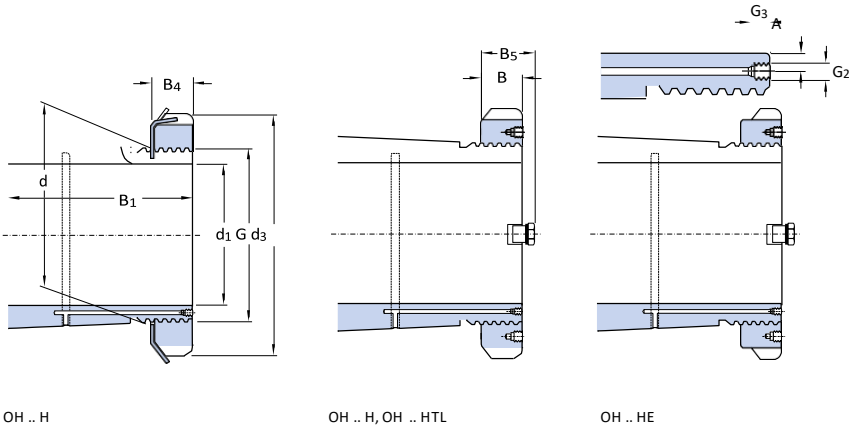
H .. E, H ..EH

Principal dimensions						Mass	Designations Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	Appro- priate hydraulic nut	
$d_1$	$d$	$d_3$	$B_1$	$B, B_4$	$G$						
mm						kg	-				
110	120	145	72	22	M 120x2	1,8	<b>H 3024</b>	KML 24	MBL 24	HMV 24E	
	120	145	88	22	M 120x2	2,5	<b>H 3124 L</b>	KML 24	MBL 24	HMV 24E	
	120	145	112	22	M 120x2	3,1	<b>H 2324 L</b>	KML 24	MBL 24	HMV 24E	
	120	155	72	26	M 120x2	1,85	<b>H 3024 E</b>	KMFE 24	-	HMV 24E	
	120	155	88	22	M 120x2	2,5	<b>H 3124</b>	KM 24	MB 24	HMV 24E	
	120	155	112	22	M 120x2	3	<b>H 2324</b>	KM 24	MB 24	HMV 24E	
	120	155	112	26	M 120x2	3,1	<b>H 2324 E</b>	KMFE 24	-	HMV 24E	
	120	155	112	26	M 120x2	3,1	<b>H 2324 EH</b>	KMFE 24 H	-	HMV 24E	
	115	130	155	80	23	M 130x2	2,8	<b>H 3026</b>	KML 26	MBL 26	HMV 26E
		130	155	92	23	M 130x2	3,65	<b>H 3126 L</b>	KML 26	MBL 26	HMV 26E
		130	155	121	23	M 130x2	4,15	<b>H 2326 L</b>	KML 26	MBL 26	HMV 26E
		130	165	80	28	M 130x2	2,9	<b>H 3026 E</b>	KMFE 26	-	HMV 26E
130		165	92	23	M 130x2	3,45	<b>H 3126</b>	KM 26	MB 26	HMV 26E	
130		165	121	23	M 130x2	4,45	<b>H 2326</b>	KM 26	MB 26	HMV 26E	
125		140	165	82	24	M 140x2	3,05	<b>H 3028</b>	KML 28	MBL 28	HMV 28E
	140	165	97	24	M 140x2	4,1	<b>H 3128 L</b>	KML 28	MBL 28	HMV 28E	
	140	180	82	28	M 140x2	3,05	<b>H 3028 E</b>	KMFE 28	-	HMV 28E	
	140	180	97	24	M 140x2	4,1	<b>H 3128</b>	KM 28	MB 28	HMV 28E	
	140	180	131	24	M 140x2	5,4	<b>H 2328</b>	KM 28	MB 28	HMV 28E	
	135	150	180	87	26	M 150x2	3,75	<b>H 3030</b>	KML 30	MBL 30	HMV 30E
150		180	111	26	M 150x2	4,7	<b>H 3130 L</b>	KML 30	MBL 30	HMV 30E	
150		180	139	26	M 150x2	5,85	<b>H 2330 L</b>	KML 30	MBL 30	HMV 30E	
150		195	87	30	M 150x2	3,75	<b>H 3030 E</b>	KMFE 30	-	HMV 30E	
150		195	111	26	M 150x2	5,25	<b>H 3130</b>	KM 30	MB 30	HMV 30E	
150		195	111	30	M 150x2	4,7	<b>H 3130 E</b>	KMFE 30	-	HMV 30E	
150		195	139	26	M 150x2	6,4	<b>H 2330</b>	KM 30	MB 30	HMV 30E	
140		160	190	93	27,5	M 160x3	5,1	<b>H 3032</b>	KML 32	MBL 32	HMV 32E
		160	190	119	27,5	M 160x3	6,4	<b>H 3132 L</b>	KML 32	MBL 32	HMV 32E
		160	190	147	28	M 160x3	7,95	<b>H 2332 L</b>	KML 32	MBL 32	HMV 32E
	160	210	93	32	M 160x3	5,1	<b>H 3032 E</b>	KMFE 32	-	HMV 32E	
	160	210	119	28	M 160x3	7,25	<b>H 3132</b>	KM 32	MB 32	HMV 32E	
	160	210	119	32	M 160x3	7,35	<b>H 3132 E</b>	KMFE 32	-	HMV 32E	
	160	210	147	28	M 160x3	8,8	<b>H 2332</b>	KM 32	MB 32	HMV 32E	

Principal dimensions						Mass	Designations	Adapter sleeve	Appertaining	locking device	Appro-
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B, B <sub>4</sub>	G		with nut and	lock nut		private	hydraulic
mm						kg	–				
150	170	200	101	28,5	M 170x3	5,8	<b>H 3034</b>	KML 34	MBL 34	HMV 34E	
	170	200	122	29	M 170x3	7,15	<b>H 3134 L</b>	KML 34	MBL 34	HMV 34E	
	170	220	101	33	M 170x3	5,9	<b>H 3034 E</b>	KMFE 34	–	HMV 34E	
	170	220	122	29	M 170x3	8,1	<b>H 3134</b>	KM 34	MB 34	HMV 34E	
	170	220	122	33	M 170x3	8,1	<b>H 3134 E</b>	KMFE 34	–	HMV 34E	
	170	220	154	29	M 170x3	9,9	<b>H 2334</b>	KM 34	MB 34	HMV 34E	
160	180	210	87	29,5	M 180x3	5,7	<b>H 3936</b>	KML 36	MBL 36	HMV 36E	
	180	210	109	29,5	M 180x3	6,7	<b>H 3036</b>	KML 36	MBL 36	HMV 36E	
	180	210	131	29,5	M 180x3	8,15	<b>H 3136 L</b>	KML 36	MBL 36	HMV 36E	
	180	230	109	34	M 180x3	6,7	<b>H 3036 E</b>	KMFE 36	–	HMV 36E	
	180	230	131	29,5	M 180x3	9,15	<b>H 3136</b>	KM 36	MB 36	HMV 36E	
	180	230	161	30	M 180x3	11	<b>H 2336</b>	KM 36	MB 36	HMV 36E	
170	190	220	89	30,5	M 190x3	6,2	<b>H 3938</b>	KML 38	MBL 38	HMV 38E	
	190	220	112	30,5	M 190x3	7,25	<b>H 3038</b>	KML 38	MBL 38	HMV 38E	
	190	240	141	30,5	M 190x3	10,5	<b>H 3138</b>	KM 38	MB 38	HMV 38E	
	190	240	169	30,5	M 190x3	12	<b>H 2338</b>	KM 38	MB 38	HMV 38E	
180	200	240	98	31,5	M 200x3	7,9	<b>H 3940</b>	KML 40	MBL 40	HMV 40E	
	200	240	120	31,5	M 200x3	8,9	<b>H 3040</b>	KML 40	MBL 40	HMV 40E	
	200	240	176	31,5	M 200x3	13	<b>H 2340 L</b>	KML 40	MBL 40	HMV 40E	
	200	250	150	31,5	M 200x3	12	<b>H 3140</b>	KM 40	MB 40	HMV 40E	
	200	250	176	31,5	M 200x3	13,5	<b>H 2340</b>	KM 40	MB 40	HMV 40E	

For oil injection variants not listed, contact SKF.

## 16.1 Adapter sleeves for metric shafts d<sub>1</sub> 200 - 500 mm



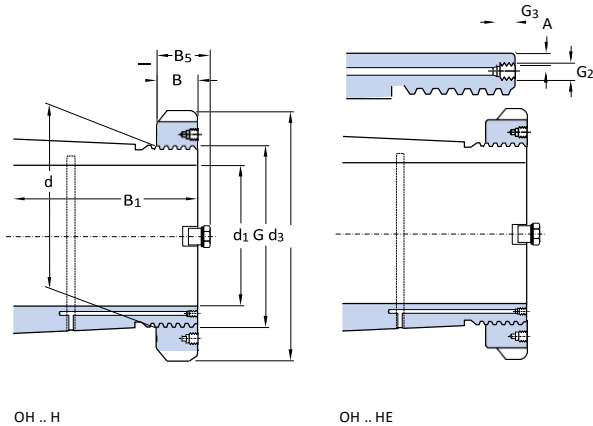
Principal dimensions							Mass			Designations		Appertaining		Appropriate hydraulic nut
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B, B <sub>4</sub>	B <sub>5</sub>	G	G <sub>2</sub>	G <sub>3</sub>	A	Adapter sleeve with nut and locking device	lock nut	locking device		
mm										kg	-			
200	220	260	96	30	41	Tr 220x4	M 6	9	4,2	7,95	<b>OH 3944 H</b>	HM 3044	MS 3044	HMV 44E
	220	260	126	30	41	Tr 220x4	M 6	9	4,2	9,9	<b>OH 3044 H</b>	HM 3044	MS 3044	HMV 44E
	220	260	161	30	41	Tr 220x4	M 6	9	4,2	14,5	<b>OH 3144 HTL</b>	HM 3044	MS 3044	HMV 44E
	220	280	161	35	-	Tr 220x4	M 6	9	4,2	15	<b>OH 3144 H</b>	HM 44 T	MB 44	HMV 44E
	220	280	186	35	-	Tr 220x4	M 6	9	4,2	17	<b>OH 2344 H</b>	HM 44 T	MB 44	HMV 44E
220	240	290	101	34	46	Tr 240x4	M 6	9	4,2	11	<b>OH 3948 H</b>	HM 3048	MS 3052-48	HMV 48E
	240	290	133	34	46	Tr 240x4	M 6	9	4,2	12	<b>OH 3048 H</b>	HM 3048	MS 3052-48	HMV 48E
	240	290	133	34	46	Tr 240x4	M 6	9	4,2	11,5	<b>OH 3048 HE</b>	HME 3048	MS 3052-48	HMV 48E
	240	290	172	34	46	Tr 240x4	M 6	9	4,2	15	<b>OH 3148 HTL</b>	HM 3048	MS 3052-48	HMV 48E
	240	300	172	37	-	Tr 240x4	M 6	9	4,2	16,5	<b>OH 3148 H</b>	HM 48 T	MB 48	HMV 48E
	240	300	199	37	-	Tr 240x4	M 6	9	4,2	19	<b>OH 2348 H</b>	HM 48 T	MB 48	HMV 48E
240	260	310	116	34	46	Tr 260x4	M 6	9	4,2	11,5	<b>OH 3952 H</b>	HM 3052	MS 3052-48	HMV 52E
	260	310	145	34	46	Tr 260x4	M 6	9	4,2	13,5	<b>OH 3052 H</b>	HM 3052	MS 3052-48	HMV 52E
	260	310	145	34	46	Tr 260x4	M 6	9	4,2	13,5	<b>OH 3052 HE</b>	HME 3052	MS 3052-48	HMV 52E
	260	310	190	34	46	Tr 260x4	M 6	9	4,2	17,5	<b>OH 3152 HTL</b>	HM 3052	MS 3052-48	HMV 52E
	260	330	190	39	-	Tr 260x4	M 6	9	4,2	21	<b>OH 3152 H</b>	HM 52 T	MB 52	HMV 52E
	260	330	211	39	-	Tr 260x4	M 6	9	4,2	23	<b>OH 2352 H</b>	HM 52 T	MB 52	HMV 52E
260	280	330	121	38	50	Tr 280x4	M 6	9	4,2	15,5	<b>OH 3956 H</b>	HM 3056	MS 3056	HMV 56E
	280	330	152	38	50	Tr 280x4	M 6	9	4,2	16	<b>OH 3056 H</b>	HM 3056	MS 3056	HMV 56E
	280	330	195	38	50	Tr 280x4	M 6	9	4,2	19,5	<b>OH 3156 HTL</b>	HM 3056	MS 3056	HMV 56E
	280	350	195	41	-	Tr 280x4	M 6	9	4,2	23	<b>OH 3156 H</b>	HM 56 T	MB 56	HMV 56E
	280	350	224	41	-	Tr 280x4	M 6	9	4,2	27	<b>OH 2356 H</b>	HM 56 T	MB 56	HMV 56E
280	300	360	140	42	54	Tr 300x4	M 6	9	4,2	20	<b>OH 3960 H</b>	HM 3060	MS 3060	HMV 60E
	300	360	168	42	54	Tr 300x4	M 6	9	4,2	20,5	<b>OH 3060 H</b>	HM 3060	MS 3060	HMV 60E
	300	380	208	40	53	Tr 300x4	M 6	9	4,2	29	<b>OH 3160 H</b>	HM 3160	MS 3160	HMV 60E
	300	380	208	40	53	Tr 300x4	M 6	9	4,2	27,5	<b>OH 3160 HE</b>	HME 3160	MS 3160	HMV 60E
	300	380	240	40	53	Tr 300x4	M 6	9	4,2	32	<b>OH 3260 H</b>	HM 3160	MS 3160	HMV 60E
300	320	380	140	42	55	Tr 320x5	M 6	9	4	21,5	<b>OH 3964 H</b>	HM 3064	MS 3068-64	HMV 64E
	320	380	171	42	55	Tr 320x5	M 6	9	4	22	<b>OH 3064 H</b>	HM 3064	MS 3068-64	HMV 64E
	320	400	226	42	56	Tr 320x5	M 6	9	4	32	<b>OH 3164 H</b>	HM 3164	MS 3164	HMV 64E
	320	400	258	42	56	Tr 320x5	M 6	9	4	35	<b>OH 3264 H</b>	HM 3164	MS 3164	HMV 64E

For oil injection variants not listed, contact SKF.

Principal dimensions										Mass Designations			locking device	private hydraulic nut	
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B	B <sub>5</sub>	G	G <sub>2</sub>	G <sub>3</sub>	A	Adapter sleeve with nut and locking device	Appertaining lock nut	MS			
mm										kg	–				
<b>320</b>	340	400	144	45	58	Tr 340x5	M 6	9	4	24,5	<b>OH 3968 H</b>	HM 3068	MS 3068-64	HMV 68E	
	340	400	187	45	58	Tr 340x5	M 6	9	4	27	<b>OH 3068 H</b>	HM 3068	MS 3068-64	HMV 68E	
	340	440	254	55	72	Tr 340x5	M 6	9	4	50	<b>OH 3168 H</b>	HM 3168	MS 3172-68	HMV 68E	
	340	440	254	55	72	Tr 340x5	M 6	9	4	46	<b>OH 3168 HE</b>	HME 3168	MS 3172-68	HMV 68E	
	340	440	288	55	72	Tr 340x5	M 6	9	4	51,5	<b>OH 3268 H</b>	HM 3168	MS 3172-68	HMV 68E	
<b>340</b>	360	420	144	45	58	Tr 360x5	M 6	9	4	25	<b>OH 3972 H</b>	HM 3072	MS 3072	HMV 72E	
	360	420	144	45	58	Tr 360x5	M 6	9	4	24,5	<b>OH 3972 HE</b>	HME 3072	MS 3072	HMV 72E	
	360	420	188	45	58	Tr 360x5	M 6	9	4	29	<b>OH 3072 H</b>	HM 3072	MS 3072	HMV 72E	
	360	460	259	58	75	Tr 360x5	M 6	9	4	56	<b>OH 3172 H</b>	HM 3172	MS 3172-68	HMV 72E	
	360	460	259	58	75	Tr 360x5	M 6	9	4	52	<b>OH 3172 HE</b>	HME 3172	MS 3172-68	HMV 72E	
	360	460	299	58	75	Tr 360x5	M 6	9	4	60,5	<b>OH 3272 H</b>	HM 3172	MS 3172-68	HMV 72E	
<b>360</b>	380	450	164	48	62	Tr 380x5	M 6	9	4	31,5	<b>OH 3976 H</b>	HM 3076	MS 3080-76	HMV 76E	
	380	450	164	48	62	Tr 380x5	M 6	9	4	30,5	<b>OH 3976 HE</b>	HME 3076	MS 3080-76	HMV 76E	
	380	450	193	48	62	Tr 380x5	M 6	9	4	35,5	<b>OH 3076 H</b>	HM 3076	MS 3080-76	HMV 76E	
	380	490	264	60	77	Tr 380x5	M 6	9	4	61,5	<b>OH 3176 H</b>	HM 3176	MS 3176	HMV 76E	
	380	490	264	60	77	Tr 380x5	M 6	9	4	58	<b>OH 3176 HE</b>	HME 3176	MS 3176	HMV 76E	
	380	490	310	60	77	Tr 380x5	M 6	9	4	69,5	<b>OH 3276 H</b>	HM 3176	MS 3176	HMV 76E	
<b>380</b>	400	470	168	52	66	Tr 400x5	M 6	9	4	35	<b>OH 3980 H</b>	HM 3080	MS 3080-76	HMV 80E	
	400	470	168	52	66	Tr 400x5	M 6	9	4	34	<b>OH 3980 HE</b>	HME 3080	MS 3080-76	HMV 80E	
	400	470	210	52	66	Tr 400x5	M 6	9	4	40	<b>OH 3080 H</b>	HM 3080	MS 3080-76	HMV 80E	
	400	520	272	62	82	Tr 400x5	M 6	9	4	73	<b>OH 3180 H</b>	HM 3180	MS 3184-80	HMV 80E	
	400	520	272	62	82	Tr 400x5	M 6	9	4	57	<b>OH 3180 HE</b>	HME 3180	MS 3184-80	HMV 80E	
	400	520	328	62	82	Tr 400x5	M 6	9	4	87	<b>OH 3280 H</b>	HM 3180	MS 3184-80	HMV 80E	
<b>400</b>	420	490	168	52	66	Tr 420x5	M 6	9	4	36	<b>OH 3984 H</b>	HM 3084	MS 3084	HMV 84E	
	420	490	168	52	66	Tr 420x5	M 6	9	4	34,5	<b>OH 3984 HE</b>	HME 3084	MS 3084	HMV 84E	
	420	490	212	52	66	Tr 420x5	M 6	9	4	47	<b>OH 3084 H</b>	HM 3084	MS 3084	HMV 84E	
	420	540	304	70	90	Tr 420x5	M 6	9	4	80	<b>OH 3184 H</b>	HM 3184	MS 3184-80	HMV 84E	
	420	540	352	70	90	Tr 420x5	M 6	9	4	96	<b>OH 3284 H</b>	HM 3184	MS 3184-80	HMV 84E	
	<b>410</b>	440	520	189	60	77	Tr 440x5	M 8	12	6,5	58	<b>OH 3988 H</b>	HM 3088	MS 3092-88	HMV 88E
440		520	189	60	77	Tr 440x5	M 8	12	6,5	56	<b>OH 3988 HE</b>	HME 3088	MS 3092-88	HMV 88E	
440		520	228	60	77	Tr 440x5	M 8	12	6,5	65	<b>OH 3088 H</b>	HM 3088	MS 3092-88	HMV 88E	
440		520	228	60	77	Tr 440x5	M 8	12	6,5	63	<b>OH 3088 HE</b>	HME 3088	MS 3092-88	HMV 88E	
440		560	307	70	90	Tr 440x5	M 8	12	6,5	95	<b>OH 3188 H</b>	HM 3188	MS 3192-88	HMV 88E	
440		560	307	70	90	Tr 440x5	M 8	12	6,5	91	<b>OH 3188 HE</b>	HME 3188	MS 3192-88	HMV 88E	
440		560	361	70	90	Tr 440x5	M 8	12	6,5	117	<b>OH 3288 H</b>	HM 3188	MS 3192-88	HMV 88E	
<b>430</b>		460	540	189	60	77	Tr 460x5	M 8	12	6,5	60	<b>OH 3992 H</b>	HM 3092	MS 3092-88	HMV 92E
		460	540	234	60	77	Tr 460x5	M 8	12	6,5	71	<b>OH 3092 H</b>	HM 3092	MS 3092-88	HMV 92E
		460	580	326	75	95	Tr 460x5	M 8	12	6,5	119	<b>OH 3192 H</b>	HM 3192	MS 3192-88	HMV 92E
	460	580	382	75	95	Tr 460x5	M 8	12	6,5	134	<b>OH 3292 H</b>	HM 3192	MS 3192-88	HMV 92E	
<b>450</b>	480	560	200	60	77	Tr 480x5	M 8	12	6,5	66	<b>OH 3996 H</b>	HM 3096	MS 30/500-96	HMV 96E	
	480	560	200	60	77	Tr 480x5	M 8	12	6,5	64	<b>OH 3996 HE</b>	HME 3096	MS 30/500-96	HMV 96E	
	480	560	237	60	77	Tr 480x5	M 8	12	6,5	75	<b>OH 3096 H</b>	HM 3096	MS 30/500-96	HMV 96E	
	480	620	335	75	95	Tr 480x5	M 8	12	6,5	135	<b>OH 3196 H</b>	HM 3196	MS 3196	HMV 96E	
	480	620	335	75	95	Tr 480x5	M 8	12	6,5	128	<b>OH 3196 HE</b>	HME 3196	MS 3196	HMV 96E	
	480	620	397	75	95	Tr 480x5	M 8	12	6,5	153	<b>OH 3296 H</b>	HM 3196	MS 3196	HMV 96E	
<b>470</b>	500	580	208	68	85	Tr 500x5	M 8	12	6,5	74,5	<b>OH 39/500 H</b>	HM 30/500	MS 30/500-96	HMV 100E	
	500	580	208	68	85	Tr 500x5	M 8	12	6,5	72,5	<b>OH 39/500 HE</b>	HME 30/500	MS 30/500-96	HMV 100E	
	500	580	247	68	85	Tr 500x5	M 8	12	6,5	82	<b>OH 30/500 H</b>	HM 30/500	MS 30/500-96	HMV 100E	
	500	630	356	80	100	Tr 500x5	M 8	12	6,5	145	<b>OH 31/500 H</b>	HM 31/500	MS 31/500	HMV 100E	
	500	630	428	80	100	Tr 500x5	M 8	12	6	170	<b>OH 32/500 H</b>	HM 31/500	MS 31/500	HMV 100E	
<b>500</b>	530	630	216	68	90	Tr 530x6	M 8	12	6	88	<b>OH 39/530 H</b>	HM 30/530	MS 30/600-530	HMV 106E	
	530	630	216	68	90	Tr 530x6	M 8	12	6	82,5	<b>OH 39/530 HE</b>	HME 30/530	MS 30/600-530	HMV 106E	
	530	630	265	68	90	Tr 530x6	M 8	12	6	105	<b>OH 30/530 H</b>	HM 30/530	MS 30/600-530	HMV 106E	
	530	670	364	80	105	Tr 530x6	M 8	12	6	161	<b>OH 31/530 H</b>	HM 31/530	MS 31/530	HMV 106E	
	530	670	447	80	105	Tr 530x6	M 8	12	6	192	<b>OH 32/530 H</b>	HM 31/530	MS 31/530	HMV 106E	

For oil injection variants not listed, contact SKF.

## 16.1 Adapter sleeves for metric shafts d<sub>1</sub> 530 - 1 000 mm



### Principal dimensions

Principal dimensions					Mass			Designations						
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B	B <sub>5</sub>	G	G <sub>2</sub>	G <sub>3</sub>	A	Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	private hydraulic nut	
mm					mm/in.			kg	-					
530	560	650	227	75	97 Tr 560x6	M 8	12	6	95	<b>OH 39/560 H</b>	HM 30/560	MS 30/560	HMV 112E	
	560	650	227	75	97 Tr 560x6	M 8	12	6	91,5	<b>OH 39/560 HE</b>	HME 30/560	MS 30/560	HMV 112E	
	560	650	282	75	97 Tr 560x6	M 8	12	6	112	<b>OH 30/560 H</b>	HM 30/560	MS 30/560	HMV 112E	
	560	710	377	85	110 Tr 560x6	M 8	12	6	185	<b>OH 31/560 H</b>	HM 31/560	MS 31/600-560	HMV 112E	
	560	710	377	85	110 Tr 560x6	M 8	12	6	179	<b>OH 31/560 HE</b>	HME 31/560	MS 31/600-560	HMV 112E	
	560	710	462	85	110 Tr 560x6	M 8	12	6	219	<b>OH 32/560 H</b>	HM 31/560	MS 31/600-560	HMV 112E	
560	600	700	239	75	97 Tr 600x6	G 1/8	13	8	127	<b>OH 39/600 H</b>	HM 30/600	MS 30/600-530	HMV 120E	
	600	700	239	75	97 Tr 600x6	G 1/8	13	8	122	<b>OH 39/600 HE</b>	HME 30/600	MS 30/600-530	HMV 120E	
	600	700	289	75	97 Tr 600x6	G 1/8	13	8	147	<b>OH 30/600 H</b>	HM 30/600	MS 30/600-530	HMV 120E	
	600	750	399	85	110 Tr 600x6	G 1/8	13	8	234	<b>OH 31/600 H</b>	HM 31/600	MS 31/600-560	HMV 120E	
	600	750	399	85	110 Tr 600x6	G 1/8	13	8	228	<b>OH 31/600 HE</b>	HME 31/600	MS 31/600-560	HMV 120E	
	600	750	487	85	110 Tr 600x6	G 1/8	13	8	278	<b>OH 32/600 H</b>	HM 31/600	MS 31/600-560	HMV 120E	
600	630	730	254	75	97 Tr 630x6	M 8	12	6	124	<b>OH 39/630 H</b>	HM 30/630	MS 30/630	HMV 126E	
	630	730	254	75	97 Tr 630x6	M 8	12	6	119	<b>OH 39/630 HE</b>	HME 30/630	MS 30/630	HMV 126E	
	630	730	301	75	97 Tr 630x6	M 8	12	6	138	<b>OH 30/630 H</b>	HM 30/630	MS 30/630	HMV 126E	
	630	800	424	95	120 Tr 630x6	M 8	12	6	254	<b>OH 31/630 H</b>	HM 31/630	MS 31/630	HMV 126E	
	630	800	424	95	120 Tr 630x6	M 8	12	6	244	<b>OH 31/630 HE</b>	HME 31/630	MS 31/630	HMV 126E	
630	670	780	264	80	102 Tr 670x6	G 1/8	13	8	162	<b>OH 39/670 H</b>	HM 30/670	MS 30/670	HMV 134E	
	670	780	324	80	102 Tr 670x6	G 1/8	13	8	190	<b>OH 30/670 H</b>	HM 30/670	MS 30/670	HMV 134E	
	670	850	456	106	131 Tr 670x6	G 1/8	13	8	340	<b>OH 31/670 H</b>	HM 31/670	MS 31/670	HMV 134E	
	670	850	456	106	131 Tr 670x6	G 1/8	13	8	329	<b>OH 31/670 HE</b>	HME 31/670	MS 31/670	HMV 134E	
	670	850	558	106	131 Tr 670x6	G 1/8	13	8	401	<b>OH 32/670 H</b>	HM 31/670	MS 31/670	HMV 134E	
670	710	830	286	90	112 Tr 710x7	G 1/8	13	8	183	<b>OH 39/710 H</b>	HM 30/710	MS 30/710	HMV 142E	
	710	830	286	90	112 Tr 710x7	G 1/8	13	8	173	<b>OH 39/710 HE</b>	HME 30/710	MS 30/710	HMV 142E	
	710	830	342	90	112 Tr 710x7	G 1/8	13	8	228	<b>OH 30/710 H</b>	HM 30/710	MS 30/710	HMV 142E	
	710	830	342	90	112 Tr 710x7	G 1/8	13	8	183	<b>OH 30/710 HE</b>	HME 30/710	MS 30/710	HMV 142E	
	710	900	467	106	135 Tr 710x7	G 1/8	13	8	392	<b>OH 31/710 H</b>	HM 31/710	MS 31/710	HMV 142E	
	710	900	467	106	135 Tr 710x7	G 1/8	13	8	379	<b>OH 31/710 HE</b>	HME 31/710	MS 31/710	HMV 142E	
	710	900	572	106	135 Tr 710x7	G 1/8	13	8	459	<b>OH 32/710 H</b>	HM 31/710	MS 31/710	HMV 142E	

For oil injection variants not listed, contact SKF.

## Principal dimensions

## Mass Designations

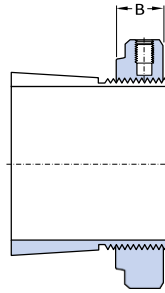
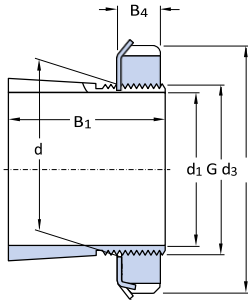
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B	B <sub>5</sub>	G	G <sub>2</sub>	G <sub>3</sub>	A	Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	Appro- pate hydraulic nut	
mm							in.			kg	–			
<b>710</b>	750	870	291	90	112	Tr 750x7	G 1/8	13	8	211	<b>OH 39/750 H</b>	HM 30/750	MS 30/800-750	HMV 150E
	750	870	291	90	112	Tr 750x7	G 1/8	13	8	203	<b>OH 39/750 HE</b>	HME 30/750	MS 30/800-750	HMV 150E
	750	870	356	90	112	Tr 750x7	G 1/8	13	8	246	<b>OH 30/750 H</b>	HM 30/750	MS 30/800-750	HMV 150E
	750	870	356	90	112	Tr 750x7	G 1/8	13	8	238	<b>OH 30/750 HE</b>	HME 30/750	MS 30/800-750	HMV 150E
	750	950	493	112	141	Tr 750x7	G 1/8	13	8	451	<b>OH 31/750 H</b>	HM 31/750	MS 31/800-750	HMV 150E
	750	950	493	112	141	Tr 750x7	G 1/8	13	8	438	<b>OH 31/750 HE</b>	HME 31/750	MS 31/800-750	HMV 150E
	750	950	603	112	141	Tr 750x7	G 1/8	13	8	526	<b>OH 32/750 H</b>	HM 31/750	MS 31/800-750	HMV 150E
	800	920	303	90	112	Tr 800x7	G 1/8	13	10	259	<b>OH 39/800 H</b>	HM 30/800	MS 30/800-750	HMV 160E
	800	920	303	90	112	Tr 800x7	G 1/8	13	10	250	<b>OH 39/800 HE</b>	HME 30/800	MS 30/800-750	HMV 160E
	800	920	366	90	112	Tr 800x7	G 1/8	13	10	302	<b>OH 30/800 H</b>	HM 30/800	MS 30/800-750	HMV 160E
	800	920	366	90	112	Tr 800x7	G 1/8	13	10	293	<b>OH 30/800 HE</b>	HME 30/800	MS 30/800-750	HMV 160E
	800	1000	505	112	141	Tr 800x7	G 1/8	13	10	535	<b>OH 31/800 H</b>	HM 31/800	MS 31/800-750	HMV 160E
800	1000	505	112	141	Tr 800x7	G 1/8	13	10	520	<b>OH 31/800 HE</b>	HME 31/800	MS 31/800-750	HMV 160E	
<b>800</b>	850	980	308	90	115	Tr 850x7	G 1/8	13	10	288	<b>OH 39/850 H</b>	HM 30/850	MS 30/900-850	HMV 170E
	850	980	308	90	115	Tr 850x7	G 1/8	13	10	277	<b>OH 39/850 HE</b>	HME 30/850	MS 30/900-850	HMV 170E
	850	980	380	90	115	Tr 850x7	G 1/8	13	10	341	<b>OH 30/850 H</b>	HM 30/850	MS 30/900-850	HMV 170E
	850	980	380	90	115	Tr 850x7	G 1/8	13	10	330	<b>OH 30/850 HE</b>	HME 30/850	MS 30/900-850	HMV 170E
	850	1060	536	118	147	Tr 850x7	G 1/8	13	10	616	<b>OH 31/850 H</b>	HM 31/850	MS 31/850	HMV 170E
	850	1060	536	118	147	Tr 850x7	G 1/8	13	10	594	<b>OH 31/850 HE</b>	HME 31/850	MS 31/850	HMV 170E
<b>850</b>	900	1030	326	100	125	Tr 900x7	G 1/8	13	10	330	<b>OH 39/900 H</b>	HM 30/900	MS 30/900-850	HMV 180E
	900	1030	326	100	125	Tr 900x7	G 1/8	13	10	316	<b>OH 39/900 HE</b>	HME 30/900	MS 30/900-850	HMV 180E
	900	1030	400	100	125	Tr 900x7	G 1/8	13	10	387	<b>OH 30/900 H</b>	HM 30/900	MS 30/900-850	HMV 180E
	900	1030	400	100	125	Tr 900x7	G 1/8	13	10	373	<b>OH 30/900 HE</b>	HME 30/900	MS 30/900-850	HMV 180E
	900	1120	557	125	154	Tr 900x7	G 1/8	13	10	677	<b>OH 31/900 H</b>	HM 31/900	MS 31/900	HMV 180E
<b>900</b>	950	1080	344	100	125	Tr 950x8	G 1/8	13	10	363	<b>OH 39/950 H</b>	HM 30/950	MS 30/950	HMV 190E
	950	1080	344	100	125	Tr 950x8	G 1/8	13	10	348	<b>OH 39/950 HE</b>	HME 30/950	MS 30/950	HMV 190E
	950	1080	420	100	125	Tr 950x8	G 1/8	13	10	424	<b>OH 30/950 H</b>	HM 30/950	MS 30/950	HMV 190E
	950	1080	420	100	125	Tr 950x8	G 1/8	13	10	409	<b>OH 30/950 HE</b>	HME 30/950	MS 30/950	HMV 190E
	950	1170	583	125	154	Tr 950x8	G 1/8	13	10	738	<b>OH 31/950 H</b>	HM 31/950	MS 31/950	HMV 190E
<b>950</b>	1000	1140	358	100	125	Tr 1000x8	G 1/8	13	10	407	<b>OH 39/1000 H</b>	HM 30/1000	MS 30/1000	HMV 200E
	1000	1140	430	100	125	Tr 1000x8	G 1/8	13	10	470	<b>OH 30/1000 H</b>	HM 30/1000	MS 30/1000	HMV 200E
	1000	1140	430	100	125	Tr 1000x8	G 1/8	13	10	454	<b>OH 30/1000 HE</b>	HME 30/1000	MS 30/1000	HMV 200E
	1000	1240	609	125	154	Tr 1000x8	G 1/8	13	10	842	<b>OH 31/1000 H</b>	HM 31/1000	MS 31/1000	HMV 200E
	1000	1240	609	125	154	Tr 1000x8	G 1/8	13	10	811	<b>OH 31/1000 HE</b>	HME 31/1000	MS 31/1000	HMV 200E
<b>1 000</b>	1060	1200	372	100	125	Tr 1060x8	G 1/4	15	12	490	<b>OH 39/1060 H</b>	HM 30/1060	MS 30/1000	HMV 212E
	1060	1200	372	100	125	Tr 1060x8	G 1/4	15	12	473	<b>OH 39/1060 HE</b>	HME 30/1060	MS 30/1000	HMV 212E
	1060	1200	447	100	125	Tr 1060x8	G 1/4	15	12	571	<b>OH 30/1060 H</b>	HM 30/1060	MS 30/1000	HMV 212E
	1060	1300	622	125	154	Tr 1060x8	G 1/4	15	12	984	<b>OH 31/1060 H</b>	HM 31/1060	MS 31/1000	HMV 212E

For oil injection variants not listed and for bore diameter  $\geq 1\,060$  mm, contact SKF.

## 16.2 Adapter sleeves for inch shafts

$d_1$   $3/4 - 3 \ 3/16$  in.

19,05 - 80,963 mm



H, HA, HE, HE.. B

HA .. E, HE .. E, HA .. EL, HE .. EL, HE .. BE

Principal dimensions							Mass Designations				
$d_1$	d	$d_3$	B <sub>1</sub>	B	B <sub>4</sub>	G	Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	Appropriate hydraulic nut	
in./mm	mm						kg	-			
$3/4$ 19,05	25	38	26	7	8	M 25x1,5	0,07	<b>HE 205</b>	KM 5	MB 5	-
	25	38	29	7	8	M 25x1,5	0,08	<b>HE 305</b>	KM 5	MB 5	-
	25	38	29	10,5	-	M 25x1,5	0,088	<b>HE 305 E</b>	KMFE 5	-	-
	25	38	35	7	8	M 25x1,5	0,09	<b>HE 2305</b>	KM 5	MB 5	-
$15/16$ 23,813	30	45	27	7	8	M 30x1,5	0,1	<b>HA 206</b>	KM 6	MB 6	-
	30	45	31	7	8	M 30x1,5	0,12	<b>HA 306</b>	KM 6	MB 6	-
	30	45	31	10,5	-	M 30x1,5	0,13	<b>HA 306 E</b>	KMFE 6	-	-
	30	45	38	7	8	M 30x1,5	0,13	<b>HA 2306</b>	KM 6	MB 6	-
1 25,4	30	45	27	7	8	M 30x1,5	0,08	<b>HE 206</b>	KM 6	MB 6	-
	30	45	31	7	8	M 30x1,5	0,1	<b>HE 306</b>	KM 6	MB 6	-
	30	45	31	10,5	-	M 30x1,5	0,11	<b>HE 306 E</b>	KMFE 6	-	-
	30	45	38	7	8	M 30x1,5	0,11	<b>HE 2306</b>	KM 6	MB 6	-
$1 \ 3/16$ 30,163	35	52	29	8	9	M 35x1,5	0,12	<b>HA 207</b>	KM 7	MB 7	-
	35	52	35	8	9	M 35x1,5	0,14	<b>HA 307</b>	KM 7	MB 7	-
	35	52	35	11,5	-	M 35x1,5	0,15	<b>HA 307 EL</b>	KMFE 7 L	-	-
	35	52	35	11,5	-	M 35x1,5	0,15	<b>HA 307 E</b>	KMFE 7	-	-
	35	52	43	8	9	M 35x1,5	0,16	<b>HA 2307</b>	KM 7	MB 7	-
$1 \ 1/4$ 31,75	40	58	31	9	10	M 40x1,5	0,19	<b>HE 208</b>	KM 8	MB 8	-
	40	58	36	9	10	M 40x1,5	0,22	<b>HE 308</b>	KM 8	MB 8	-
	40	58	36	13	-	M 40x1,5	0,19	<b>HE 308 E</b>	KMFE 8	-	-
	40	58	46	9	10	M 40x1,5	0,28	<b>HE 2308</b>	KM 8	MB 8	-
	40	58	46	13	-	M 40x1,5	0,3	<b>HE 2308 E</b>	KMFE 8	-	-
$17/16$ 36,513	45	65	33	10	11	M 45x1,5	0,26	<b>HA 209</b>	KM 9	MB 9	-
	45	65	39	10	11	M 45x1,5	0,29	<b>HA 309</b>	KM 9	MB 9	-
	45	65	39	13	-	M 45x1,5	0,31	<b>HA 309 E</b>	KMFE 9	-	-
	45	65	50	10	11	M 45x1,5	0,35	<b>HA 2309</b>	KM 9	MB 9	-
$1 \ 1/2$ 38,1	45	65	33	10	11	M 45x1,5	0,2	<b>HE 209</b>	KM 9	MB 9	-
	45	65	39	10	11	M 45x1,5	0,24	<b>HE 309</b>	KM 9	MB 9	-
	45	65	39	13	-	M 45x1,5	0,31	<b>HE 309 E</b>	KMFE 9	-	-
	45	65	50	10	11	M 45x1,5	0,31	<b>HE 2309</b>	KM 9	MB 9	-
$1 \ 11/16$ 42,863	50	70	35	11	12	M 50x1,5	0,28	<b>HA 210</b>	KM 10	MB 10	HMV 10E
	50	70	42	11	12	M 50x1,5	0,32	<b>HA 310</b>	KM 10	MB 10	HMV 10E
	50	70	42	14	-	M 50x1,5	0,32	<b>HA 310 E</b>	KMFE 10	-	HMV 10E
	50	70	55	11	12	M 50x1,5	0,4	<b>HA 2310</b>	KM 10	MB 10	HMV 10E



## Principal dimensions

## Mass Designations

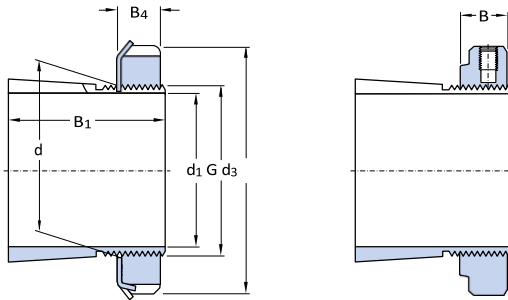
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B	B <sub>4</sub>	G		Adapter sleeve with Appertaining		locking device	Appropriate lock nut	locking device	Appropriate hydraulic nut
								nut and locking device	lock nut				
in./mm	mm						kg	–					
<b>1 3/4</b> 44,45	50	70	35	11	12	M 50x1,5	0,26	<b>HE 210</b>	KM 10	MB 10	HMV 10E		
	50	70	42	11	12	M 50x1,5	0,29	<b>HE 310</b>	KM 10	MB 10	HMV 10E		
	50	70	42	14	–	M 50x1,5	0,29	<b>HE 310 E</b>	KMFE 10	–	HMV 10E		
	50	70	55	11	12	M 50x1,5	0,36	<b>HE 2310</b>	KM 10	MB 10	HMV 10E		
<b>1 15/16</b> 49,213	55	75	37	11	12,5	M 55x2	0,3	<b>HA 211</b>	KM 11	MB 11	HMV 11E		
	55	75	45	11	12,5	M 55x2	0,34	<b>HA 311</b>	KM 11	MB 11	HMV 11E		
	55	75	45	14	–	M 55x2	0,35	<b>HA 311 E</b>	KMFE 11	–	HMV 11E		
	55	75	59	11	12,5	M 55x2	0,42	<b>HA 2311</b>	KM 11	MB 11	HMV 11E		
<b>2</b> 50,8	55	75	37	11	12,5	W 55x1/19	0,26	<b>HE 211 B</b>	HM 11	MB 11	–		
	55	75	45	11	12,5	W 55x1/19	0,29	<b>HE 311 B</b>	HM 11	MB 11	–		
	55	75	45	14	–	W 55x1/19	0,29	<b>HE 311 BE</b>	KMFE 11 B	–	–		
	55	75	59	11	12,5	W 55x1/19	0,36	<b>HE 2311 B</b>	HM 11	MB 11	–		
<b>2 3/16</b> 55,563	65	85	40	12	13,5	M 65x2	0,49	<b>HA 213</b>	KM 13	MB 13	HMV 13E		
	65	85	50	12	13,5	M 65x2	0,58	<b>HA 313</b>	KM 13	MB 13	HMV 13E		
	65	85	50	15	–	M 65x2	0,59	<b>HA 313 E</b>	KMFE 13	–	HMV 13E		
	65	85	65	12	13,5	M 65x2	0,75	<b>HA 2313</b>	KM 13	MB 13	HMV 13E		
	65	85	65	15	–	M 65x2	0,76	<b>HA 2313 E</b>	KMFE 13	–	HMV 13E		
<b>2 1/4</b> 57,15	65	85	40	12	13,5	M 65x2	0,44	<b>HE 213</b>	KM 13	MB 13	HMV 13E		
	65	85	50	12	13,5	M 65x2	0,52	<b>HE 313</b>	KM 13	MB 13	HMV 13E		
	65	85	50	15	–	M 65x2	0,53	<b>HE 313 E</b>	KMFE 13	–	HMV 13E		
	65	85	65	12	13,5	M 65x2	0,65	<b>HE 2313</b>	KM 13	MB 13	HMV 13E		
	65	85	65	15	–	M 65x2	0,66	<b>HE 2313 E</b>	KMFE 13	–	HMV 13E		
<b>27/16</b> 61,913	75	98	43	13	15	M 75x2	0,75	<b>HA 215</b>	KM 15	MB 15	HMV 15E		
	75	98	55	13	15	M 75x2	0,91	<b>HA 315</b>	KM 15	MB 15	HMV 15E		
	75	98	55	16	–	M 75x2	0,93	<b>HA 315 E</b>	KMFE 15	–	HMV 15E		
	75	98	73	13	15	M 75x2	1,15	<b>HA 2315</b>	KM 15	MB 15	HMV 15E		
<b>2 1/2</b> 63,5	75	98	43	13	15	M 75x2	0,7	<b>HE 215</b>	KM 15	MB 15	HMV 15E		
	75	98	55	13	15	M 75x2	0,85	<b>HE 315</b>	KM 15	MB 15	HMV 15E		
	75	98	55	16	–	M 75x2	0,87	<b>HE 315 E</b>	KMFE 15	–	HMV 15E		
	75	98	73	13	15	M 75x2	1,1	<b>HE 2315</b>	KM 15	MB 15	HMV 15E		
<b>2 11/16</b> 68,263	80	105	46	15	17	M 80x2	0,87	<b>HA 216</b>	KM 16	MB 16	HMV 16E		
	80	105	59	15	17	M 80x2	1,05	<b>HA 316</b>	KM 16	MB 16	HMV 16E		
	80	105	59	18	–	M 80x2	1,05	<b>HA 316 E</b>	KMFE 16	–	HMV 16E		
	80	105	78	15	17	M 80x2	1,3	<b>HA 2316</b>	KM 16	MB 16	HMV 16E		
<b>2 3/4</b> 69,85	80	105	46	15	17	M 80x2	0,81	<b>HE 216</b>	KM 16	MB 16	HMV 16E		
	80	105	59	15	17	M 80x2	0,97	<b>HE 316</b>	KM 16	MB 16	HMV 16E		
	80	105	59	18	–	M 80x2	0,98	<b>HE 316 E</b>	KMFE 16	–	HMV 16E		
	80	105	78	15	17	M 80x2	1,2	<b>HE 2316</b>	KM 16	MB 16	HMV 16E		
<b>2 15/16</b> 74,613	85	110	50	16	18	M 85x2	0,94	<b>HA 217</b>	KM 17	MB 17	HMV 17E		
	85	110	63	16	18	M 85x2	1,1	<b>HA 317</b>	KM 17	MB 17	HMV 17E		
	85	110	63	19	–	M 85x2	1,2	<b>HA 317 E</b>	KMFE 17	–	HMV 17E		
	85	110	82	16	18	M 85x2	1,4	<b>HA 2317</b>	KM 17	MB 17	HMV 17E		
<b>3</b> 76,2	85	110	50	16	18	M 85x2	0,87	<b>HE 217</b>	KM 17	MB 17	HMV 17E		
	85	110	63	16	18	M 85x2	1	<b>HE 317</b>	KM 17	MB 17	HMV 17E		
	85	110	63	19	–	M 85x2	0,99	<b>HE 317 E</b>	KMFE 17	–	HMV 17E		
	85	110	82	16	18	M 85x2	1,3	<b>HE 2317</b>	KM 17	MB 17	HMV 17E		
<b>3 3/16</b> 80,963	90	120	52	16	18	M 90x2	1,05	<b>HA 218</b>	KM 18	MB 18	HMV 18E		
	90	120	65	16	18	M 90x2	1,25	<b>HA 318</b>	KM 18	MB 18	HMV 18E		
	90	120	65	19	–	M 90x2	1,25	<b>HA 318 E</b>	KMFE 18	–	HMV 18E		
	90	120	73	19	–	M 90x2	1,4	<b>HA 2318</b>	E/L73 <sup>1)</sup> KMFE 18	–	HMV 18E		
	90	120	86	16	18	M 90x2	1,5	<b>HA 2318</b>	KM 18	MB 18	HMV 18E		

<sup>1)</sup> Width reduced to 73 mm



## 16.2 Adapter sleeves for inch shafts

$d_{13} \text{ } 1\frac{1}{4} - 5\frac{1}{4} \text{ in.}$   
 $82,55 - 133,35 \text{ mm}$



HE, HA, HA .. L

HA .. E, HE .. E, HA .. EH, HE .. EH, HE .. EL

Principal dimensions							Mass Designations					
$d_1$	d	$d_3$	$B_1$	B	$B_4$	G	Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	Appropriate hydraulic nut		
in./mm	mm						kg	-				
3 1/4 82,55	90	120	52	16	18	M 90x2	0,97	HE 218	KM 18	MB 18	HMV 18E	
	90	120	65	16	18	M 90x2	1,1	HE 318	KM 18	MB 18	HMV 18E	
	90	120	65	19	-	M 90x2	1,1	HE 318 E	KMFE 18	-	HMV 18E	
	90	120	73	19	-	M 90x2	1,3	HE 2318 E/L73 <sup>1)</sup>	KMFE 18	-	HMV 18E	
	90	120	86	16	18	M 90x2	1,4	HE 2318	KM 18	MB 18	HMV 18E	
	95	125	55	17	19	M 95x2	1,35	HE 219	KM 19	MB 19	HMV 19E	
	95	125	68	17	19	M 95x2	1,6	HE 319	KM 19	MB 19	HMV 19E	
	95	125	68	20	-	M 95x2	1,6	HE 319 E	KMFE 19	-	HMV 19E	
	95	125	90	17	19	M 95x2	2	HE 2319	KM 19	MB 19	HMV 19E	
	95	125	90	20	-	M 95x2	2,05	HE 2319 EL	KMFE 19 L	-	HMV 20E	
3 7/16 87,313	100	130	58	18	20	M 100x2	1,55	HA 220	KM 20	MB 20	HMV 20E	
	100	130	71	18	20	M 100x2	1,8	HA 320	KM 20	MB 20	HMV 20E	
	100	130	71	21	-	M 100x2	1,75	HA 320 E	KMFE 20	-	HMV 20E	
	100	130	97	18	20	M 100x2	2,35	HA 2320	KM 20	MB 20	HMV 20E	
	100	130	97	21	-	M 100x2	2,35	HA 2320 E	KMFE 20	-	HMV 20E	
3 1/2 88,9	100	130	58	18	20	M 100x2	1,45	HE 220	KM 20	MB 20	HMV 20E	
	100	130	71	18	20	M 100x2	1,75	HE 320	KM 20	MB 20	HMV 20E	
	100	130	71	21	-	M 100x2	1,7	HE 320 E	KMFE 20	-	HMV 20E	
	100	130	76	18	20	M 100x2	1,8	HE 3120	KM 20	MB 20	HMV 20E	
	100	130	76	21	-	M 100x2	1,8	HE 3120 E	KMFE 20	-	HMV 20E	
	100	130	97	18	20	M 100x2	2,2	HE 2320	KM 20	MB 20	HMV 20E	
	100	130	97	21	-	M 100x2	2,2	HE 2320 E	KMFE 20	-	HMV 20E	
	4 101,6	110	145	63	19	21	M 110x2	1,65	HE 222	KM 22	MB 22	HMV 22E
		110	145	77	19	21	M 110x2	1,9	HE 322	KM 22	MB 22	HMV 22E
		110	145	77	21,5	-	M 110x2	1,85	HE 322 E	KMFE 22	-	HMV 22E
110		145	81	19	21	M 110x2	2,25	HE 3122	KM 22	MB 22	HMV 22E	
110		145	81	21,5	-	M 110x2	2,3	HE 3122 E	KMFE 22	-	HMV 22E	
110		145	105	19	21	M 110x2	2,4	HE 2322	KM 22	MB 22	HMV 22E	
110		145	105	21,5	-	M 110x2	2,4	HE 2322 E	KMFE 22	-	HMV 22E	

<sup>1)</sup> Width reduced to 73 mm



## 16.2 Adapter sleeves for inch shafts

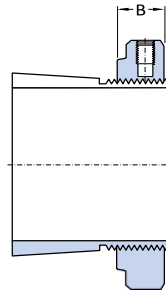
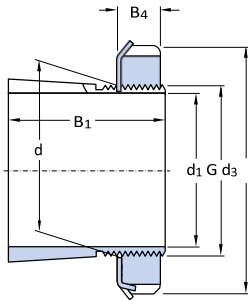
d<sub>1301</sub> 1/4 - 5 1/4 in.

d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B	B <sub>4</sub>	G		device	device	hydraulic nut		
in./mm	mm						kg	-				
4 3/16 106,363	120	145	72	20	22	M 120x2	2,25	<b>HA 3024</b>	KML 24	MBL 24	HMV 24E	
	120	145	88	20	22	M 120x2	2,6	<b>HA 3124 L</b>	KML 24	MBL 24	HMV 24E	
	120	145	112	20	22	M 120x2	3,3	<b>HA 2324 L</b>	KML 24	MBL 24	HMV 24E	
	120	155	72	26	-	M 120x2	2,3	<b>HA 3024 E</b>	KMFE 24	-	HMV 24E	
	120	155	88	20	22	M 120x2	2,9	<b>HA 3124</b>	KM 24	MB 24	HMV 24E	
	120	155	112	20	22	M 120x2	3,6	<b>HA 2324</b>	KM 24	MB 24	HMV 24E	
	120	155	112	26	-	M 120x2	3,7	<b>HA 2324 E</b>	KMFE 24	-	HMV 24E	
	120	155	112	26	-	M 120x2	3,65	<b>HA 2324 EH</b>	KMFE 24 H	-	HMV 24E	
	4 1/4 107,95	120	145	72	20	22	M 120x2	2	<b>HE 3024</b>	KML 24	MBL 24	HMV 24E
		120	145	112	20	22	M 120x2	3,05	<b>HE 2324 L</b>	KML 24	MBL 24	HMV 24E
120		155	72	26	-	M 120x2	2,7	<b>HE 3024 E</b>	KMFE 24	-	HMV 24E	
120		155	88	20	22	M 120x2	2,8	<b>HE 3124</b>	KM 24	MB 24	HMV 24E	
120		155	112	20	22	M 120x2	3,35	<b>HE 2324</b>	KM 24	MB 24	HMV 24E	
120		155	112	26	-	M 120x2	3,45	<b>HE 2324 E</b>	KMFE 24	-	HMV 24E	
120		155	112	26	-	M 120x2	3,4	<b>HE 2324 EH</b>	KMFE 24 H	-	HMV 24E	
4 7/16 112,713		130	155	80	21	23	M 130x2	3,05	<b>HA 3026</b>	KML 26	MBL 26	HMV 26E
		130	155	92	21	23	M 130x2	3,55	<b>HA 3126 L</b>	KML 26	MBL 26	HMV 26E
		130	155	121	21	23	M 130x2	4,45	<b>HA 2326 L</b>	KML 26	MBL 26	HMV 26E
	130	165	80	28	-	M 130x2	3,15	<b>HA 3026 E</b>	KMFE 26	-	HMV 26E	
	130	165	92	21	23	M 130x2	3,75	<b>HA 3126</b>	KM 26	MB 26	HMV 26E	
	130	165	92	28	-	M 130x2	3,75	<b>HA 3126 E</b>	KMFE 26	-	HMV 26E	
	130	165	121	21	23	M 130x2	4,75	<b>HA 2326</b>	KM 26	MB 26	HMV 26E	
	4 1/2 114,3	130	155	80	21	23	M 130x2	2,9	<b>HE 3026</b>	KML 26	MBL 26	HMV 26E
		130	155	92	21	23	M 130x2	3,4	<b>HE 3126 L</b>	KML 26	MBL 26	HMV 26E
		130	155	121	21	23	M 130x2	4,25	<b>HE 2326 L</b>	KML 26	MBL 26	HMV 26E
130		165	80	28	-	M 130x2	3	<b>HE 3026 E</b>	KMFE 26	-	HMV 26E	
130		165	92	21	23	M 130x2	3,6	<b>HE 3126</b>	KM 26	MB 26	HMV 26E	
130		165	121	21	23	M 130x2	4,55	<b>HE 2326</b>	KM 26	MB 26	HMV 26E	
4 15/16 125,413		140	165	82	22	24	M 140x2	3	<b>HA 3028</b>	KML 28	MBL 28	HMV 28E
		140	165	97	22	24	M 140x2	4,6	<b>HA 3128 L</b>	KML 28	MBL 28	HMV 28E
	140	180	82	28	-	M 140x2	3	<b>HA 3028 E</b>	KMFE 28	-	HMV 28E	
	140	180	97	22	24	M 140x2	4,1	<b>HA 3128</b>	KM 28	MB 28	HMV 28E	
	140	180	131	22	24	M 140x2	5,3	<b>HA 2328</b>	KM 28	MB 28	HMV 28E	
	5 127	140	165	82	22	24	M 140x2	2,8	<b>HE 3028</b>	KML 28	MBL 28	HMV 28E
140		165	97	22	24	M 140x2	3,3	<b>HE 3128 L</b>	KML 28	MBL 28	HMV 28E	
140		180	82	28	-	M 140x2	2,8	<b>HE 3028 E</b>	KMFE 28	-	HMV 28E	
140		180	97	22	24	M 140x2	3,8	<b>HE 3128</b>	KM 28	MB 28	HMV 28E	
140		180	131	22	24	M 140x2	5	<b>HE 2328</b>	KM 28	MB 28	HMV 28E	
5 3/16 131,763		150	180	87	24	26	M 150x2	4,2	<b>HA 3030</b>	KML 30	MBL 30	HMV 30E
	150	180	111	24	26	M 150x2	5,3	<b>HA 3130 L</b>	KML 30	MBL 30	HMV 30E	
	150	180	139	24	26	M 150x2	6,45	<b>HA 2330 L</b>	KML 30	MBL 30	HMV 30E	
	150	195	87	30	-	M 150x2	4,2	<b>HA 3030 E</b>	KMFE 30	-	HMV 30E	
	150	195	111	24	26	M 150x2	5,8	<b>HA 3130</b>	KM 30	MB 30	HMV 30E	
	150	195	111	30	-	M 150x2	5,8	<b>HA 3130 E</b>	KMFE 30	-	HMV 30E	
	150	195	139	24	26	M 150x2	7,1	<b>HA 2330</b>	KM 30	MB 30	HMV 30E	
	5 1/4 133,35	150	180	87	24	26	M 150x2	4	<b>HE 3030</b>	KML 30	MBL 30	HMV 30E
150		180	111	24	26	M 150x2	5	<b>HE 3130 L</b>	KML 30	MBL 30	HMV 30E	
150		180	139	24	26	M 150x2	6,15	<b>HE 2330 L</b>	KML 30	MBL 30	HMV 30E	
150		195	111	24	26	M 150x2	5,5	<b>HE 3130</b>	KM 30	MB 30	HMV 30E	
150		195	111	30	-	M 150x2	4	<b>HE 3030 E</b>	KMFE 30	-	HMV 30E	
150		195	111	30	-	M 150x2	5,5	<b>HE 3130 E</b>	KMFE 30	-	HMV 30E	
150		195	139	24	26	M 150x2	6,8	<b>HE 2330</b>	KM 30	MB 30	HMV 30E	



## 16.2 Adapter sleeves for inch shafts

$d_{15} \text{ } 7/16 - 7 \text{ } 3/16 \text{ in.}$   
 $139, 113 - 182, 563 \text{ mm}$



HA, HE, HA .. L, HE .. L

HA .. E, HE .. E

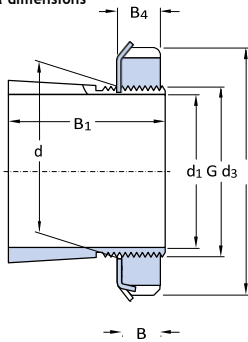
Principal dimensions							Mass Designations				
$d_1$	d	$d_3$	$B_1$	B	$B_4$	G	Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	Appropriate hydraulic nut	
in./mm	mm						kg	-			
<b>5 7/16</b> <b>138, 113</b>	160	190	93	25	27,5	M 160x3	5,2	<b>HA 3032</b>	KML 32	MBL 32	HMV 32E
	160	190	147	25	27,5	M 160x3	9,4	<b>HA 2332 L</b>	KML 32	MBL 32	HMV 32E
	160	210	93	32	-	M 160x3	5,2	<b>HA 3032 E</b>	KMFE 32	-	HMV 32E
	160	210	119	25	27,5	M 160x3	7,55	<b>HA 3132</b>	KM 32	MB 32	HMV 32E
	160	210	119	32	-	M 160x3	7,55	<b>HA 3132 E</b>	KMFE 32	-	HMV 32E
	160	210	147	25	27,5	M 160x3	9,4	<b>HA 2332</b>	KM 32	MB 32	HMV 32E
<b>5 1/2</b> <b>139,7</b>	160	190	93	25	27,5	M 160x3	5,1	<b>HE 3032</b>	KML 32	MBL 32	HMV 32E
	160	190	119	25	27,5	M 160x3	7,55	<b>HA 3132 L</b>	KML 32	MBL 32	HMV 32E
	160	190	119	25	27,5	M 160x3	7,3	<b>HE 3132 L</b>	KML 32	MBL 32	HMV 32E
	160	190	147	25	27,5	M 160x3	8,8	<b>HE 2332 L</b>	KML 32	MBL 32	HMV 32E
	160	210	93	32	-	M 160x3	5,1	<b>HE 3032 E</b>	KMFE 32	-	HMV 32E
	160	210	119	25	27,5	M 160x3	7,3	<b>HE 3132</b>	KM 32	MB 32	HMV 32E
	160	210	119	32	-	M 160x3	7,3	<b>HE 3132 E</b>	KMFE 32	-	HMV 32E
	160	210	147	25	27,5	M 160x3	8,8	<b>HE 2332</b>	KM 32	MB 32	HMV 32E
<b>5 15/16</b> <b>150, 813</b>	170	200	101	26	28,5	M 170x3	5,7	<b>HA 3034</b>	KML 34	MBL 34	HMV 34E
	170	200	122	26	28,5	M 170x3	6,8	<b>HA 3134 L</b>	KML 34	MBL 34	HMV 34E
	170	220	122	26	28,5	M 170x3	7,8	<b>HA 3134</b>	KM 34	MB 34	HMV 34E
	170	220	122	33	-	M 170x3	7,9	<b>HA 3134 E</b>	KMFE 34	-	HMV 34E
	170	220	154	26	28,5	M 170x3	9,6	<b>HA 2334</b>	KM 34	MB 34	HMV 34E
<b>6</b> <b>152,4</b>	170	200	101	26	28,5	M 170x3	5,4	<b>HE 3034</b>	KML 34	MBL 34	HMV 34E
	170	200	122	26	28,5	M 170x3	7,55	<b>HE 3134 L</b>	KML 34	MBL 34	HMV 34E
	170	220	101	33	-	M 170x3	5,75	<b>HA 3034 E</b>	KMFE 34	-	HMV 34E
	170	220	101	33	-	M 170x3	5,5	<b>HE 3034 E</b>	KMFE 34	-	HMV 34E
	170	220	122	26	28,5	M 170x3	7,55	<b>HE 3134</b>	KM 34	MB 34	HMV 34E
	170	220	122	33	-	M 170x3	7,65	<b>HE 3134 E</b>	KMFE 34	-	HMV 34E
	170	220	154	26	28,5	M 170x3	9,2	<b>HE 2334</b>	KM 34	MB 34	HMV 34E
	170	220	154	26	28,5	M 170x3	9,2	<b>HE 2334</b>	KM 34	MB 34	HMV 34E
<b>6 7/16</b> <b>163,513</b>	180	210	109	27	29,5	M 180x3	6	<b>HA 3036</b>	KML 36	MBL 36	HMV 36E
	180	230	122	34	-	M 180x3	7,2	<b>HA 3036 E</b>	KMFE 36	-	HMV 36E
	180	230	131	27	29,5	M 180x3	8,15	<b>HA 3136</b>	KM 36	MB 36	HMV 36E
	180	230	161	27	29,5	M 180x3	9,9	<b>HA 2336</b>	KM 36	MB 36	HMV 36E

Principal dimensions							Mass Designations				
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B	B <sub>4</sub>	G	Adapter sleeve with Appertaining nut and locking lock nut		locking device	private hydraulic nut	
in./mm	mm						kg	–			
<b>6 1/2</b> <b>165,1</b>	180	210	109	27	29,5	M 180x3	5,55	<b>HE 3036</b>	KML 36	MBL 36	HMV 36E
	180	210	131	27	29,5	M 180x3	6,85	<b>HA 3136 L</b>	KML 36	MBL 36	HMV 36E
	180	230	122	34	–	M 180x3	6,75	<b>HE 3036 E</b>	KMFE 36	–	HMV 36E
	180	230	131	27	29,5	M 180x3	7,8	<b>HE 3136</b>	KM 36	MB 36	HMV 36E
	180	230	161	27	29,5	M 180x3	9,35	<b>HE 2336</b>	KM 36	MB 36	HMV 36E
<b>6 3/4</b> <b>171,45</b>	190	220	112	28	30,5	M 190x3	7,2	<b>HE 3038</b>	KML 38	MBL 38	HMV 38E
	190	240	141	28	30,5	M 190x3	10	<b>HE 3138</b>	KM 38	MB 38	HMV 38E
	190	240	169	28	30,5	M 190x3	11,5	<b>HE 2338</b>	KM 38	MB 38	HMV 38E
<b>6 15/16</b> <b>176,213</b>	190	220	112	28	30,5	M 190x3	5,8	<b>HA 3038</b>	KML 38	MBL 38	HMV 38E
	190	240	141	28	30,5	M 190x3	8,5	<b>HA 3138</b>	KM 38	MB 38	HMV 38E
	190	240	169	28	30,5	M 190x3	10	<b>HA 2338</b>	KM 38	MB 38	HMV 38E
<b>7</b> <b>177,8</b>	200	240	120	29	31,5	M 200x3	9,35	<b>HE 3040</b>	KML 40	MBL 40	HMV 40E
	200	240	176	29	31,5	M 200x3	13,5	<b>HE 2340 L</b>	KML 40	MBL 40	HMV 40E
	200	250	150	29	31,5	M 200x3	12,5	<b>HE 3140</b>	KM 40	MB 40	HMV 40E
	200	250	176	29	31,5	M 200x3	14	<b>HE 2340</b>	KM 40	MB 40	HMV 40E
<b>7 3/16</b> <b>182,563</b>	200	240	120	29	31,5	M 200x3	8,25	<b>HA 3040</b>	KML 40	MBL 40	HMV 40E
	200	240	176	29	31,5	M 200x3	12	<b>HA 2340 L</b>	KML 40	MBL 40	HMV 40E
	200	250	150	29	31,5	M 200x3	11	<b>HA 3140</b>	KM 40	MB 40	HMV 40E
	200	250	176	29	31,5	M 200x3	12,5	<b>HA 2340</b>	KM 40	MB 40	HMV 40E



$d_1$  3/4 - 4 3/16 in.  
19,05 - 106,363 mm

Principal dimensions



Thread

Threads  
per inch

Mass Designations

Adapter sleeve with  
nut and locking device

Appertaining  
lock nut

Appropriate  
locking hydraulic  
nut

Principal dimensions

Thread

Threads  
per inch

Mass Designations

Adapter sleeve with  
nut and locking device

Appertaining  
lock nut

Appropriate  
locking hydraulic  
nut

$d_1$

$d$

$d_3$

$B_1$

$B$

$B_4$

$G$

in./mm

mm

in.

in.

–

kg

–

3/4  
19,05

25

1 9/16 1,269

0,416 0,456

0,969 32

0,1

SNW 5 x 3/4

N 05

W 05

–

15/16  
23,813

30

1 3/4 1,353

0,416 0,456

1,173 18

0,1

SNW 6 x 15/16

N 06

W 06

–

1  
25,4

30

1 3/4 1,353

0,416 0,456

1,173 18

0,1

SNW 6 x 1

N 06

W 06

–

1 1/8  
28,575

35

2 1/16 1,459

0,448 0,488

1,376 18

0,16

SNW 7 x 1 1/8

N 07

W 07

–

1 3/16  
30,163

35

2 1/16 1,459

0,448 0,488

1,376 18

0,16

SNW 7 x 1 3/16

N 07

W 07

–

1 1/4  
31,75

35

2 1/16 1,459

0,448 0,488

1,376 18

0,16

SNW 7 x 1 1/4

N 07

W 07

–

1 3/8  
34,925

40

2 1/4 1,504

0,448 0,496

1,563 18

0,19

SNW 8 x 1 1/4

N 08

W 08

–

1 5/16  
33,338

45

2 1/4 1,504

0,448 0,496

1,767 18

0,28

SNW 9 x 1 3/8

N 09

W 09

–

1 7/16  
36,513

45

2 1/4 1,504

0,448 0,496

1,767 18

0,28

SNW 9 x 1 5/16

N 09

W 09

–

1 7/16  
36,513

45

2 17/32 2,133

0,448 0,496

1,767 18

0,32

SNW 9 x 1 7/16

N 09

W 09

–

1 1/2  
38,1

45

2 17/32 2,133

0,448 0,496

1,767 18

0,32

SNW 109 x 1 1/2

N 09

W 09

–

1 5/8  
41,275

50

2 11/16 1,765

0,51 0,558

1,967 18

0,33

SNW 10 x 1 5/8

N 10

W 10

HMVC 10E

1 11/16  
42,863

50

2 11/16 1,765

0,51 0,558

1,967 18

0,33

SNW 10 x 1 11/16

N 10

W 10

HMVC 10E

1 3/4  
44,45

50

2 11/16 1,765

0,51 0,558

1,967 18

0,33

SNW 110 x 1 11/16

N 10

W 10

HMVC 10E

1 3/4  
44,45

55

2 31/32 1,845

0,51 0,563

2,157 18

0,36

SNW 10 x 1 3/4

N 10

W 10

HMVC 10E

1 13/16  
46,038

55

2 31/32 1,845

0,51 0,563

2,157 18

0,36

SNW 11 x 1 3/4

N 11

W 11

HMVC 11E

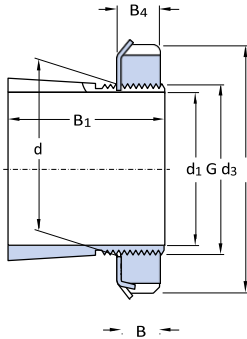


Principal dimensions						Thread	Mass Designations					
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B	B <sub>4</sub>	G	Threads per inch		Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	Appropriate hydraulic nut
in./mm	mm	in.				in.	–	kg	–			
<b>1 7/8</b> 47,625	55	2 31/32	1,845	0,51	0,563	2,157	18	0,36	<b>SNW 11 x 1 7/8</b>	N 11	W 11	HMVC 11E
<b>1 15/16</b> 49,213	55	2 31/32	1,845	0,51	0,563	2,157	18	0,36	<b>SNW 11 x 1 15/16</b>	N 11	W 11	HMVC 11E
	55	2 31/32	2,516	0,51	0,563	2,157	18	0,43	<b>SNW 111 x 1 15/16</b>	N 11	W 11	HMVC 11E
<b>2</b> 50,8	55	2 31/32	1,845	0,51	0,563	2,157	18	0,36	<b>SNW 11 x 2</b>	N 11	W 11	HMVC 11E
	55	2 31/32	2,516	0,51	0,563	2,157	18	0,43	<b>SNW 111 x 2</b>	N 11	W 11	HMVC 11E
	65	3 3/8	2,1	0,573	0,626	2,548	18	0,64	<b>SNW 13 x 2</b>	N 13	W 13	HMVC 13E
<b>2 1/16</b> 52,388	60	3 5/32	2,659	0,541	0,594	2,36	18	0,73	<b>SNW 112 x 2 1/16</b>	N 12	W 12	HMVC 12E
<b>2 3/16</b> 55,563	65	3 3/8	2,1	0,573	0,626	2,548	18	0,64	<b>SNW 13 x 2 3/16</b>	N 13	W 13	HMVC 13E
	65	3 3/8	2,771	0,573	0,626	2,548	18	0,79	<b>SNW 113 x 2 3/16</b>	N 13	W 13	HMVC 13E
<b>2 1/4</b> 57,15	65	3 3/8	2,1	0,573	0,626	2,548	18	0,64	<b>SNW 13 x 2 1/4</b>	N 13	W 13	HMVC 13E
	65	3 3/8	2,771	0,573	0,626	2,548	18	0,79	<b>SNW 113 x 2 1/4</b>	N 13	W 13	HMVC 13E
<b>2 5/16</b> 58,738	65	3 3/8	2,1	0,573	0,626	2,548	18	0,64	<b>SNW 13 x 2 5/16</b>	N 13	W 13	HMVC 13E
<b>2 3/8</b> 60,325	75	3 3/8	2,296	0,604	0,666	2,933	12	1	<b>SNW 15 x 2 3/8</b>	AN 15	W 15	HMVC 15E
<b>2 7/16</b> 61,913	75	3 7/8	2,296	0,604	0,666	2,933	12	1	<b>SNW 15 x 2 7/16</b>	AN 15	W 15	HMVC 15E
	75	3 7/8	3,084	0,604	0,666	2,933	12	1,35	<b>SNW 115 x 2 7/16</b>	AN 15	W 15	HMVC 15E
<b>2 11/16</b> 68,263	80	4 5/32	2,376	0,604	0,666	3,137	12	1,1	<b>SNW 16 X 2 11/16</b>	AN 16	W 16	HMVC 16E
	80	4 5/32	3,204	0,604	0,666	3,137	12	1,45	<b>SNW 116 X 2 11/16</b>	AN 16	W 16	HMVC 16E
<b>2 3/4</b> 69,85	80	4 5/32	2,376	0,604	0,666	3,137	12	1,1	<b>SNW 16 X 2 3/4</b>	AN 16	W 16	HMVC 16E
<b>2 15/16</b> 74,613	85	4 13/32	2,486	0,635	0,697	3,34	12	1,3	<b>SNW 17 x 2 15/16</b>	AN 17	W 17	HMVC 17E
	85	4 13/32	3,312	0,635	0,697	3,34	12	1,55	<b>SNW 117 x 2 15/16</b>	AN 17	W 17	HMVC 17E
<b>3</b> 76,2	85	4 13/32	2,486	0,635	0,697	3,34	12	1,3	<b>SNW 17 x 3</b>	AN 17	W 17	HMVC 17E
	85	4 13/32	3,312	0,635	0,697	3,34	12	1,55	<b>SNW 117 x 3</b>	AN 17	W 17	HMVC 17E
<b>3 3/16</b> 80,963	90	4 21/32	2,646	0,698	0,782	3,527	12	1,4	<b>SNW 18 x 3 3/16</b>	AN 18	W 18	HMVC 18E
	90	4 21/32	3,553	0,698	0,782	3,527	12	1,8	<b>SNW 118 x 3 3/16</b>	AN 18	W 18	HMVC 18E
<b>3 1/4</b> 82,55	90	4 21/32	2,645	0,698	0,782	3,527	12	1,4	<b>SNW 18 x 3 1/4</b>	AN 18	W 18	HMVC 18E
<b>3 5/16</b> 84,138	95	4 15/16	2,76	0,729	0,813	3,73	12	1,85	<b>SNW 19 x 3 5/16</b>	AN 19	W 19	HMVC 19E
	95	4 15/16	3,702	0,729	0,813	3,73	12	2,2	<b>SNW 119 x 3 5/16</b>	AN 19	W 19	HMVC 19E
<b>3 7/16</b> 87,313	100	5 3/16	2,869	0,76	0,844	3,918	12	2	<b>SNW 20 x 3 7/16</b>	AN 20	W 20	HMVC 20E
	100	5 3/16	3,971	0,76	0,844	3,918	12	2,85	<b>SNW 120 x 3 7/16</b>	AN 20	W 20	HMVC 20E
<b>3 1/2</b> 88,9	100	5 3/16	2,869	0,76	0,844	3,918	12	2	<b>SNW 20 x 3 1/2</b>	AN 20	W 20	HMVC 20E
	100	5 3/16	3,971	0,76	0,844	3,918	12	2,85	<b>SNW 120 x 3 1/2</b>	AN 20	W 20	HMVC 20E
<b>3 11/16</b> 93,663	105	5 7/16	2,987	0,76	0,844	4,122	12	2,05	<b>SNW 21 x 3 11/16</b>	AN 21	W 21	HMVC 21E
	110	5 23/32	3,206	0,76	0,844	4,325	12	2,25	<b>SNW 121 x 3 11/16</b>	AN 21	W 21	HMVC 21E
<b>3 15/16</b> 100,013	110	5 23/32	3,206	0,791	0,906	4,325	12	2,25	<b>SNW 22 x 3 15/16</b>	AN 22	W 22	HMVC 22E
	110	5 23/32	4,348	0,791	0,906	4,325	12	2,95	<b>SNW 122 x 3 15/16</b>	AN 22	W 22	HMVC 22E
<b>4</b> 101,6	110	5 23/32	3,206	0,791	0,906	4,325	12	2,25	<b>SNW 22 x 4</b>	AN 22	W 22	HMVC 22E
<b>4 3/16</b> 106,363	120	5 11/16	2,947	0,823	0,938	4,716	12	2,8	<b>SNW 3024 x 4 3/16</b>	N 024	W 024	HMVC 24E
	120	5 11/16	3,466	0,823	0,938	4,716	12	2,65	<b>SNW 3124 x 4 3/16</b>	N 024	W 024	HMVC 24E
	120	6 1/8	3,466	0,823	0,938	4,716	12	3	<b>SNW 24 x 4 3/16</b>	AN 24	W 24	HMVC 24E
	120	6 3/8	4,648	0,823	0,938	4,716	12	3,55	<b>SNW 124 x 4 3/16</b>	AN 24	W 24	HMVC 24E

## 16.3 Adapter sleeves with inch dimensions

$d_1$  4 1/4 - 8 in.

107,95 - 203,2 mm



Principal dimensions			Thread			Mass Designations					
$d_1$	$d$	$d_3$	$B_1$	$B$	$B_4$	$G$	Threads per inch	Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	Appropriate hydraulic nut
in./mm	mm	in.				in.	-	kg	-		
4 1/4 107,95	120	5 11/16	3,466	0,823	0,938	4,716	12	2,65	SNW 3124 x 4 1/4	N 024 W 024	HMVC 24E
	120	6 1/8	3,466	0,823	0,938	4,716	12	3	SNW 24 x 4 1/4	AN 24 W 24	HMVC 24E
4 7/16 112,713	130	6 1/8	3,237	0,885	1	5,106	12	3,4	SNW 3026 x 4 7/16	N 026 W 026	HMVC 26E
	130	6 1/8	3,762	0,885	1	5,106	12	3,8	SNW 3126 x 4 7/16	N 026 W 026	HMVC 26E
	130	6 3/4	3,762	0,885	1	5,106	12	4,4	SNW 26 x 4 7/16	AN 26 W 26	HMVC 26E
	130	6 3/4	4,982	0,885	1	5,106	12	5,65	SNW 126 x 4 7/16	AN 26 W 26	HMVC 26E
4 1/2 114,3	130	6 1/8	3,237	0,885	1	5,106	12	3,4	SNW 3026 x 4 1/2	N 026 W 026	HMVC 26E
	130	6 1/8	3,762	0,885	1	5,106	12	3,8	SNW 3126 x 4 1/2	N 026 W 026	HMVC 26E
	130	6 3/4	3,762	0,885	1	5,106	12	4,4	SNW 26 x 4 1/2	AN 26 W 26	HMVC 26E
4 15/16 125,413	140	6 1/2	3,34	0,948	1,063	5,497	12	3,8	SNW 3028 x 4 15/16	N 028 W 028	HMVC 28E
	140	6 1/2	3,981	0,948	1,063	5,497	12	4	SNW 3128 x 4 15/16	N 028 W 028	HMVC 28E
	140	7 3/32	3,981	0,948	1,063	5,497	12	4,75	SNW 28 x 4 15/16	AN 28 W 28	HMVC 28E
	140	7 3/32	5,323	0,948	1,063	5,497	12	5,9	SNW 128 x 4 15/16	AN 28 W 28	HMVC 28E
5 127	140	6 1/2	3,34	0,948	1,063	5,497	12	3,85	SNW 3028 x 5	N 028 W 028	HMVC 28E
	140	6 1/2	3,981	0,948	1,063	5,497	12	4	SNW 3128 x 5	N 028 W 028	HMVC 28E
	140	7 3/32	3,981	0,948	1,063	5,497	12	4,75	SNW 28 x 5	AN 28 W 28	HMVC 28E
5 3/16 131,763	150	7 1/8	3,492	0,979	1,094	5,888	12	4,45	SNW 3030 x 5 3/16	N 030 W 030	HMVC 30E
	150	7 1/8	4,241	0,979	1,094	5,888	12	6,2	SNW 3130 x 5 3/16	N 030 W 030	HMVC 30E
	150	7 11/16	4,241	0,979	1,125	5,888	12	7,25	SNW 30 x 5 3/16	AN 30 W 30	HMVC 30E
	150	7 11/16	5,621	0,979	1,125	5,888	12	8,15	SNW 130 x 5 3/16	AN 30 W 30	HMVC 30E
5 1/4 133,35	150	7 11/16	4,241	0,979	1,125	5,888	12	7,25	SNW 30 x 5 1/4	AN 30 W 30	HMVC 30E
5 7/16 138,113	160	7 1/2	3,711	1,041	1,156	6,284	8	5,45	SNW 3032 x 5 7/16	N 032 W 032	HMVC 32E
	160	7 1/2	4,578	1,041	1,156	6,284	8	6,1	SNW 3132 x 5 7/16	N 032 W 032	HMVC 32E
	160	8 1/16	4,578	1,041	1,187	6,284	8	7,05	SNW 32 x 5 7/16	AN 32 W 32	HMVC 32E
	160	8 1/16	5,92	1,041	1,187	6,284	8	8,15	SNW 132 x 5 7/16	AN 32 W 32	HMVC 32E
5 3/4 146,05	160	8 1/16	4,578	1,041	1,187	6,284	8	7,05	SNW 32 x 5 3/4	AN 32 W 32	HMVC 32E

For oil injection variants, contact SKF.

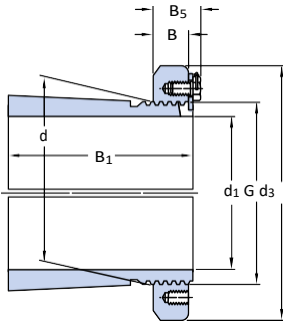
Principal dimensions						Thread	Mass Designations					
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B	B <sub>4</sub>	G	Threads per inch	Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	Appropriate hydraulic nut	
in./mm	mm	in.				in.	–	kg	–			
<b>5 15/16</b> <b>150,813</b>	170	7 7/8	4,019	1,073	1,188	6,659	8	6,1	<b>SNW 3034 x 5 15/16</b>	N 034	W 034	HMVC 34E
	170	7 7/8	4,847	1,073	1,188	6,659	8	7,3	<b>SNW 3134 x 5 15/16</b>	N 034 W	034	HMVC 34E
	170	8 <sup>21</sup> /32	4,847	1,073	1,219	6,659	8	8,85	<b>SNW 34 x 5 15/16</b>	AN 34	W 34	HMVC 34E
	170	8 <sup>21</sup> /32	6,188	1,073	1,219	6,659	8	9,55	<b>SNW 134 x 5 15/16</b>	AN 34	W 34	HMVC 34E
<b>6</b> <b>152,4</b>	170	7 7/8	4,019	1,073	1,188	6,659	8	6,1	<b>SNW 3034 x 6</b>	N 034	W 034	HMVC 34E
	170	7 7/8	4,847	1,073	1,188	6,659	8	7,3	<b>SNW 3134 x 6</b>	N 034	W 034	HMVC 34E
	170	8 <sup>21</sup> /32	4,847	1,073	1,219	6,659	8	8,85	<b>SNW 34 x 6</b>	AN 34	W 34	HMVC 34E
	170	8 <sup>21</sup> /32	6,188	1,073	1,219	6,659	8	9,55	<b>SNW 134 x 6</b>	AN 34	W 34	HMVC 34E
<b>6 7/16</b> <b>163,513</b>	180	8 1/4	4,337	1,104	1,219	7,066	8	6,8	<b>SNW 3036 x 6 7/16</b>	N 036	W 036	HMVC 36E
	180	8 1/4	5,038	1,104	1,219	7,066	8	7,75	<b>SNW 3136 x 6 7/16</b>	N 036	W 036	HMVC 36E
	180	9 <sup>1</sup> /16	5,038	1,104	1,25	7,066	8	9,3	<b>SNW 36 x 6 7/16</b>	AN 36	W 36	HMVC 36E
	180	9 <sup>1</sup> /16	6,456	1,104	1,25	7,066	8	10	<b>SNW 136 x 6 7/16</b>	AN 36	W 36	HMVC 36E
<b>6 1/2</b> <b>165,1</b>	180	8 1/4	5,038	1,104	1,219	7,066	8	7,75	<b>SNW 3136 x 6 1/2</b>	N 036	W 036	HMVC 36E
	180	9 <sup>1</sup> /16	5,038	1,104	1,25	7,066	8	9,3	<b>SNW 36 x 6 1/2</b>	AN 36	W 36	HMVC 36E
<b>6 15/16</b> <b>176,213</b>	190	8 <sup>11</sup> /16	4,412	1,135	1,25	7,472	8	7,5	<b>SNW 3038 x 6 15/16</b>	N 038	W 038	HMVC 38E
	190	8 <sup>11</sup> /16	5,261	1,135	1,25	7,472	8	8,95	<b>SNW 3138 x 6 15/16</b>	N 038	W 038	HMVC 38E
	190	9 <sup>15</sup> /32	5,261	1,135	1,281	7,472	8	10,5	<b>SNW 38 x 6 15/16</b>	AN 38	W 38	HMVC 38E
	190	9 <sup>15</sup> /32	6,758	1,135	1,281	7,472	8	12,5	<b>SNW 138 x 6 15/16</b>	AN 38	W 38	HMVC 38E
<b>7</b> <b>177,8</b>	190	8 <sup>11</sup> /16	4,412	1,135	1,25	7,472	8	7,5	<b>SNW 3038 x 7</b>	N 038	W 038	HMVC 38E
	190	8 <sup>11</sup> /16	5,261	1,135	1,25	7,472	8	8,95	<b>SNW 3138 x 7</b>	N 038	W 038	HMVC 38E
	190	9 <sup>15</sup> /32	5,261	1,135	1,281	7,472	8	10,5	<b>SNW 38 x 7</b>	AN 38	W 38	HMVC 38E
	190	9 <sup>15</sup> /32	6,758	1,135	1,281	7,472	8	12,5	<b>SNW 138 x 7</b>	AN 38	W 38	HMVC 38E
<b>7 3/16</b> <b>182,563</b>	200	9 7/16	4,75	1,198	1,313	7,847	8	8,85	<b>SNW 3040 x 7 3/16</b>	N 040	W 040	HMVC 40E
	200	9 7/16	5,484	1,198	1,313	7,847	8	13	<b>SNW 3140 x 7 3/16</b>	N 040	W 040	HMVC 40E
	200	9 <sup>27</sup> /32	5,484	1,198	1,344	7,847	8	14	<b>SNW 40 x 7 3/16</b>	AN 40	W 40	HMVC 40E
	200	9 <sup>27</sup> /32	7,095	1,198	1,344	7,847	8	16	<b>SNW 140 x 7 3/16</b>	AN 40	W 40	HMVC 40E
<b>7 15/16</b> <b>201,613</b>	220	10 1/4	5,13	1,26	1,375	8,628	8	11	<b>SNW 3044 x 7 15/16</b>	N 044	W 044	HMVC 44E
	220	10 1/4	5,901	1,26	1,375	8,628	8	13	<b>SNW 3144 x 7 15/16</b>	N 044	W 044	HMVC 44E
	220	11	5,901	1,26	1,406	8,628	8	14,5	<b>SNW 44 x 7 15/16</b>	N 44	W 44	HMVC 44E
	220	11	7,287	1,26	1,406	8,628	8	21	<b>SNW 144 x 7 15/16</b>	N 44	W 44	HMVC 44E
<b>8</b> <b>203,2</b>	220	10 1/4	5,13	1,26	1,375	8,628	8	11	<b>SNW 3044 x 8</b>	N 044	W 044	HMVC 44E
	220	10 1/4	5,901	1,26	1,375	8,628	8	13	<b>SNW 3144 x 8</b>	N 044	W 044	HMVC 44E
	220	11	5,901	1,26	1,406	8,628	8	14,5	<b>SNW 44 x 8</b>	N 44	W 44	HMVC 44E

For oil injection variants, contact SKF.

## 16.3 Adapter sleeves with inch dimensions

$d_1$  8 15/16 - 19 1/2 in.

227,013 - 495,3 mm



Principal dimensions					Thread		Mass	Designations			
$d_1$	d	$d_3$	$B_1$	B	$B_5$	G	Threads per inch	Adapter sleeve with nut and locking device	Appertaining lock nut	Appropriate locking device	Appropriate hydraulic nut
in./mm	mm	in.				in.	–	kg	–		
8 15/16 227,013	240	11 7/16	5,432	1,354	1,69	9,442	6	14,5	SNP 3048 x 8 15/16	N 048	PL 48 HMVC 48E
	240	11 7/16	6,638	1,354	1,69	9,442	6	17	SNP 3148 x 8 15/16	N 048	PL 48 HMVC 48E
	240	11 7/16	8,109	1,354	1,69	9,442	6	22	SNP 148 x 8 15/16	N 048	PL 48 HMVC 48E
9 7/16 239,713	260	12 3/16	6,019	1,416	1,752	10,192	6	18,5	SNP 3052 x 9 7/16	N 052	PL 52 HMVC 52E
	260	12 3/16	7,593	1,416	1,752	10,192	6	20	SNP 3152 x 9 7/16	N 052	PL 52 HMVC 52E
	260	12 3/16	8,744	1,416	1,752	10,192	6	25	SNP 152 x 9 7/16	N 052	PL 52 HMVC 52E
9 1/2 241,3	260	12 3/16	6,019	1,416	1,752	10,192	6	18,5	SNP 3052 x 9 1/2	N 052	PL 52 HMVC 52E
	260	12 3/16	7,593	1,416	1,752	10,192	6	20	SNP 3152 x 9 1/2	N 052	PL 52 HMVC 52E
9 15/16 252,413	280	13	6,191	1,51	1,846	11,004	6	20,5	SNP 3056 x 9 15/16	N 056	PL 56 HMVC 56E
	280	13	6,191	1,51	1,846	11,004	6	20,5	SNP 3056 x 10	N 056	PL 56 HMVC 56E
10 254	280	13	7,766	1,51	1,846	11,004	6	21	SNP 3156 x 10	N 056	PL 56 HMVC 56E
	280	13	6,191	1,51	1,846	11,004	6	20,5	SNP 3056 x 10 7/16	N 056	PL 56 HMVC 56E
10 7/16 265,113	280	13	8,947	1,51	1,846	11,004	6	27	SNP 3256 x 10 7/16	N 056	PL 56 HMVC 56E
	280	13	6,191	1,51	1,846	11,004	6	20,5	SNP 3056 x 10 1/2	N 056	PL 56 HMVC 56E
10 1/2 266,7	280	13	6,191	1,51	1,846	11,004	6	20,5	SNP 3056 x 10 1/2	N 056	PL 56 HMVC 56E
	300	14 3/16	6,727	1,573	1,941	11,785	6	27	SNP 3060 x 10 15/16	N 060	PL 60 HMVC 60E
	300	14 3/16	8,38	1,573	1,941	11,785	6	27	SNP 3160 x 10 15/16	N 060	PL 60 HMVC 60E
11 279,4	300	14 3/16	9,64	1,573	1,941	11,785	6	31	SNP 3260 x 10 15/16	N 060	PL 60 HMVC 60E
	300	14 3/16	6,727	1,573	1,941	11,785	6	27	SNP 3060 x 11	N 060	PL 60 HMVC 60E
	300	14 3/16	9,64	1,573	1,941	11,785	6	31	SNP 3260 x 11	N 060	PL 60 HMVC 60E
11 1/2 292,1	320	15	6,946	1,666	2,034	12,562	6	29,5	SNP 3064 x 11 1/2	N 064	PL 64 HMVC 60E
	320	15	6,946	1,666	2,034	12,562	6	29,5	SNP 3064 x 11 15/16	N 064	PL 64 HMVC 64E
11 15/16 303,213	320	15	10,371	1,666	2,034	12,562	6	44,5	SNP 3264 x 11 15/16	N 064	PL 64 HMVC 64E
	320	15	6,946	1,666	2,034	12,562	6	29,5	SNP 3064 x 12	N 064	PL 64 HMVC 64E
12 304,8	320	15	9,111	1,666	2,034	12,562	6	33,5	SNP 3164 x 12	N 064	PL 64 HMVC 64E
	320	15	10,371	1,666	2,034	12,562	6	44,5	SNP 3264 x 12	N 064	PL 64 HMVC 64E

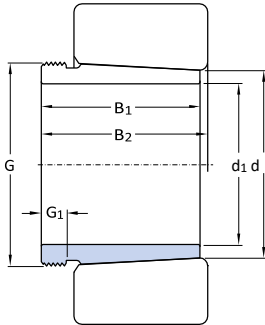
For oil injection variants, contact SKF.

Principal dimensions					Thread		Mass Designations		Appertaining locking device		Appropriate hydraulic nut	
d <sub>1</sub>	d	d <sub>3</sub>	B <sub>1</sub>	B	B <sub>5</sub>	G	Threads per inch	Adapter sleeve with nut and locking device	lock nut	locking device		
in./mm	mm	in.				in.	–	kg	–			
<b>12 7/16</b> <b>315,913</b>	340	15 3/4	7,543	1,791	2,159	13,303	5	35,5	<b>SNP 3068 x 12 7/16</b>	N 068	PL 68	HMVC 68E
	340	15 3/4	9,787	1,791	2,159	13,303	5	42,5	<b>SNP 3168 x 12 7/16</b>	N 068	PL 68	HMVC 68E
	340	15 3/4	11,126	1,791	2,159	13,303	5	47,5	<b>SNP 3268 x 12 7/16</b>	N 068	PL 68	HMVC 68E
<b>13 7/16</b> <b>341,313</b>	360	16 1/2	7,579	1,791	2,159	14,134	5	39	<b>SNP 3072 x 13 7/16</b>	N 072	PL 72	HMVC 72E
	360	16 1/2	9,862	1,791	2,159	14,134	5	54,5	<b>SNP 3172 x 13 7/16</b>	N 072	PL 72	HMVC 72E
	360	16 1/2	11,437	1,791	2,159	14,134	5	61,5	<b>SNP 3272 x 13 7/16</b>	N 072	PL 72	HMVC 72E
<b>13 15/16</b> <b>354,013</b>	380	17 3/4	7,743	1,916	2,364	14,921	5	43	<b>SNP 3076 x 13 15/16</b>	N 076	PL 76	HMVC 76E
	380	17 3/4	10,066	1,916	2,364	14,921	5	57	<b>SNP 3176 x 13 15/16</b>	N 076	PL 76	HMVC 76E
	380	17 3/4	11,877	1,916	2,364	14,921	5	66	<b>SNP 3276 x 13 15/16</b>	N 076	PL 76	HMVC 76E
<b>14</b> <b>355,6</b>	380	17 3/4	7,743	1,916	2,364	14,921	5	43	<b>SNP 3076 x 14</b>	N 076	PL 76	HMVC 76E
	380	17 3/4	10,066	1,916	2,364	14,921	5	57	<b>SNP 3176 x 14</b>	N 076	PL 76	HMVC 76E
	380	17 3/4	11,877	1,916	2,364	14,921	5	66	<b>SNP 3276 x 14</b>	N 076	PL 76	HMVC 76E
<b>15</b> <b>381</b>	400	18 1/2	8,411	2,073	2,521	15,709	5	45,5	<b>SNP 3080 x 15</b>	N 080	PL 80	HMVC 80E
	400	18 1/2	10,459	2,073	2,521	15,709	5	63,5	<b>SNP 3180 x 15</b>	N 080	PL 80	HMVC 80E
	400	18 1/2	12,664	2,073	2,521	15,709	5	75	<b>SNP 3280 x 15</b>	N 080	PL 80	HMVC 80E
<b>15 3/4</b> <b>400,05</b>	420	19 5/16	8,498	2,073	2,521	16,496	5	47,5	<b>SNP 3084 x 15 3/4</b>	N 084	PL 84	HMVC 84E
	420	19 5/16	11,412	2,073	2,521	16,496	5	66	<b>SNP 3184 x 15 3/4</b>	N 084	PL 84	HMVC 84E
	420	19 5/16	13,302	2,073	2,521	16,496	5	75	<b>SNP 3284 x 15 3/4</b>	N 084	PL 84	HMVC 84E
<b>16 1/2</b> <b>419,1</b>	440	20 1/2	9,1	2,385	2,913	17,283	5	59	<b>SNP 3088 x 16 1/2</b>	N 088	PL 88	HMVC 88E
	440	20 1/2	11,817	2,385	2,913	17,283	5	68,5	<b>SNP 3188 x 16 1/2</b>	N 088	PL 88	HMVC 88E
	440	20 1/2	13,943	2,385	2,913	17,283	5	86,5	<b>SNP 3288 x 16 1/2</b>	N 088	PL 88	HMVC 88E
<b>17</b> <b>431,8</b>	460	21 1/4	9,336	2,385	2,913	18,071	5	71,5	<b>SNP 3092 x 17</b>	N 092	PL 92	HMVC 92E
	460	21 1/4	12,368	2,385	2,913	18,071	5	95	<b>SNP 3192 x 17</b>	N 092	PL 92	HMVC 92E
<b>18</b> <b>457,2</b>	480	22 1/16	9,446	2,385	2,944	18,858	5	75	<b>SNP 3096 x 18</b>	N 096	PL 96	HMVC 96E
	480	22 1/16	12,714	2,385	2,944	18,858	5	91,5	<b>SNP 3196 x 18</b>	N 096	PL 96	HMVC 96E
<b>18 1/2</b> <b>469,9</b>	500	22 13/16	9,838	2,703	3,262	19,646	5	91	<b>SNP 30/500 x 18 1/2</b>	N 500	PL 500	HMVC 100E
<b>19 1/2</b> <b>495,3</b>	530	24 13/16	10,679	2,703	3,262	20,827	4	120	<b>SNP 30/530 x 19 1/2</b>	N 530	PL 530	HMVC 106E

For oil injection variants, contact SKF.

## 16.4 Withdrawal sleeves

$d_1$  35 - 170 mm



Principal dimensions						Mass	Designations	Appropriate	hydraulic
$d_1$	$d$	$B_1$	$B_2^{1)}$	G	$G_1$		Withdrawal sleeve	nut for dis-	nut
mm						kg	-	mounting	
35	40	29	32	M 45x1,5	6	0,09	AH 308	KM 9	-
	40	40	43	M 45x1,5	7	0,13	AH 2308	KM 9	-
40	45	31	34	M 50x1,5	6	0,12	AH 309	KM 10	HMV 10 E
	45	44	47	M 50x1,5	7	0,16	AH 2309	KM 10	HMV 10 E
45	50	35	38	M 55x2	7	0,13	AHX 310	KM 11	HMV 11 E
	50	50	53	M 55x2	9	0,19	AHX 2310	KM 11	HMV 11 E
50	55	37	40	M 60x2	7	0,16	AHX 311	KM 12	HMV 12 E
	55	54	57	M 60x2	10	0,26	AHX 2311	KM 12	HMV 12 E
55	60	40	43	M 65x2	8	0,19	AHX 312	KM 13	HMV 13 E
	60	58	61	M 65x2	11	0,3	AHX 2312	KM 13	HMV 13 E
60	65	42	45	M 70x2	8	0,22	AH 313 G	KM 14	HMV 14 E
	65	61	64	M 70x2	12	0,36	AH 2313 G	KM 14	HMV 14 E
65	70	43	47	M 75x2	8	0,24	AH 314 G	KM 15	HMV 15 E
	70	64	68	M 75x2	12	0,42	AHX 2314 G	KM 15	HMV 15 E
70	75	45	49	M 80x2	8	0,29	AH 315 G	KM 16	HMV 16 E
	75	68	72	M 80x2	12	0,48	AHX 2315 G	KM 16	HMV 16 E
75	80	48	52	M 90x2	8	0,37	AH 316	KM 18	HMV 18 E
	80	71	75	M 90x2	12	0,57	AHX 2316	KM 18	HMV 18 E
80	85	52	56	M 95x2	9	0,43	AHX 317	KM 19	HMV 19 E
	85	74	78	M 95x2	13	0,65	AHX 2317	KM 19	HMV 19 E
85	90	53	57	M 100x2	9	0,46	AHX 318	KM 20	HMV 20 E
	90	63	67	M 100x2	10	0,57	AHX 3218	KM 20	HMV 20 E
	90	79	83	M 100x2	14	0,76	AHX 2318	KM 20	HMV 20 E
90	95	57	61	M 105x2	10	0,54	AHX 319	KM 21	HMV 21 E
	95	85	89	M 105x2	16	0,9	AHX 2319	KM 21	HMV 21 E

<sup>1)</sup>Width before the sleeve is driven into the bearing bore.

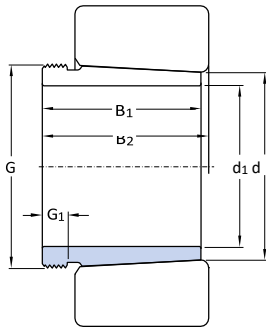


Principal dimensions						Mass	Designations	Appropriate nut for dis-mounting	hydraulic nut
d <sub>1</sub>	d	B <sub>1</sub>	B <sub>2</sub> <sup>1)</sup>	G	G <sub>1</sub>		Withdrawal sleeve		
mm						kg	-		
<b>95</b>	100	59	63	M 110x2	10	0,58	AHX 320	KM 22	HMV 22 E
	100	64	68	M 110x2	11	0,66	AHX 3120	KM 22	HMV 22 E
	100	73	77	M 110x2	11	0,76	AHX 3220	KM 22	HMV 22 E
	100	90	94	M 110x2	16	1	AHX 2320	KM 22	HMV 22 E
<b>105</b>	110	63	67	M 120x2	12	0,77	AHX 322	KM 24	HMV 24 E
	110	68	72	M 120x2	11	0,76	AHX 3122	KM 24	HMV 24 E
	110	82	86	M 120x2	11	1	AHX 3222 G	KM 24	HMV 24 E
	110	82	91	M 115x2	13	0,71	AH 24122	KM 23	HMV 23 E
	110	98	102	M 120x2	16	1,3	AHX 2322 G	KM 24	HMV 24 E
<b>115</b>	120	60	64	M 130x2	13	0,73	AHX 3024	KM 26	HMV 26 E
	120	73	82	M 125x2	13	0,7	AH 24024	KM 25	HMV 25 E
	120	75	79	M 130x2	12	0,94	AHX 3124	KM 26	HMV 26 E
	120	90	94	M 130x2	13	1,7	AHX 3224 G	KM 26	HMV 26 E
	120	93	102	M 130x2	13	1	AH 24124	KM 26	HMV 26 E
	120	105	109	M 130x2	17	1,55	AHX 2324 G	KM 26	HMV 26 E
	120	105	109	M 130x2	17	1,55	AHX 2324 G	KM 26	HMV 26 E
<b>125</b>	130	67	71	M 140x2	14	0,91	AHX 3026	KM 28	HMV 28 E
	130	78	82	M 140x2	12	1,1	AHX 3126	KM 28	HMV 28 E
	130	83	93	M 135x2	14	0,88	AH 24026	KM 27	HMV 27 E
	130	94	104	M 140x2	14	1,15	AH 24126	KM 28	HMV 28 E
	130	98	102	M 140x2	15	1,5	AHX 3226 G	KM 28	HMV 28 E
	130	115	119	M 140x2	19	1,85	AHX 2326 G	KM 28	HMV 28 E
	130	115	119	M 140x2	19	1,85	AHX 2326 G	KM 28	HMV 28 E
<b>135</b>	140	68	73	M 150x2	14	1	AHX 3028	KM 30	HMV 30 E
	140	83	88	M 150x2	14	1,3	AHX 3128	KM 30	HMV 30 E
	140	83	93	M 145x2	14	0,95	AH 24028	KM 29	HMV 29 E
	140	99	109	M 150x2	14	1,3	AH 24128	KM 30	HMV 30 E
	140	104	109	M 150x2	15	1,75	AHX 3228 G	KM 30	HMV 30 E
	140	125	130	M 150x2	20	2,25	AHX 2328 G	KM 30	HMV 30 E
	140	125	130	M 150x2	20	2,25	AHX 2328 G	KM 30	HMV 30 E
<b>145</b>	150	72	77	M 160x3	15	1,15	AHX 3030	KM 32	HMV 32 E
	150	90	101	M 155x3	15	1,05	AH 24030	KM 31	HMV 31 E
	150	96	101	M 160x3	15	1,7	AHX 3130 G	KM 32	HMV 32 E
	150	114	119	M 160x3	17	2,1	AHX 3230 G	KM 32	HMV 32 E
	150	115	126	M 160x3	15	1,55	AH 24130	KM 32	HMV 32 E
	150	135	140	M 160x3	24	3,7	AHX 2330 G	KM 32	HMV 32 E
	150	135	140	M 160x3	24	3,7	AHX 2330 G	KM 32	HMV 32 E
<b>150</b>	160	77	82	M 170x3	16	2	AH 3032	KM 34	HMV 34 E
	160	95	106	M 170x3	15	2,3	AH 24032	KM 34	HMV 34 E
	160	103	108	M 170x3	16	3	AH 3132 G	KM 34	HMV 34 E
	160	124	130	M 170x3	20	3,7	AH 3232 G	KM 34	HMV 34 E
	160	124	135	M 170x3	15	3	AH 24132	KM 34	HMV 34 E
	160	140	146	M 170x3	24	4,35	AH 2332 G	KM 34	HMV 34 E
	160	140	146	M 170x3	24	4,35	AH 2332 G	KM 34	HMV 34 E
<b>160</b>	170	85	90	M 180x3	17	2,45	AH 3034	KM 36	HMV 36 E
	170	104	109	M 180x3	16	3,2	AH 3134 G	KM 36	HMV 36 E
	170	106	117	M 180x3	16	2,7	AH 24034	KM 36	HMV 36 E
	170	125	136	M 180x3	16	3,25	AH 24134	KM 36	HMV 36 E
	170	134	140	M 180x3	24	4,35	AH 3234 G	KM 36	HMV 36 E
	170	146	152	M 180x3	24	4,85	AH 2334 G	KM 36	HMV 36 E
	170	146	152	M 180x3	24	4,85	AH 2334 G	KM 36	HMV 36 E
<b>170</b>	180	92	98	M 190x3	17	2,8	AH 3036	KM 38	HMV 38 E
	180	105	110	M 190x3	17	3,4	AH 2236 G	KM 38	HMV 38 E
	180	116	122	M 190x3	19	3,9	AH 3136 G	KM 38	HMV 38 E
	180	116	127	M 190x3	16	3,2	AH 24036	KM 38	HMV 38 E
	180	134	145	M 190x3	16	3,75	AH 24136	KM 38	HMV 38 E
	180	140	146	M 190x3	24	4,85	AH 3236 G	KM 38	HMV 38 E
	180	154	160	M 190x3	26	5,5	AH 2336 G	KM 38	HMV 38 E

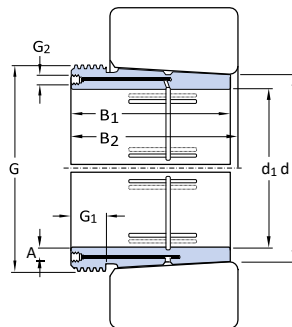
<sup>1)</sup>Width before the sleeve is driven into the bearing bore.

## 16.4 Withdrawal sleeves

$d_1$  180 - 440 mm



AH



AOH

### Principal dimensions

### Mass Designations

$d_1$	d	$B_1$	$B_2^{1)}$	G	$G_1$	$G_2$	A	Withdrawal sleeve	Appropriate nut for dis-mounting	hydraulic nut	
											kg
mm							mm	kg	in.		
180	190	96	102	M 200x3	18	–	–	3,3	AH 3038 G	KM 40	HMV 40 E
	190	112	117	M 200x3	18	–	–	3,9	AH 2238 G	KM 40	HMV 40 E
	190	118	131	M 200x3	18	–	–	3,55	AH 24038	KM 40	HMV 40 E
	190	125	131	M 200x3	20	–	–	4,5	AH 3138 G	KM 40	HMV 40 E
	190	145	152	M 200x3	25	–	–	5,4	AH 3238 G	KM 40	HMV 40 E
	190	146	159	M 200x3	18	–	–	4,45	AH 24138	KM 40	HMV 40 E
	190	160	167	M 200x3	26	–	–	6,1	AH 2338 G	KM 40	HMV 40 E
190	200	102	108	Tr 210x4	19	–	–	3,7	AH 3040 G	HM 42 T	HMV 42 E
	200	127	140	Tr 210x4	18	–	–	4	AH 24040	HM 42 T	HMV 42 E
	200	134	140	Tr 220x4	21	–	–	5,65	AH 3140	HM 3044	HMV 44 E
	200	153	160	Tr 220x4	25	–	–	6,6	AH 3240	HM 3044	HMV 44 E
	200	158	171	Tr 210x4	18	–	–	5,05	AH 24140	HM 42 T	HMV 42 E
	200	170	177	Tr 220x4	30	–	–	7,6	AH 2340	HM 3044	HMV 44 E
200	220	111	117	Tr 230x4	20	G 1/8	6,5	7,3	AOH 3044 G	HM 46 T	HMV 46 E
	220	138	152	Tr 230x4	20	G 1/8	6,5	7,45	AOH 24044	HM 46 T	HMV 46 E
	220	145	151	Tr 240x4	23	G 1/4	9	9,3	AOH 3144	HM 3048	HMV 48 E
	220	170	184	Tr 230x4	20	G 1/8	6,5	10	AOH 24144	HM 46 T	HMV 46 E
	220	181	189	Tr 240x4	30	G 1/4	9	13,5	AOH 2344	HM 3048	HMV 48 E
220	240	116	123	Tr 260x4	21	G 1/4	9	7,95	AOH 3048	HM 3052	HMV 52 E
	240	138	153	Tr 250x4	20	G 1/8	6,5	8,05	AOH 24048	HM 50 T	HMV 50 E
	240	154	161	Tr 260x4	25	G 1/4	9	12	AOH 3148	HM 3052	HMV 52 E
	240	180	195	Tr 260x4	20	G 1/4	9	11,5	AOH 24148	HM 3052	HMV 52 E
	240	189	197	Tr 260x4	30	G 1/4	9	14	AOH 2348	HM 3052	HMV 52 E
240	260	128	135	Tr 280x4	23	G 1/4	9	9,55	AOH 3052	HM 3056	HMV 56 E
	260	155	161	Tr 280x4	23	G 1/4	9	13,5	AOH 2252 G	HM 3056	HMV 56 E
	260	162	178	Tr 280x4	22	G 1/8	6,5	12,5	AOH 24052 G	HM 3056	HMV 56 E
	260	172	179	Tr 280x4	26	G 1/4	9	15,5	AOH 3152 G	HM 3056	HMV 56 E
	260	202	218	Tr 280x4	22	G 1/4	9	14	AOH 24152	HM 3056	HMV 56 E
	260	205	213	Tr 280x4	30	G 1/4	9	19	AOH 2352 G	HM 3056	HMV 56 E

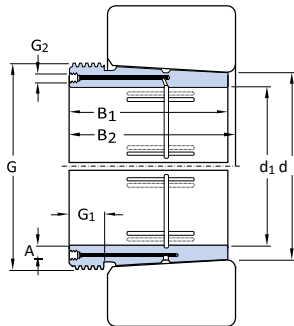
<sup>1)</sup>Width before the sleeve is driven into the bearing bore.

d <sub>1</sub>	d	B <sub>1</sub>	B <sub>2</sub> <sup>1)</sup>	G	G <sub>1</sub>	G <sub>2</sub>	A	mounting				
mm						in.	mm	kg	-			
<b>260</b>	280	131	139	Tr 300x4	24	G 1/4	9	11	<b>AOH 3056</b>	HM 3060	HMV 60 E	
	280	155	163	Tr 300x4	24	G 1/4	9	15	<b>AOH 2256 G</b>	HM 3160	HMV 60 E	
	280	162	179	Tr 300x4	22	G 1/8	6,5	13,5	<b>AOH 24056 G</b>	HM 3160	HMV 60 E	
	280	175	183	Tr 300x4	28	G 1/4	9	17	<b>AOH 3156 G</b>	HM 3160	HMV 60 E	
	280	202	219	Tr 300x4	22	G 1/4	9	15	<b>AOH 24156</b>	HM 3160	HMV 60 E	
	280	212	220	Tr 300x4	30	G 1/4	9	21,5	<b>AOH 2356 G</b>	HM 3160	HMV 60 E	
<b>280</b>	300	145	153	Tr 320x5	26	G 1/4	9	13	<b>AOH 3060</b>	HM 3064	HMV 64 E	
	300	170	178	Tr 320x5	26	G 1/4	9	17,5	<b>AOH 2260 G</b>	HM 3164	HMV 64 E	
	300	184	202	Tr 320x5	24	G 1/8	6,5	17	<b>AOH 24060 G</b>	HM 3164	HMV 64 E	
	300	192	200	Tr 320x5	30	G 1/4	9	20,5	<b>AOH 3160 G</b>	HM 3164	HMV 64 E	
	300	224	242	Tr 320x5	24	G 1/4	9	18,5	<b>AOH 24160</b>	HM 3164	HMV 64 E	
	300	228	236	Tr 320x5	34	G 1/4	9	23,5	<b>AOH 3260 G</b>	HM 3164	HMV 64 E	
<b>300</b>	320	149	157	Tr 340x5	27	G 1/4	9	16,5	<b>AOH 3064 G</b>	HM 3068	HMV 68 E	
	320	180	190	Tr 340x5	27	G 1/4	9	20	<b>AOH 2264 G</b>	HM 3168	HMV 68 E	
	320	184	202	Tr 340x5	24	G 1/8	6,5	18	<b>AOH 24064 G</b>	HM 3168	HMV 68 E	
	320	209	217	Tr 340x5	31	G 1/4	9	24,5	<b>AOH 3164 G</b>	HM 3168	HMV 68 E	
	320	242	260	Tr 340x5	24	G 1/4	9	20,5	<b>AOH 24164</b>	HM 3168	HMV 68 E	
	320	246	254	Tr 340x5	36	G 1/4	9	27,5	<b>AOH 3264 G</b>	HM 3168	HMV 68 E	
<b>320</b>	340	162	171	Tr 360x5	28	G 1/4	9	19	<b>AOH 3068 G</b>	HM 3072	HMV 72 E	
	340	206	225	Tr 360x5	26	G 1/4	9	18	<b>AOH 24068</b>	HM 3172	HMV 72 E	
	340	225	234	Tr 360x5	33	G 1/4	9	28,5	<b>AOH 3168 G</b>	HM 3172	HMV 72 E	
	340	264	273	Tr 360x5	38	G 1/4	9	32	<b>AOH 3268 G</b>	HM 3172	HMV 72 E	
	340	269	288	Tr 360x5	26	G 1/4	9	25,5	<b>AOH 24168</b>	HM 3172	HMV 72 E	
<b>340</b>	360	167	176	Tr 380x5	30	G 1/4	9	21	<b>AOH 3072 G</b>	HM 3076	HMV 76 E	
	360	206	226	Tr 380x5	26	G 1/4	9	20	<b>AOH 24072</b>	HM 3176	HMV 76 E	
	360	229	238	Tr 380x5	35	G 1/4	9	30,5	<b>AOH 3172 G</b>	HM 3176	HMV 76 E	
	360	269	289	Tr 380x5	26	G 1/4	9	26	<b>AOH 24172</b>	HM 3176	HMV 76 E	
	360	274	283	Tr 380x5	40	G 1/4	9	35,5	<b>AOH 3272 G</b>	HM 3176	HMV 76 E	
<b>360</b>	380	170	180	Tr 400x5	31	G 1/4	9	22,5	<b>AOH 3076 G</b>	HM 3080	HMV 80 E	
	380	208	228	Tr 400x5	28	G 1/4	9	23,5	<b>AOH 24076</b>	HM 3180	HMV 80 E	
	380	232	242	Tr 400x5	36	G 1/4	9	33	<b>AOH 3176 G</b>	HM 3180	HMV 80 E	
	380	271	291	Tr 400x5	28	G 1/4	9	31	<b>AOH 24176</b>	HM 3180	HMV 80 E	
	380	284	294	Tr 400x5	42	G 1/4	9	42	<b>AOH 3276 G</b>	HM 3180	HMV 80 E	
<b>380</b>	400	183	193	Tr 420x5	33	G 1/4	9	26	<b>AOH 3080 G</b>	HM 3084	HMV 84 E	
	400	228	248	Tr 420x5	28	G 1/4	9	27	<b>AOH 24080</b>	HM 3184	HMV 84 E	
	400	240	250	Tr 420x5	38	G 1/4	9	36	<b>AOH 3180 G</b>	HM 3184	HMV 84 E	
	400	278	298	Tr 420x5	28	G 1/4	9	35	<b>AOH 24180</b>	HM 3184	HMV 84 E	
	400	302	312	Tr 420x5	44	G 1/4	9	48	<b>AOH 3280 G</b>	HM 3184	HMV 84 E	
<b>400</b>	420	186	196	Tr 440x5	34	G 1/4	9	28	<b>AOH 3084 G</b>	HM 3088	HMV 88 E	
	420	230	252	Tr 440x5	30	G 1/4	9	29	<b>AOH 24084</b>	HM 3188	HMV 88 E	
	420	266	276	Tr 440x5	40	G 1/4	9	43	<b>AOH 3184 G</b>	HM 3188	HMV 88 E	
	420	310	332	Tr 440x5	30	G 1/4	9	39	<b>AOH 24184</b>	HM 3188	HMV 88 E	
	420	321	331	Tr 440x5	46	G 1/4	9	54,5	<b>AOH 3284 G</b>	HM 3188	HMV 88 E	
<b>420</b>	440	194	205	Tr 460x5	35	G 1/4	9	31	<b>AOHX 3088 G</b>	HM 3092	HMV 92 E	
	440	242	264	Tr 460x5	30	G 1/4	9	32	<b>AOH 24088</b>	HM 3192	HMV 92 E	
	440	270	281	Tr 460x5	42	G 1/4	9	46	<b>AOHX 3188 G</b>	HM 3192	HMV 92 E	
	440	310	332	Tr 460x5	30	G 1/4	9	45,5	<b>AOH 24188</b>	HM 3192	HMV 92 E	
	440	330	341	Tr 460x5	48	G 1/4	9	59	<b>AOHX 3288 G</b>	HM 3192	HMV 92 E	
<b>440</b>	460	202	213	Tr 480x5	37	G 1/4	9	34	<b>AOHX 3092 G</b>	HM 3096	HMV 96 E	
	460	250	273	Tr 480x5	32	G 1/4	9	34,5	<b>AOH 24092</b>	HM 3196	HMV 96 E	
	460	285	296	Tr 480x5	43	G 1/4	9	51,5	<b>AOHX 3192 G</b>	HM 3196	HMV 96 E	
	460	332	355	Tr 480x5	32	G 1/4	9	50	<b>AOH 24192</b>	HM 3196	HMV 96 E	
	460	349	360	Tr 480x5	50	G 1/4	9	66,5	<b>AOHX 3292 G</b>	HM 3196	HMV 96 E	

<sup>1)</sup>Width before the sleeve is driven into the bearing bore.

## 16.4 Withdrawal sleeves

$d_1$  460 - 1 000 mm



AOH

Principal dimensions								Mass Designations			
$d_1$	$d$	$B_1$	$B_2^{1)}$	G	$G_1$	$G_2$	A	Withdrawal sleeve	Appropriate nut for dis-mounting	hydraulic nut	
mm						in.	mm	kg	-		
460	480	205	217	Tr 500x5	38	G 1/4	9	34	<b>AOHX 3096 G</b>	HM 30/500	HMV 100 E
	480	250	273	Tr 500x5	32	G 1/4	9	36,5	<b>AOHX 24096</b>	HM 31/500	HMV 100 E
	480	295	307	Tr 500x5	45	G 1/4	9	56	<b>AOHX 3196 G</b>	HM 31/500	HMV 100 E
	480	340	363	Tr 500x5	32	G 1/4	9	51,5	<b>AOHX 24196</b>	HM 31/500	HMV 100 E
	480	364	376	Tr 500x5	52	G 1/4	9	73,5	<b>AOHX 3296 G</b>	HM 31/500	HMV 100 E
480	500	209	221	Tr 530x6	40	G 1/4	9	41	<b>AOHX 30/500 G</b>	HM 30/530	HMV 106 E
	500	253	276	Tr 530x6	35	G 1/4	9	43	<b>AOHX 240/500</b>	HM 31/530	HMV 106 E
	500	313	325	Tr 530x6	47	G 1/4	9	66,5	<b>AOHX 31/500 G</b>	HM 31/530	HMV 106 E
	500	360	383	Tr 530x6	35	G 1/4	9	62,5	<b>AOHX 241/500</b>	HM 31/530	HMV 106 E
	500	393	405	Tr 530x6	54	G 1/4	9	89,5	<b>AOHX 32/500 G</b>	HM 31/530	HMV 106 E
500	530	230	242	Tr 560x6	45	G 1/4	10	63,5	<b>AOH 30/530</b>	HM 30/560	HMV 112 E
	530	285	309	Tr 560x6	35	G 1/4	9	64,5	<b>AOHX 240/530 G</b>	HM 31/560	HMV 112 E
	530	325	337	Tr 560x6	53	G 1/4	10	93,5	<b>AOHX 31/530</b>	HM 31/560	HMV 112 E
	530	370	394	Tr 560x6	35	G 1/4	9	92	<b>AOHX 241/530 G</b>	HM 31/560	HMV 112 E
	530	412	424	Tr 560x6	57	G 1/4	10	127	<b>AOHX 32/530 G</b>	HM 31/560	HMV 112 E
530	560	240	252	Tr 600x6	45	G 1/4	11	73,5	<b>AOHX 30/560</b>	HM 30/600	HMV 120 E
	560	296	320	Tr 600x6	38	G 1/4	9	79,5	<b>AOHX 240/560 G</b>	HM 31/600	HMV 120 E
	560	335	347	Tr 600x6	55	G 1/4	11	107	<b>AOHX 31/560</b>	HM 31/600	HMV 120 E
	560	393	417	Tr 600x6	38	G 1/4	9	107	<b>AOHX 241/560 G</b>	HM 31/600	HMV 120 E
	560	422	434	Tr 600x6	57	G 1/4	11	143	<b>AOHX 32/560</b>	HM 31/600	HMV 120 E
570	600	245	259	Tr 630x6	45	G 1/4	11	77	<b>AOHX 30/600</b>	HM 30/630	HMV 126 E
	600	310	336	Tr 630x6	38	G 1/4	9	86,5	<b>AOHX 240/600</b>	HM 31/630	HMV 126 E
	600	355	369	Tr 630x6	55	G 1/4	11	120	<b>AOHX 31/600</b>	HM 31/630	HMV 126 E
	600	413	439	Tr 630x6	38	G 1/4	9	118	<b>AOHX 241/600</b>	HM 31/630	HMV 126 E
	600	445	459	Tr 630x6	57	G 1/4	11	159	<b>AOHX 32/600 G</b>	HM 31/630	HMV 126 E
600	630	258	272	Tr 670x6	46	G 1/4	11	88,5	<b>AOH 30/630</b>	HM 30/670	HMV 134 E
	630	330	356	Tr 670x6	40	G 1/4	9	101	<b>AOHX 240/630 G</b>	HM 31/670	HMV 134 E
	630	375	389	Tr 670x6	60	G 1/4	11	139	<b>AOHX 31/630</b>	HM 31/670	HMV 134 E
	630	440	466	Tr 670x6	40	G 1/4	9	139	<b>AOHX 241/630 G</b>	HM 31/670	HMV 134 E
	630	475	489	Tr 670x6	63	G 1/4	11	188	<b>AOHX 32/630 G</b>	HM 31/670	HMV 134 E

<sup>1)</sup> Width before the sleeve is driven into the bearing bore.

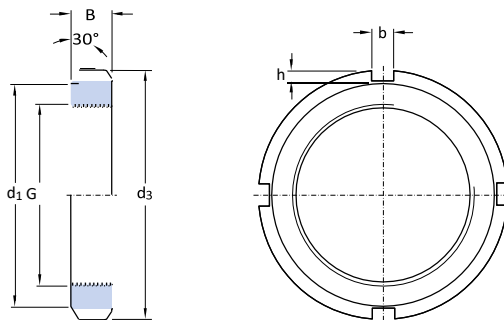
d <sub>1</sub>	d	B <sub>1</sub>	B <sub>2</sub> <sup>1)</sup>	G	G <sub>1</sub>	G <sub>2</sub>	A	mounting				
mm						in.	mm	kg	–			
<b>630</b>	670	280	294	Tr 710x7	50	G 1/4	12	125	AOH 30/670	HM 30/710	HMV 142 E	
	670	348	374	Tr 710x7	40	G 1/4	12	141	AOH 240/670 G	HM 31/710	HMV 142 E	
	670	395	409	Tr 710x7	59	G 1/4	12	189	AOHX 31/670	HM 31/710	HMV 142 E	
	670	452	478	Tr 710x7	40	G 1/4	12	185	AOH 241/670	HM 31/710	HMV 142 E	
	670	500	514	Tr 710x7	62	G 1/4	12	252	AOH 32/670 G	HM 31/710	HMV 142 E	
<b>670</b>	710	286	302	Tr 750x7	50	G 1/4	15	139	AOHX 30/710	HM 30/750	HMV 150 E	
	710	360	386	Tr 750x7	45	G 1/4	12	155	AOH 240/710 G	HM 31/750	HMV 150 E	
	710	405	421	Tr 750x7	60	G 1/4	15	207	AOHX 31/710	HM 31/750	HMV 150 E	
	710	483	509	Tr 750x7	45	G 1/4	12	212	AOH 241/710	HM 31/750	HMV 150 E	
	710	515	531	Tr 750x7	65	G 1/4	15	278	AOH 32/710 G	HM 31/750	HMV 150 E	
<b>710</b>	750	300	316	Tr 800x7	50	G 1/4	15	145	AOH 30/750	HM 30/800	HMV 160 E	
	750	380	408	Tr 800x7	45	G 1/4	12	179	AOH 240/750 G	HM 31/800	HMV 160 E	
	750	425	441	Tr 800x7	60	G 1/4	15	238	AOH 31/750	HM 31/800	HMV 160 E	
	750	520	548	Tr 800x7	45	G 1/4	12	248	AOH 241/750 G	HM 31/800	HMV 160 E	
	750	540	556	Tr 800x7	65	G 1/4	15	320	AOH 32/750	HM 31/800	HMV 160 E	
<b>750</b>	800	308	326	Tr 850x7	50	G 1/4	15	204	AOH 30/800	HM 30/850	HMV 170 E	
	800	395	423	Tr 850x7	50	G 1/4	15	237	AOH 240/800 G	HM 31/850	HMV 170 E	
	800	438	456	Tr 850x7	63	G 1/4	15	305	AOH 31/800	HM 31/850	HMV 170 E	
	800	525	553	Tr 850x7	50	G 1/4	15	318	AOH 241/800 G	HM 31/850	HMV 170 E	
	800	550	568	Tr 850x7	67	G 1/4	15	401	AOH 32/800	HM 31/850	HMV 170 E	
<b>800</b>	850	325	343	Tr 900x7	53	G 1/4	15	230	AOH 30/850	HM 30/900	HMV 180 E	
	850	415	445	Tr 900x7	50	G 1/4	15	265	AOH 240/850 G	HM 31/900	HMV 180 E	
	850	462	480	Tr 900x7	62	G 1/4	15	345	AOH 31/850	HM 31/900	HMV 180 E	
	850	560	600	Tr 900x7	60	G 1/4	15	368	AOH 241/850	HM 31/900	HMV 180 E	
	850	585	603	Tr 900x7	70	G 1/4	15	461	AOH 32/850	HM 31/900	HMV 180 E	
<b>850</b>	900	335	355	Tr 950x8	55	G 1/4	15	250	AOH 30/900	HM 30/950	HMV 190 E	
	900	430	475	Tr 950x8	55	G 1/4	15	296	AOH 240/900	HM 31/950	HMV 190 E	
	900	475	495	Tr 950x8	63	G 1/4	15	379	AOH 31/900	HM 31/950	HMV 190 E	
	900	575	620	Tr 950x8	60	G 1/4	15	402	AOH 241/900	HM 31/950	HMV 190 E	
	900	585	605	Tr 950x8	70	G 1/4	15	489	AOH 32/900	HM 31/950	HMV 190 E	
<b>900</b>	950	355	375	Tr 1000x8	55	G 1/4	15	285	AOH 30/950	HM 30/1000	HMV 200 E	
	950	467	512	Tr 1000x8	55	G 1/4	15	340	AOH 240/950	HM 31/1000	HMV 200 E	
	950	500	520	Tr 1000x8	62	G 1/4	15	426	AOH 31/950	HM 31/1000	HMV 200 E	
	950	600	620	Tr 1000x8	70	G 1/4	15	533	AOH 32/950	HM 31/1000	HMV 200 E	
	950	605	650	Tr 1000x8	60	G 1/4	15	449	AOH 241/950	HM 31/1000	HMV 200 E	
<b>950</b>	1 000	365	387	Tr 1060x8	57	G 1/4	15	318	AOH 30/1000	HM 30/1060	HMV 212 E	
	1 000	469	519	Tr 1060x8	57	G 1/4	15	369	AOH 240/1000	HM 31/1060	HMV 212 E	
	1 000	525	547	Tr 1060x8	63	G 1/4	15	485	AOH 31/1000	HM 31/1060	HMV 212 E	
	1 000	630	652	Tr 1060x8	70	G 1/4	15	608	AOH 32/1000	HM 31/1060	HMV 212 E	
	1 000	645	695	Tr 1060x8	65	G 1/4	15	519	AOH 241/1000	HM 31/1060	HMV 212 E	
<b>1 000</b>	1 060	385	407	Tr 1120x8	60	G 1/4	15	406	AOH 30/1060	HM 30/1120	HMV 224 E	
	1 060	498	548	Tr 1120x8	60	G 1/4	15	479	AOH 240/1060	HM 30/1120	HMV 224 E	
	1 060	540	562	Tr 1120x8	65	G 1/4	15	599	AOH 31/1060	HM 30/1120	HMV 224 E	
	1 060	665	715	Tr 1120x8	65	G 1/4	15	652	AOH 241/1060	HM 30/1120	HMV 224 E	

<sup>1)</sup>Width before the sleeve is driven into the bearing bore.  
For bore diameter ≥ 1 060 mm, contact SKF.

## 16.5 KM(L) and HM .. T lock nuts

M 10x0,75 - M 200x3

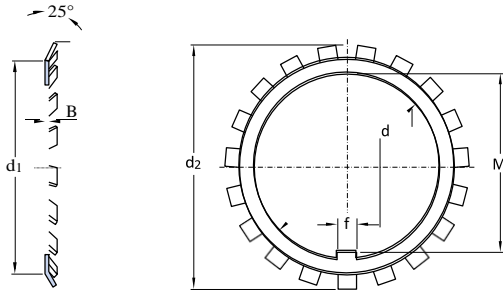
Tr 210x4 - Tr 280x4



Dimensions						Axial load carrying capacity static	Mass Designations			
G	d <sub>1</sub>	d <sub>3</sub>	B	b	h		Lock nut	Appropriate lock washer spanner		
mm						kN	kg	–		
M 10x0,75	13,5	18	4	3	2	9,8	0,004	<b>KM 0</b>	MB 0	HN 0
M 12x1	17	22	4	3	2	11,8	0,006	<b>KM 1</b>	MB 1	HN 1
M 15x1	21	25	5	4	2	14,6	0,009	<b>KM 2</b>	MB 2	HN 2-3
M 17x1	24	28	5	4	2	19,6	0,012	<b>KM 3</b>	MB 3	HN 2-3
M 20x1	26	32	6	4	2	24	0,025	<b>KM 4</b>	MB 4	HN 4
M 25x1,5	32	38	7	5	2	31,5	0,028	<b>KM 5</b>	MB 5	HN 5-6
M 30x1,5	38	45	7	5	2	36,5	0,039	<b>KM 6</b>	MB 6	HN 5-6
M 35x1,5	44	52	8	5	2	50	0,059	<b>KM 7</b>	MB 7	HN 7
M 40x1,5	50	58	9	6	2,5	62	0,078	<b>KM 8</b>	MB 8	HN 8-9
M 45x1,5	56	65	10	6	2,5	78	0,11	<b>KM 9</b>	MB 9	HN 8-9
M 50x1,5	61	70	11	6	2,5	91,5	0,14	<b>KM 10</b>	MB 10	HN 10-11
M 55x2	67	75	11	7	3	91,5	0,15	<b>KM 11</b>	MB 11	HN 10-11
M 60x2	73	80	11	7	3	95	0,16	<b>KM 12</b>	MB 12	HN 12-13
M 65x2	79	85	12	7	3	108	0,19	<b>KM 13</b>	MB 13	HN 12-13
M 70x2	85	92	12	8	3,5	118	0,23	<b>KM 14</b>	MB 14	HN 14
M 75x2	90	98	13	8	3,5	134	0,27	<b>KM 15</b>	MB 15	HN 15
M 80x2	95	105	15	8	3,5	173	0,36	<b>KM 16</b>	MB 16	HN 16
M 85x2	102	110	16	8	3,5	190	0,41	<b>KM 17</b>	MB 17	HN 17
M 90x2	108	120	16	10	4	216	0,51	<b>KM 18</b>	MB 18	HN 18-20
M 95x2	113	125	17	10	4	236	0,55	<b>KM 19</b>	MB 19	HN 18-20
M 100x2	120	130	18	10	4	255	0,64	<b>KM 20</b>	MB 20	HN 18-20

Dimensions						Axial load carrying capacity static	Mass	Designations		Appropriate	
	G	d <sub>1</sub>	d <sub>3</sub>	B	b			h	Lock nut	washer	lock
mm						kN	kg	–			
<b>M 105x2</b>	126	140	18	12	5	290	0,79	<b>KM 21</b>	MB 21	HN 21-22	
<b>M 110x2</b>	133	145	19	12	5	310	0,87	<b>KM 22</b>	MB 22	HN 21-22	
<b>M 115x2</b>	137	150	19	12	5	315	0,91	<b>KM 23</b>	MB 23	TMFN 23-30	
<b>M 120x2</b>	135	145	20	12	5	265	0,69	<b>KML 24</b>	MBL 24	HN 21-22	
	138	155	20	12	5	340	0,97	<b>KM 24</b>	MB 24	TMFN 23-30	
<b>M 125x2</b>	148	160	21	12	5	360	1,1	<b>KM 25</b>	MB 25	TMFN 23-30	
<b>M 130x2</b>	145	155	21	12	5	285	0,8	<b>KML 26</b>	MBL 26	TMFN 23-30	
	149	165	21	12	5	365	1,1	<b>KM 26</b>	MB 26	TMFN 23-30	
<b>M 135x2</b>	160	175	22	14	6	430	1,4	<b>KM 27</b>	MB 27	TMFN 23-30	
<b>M 140x2</b>	155	165	22	12	5	305	0,92	<b>KML 28</b>	MBL 28	TMFN 23-30	
	160	180	22	14	6	430	1,4	<b>KM 28</b>	MB 28	TMFN 23-30	
<b>M 145x2</b>	171	190	24	14	6	520	1,8	<b>KM 29</b>	MB 29	TMFN 23-30	
<b>M 150x2</b>	170	180	24	14	5	390	1,25	<b>KML 30</b>	MBL 30	TMFN 23-30	
	171	195	24	14	6	530	1,9	<b>KM 30</b>	MB 30	TMFN 23-30	
<b>M 155x3</b>	182	200	25	16	7	540	2,1	<b>KM 31</b>	MB 31	TMFN 30-40	
<b>M 160x3</b>	180	190	25	14	5	405	1,4	<b>KML 32</b>	MBL 32	TMFN 23-30	
	182	210	25	16	7	585	2,3	<b>KM 32</b>	MB 32	TMFN 30-40	
<b>M 165x3</b>	193	210	26	16	7	570	2,3	<b>KM 33</b>	MB 33	TMFN 30-40	
<b>M 170x3</b>	190	200	26	16	5	430	1,55	<b>KML 34</b>	MBL 34	TMFN 30-40	
	193	220	26	16	7	620	2,35	<b>KM 34</b>	MB 34	TMFN 30-40	
<b>M 180x3</b>	200	210	27	16	5	450	1,8	<b>KML 36</b>	MBL 36	TMFN 30-40	
	203	230	27	18	8	670	2,8	<b>KM 36</b>	MB 36	TMFN 30-40	
<b>M 190x3</b>	210	220	28	16	5	475	1,85	<b>KML 38</b>	MBL 38	TMFN 30-40	
	214	240	28	18	8	695	3,05	<b>KM 38</b>	MB 38	TMFN 30-40	
<b>M 200x3</b>	222	240	29	18	8	625	2,6	<b>KML 40</b>	MBL 40	TMFN 30-40	
	226	250	29	18	8	735	3,35	<b>KM 40</b>	MB 40	TMFN 30-40	
<b>Tr 210x4</b>	238	270	30	20	10	– <sup>1)</sup>	5,1	<b>HM 42 T</b>	– <sup>2)</sup>	TMFN 40-52	
<b>Tr 220x4</b>	250	280	32	20	10	– <sup>1)</sup>	4,75	<b>HM 44 T</b>	MB 44	TMFN 40-52	
<b>Tr 230x4</b>	260	290	34	20	10	– <sup>1)</sup>	5,45	<b>HM 46 T</b>	– <sup>2)</sup>	TMFN 40-52	
<b>Tr 240x4</b>	270	300	34	20	10	– <sup>1)</sup>	5,6	<b>HM 48 T</b>	MB 48	TMFN 40-52	
<b>Tr 250x4</b>	290	320	36	20	10	– <sup>1)</sup>	7,45	<b>HM 50 T</b>	– <sup>2)</sup>	TMFN 40-52	
<b>Tr 260x4</b>	300	330	36	24	12	– <sup>1)</sup>	7,55	<b>HM 52 T</b>	MB 52	TMFN 52-64	
<b>Tr 280x4</b>	320	350	38	24	12	– <sup>1)</sup>	8,65	<b>HM 56 T</b>	MB 56	TMFN 52-64	

## 16.6 MB(L) lock washers MB 0 - MB 56



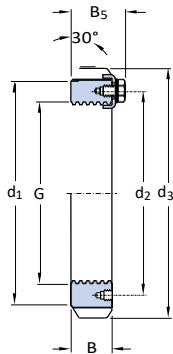
Designation	Dimensions						Mass		Designation	Dimensions						Mass	
	d	d <sub>1</sub>	d <sub>2</sub>	B	f	M	kg	d		d <sub>1</sub>	d <sub>2</sub>	B	f	M	kg		
-	mm						kg		-	mm						kg	
MB 0	10	13,5	21	1	3	8,5	0,001	MB 14	70	85	98	1,5	8	66,5	0,032		
MB 1	12	17	25	1	3	10,5	0,002	MB 14 A	70	85	98	2,5	8	66,5	0,053		
MB 1 A	12	17	25	1,2	3	10,5	0,0025	MB 15	75	90	104	1,5	8	71,5	0,035		
MB 2	15	21	28	1	4	13,5	0,003	MB 15 A	75	90	104	2,5	8	71,5	0,058		
MB 2 A	15	21	28	1,2	4	13,5	0,0035	MB 16	80	95	112	1,75	10	76,5	0,046		
MB 3	17	24	32	1	4	15,5	0,003	MB 16 A	80	95	112	2,5	10	76,5	0,066		
MB 3 A	17	24	32	1,2	4	15,5	0,0035	MB 17	85	102	119	1,75	10	81,5	0,053		
MB 4	20	26	36	1	4	18,5	0,004	MB 17 A	85	102	119	2,5	10	81,5	0,076		
MB 4 A	20	26	36	1,2	4	18,5	0,005	MB 18	90	108	126	1,75	10	86,5	0,061		
MB 5	25	32	42	1,25	5	23	0,006	MB 18 A	90	108	126	2,5	10	86,5	0,087		
MB 5 A	25	32	42	1,8	5	23	0,0085	MB 19	95	113	133	1,75	10	91,5	0,066		
MB 6	30	38	49	1,25	5	27,5	0,008	MB 19 A	95	113	133	2,5	10	91,5	0,094		
MB 6 A	30	38	49	1,8	5	27,5	0,011	MB 20	100	120	142	1,75	12	96,5	0,077		
MB 7	35	44	57	1,25	6	32,5	0,011	MB 20 A	100	120	142	2,5	12	96,5	0,11		
MB 7 A	35	44	57	1,8	6	32,5	0,016	MB 21	105	126	145	1,75	12	100,5	0,083		
MB 8	40	50	62	1,25	6	37,5	0,013	MB 22	110	133	154	1,75	12	105,5	0,091		
MB 8 A	40	50	62	1,8	6	37,5	0,018	MB 23	115	137	159	2	12	110,5	0,11		
MB 9	45	56	69	1,25	6	42,5	0,015	MBL 24	120	135	152	2	14	115	0,07		
MB 9 A	45	56	69	1,8	6	42,5	0,021	MB 24	120	138	164	2	14	115	0,11		
MB 10	50	61	74	1,25	6	47,5	0,016	MB 25	125	148	170	2	14	120	0,12		
MB 10 A	50	61	74	1,8	6	47,5	0,023	MBL 26	130	145	161	2	14	125	0,08		
MB 11	55	67	81	1,5	8	52,5	0,022	MB 26	130	149	175	2	14	125	0,12		
MB 11 A	55	67	81	2,5	8	52,5	0,037	MB 27	135	160	185	2	14	130	0,14		
MB 12	60	73	86	1,5	8	57,5	0,024	MBL 28	140	155	172	2	16	135	0,09		
MB 12 A	60	73	86	2,5	8	57,5	0,04	MB 28	140	160	192	2	16	135	0,14		
MB 13	65	79	92	1,5	8	62,5	0,03										
MB 13 A	65	79	92	2,5	8	62,5	0,05										



**Designation Dimensions**
**Mass**

	d	d <sub>1</sub>	d <sub>2</sub>	B	f	M	
–	mm						kg
<b>MB 29</b>	145	172	202	2	16	140	0,17
<b>MBL 30</b>	150	170	189	2	16	145	0,1
<b>MB 30</b>	150	171	205	2	16	145	0,18
<b>MB 31</b>	155	182	212	2,5	16	147,5	0,2
<b>MBL 32</b>	160	180	199	2,5	18	154	0,14
<b>MB 32</b>	160	182	217	2,5	18	154	0,22
<b>MB 33</b>	165	193	222	2,5	18	157,5	0,24
<b>MBL 34</b>	170	190	211	2,5	18	164	0,15
<b>MB 34</b>	170	193	232	2,5	18	164	0,24
<b>MBL 36</b>	180	200	222	2,5	20	174	0,16
<b>MB 36</b>	180	203	242	2,5	20	174	0,26
<b>MBL 38</b>	190	210	232	2,5	20	184	0,17
<b>MB 38</b>	190	214	252	2,5	20	184	0,26
<b>MBL 40</b>	200	222	245	2,5	20	194	0,22
<b>MB 40</b>	200	226	262	2,5	20	194	0,28
<b>MB 44</b>	220	250	292	3	24	213	0,35
<b>MB 48</b>	240	270	312	3	24	233	0,45
<b>MB 52</b>	260	300	342	3	28	253	0,65
<b>MB 56</b>	280	320	362	3	28	273	1,05

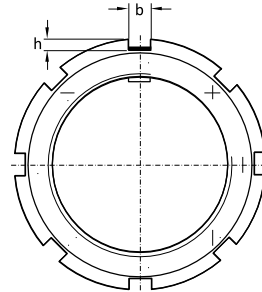
## 16.7 HM(E) lock nuts Tr 220x4 - Tr 900x7



HM



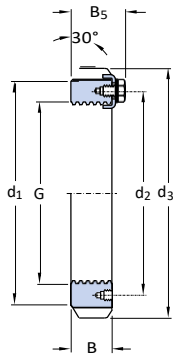
HME



Dimensions				Mass Designations				Appropriate locking clip		spanner		
G	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	B	B <sub>5</sub>	B <sub>3</sub>	b	h	Lock nut	Appropriate locking clip	spanner	
mm	mm								kg	-		
Tr 220x4	237	229	260	30	41	5	20	9	2,5	<b>HME 3044</b>	MS 3044	TMFN 40-52
	242	229	260	30	41	-	20	9	2,75	<b>HM 3044</b>	MS 3044	TMFN 40-52
Tr 240x4	264	253	290	34	46	8	20	10	4	<b>HME 3048</b>	MS 3052-48	TMFN 40-52
	270	253	290	34	46	-	20	10	4,5	<b>HM 3048</b>	MS 3052-48	TMFN 40-52
Tr 260x4	288	273	310	34	46	8	20	10	4,3	<b>HME 3052</b>	MS 3052-48	TMFN 40-52
	290	273	310	34	46	-	20	10	4,8	<b>HM 3052</b>	MS 3052-48	TMFN 40-52
Tr 280x4	310	293	330	38	50	-	24	10	5,75	<b>HM 3056</b>	MS 3056	TMFN 52-64
Tr 300x4	335	326	380	40	53	5	24	12	11	<b>HME 3160</b>	MS 3160	TMFN 52-64
	340	326	380	40	53	-	24	12	11,5	<b>HM 3160</b>	MS 3160	TMFN 52-64
	336	316	360	42	54	-	24	12	8,35	<b>HM 3060</b>	MS 3060	TMFN 52-64
Tr 320x5	356	336	380	42	55	-	24	12	9	<b>HM 3064</b>	MS 3068-64	TMFN 52-64
	360	346	400	42	56	-	24	12	13	<b>HM 3164</b>	MS 3164	TMFN 52-64
Tr 340x5	376	356	400	45	58	-	24	12	11	<b>HM 3068</b>	MS 3068-64	TMFN 52-64
	382	373	440	55	72	8	28	15	22	<b>HME 3168</b>	MS 3172-68	TMFN 64-80
	400	373	440	55	72	-	28	15	24	<b>HM 3168</b>	MS 3172-68	TMFN 64-80
Tr 360x5	394	375	420	45	58	8	28	13	11	<b>HME 3072</b>	MS 3072	TMFN 64-80
	394	375	420	45	58	-	28	13	11,5	<b>HM 3072</b>	MS 3072	TMFN 64-80
	406	393	460	58	75	10	28	15	24	<b>HME 3172</b>	MS 3172-68	TMFN 64-80
	420	393	460	58	75	-	28	15	26,5	<b>HM 3172</b>	MS 3172-68	TMFN 64-80
Tr 380x5	422	399	450	48	62	10	28	14	14	<b>HME 3076</b>	MS 3080-76	TMFN 64-80
	422	399	450	48	62	-	28	14	15	<b>HM 3076</b>	MS 3080-76	TMFN 64-80
	438	415	490	60	77	15	32	18	28,5	<b>HME 3176</b>	MS 3176	TMFN 64-80
	440	415	490	60	77	-	32	18	32	<b>HM 3176</b>	MS 3176	TMFN 64-80
Tr 400x5	442	419	470	52	66	10	28	14	16	<b>HME 3080</b>	MS 3080-76	TMFN 64-80
	442	419	470	52	66	-	28	14	17	<b>HM 3080</b>	MS 3080-76	TMFN 64-80
	456	440	520	62	82	15	32	18	33	<b>HME 3180</b>	MS 3184-80	TMFN 80-500
	460	440	520	62	82	-	32	18	38	<b>HM 3180</b>	MS 3184-80	TMFN 80-500
Tr 420x5	462	439	490	52	66	10	32	14	17	<b>HME 3084</b>	MS 3084	TMFN 64-80
	462	439	490	52	66	-	32	14	18,5	<b>HM 3084</b>	MS 3084	TMFN 64-80
	490	460	540	70	90	-	32	18	45	<b>HM 3184</b>	MS 3184-80	TMFN 80-500

Dimensions										Mass	Designations	Appropriate locking clip	spanner	
G	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	B	B <sub>5</sub>	B <sub>3</sub>	b	h		Lock nut				
mm	mm								kg	-				
<b>Tr 440x5</b>	488	463	520	60	77	12	32	15	24	<b>HME 3088</b>	MS 3092-88	TMFN 64-80		
	490	463	520	60	77	-	32	15	26	<b>HM 3088</b>	MS 3092-88	TMFN 64-80		
	508	478	560	70	90	15	36	20	42,5	<b>HME 3188</b>	MS 3192-88	TMFN 80-500		
	510	478	560	70	90	-	36	20	46,5	<b>HM 3188</b>	MS 3192-88	TMFN 80-500		
<b>Tr 460x5</b>	510	483	540	60	77	-	32	15	27	<b>HM 3092</b>	MS 3092-88	TMFN 80-500		
	535	498	580	75	95	20	36	20	45,5	<b>HME 3192</b>	MS 3192-88	TMFN 80-500		
	540	498	580	75	95	-	36	20	50,5	<b>HM 3192</b>	MS 3192-88	TMFN 80-500		
<b>Tr 480x5</b>	530	503	560	60	77	12	36	15	26	<b>HME 3096</b>	MS 30/500-96	TMFN 80-500		
	530	503	560	60	77	-	36	15	28	<b>HM 3096</b>	MS 30/500-96	TMFN 80-500		
	560	528	620	75	95	20	36	20	55	<b>HME 3196</b>	MS 3196	TMFN 80-500		
	560	528	620	75	95	-	36	20	62	<b>HM 3196</b>	MS 3196	TMFN 80-500		
<b>Tr 500x5</b>	550	523	580	68	85	12	36	15	31,5	<b>HME 30/500</b>	MS 30/500-96	TMFN 80-500		
	550	523	580	68	85	-	36	15	33,5	<b>HM 30/500</b>	MS 30/500-96	TMFN 500-600		
	580	540	630	80	100	12	40	23	60	<b>HME 31/500</b>	MS 31/500	TMFN 500-600		
	580	540	630	80	100	-	40	23	63,5	<b>HM 31/500</b>	MS 31/500	TMFN 500-600		
<b>Tr 530x6</b>	571	558	630	68	90	15	40	20	37	<b>HME 30/530</b>	MS 30/600-530	TMFN 500-600		
	590	558	630	68	90	-	40	20	42,5	<b>HM 30/530</b>	MS 30/600-530	TMFN 500-600		
	610	575	670	80	105	-	40	23	71,5	<b>HM 31/530</b>	MS 31/530	TMFN 500-600		
<b>Tr 560x6</b>	610	583	650	75	97	15	40	20	41	<b>HME 30/560</b>	MS 30/560	TMFN 500-600		
	610	583	650	75	97	-	40	20	44,5	<b>HM 30/560</b>	MS 30/560	TMFN 500-600		
	650	608	710	85	110	15	45	25	80,5	<b>HME 31/560</b>	MS 31/600-560	TMFN 500-600		
	650	608	710	85	110	-	45	25	86,5	<b>HM 31/560</b>	MS 31/600-560	TMFN 500-600		
<b>Tr 600x6</b>	657	628	700	75	97	18	40	20	47	<b>HME 30/600</b>	MS 30/600-530	TMFN 500-600		
	660	628	700	75	97	-	40	20	52,5	<b>HM 30/600</b>	MS 30/600-530	TMFN 500-600		
	690	648	750	85	110	15	45	25	85	<b>HME 31/600</b>	MS 31/600-560	TMFN 600-750		
	690	648	750	85	110	-	45	25	91,5	<b>HM 31/600</b>	MS 31/600-560	TMFN 600-750		
<b>Tr 630x6</b>	690	658	730	75	97	18	45	20	50	<b>HME 30/630</b>	MS 30/630	TMFN 500-600		
	690	658	730	75	97	-	45	20	55	<b>HM 30/630</b>	MS 30/630	TMFN 500-600		
	730	685	800	95	120	18	50	28	115	<b>HME 31/630</b>	MS 31/630	TMFN 600-750		
	730	685	800	95	120	-	50	28	125	<b>HM 31/630</b>	MS 31/630	TMFN 600-750		
<b>Tr 670x6</b>	740	703	780	80	102	-	45	20	68,5	<b>HM 30/670</b>	MS 30/670	TMFN 600-750		
	775	730	850	106	131	18	50	28	144	<b>HME 31/670</b>	MS 31/670	TMFN 600-750		
	775	730	850	106	131	-	50	28	155	<b>HM 31/670</b>	MS 31/670	TMFN 600-750		
<b>Tr 710x7</b>	766	742	830	90	112	20	50	25	81	<b>HME 30/710</b>	MS 30/710	TMFN 600-750		
	780	742	830	90	112	-	50	25	91,5	<b>HM 30/710</b>	MS 30/710	TMFN 600-750		
	825	772	900	106	133	20	55	30	149	<b>HME 31/710</b>	MS 31/710	TMFN 600-750		
	825	772	900	106	133	-	55	30	162	<b>HM 31/710</b>	MS 31/710	TMFN 600-750		
<b>Tr 750x7</b>	820	782	870	90	112	20	55	25	85,5	<b>HME 30/750</b>	MS 30/800-750	TMFN 600-750		
	820	782	870	90	112	-	55	25	94	<b>HM 30/750</b>	MS 30/800-750	TMFN 600-750		
	875	813	950	112	139	20	60	34	177	<b>HME 31/750</b>	MS 31/800-750	TMFN 600-750		
	875	813	950	112	139	-	60	34	190	<b>HM 31/750</b>	MS 31/800-750	TMFN 600-750		
<b>Tr 800x7</b>	870	832	920	90	112	20	55	25	90,5	<b>HME 30/800</b>	MS 30/800-750	TMFN 600-750		
	870	832	920	90	112	-	55	25	99,5	<b>HM 30/800</b>	MS 30/800-750	TMFN 600-750		
	925	863	1 000	112	139	20	60	34	187	<b>HME 31/800</b>	MS 31/800-750	-		
	925	863	1 000	112	139	-	60	34	202	<b>HM 31/800</b>	MS 31/800-750	-		
<b>Tr 850x7</b>	925	887	980	90	115	20	60	25	104	<b>HME 30/850</b>	MS 30/900-850	-		
	925	887	980	90	115	-	60	25	115	<b>HM 30/850</b>	MS 30/900-850	-		
	975	914	1 060	118	145	25	70	38	212	<b>HME 31/850</b>	MS 31/850	-		
	975	914	1 060	118	145	-	70	38	234	<b>HM 31/850</b>	MS 31/850	-		
<b>Tr 900x7</b>	975	937	1 030	100	125	25	60	25	117	<b>HME 30/900</b>	MS 30/900-850	-		
	975	937	1 030	100	125	-	60	25	131	<b>HM 30/900</b>	MS 30/900-850	-		
	1 030	969	1 120	125	154	-	70	38	280	<b>HM 31/900</b>	MS 31/900	-		

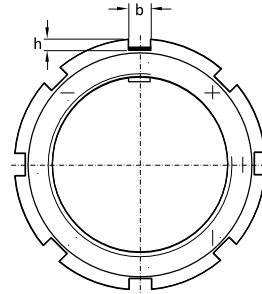
## 16.7 HM(E) lock nuts Tr 950x8 - Tr 1120x8



HM



HME

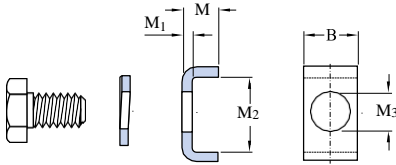


Dimensions										Mass Designations	
G	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	B	B <sub>5</sub>	B <sub>3</sub>	b	h	Lock nut	Appropriate locking clip	
mm									kg	–	
<b>Tr 950x8</b>	1 025	985	1 080	100	125	25	60	25	124	<b>HME 30/950</b>	MS 30/950
	1 025	985	1 080	100	125	–	60	25	139	<b>HM 30/950</b>	MS 30/950
	1 080	1 017	1 170	125	154	–	70	38	293	<b>HM 31/950</b>	MS 31/950
<b>Tr 1000x8</b>	1 085	1 040	1 140	100	125	25	60	25	141	<b>HME 30/1000</b>	MS 30/1000
	1 085	1 040	1 140	100	125	–	60	25	157	<b>HM 30/1000</b>	MS 30/1000
	1 140	1 077	1 240	125	154	25	70	38	305	<b>HME 31/1000</b>	MS 31/1000
	1 140	1 077	1 240	125	154	–	70	38	336	<b>HM 31/1000</b>	MS 31/1000
<b>Tr 1060x8</b>	1 145	1 100	1 200	100	125	25	60	25	149	<b>HME 30/1060</b>	MS 30/1000
	1 145	1 100	1 200	100	125	–	60	25	166	<b>HM 30/1060</b>	MS 30/1000
	1 210	1 137	1 300	125	154	–	70	38	354	<b>HM 31/1060</b>	MS 31/1000
<b>Tr 1120x8</b>	1 205	1 160	1 260	100	125	–	60	25	175	<b>HM 30/1120</b>	MS 30/1000



# 16.8 MS locking clips

## MS 3044 - MS 31/1000



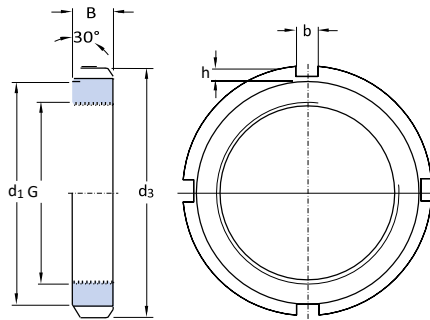
Designations Locking clip	Appertaining hexagonal head bolt	spring washer in accordance with DIN 128	Dimensions					Mass
			B	M	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>	
-			mm					kg
MS 3044	M 6x12	A 6	20	12	4	13,5	7	0,022
MS 3052-48	M 8x16	A 8	20	12	4	17,5	9	0,024
MS 3056	M 8x16	A 8	24	12	4	17,5	9	0,03
MS 3060	M 8x16	A 8	24	12	4	20,5	9	0,033
MS 3068-64	M 8x16	A 8	24	15	5	21	9	0,046
MS 3072	M 8x16	A 8	28	15	5	20	9	0,051
MS 3080-76	M 10x20	A 10	28	15	5	24	12	0,055
MS 3084	M 10x20	A 10	32	15	5	24	12	0,063
MS 3092-88	M 12x25	A 12	32	15	5	28	14	0,067
MS 30/500-96	M 12x25	A 12	36	15	5	28	14	0,076
MS 30/560	M 16x30	A 16	40	21	7	29	18	0,15
MS 30/600-530	M 16x30	A 16	40	21	7	34	18	0,14
MS 30/630	M 16x30	A 16	45	21	7	34	18	0,17
MS 30/670	M 16x30	A 16	45	21	7	39	18	0,19
MS 30/710	M 16x30	A 16	50	21	7	39	18	0,21
MS 30/800-750	M 16x30	A 16	55	21	7	39	18	0,23
MS 30/900-850	M 20x40	A 20	60	21	7	44	22	0,26
MS 30/950	M 20x40	A 20	60	21	7	46	22	0,26
MS 30/1000	M 20x40	A 20	60	21	7	51	22	0,28
MS 3160	M 10x20	A 10	24	12	4	30,5	12	0,04
MS 3164	M 10x20	A 10	24	15	5	31	12	0,055

Designations Locking clip	Appertaining hexagonal head bolt spring washer in accordance with DIN 128		Dimensions					Mass
			B	M	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>	
–			mm					kg
MS 3172-68	M 12x25	A 12	28	15	5	38	14	0,069
MS 3176	M 12x25	A 12	32	15	5	40	14	0,083
MS 3184-80	M 16x30	A 16	32	15	5	45	18	0,089
MS 3192-88	M 16x30	A 16	36	15	5	43	18	0,097
MS 3196	M 16x30	A 16	36	15	5	53	18	0,11
MS 31/500	M 16x30	A 16	40	15	5	45	18	0,11
MS 31/530	M 20x40	A 20	40	21	7	51	22	0,19
MS 31/600-560	M 20x40	A 20	45	21	7	54	22	0,22
MS 31/630	M 20x40	A 20	50	21	7	61	22	0,27
MS 31/670	M 20x40	A 20	50	21	7	66	22	0,28
MS 31/710	M 24x50	A 24	55	21	7	69	26	0,32
MS 31/800-750	M 24x50	A 24	60	21	7	70	26	0,35
MS 31/850	M 24x50	A 24	70	21	7	71	26	0,41
MS 31/900	M 24x50	A 24	70	21	7	76	26	0,41
MS 31/950	M 24x50	A 24	70	21	7	78	26	0,42
MS 31/1000	M 24x50	A 24	70	21	7	88	26	0,5

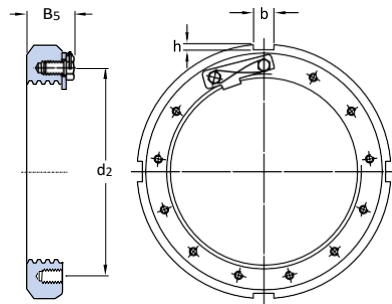
## 16.9 N and AN inch lock nuts

G 0.391 - 10.192 in.

9,931 - 258,877 mm



AN, N (size ≤ 44)



N (size ≥ 48)

Threads <sup>1)</sup>	Threads per inch	Dimensions					Mass	Designations		
		d <sub>1</sub>	d <sub>3</sub>	B	b	h		Lock nut	Appropriate locking device	spanner
G		in.					kg			
0.391 9,931	32	0.625	<sup>3</sup> / <sub>4</sub>	<sup>7</sup> / <sub>32</sub>	0.12	0.073	0,0091	N 00	W 00	HN 0
0.469 11,913	32	0.719	<sup>7</sup> / <sub>8</sub>	<sup>5</sup> / <sub>16</sub>	0.12	0.073	0,018	N 01	W 01	HN 1
0.586 14,884	32	0.813	1	<sup>5</sup> / <sub>16</sub>	0.12	0.104	0,023	N 02	W 02	HN 2-3
0.664 16,866	32	0.938	1 <sup>1</sup> / <sub>8</sub>	<sup>11</sup> / <sub>32</sub>	0.12	0.104	0,032	N 03	W 03	HN 2-3
0.781 19,837	32	1.125	1 <sup>3</sup> / <sub>8</sub>	<sup>3</sup> / <sub>8</sub>	0.178	0.104	0,05	N 04	W 04	HN 4
0.969 24,613	32	1.281	1 <sup>9</sup> / <sub>16</sub>	<sup>13</sup> / <sub>32</sub>	0.178	0.104	0,064	N 05	W 05	HN 5-6
1.173 29,794	18	1.5	1 <sup>3</sup> / <sub>4</sub>	<sup>13</sup> / <sub>32</sub>	0.178	0.104	0,073	N 06	W 06	HN 5-6
1.376 34,95	18	1.813	2 <sup>1</sup> / <sub>16</sub>	<sup>7</sup> / <sub>16</sub>	0.178	0.104	0,11	N 07	W 07	HN 7
1.563 39,7	18	2	2 <sup>1</sup> / <sub>4</sub>	<sup>7</sup> / <sub>16</sub>	0.24	0.104	0,12	N 08	W 08	HN 8-9
1.767 44,882	18	2.281	2 <sup>17</sup> / <sub>32</sub>	<sup>7</sup> / <sub>16</sub>	0.24	0.104	0,15	N 09	W 09	HN 8-9
1.967 49,962	18	2.438	2 <sup>11</sup> / <sub>16</sub>	<sup>1</sup> / <sub>2</sub>	0.24	0.104	0,18	N 10	W 10	HN 10-11
2.157 54,788	18	2.656	2 <sup>31</sup> / <sub>32</sub>	<sup>1</sup> / <sub>2</sub>	0.24	0.135	0,22	N 11	W 11	HN 10-11
2.36 59,944	18	2.844	3 <sup>5</sup> / <sub>32</sub>	<sup>17</sup> / <sub>32</sub>	0.24	0.135	0,24	N 12	W 12	HN 12-13

<sup>1)</sup> For detailed information about threads, refer to ANSI/ABMA Standard 8.2.

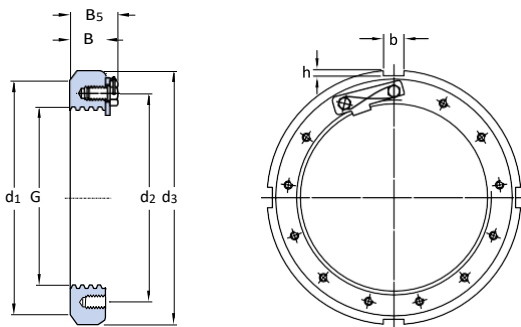


Threads <sup>1)</sup> G	Threads per inch	Dimensions							Mass Designations				
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	B	B <sub>5</sub>	b	h	Lock nut	Appropriate locking device	spanner		
in./mm	–	in.							kg	–			
<b>2.548</b> <i>64,719</i>	18	3.063	–	3 3/8	9/16	–	0.24	0.135	0,29	<b>N 13</b>	W 13	HN 12-13	
<b>2.751</b> <i>69,875</i>	18	3.313	–	3 5/8	9/16	–	0.24	0.135	0,33	<b>N 14</b>	W 14	HN 14	
<b>2.933</b> <i>74,498</i>	12	3.563	–	3 7/8	19/32	–	0.36	0.135	0,41	<b>AN 15</b>	W 15	HN 15	
<b>3.137</b> <i>79,68</i>	12	3.844	–	4 5/32	19/32	–	0.36	0.135	0,48	<b>AN 16</b>	W 16	HN 16	
<b>3.34</b> <i>84,836</i>	12	4.031	–	4 13/32	5/8	–	0.36	0.166	0,54	<b>AN 17</b>	W 17	HN 17	
<b>3.527</b> <i>89,586</i>	12	4.281	–	4 21/32	11/16	–	0.36	0.166	0,68	<b>AN 18</b>	W 18	HN 18-20	
<b>3.73</b> <i>94,742</i>	12	4.563	–	4 15/16	23/32	–	0.36	0.166	0,79	<b>AN 19</b>	W 19	HN 18-20	
<b>3.918</b> <i>99,517</i>	12	4.813	–	5 3/16	3/4	–	0.36	0.166	0,93	<b>AN 20</b>	W 20	HN 18-20	
<b>4.122</b> <i>104,699</i>	12	5	–	5 7/16	3/4	–	0.485	0.198	1	<b>AN 21</b>	W 21	HN 21-22	
<b>4.325</b> <i>109,855</i>	12	4.901	–	5 5/16	25/32	–	0.485	0.198	0,79	<b>N 022</b>	W 022	HN 21-22	
	12	5.281	–	5 23/32	25/32	–	0.485	0.198	1,1	<b>AN 22</b>	W 22	HN 21-22	
<b>4.716</b> <i>119,786</i>	12	5.313	–	5 11/16	13/16	–	0.485	0.198	0,86	<b>N 024</b>	W 024	TMFN 23-30	
	12	5.688	–	6 1/8	13/16	–	0.485	0.198	1,25	<b>AN 24</b>	W 24	TMFN 23-30	
<b>5.106</b> <i>129,692</i>	12	5.703	–	6 1/8	7/8	–	0.485	0.198	1,2	<b>N 026</b>	W 026	TMFN 23-30	
	12	6.188	–	6 3/4	7/8	–	0.61	0.26	1,75	<b>AN 26</b>	W 26	TMFN 23-30	
<b>5.497</b> <i>139,624</i>	12	6.109	–	6 1/2	15/16	–	0.485	0.198	1,2	<b>N 028</b>	W 028	TMFN 23-30	
	12	6.531	–	7 3/32	15/16	–	0.61	0.26	1,95	<b>AN 28</b>	W 28	TMFN 23-30	
<b>5.888</b> <i>149,555</i>	12	6.688	–	7 1/8	31/32	–	0.61	0.229	1,65	<b>N 030</b>	W 030	TMFN 23-30	
	12	7.063	–	7 11/16	31/32	–	0.61	0.291	2,45	<b>AN 30</b>	W 30	TMFN 23-30	
<b>6.284</b> <i>159,614</i>	8	7.094	–	7 1/2	1 1/32	–	0.61	0.229	1,9	<b>N 032</b>	W 032	TMFN 23-30	
	8	7.438	–	8 1/16	1 1/32	–	0.61	0.291	2,8	<b>AN 32</b>	W 32	TMFN 30-40	
<b>6.659</b> <i>169,139</i>	8	7.484	–	7 7/8	1 1/16	–	0.61	0.229	2,05	<b>N 034</b>	W 034	TMFN 30-40	
	8	8.031	–	8 21/32	1 1/16	–	0.61	0.291	3,4	<b>AN 34</b>	W 34	TMFN 30-40	
<b>7.066</b> <i>179,476</i>	8	7.875	–	8 1/4	1 3/32	–	0.61	0.229	2,2	<b>N 036</b>	W 036	TMFN 30-40	
	8	8.375	–	9 1/16	1 3/32	–	0.735	0.323	3,75	<b>AN 36</b>	W 36	TMFN 30-40	
<b>7.472</b> <i>189,789</i>	8	8.266	–	8 11/16	1 1/8	–	0.61	0.229	3	<b>N 038</b>	W 038	TMFN 30-40	
	8	8.781	–	9 15/32	1 1/8	–	0.735	0.323	4	<b>AN 38</b>	W 38	TMFN 30-40	
<b>7.847</b> <i>199,314</i>	8	8.75	–	9 7/16	1 3/16	–	0.735	0.323	3,45	<b>N 040</b>	W 040	TMFN 30-40	
	8	9.156	–	9 27/32	1 3/16	–	0.735	0.323	4,4	<b>AN 40</b>	W 40	TMFN 30-40	
<b>8.628</b> <i>219,151</i>	8	9.531	–	10 1/4	1 1/4	–	0.86	0.385	4,2	<b>N 044</b>	W 044	TMFN 40-52	
	8	9.843	–	11	1 1/4	–	0.98	0.51	6,1	<b>N 44</b>	W 44	TMFN 40-52	
<b>9.442</b> <i>239,827</i>	6	10.625	10,423	11 7/16	1 11/32	1,698	0.86	0.385	5,9	<b>N 048</b>	PL 48	TMFN 40-52	
<b>10.192</b> <i>258,877</i>	6	11.406	11,298	12 3/16	1 13/32	1,76	0.86	0.385	6,8	<b>N 052</b>	PL 52	TMFN 40-52	

<sup>1)</sup> For detailed information about threads, refer to ANSI/ABMA Standard 8.2.

## 16.9 N and AN inch lock nuts

G 11.004 - 20.867 in.  
279,502 - 530,022 mm

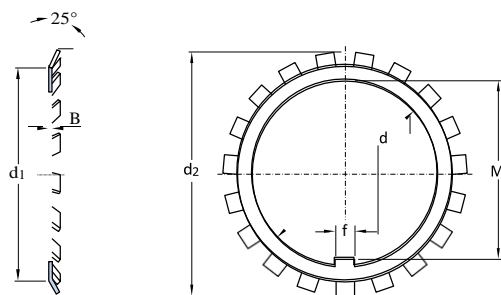


Threads <sup>1)</sup> G	Threads per inch	Dimensions							Mass Designations			
		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	B	B <sub>5</sub>	b	h	Lock nut	Appropriate locking device	Appropriate spanner device	
in./mm	–	in.							kg	–		
<b>11.004</b> 279,502	6	12.219	12,11	13	1 1/2	1,854	0.98	0.385	7,7	<b>N 056</b>	PL 56	TMFN 52-64
<b>11.785</b> 299,339	6	13.219	13,11	14 3/16	1 9/16	1,948	0.98	0.51	10,5	<b>N 060</b>	PL 60	TMFN 52-64
<b>12.562</b> 319,075	6	14.031	13,86	15	1 21/32	2,041	0.98	0.51	12	<b>N 064</b>	PL 64	TMFN 52-64
<b>13.339</b> 338,811	5	14.813	14,735	15 3/4	1 25/32	2,166	0.98	0.51	13,5	<b>N 068</b>	PL 68	TMFN 52-64
<b>14.17</b> 359,918	5	15.5	15,485	16 1/2	1 25/32	2,166	1.23	0.51	13,5	<b>N 072</b>	PL 72	TMFN 64-80
<b>14.957</b> 379,908	5	16.625	16,485	17 3/4	1 29/32	2,353	1.23	0.604	18,5	<b>N 076</b>	PL 76	TMFN 64-80
<b>15.745</b> 399,923	5	17.438	17,235	18 1/2	2 1/16	2,5	1.23	0.604	21	<b>N 080</b>	PL 80	TMFN 64-80
<b>16.532</b> 419,913	5	18.188	18,11	19 5/16	2 1/16	2,5	1.355	0.604	22	<b>N 084</b>	PL 84	TMFN 64-80
<b>17.319</b> 439,903	5	19.25	19,11	20 1/2	2 3/8	2,906	1.355	0.604	30	<b>N 088</b>	PL 88	TMFN 64-80
<b>18.107</b> 459,918	5	20.688	19,985	21 1/4	2 3/8	2,906	1.355	0.604	31	<b>N 092</b>	PL 92	TMFN 80-500
<b>18.894</b> 479,908	5	20.75	20,673	22 1/16	2 3/8	2,937	1.48	0.604	32,5	<b>N 096</b>	PL 96	TMFN 80-500
<b>19.682</b> 499,923	5	21.688	21,61	22 13/16	2 11/16	3,25	1.48	0.604	36	<b>N 500</b>	PL 500	TMFN 80-500
<b>20.867</b> 530,022	4	23.25	23,36	24 13/16	2 11/16	3,25	1.605	0.823	48,5	<b>N 530</b>	PL 530	TMFN 80-500

<sup>1)</sup> For detailed information about threads, refer to ANSI/ABMA Standard 8.2.



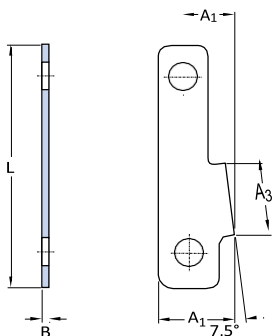
## 16.10 Winch lock washers W 00 - W 44



Designation	Dimensions						Mass
	d	d <sub>1</sub>	d <sub>2</sub>	B	f	M	
–	in.						kg
W 00	0.406	0.655	0.875	0.032	0.12	0.334	0,094
W 01	0.484	0.749	1.016	0.032	0.12	0.412	0,1
W 02	0.601	0.843	1.156	0.032	0.12	0.529	0,13
W 03	0.679	0.968	1.328	0.032	0.12	0.607	0,24
W 04	0.801	1.155	1.531	0.032	0.176	0.729	0,002
W 05	0.989	1.311	1.719	0.04	0.176	0.909	0,007
W 06	1.193	1.53	1.922	0.04	0.176	1.093	0,008
W 07	1.396	1.843	2.25	0.04	0.176	1.296	0,008
W 08	1.583	2.03	2.469	0.048	0.29	1.478	0,014
W 09	1.792	2.311	2.734	0.048	0.29	1.687	0,019
W 10	1.992	2.468	2.922	0.048	0.29	1.887	0,021
W 11	2.182	2.686	3.109	0.053	0.29	2.069	0,02
W 12	2.4	2.874	3.344	0.053	0.29	2.267	0,022
W 13	2.588	3.093	3.578	0.053	0.29	2.455	0,025
W 14	2.791	3.343	3.828	0.053	0.29	2.658	0,027
W 15	2.973	3.593	4.109	0.062	0.29	2.834	0,032
W 16	3.177	3.874	4.375	0.062	0.353	3.038	0,048
W 17	3.395	4.061	4.625	0.062	0.353	3.253	0,053
W 18	3.582	4.311	4.938	0.084	0.353	3.418	0,057
W 19	3.8	4.593	5.219	0.084	0.353	3.636	0,07
W 20	3.988	4.843	5.5	0.084	0.353	3.809	0,082

Designation	Dimensions						Mass
	d	d <sub>1</sub>	d <sub>2</sub>	B	f	M	
–	in.						kg
<b>W 21</b>	4.192	5.03	5.703	0.084	0.353	4.013	0,094
<b>W 022</b>	4.395	4.951	5.688	0.115	0.35	4.185	0,15
<b>W 22</b>	4.395	5.311	6.063	0.115	0.353	4.185	0,1
<b>W 024</b>	4.801	5.363	6.188	0.115	0.35	4.591	0,19
<b>W 24</b>	4.801	5.718	6.469	0.115	0.353	4.591	0,16
<b>W 026</b>	5.191	5.753	6.625	0.115	0.469	4.969	0,2
<b>W 26</b>	5.191	6.218	7.031	0.115	0.435	4.969	0,17
<b>W 028</b>	5.582	6.159	7.094	0.115	0.594	5.36	0,23
<b>W 28</b>	5.582	6.561	7.438	0.115	0.59	5.36	0,22
<b>W 030</b>	5.983	6.738	7.719	0.115	0.594	5.73	0,25
<b>W 30</b>	5.983	7.093	8.063	0.146	0.59	5.73	0,22
<b>W 032</b>	6.389	7.144	8.156	0.115	0.594	6.128	0,29
<b>W 32</b>	6.389	7.468	8.438	0.146	0.59	6.128	0,33
<b>W 034</b>	6.764	7.538	8.594	0.115	0.719	6.503	0,3
<b>W 34</b>	6.764	8.061	9.063	0.146	0.715	6.503	0,34
<b>W 036</b>	7.171	7.929	9	0.115	0.719	6.91	0,6
<b>W 36</b>	7.171	8.405	9.438	0.146	0.715	6.91	0,42
<b>W 038</b>	7.577	8.32	9.438	0.115	0.719	7.316	0,002
<b>W 38</b>	7.577	8.811	9.875	0.146	0.715	7.316	0,43
<b>W 040</b>	7.982	8.804	9.969	0.115	0.844	7.721	0,003
<b>W 40</b>	7.982	9.186	10.313	0.146	0.84	7.721	0,46
<b>W 044</b>	8.701	9.6	10.406	0.115	0.945	8.327	0,005
<b>W 44</b>	8.701	9.905	11.438	0.146	0.94	8.327	0,47

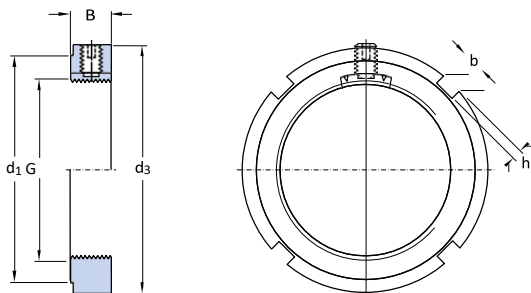
## 16.11 PL inch locking plates PL 48 - 530



Designations Locking plate	Appertaining hexagonal head bolt	Dimensions					Mass
		A <sub>1</sub>	A <sub>2</sub>	A <sub>3</sub>	B	L	
		in.					kg
PL 48	5/16-18x5/8	1.125	0.813	1	0.126	3.5	0,06
PL 52	5/16-18x5/8	1.156	0.804	1.063	0.126	3.75	0,07
PL 56	5/16-18x5/8	1.156	0.822	1.125	0.126	3.938	0,07
PL 60	3/8-16x3/4	1.375	0.915	1.25	0.126	4.344	0,1
PL 64	3/8-16x3/4	1.312	0.888	1.313	0.126	4.531	0,1
PL 68	3/8-16x3/4	1.25	0.856	1.375	0.126	4.75	0,1
PL 72	3/8-16x3/4	1.25	0.856	1.375	0.126	4.906	0,1
PL 76	1/2-13x7/8	1.5	1.039	1.375	0.126	5.438	0,2
PL 80	1/2-13x7/8	1.469	0.976	1.5	0.126	5.719	0,2
PL 84	1/2-13x7/8	1.562	1.067	1.5	0.126	5.812	0,2
PL 88	5/8-11x1	1.656	1.125	1.688	0.126	6.25	0,27
PL 92	5/8-11x1	1.656	1.063	1.688	0.126	6.422	0,28
PL 96	5/8-11x1 1/4	1.562	0.999	1.688	0.157	6.594	0,33
PL 500	5/8-11x1 1/4	1.688	1.125	1.688	0.157	6.844	0,33
PL 530	5/8-11x1 1/4	2.125	1.562	1.688	0.157	7.312	0,4

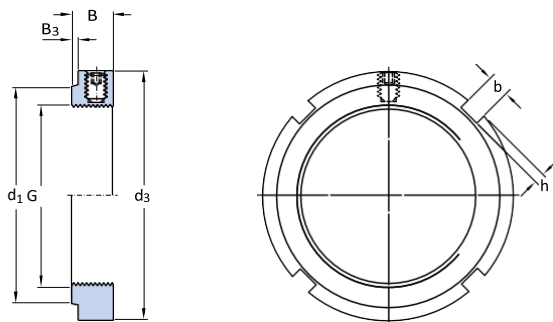
Two hexagonal head bolts and a wire to secure the bolts are supplied with a locking plate.

## 16.12 KMK lock nuts with an integral locking device M 10x0,75 - M 100x2



Dimensions		Axial load carrying capacity static	Mass	Designations	Grub screw	Recommended tightening torque					
G	d <sub>1</sub>						d <sub>3</sub>	B	b	h	
mm		kN	kg	Lock nut	Appropriate spanner	Size					
M 10x0,75	16	20	9	3	2	9,8	0,016	KMK 0	HN 0	M 5	4
M 12x1	18	22	9	3	2	11,8	0,018	KMK 1	HN 1	M 5	4
M 15x1	21	25	9	4	2	14,6	0,021	KMK 2	HN 2-3	M 5	4
M 17x1	24	28	9	4	2	19,6	0,027	KMK 3	HN 2-3	M 5	4
M 20x1	28	32	9	4	2	24	0,03	KMK 4	HN 4	M 5	4
M 25x1,5	34	38	9	5	2	31,5	0,03	KMK 5	HN 5-6	M 5	4
M 30x1,5	41	45	9	5	2	36,5	0,06	KMK 6	HN 5-6	M 5	4
M 35x1,5	48	52	9	5	2	50	0,07	KMK 7	HN 7	M 5	4
M 40x1,5	53	58	11	6	2,5	62	0,11	KMK 8	HN 8-9	M 6	8
M 45x1,5	60	65	11	6	2,5	78	0,14	KMK 9	HN 8-9	M 6	8
M 50x1,5	65	70	15	6	2,5	91,5	0,2	KMK 10	HN 10-11	M 8	18
M 55x2	69	75	15	7	3	91,5	0,22	KMK 11	HN 10-11	M 8	18
M 60x2	74	80	15	7	3	95	0,23	KMK 12	HN 12-13	M 8	18
M 65x2	79	85	14	7	3	108	0,24	KMK 13	HN 12-13	M 8	18
M 70x2	85	92	14	8	3,5	118	0,28	KMK 14	HN 14	M 8	18
M 75x2	91	98	14	8	3,5	134	0,33	KMK 15	HN 15	M 8	18
M 80x2	98	105	18	8	3,5	173	0,45	KMK 16	HN 16	M 10	35
M 85x2	103	110	18	8	3,5	190	0,52	KMK 17	HN 17	M 10	35
M 90x2	112	120	18	10	4	216	0,65	KMK 18	HN 18-20	M 10	35
M 95x2	117	125	20	10	4	236	0,76	KMK 19	HN 18-20	M 10	35
M 100x2	122	130	20	10	4	255	0,8	KMK 20	HN 18-20	M 10	35

## 16.13 KMFE lock nuts with a locking screw M 20x1 - M 200x3



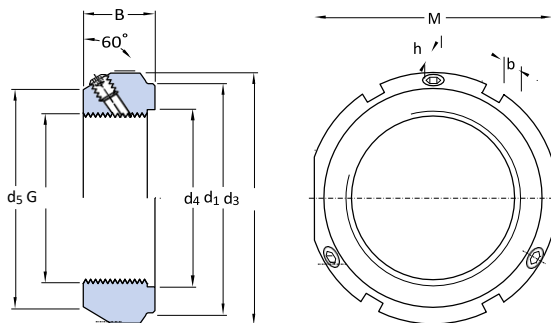
Dimensions								Axial load carrying capacity static	Mass	Designations		Grub screw	
G	d <sub>1</sub>	d <sub>3</sub>	B	B <sub>3</sub>	b	h	Lock nut			Appropriate spanner	Size	Recommended tightening torque	
mm								kN	kg	-		-	Nm
<b>M 20x1</b>	26	32	9,5	1	4	2	24	0,031	<b>KMFE 4</b>	HN 4	M 5	4	
<b>M 25x1,5</b>	30	38	10,5	2	5	2	31,5	0,041	<b>KMFE 5 L</b>	HN 5-6	M 5	4	
	31	38	10,5	2	5	2	31,5	0,042	<b>KMFE 5</b>	HN 5-6	M 5	4	
<b>M 30x1,5</b>	36	45	10,5	2	5	2	36,5	0,058	<b>KMFE 6</b>	HN 5-6	M 5	4	
<b>M 35x1,5</b>	41,5	52	11,5	3	5	2	50	0,079	<b>KMFE 7 L</b>	HN 7	M 5	4	
	42,5	52	11,5	3	5	2	50	0,08	<b>KMFE 7</b>	HN 7	M 5	4	
<b>M 40x1,5</b>	47	58	13	3	6	2,5	52	0,11	<b>KMFE 8</b>	HN 8-9	M 6	8	
	47,5	58	13	3	6	2,5	52	0,12	<b>KMFE 8 H</b>	HN 8-9	M 6	8	
<b>M 45x1,5</b>	53	65	13	3	6	2,5	78	0,14	<b>KMFE 9</b>	HN 8-9	M 6	8	
	54,5	65	13	3	6	2,5	78	0,15	<b>KMFE 9 H</b>	HN 8-9	M 6	8	
<b>M 50x1,5</b>	57,5	70	14	3	6	2,5	91,5	0,16	<b>KMFE 10</b>	HN 10-11	M 6	8	
	61,5	70	14	3	6	2,5	91,5	0,17	<b>KMFE 10 H</b>	HN 10-11	M 6	8	
<b>M 55x2</b>	64	75	14	3	7	3	91,5	0,18	<b>KMFE 11</b>	HN 10-11	M 6	8	
	67	75	14	3	7	3	91,5	0,19	<b>KMFE 11 H</b>	HN 10-11	M 6	8	
<b>M 60x2</b>	69	80	14	3	7	3	95	0,19	<b>KMFE 12</b>	HN 12-13	M 6	8	
<b>M 65x2</b>	71,5	85	15	3	7	3	108	0,22	<b>KMFE 13 L</b>	HN 12-13	M 6	8	
	76	85	15	3	7	3	108	0,23	<b>KMFE 13</b>	HN 12-13	M 6	8	
	77,5	85	15	3	7	3	108	0,24	<b>KMFE 13 H</b>	HN 12-13	M 6	8	
<b>M 70x2</b>	79	92	15	3	8	3,5	118	0,26	<b>KMFE 14</b>	HN 14	M 6	8	
<b>M 75x2</b>	81,5	98	16	3	8	3,5	134	0,31	<b>KMFE 15 L</b>	HN 15	M 6	8	
	85	98	16	3	8	3,5	134	0,32	<b>KMFE 15</b>	HN 15	M 6	8	
	87,5	98	16	3	8	3,5	134	0,33	<b>KMFE 15 H</b>	HN 15	M 6	8	
<b>M 80x2</b>	91,5	105	18	3	8	3,5	173	0,42	<b>KMFE 16</b>	HN 16	M 8	18	
	93	105	18	3	8	3,5	173	0,43	<b>KMFE 16 H</b>	HN 16	M 8	18	
<b>M 85x2</b>	98	110	19	4	8	3,5	190	0,46	<b>KMFE 17</b>	HN 17	M 8	18	
<b>M 90x2</b>	102	120	19	4	10	4	216	0,58	<b>KMFE 18</b>	HN 18-20	M 8	18	



Dimensions								Axial load Mass carrying capacity static		Designations		Grub screw	
G	d <sub>1</sub>	d <sub>3</sub>	B	B <sub>3</sub>	b	h	kN	kg	Lock nut	Appropriate spanner	Size	Recommended tightening torque	
mm										–		–	Nm
<b>M 95x2</b>	108	125	20	4	10	4	236	0,65	<b>KMFE 19 L</b>	HN 18-20	M 8	18	
	110	125	20	4	10	4	236	0,66	<b>KMFE 19</b>	HN 18-20	M 8	18	
<b>M 100x2</b>	110	130	21	4	10	4	255	0,7	<b>KMFE 20 L</b>	HN 18-20	M 8	18	
	112	130	21	4	10	4	255	0,71	<b>KMFE 20</b>	HN 18-20	M 8	18	
<b>M 110x2</b>	119	145	21,5	4	12	5	310	0,92	<b>KMFE 22 L</b>	HN 21-22	M 8	18	
	122	145	21,5	4	12	5	310	0,93	<b>KMFE 22</b>	HN 21-22	M 8	18	
	124	145	21,5	4	12	5	310	0,94	<b>KMFE 22 H</b>	HN 21-22	M 8	18	
<b>M 120x2</b>	130	155	26	6	12	5	340	1,15	<b>KMFE 24</b>	TMFN 23-30	M 10	35	
	132	155	26	6	12	5	340	1,15	<b>KMFE 24 H</b>	TMFN 23-30	M 10	35	
<b>M 130x2</b>	140	165	28	7	12	5	365	1,3	<b>KMFE 26 L</b>	TMFN 23-30	M 10	35	
	141	165	28	7	12	5	365	1,35	<b>KMFE 26</b>	TMFN 23-30	M 10	35	
<b>M 140x2</b>	151	180	28	7	14	6	420	1,55	<b>KMFE 28 L</b>	TMFN 23-30	M 10	35	
	152	180	28	7	14	6	440	1,55	<b>KMFE 28</b>	TMFN 23-30	M 10	35	
<b>M 150x2</b>	162	195	30	9	14	6	495	2,05	<b>KMFE 30</b>	TMFN 23-30	M 10	35	
<b>M 160x3</b>	173	210	32	11	16	7	540	2,5	<b>KMFE 32</b>	TMFN 30-40	M 10	35	
<b>M 170x3</b>	184	220	33	12	16	7	550	2,7	<b>KMFE 34</b>	TMFN 30-40	M 10	35	
<b>M 180x3</b>	194	230	34	12	18	8	590	3	<b>KMFE 36</b>	TMFN 30-40	M 10	35	
<b>M 190x3</b>	207	240	34	12	18	8	610	3,1	<b>KMFE 38</b>	TMFN 30-40	M 10	35	
<b>M 200x3</b>	217	250	34	12	18	8	625	3,3	<b>KMFE 40</b>	TMFN 30-40	M 10	35	

## 16.14 KMT precision lock nuts with locking pins

M 10x0,75 - M 200x3

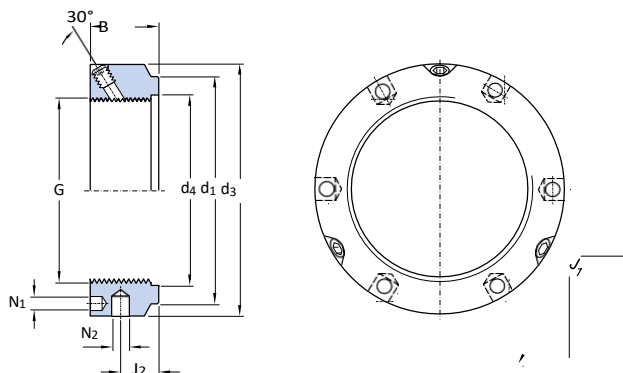


Dimensions										Axial load carrying capacity static	Mass kg	Designations Lock nut Appropriate spanner	Grub screw		
G	d <sub>1</sub>	d <sub>3</sub>	d <sub>4</sub>	d <sub>5</sub>	B	b	h	M	Size				Recommended tightening torque		
mm										kN	kg	-		-	Nm
M 10x0,75	23	28	11	21	14	4	2	24	35	0,045	<b>KMT 0</b>	HN 2-3	M 5	4,5	
M 12x1	25	30	13	23	14	4	2	27	40	0,05	<b>KMT 1</b>	HN 4	M 5	4,5	
M 15x1	28	33	16	26	16	4	2	30	60	0,075	<b>KMT 2</b>	HN 4	M 5	4,5	
M 17x1	33	37	18	29	18	5	2	34	80	0,1	<b>KMT 3</b>	HN 5-6	M 6	8	
M 20x1	35	40	21	32	18	5	2	36	90	0,11	<b>KMT 4</b>	HN 5-6	M 6	8	
M 25x1,5	39	44	26	36	20	5	2	41	130	0,13	<b>KMT 5</b>	HN 5-6	M 6	8	
M 30x1,5	44	49	32	41	20	5	2	46	160	0,16	<b>KMT 6</b>	HN 7	M 6	8	
M 35x1,5	49	54	38	46	22	5	2	50	190	0,19	<b>KMT 7</b>	HN 7	M 6	8	
M 40x1,5	59	65	42	54	22	6	2,5	60	210	0,3	<b>KMT 8</b>	HN 8-9	M 8	18	
M 45x1,5	64	70	48	60	22	6	2,5	65	240	0,33	<b>KMT 9</b>	HN 10-11	M 8	18	
M 50x1,5	68	75	52	64	25	7	3	70	300	0,4	<b>KMT 10</b>	HN 10-11	M 8	18	
M 55x2	78	85	58	74	25	7	3	80	340	0,54	<b>KMT 11</b>	HN 12-13	M 8	18	
M 60x2	82	90	62	78	26	8	3,5	85	380	0,61	<b>KMT 12</b>	HN 12-13	M 8	18	
M 65x2	87	95	68	83	28	8	3,5	90	460	0,71	<b>KMT 13</b>	HN 15	M 8	18	
M 70x2	92	100	72	88	28	8	3,5	95	490	0,75	<b>KMT 14</b>	HN 15	M 8	18	
M 75x2	97	105	77	93	28	8	3,5	100	520	0,8	<b>KMT 15</b>	HN 16	M 8	18	
M 80x2	100	110	83	98	32	8	3,5	-	620	0,9	<b>KMT 16</b>	HN 17	M 8	18	
M 85x2	110	120	88	107	32	10	4	-	650	1,15	<b>KMT 17</b>	HN 18-20	M 10	35	
M 90x2	115	125	93	112	32	10	4	-	680	1,2	<b>KMT 18</b>	HN 18-20	M 10	35	
M 95x2	120	130	98	117	32	10	4	-	710	1,25	<b>KMT 19</b>	HN 18-20	M 10	35	
M 100x2	125	135	103	122	32	10	4	-	740	1,3	<b>KMT 20</b>	HN 21-22	M 10	35	

Dimensions								Axial load Mass carrying capacity static		Designations Lock nut    Appropriate spanner		Grub screw Size        Recommended tightening torque	
G	d <sub>1</sub>	d <sub>3</sub>	d <sub>4</sub>	d <sub>5</sub>	B	b	h	kN	kg	–		–	Nm
mm													
<b>M 110x2</b>	134	145	112	132	32	10	4	800	1,45	<b>KMT 22</b>	HN 21-22	M 10	35
<b>M 120x2</b>	144	155	122	142	32	10	4	860	1,6	<b>KMT 24</b>	HN 21-22	M 10	35
<b>M 130x2</b>	154	165	132	152	32	12	5	920	1,7	<b>KMT 26</b>	TMFN 23-30	M 10	35
<b>M 140x2</b>	164	175	142	162	32	14	5	980	1,8	<b>KMT 28</b>	TMFN 23-30	M 10	35
<b>M 150x2</b>	174	185	152	172	32	14	5	1 040	1,95	<b>KMT 30</b>	TMFN 23-30	M 10	35
<b>M 160x3</b>	184	195	162	182	32	14	5	1 100	2,1	<b>KMT 32</b>	TMFN 23-30	M 10	35
<b>M 170x3</b>	192	205	172	192	32	14	5	1 160	2,2	<b>KMT 34</b>	TMFN 30-40	M 10	35
<b>M 180x3</b>	204	215	182	202	32	16	5	1 220	2,3	<b>KMT 36</b>	TMFN 30-40	M 10	35
<b>M 190x3</b>	214	225	192	212	32	16	5	1 280	2,4	<b>KMT 38</b>	TMFN 30-40	M 10	35
<b>M 200x3</b>	224	235	202	222	32	18	5	1 340	2,5	<b>KMT 40</b>	TMFN 30-40	M 10	35

## 16.15 KMTA precision lock nuts with locking pins

### M 25x1,5 - M 200x3



Dimensions		Axial load carrying capacity		Mass		Designations		Grub screw					
G	d <sub>1</sub>	d <sub>3</sub>	d <sub>4</sub>	B	J <sub>1</sub>	J <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	Lock nut	Appropriate spanner	Size	Recommended tightening torque	
mm									kN	kg	–	Nm	
M 25x1,5	35	42	26	20	32,5	11	4,3	4	130	0,13	<b>KMTA 5</b> B 40-42	M 6	8
M 30x1,5	40	48	32	20	40,5	11	4,3	5	160	0,16	<b>KMTA 6</b> B 45-50	M 6	8
M 35x1,5	47	53	38	20	45,5	11	4,3	5	190	0,19	<b>KMTA 7</b> B 52-55	M 6	8
M 40x1,5	52	58	42	22	50,5	12	4,3	5	210	0,23	<b>KMTA 8</b> B 58-62	M 6	8
M 45x1,5	58	68	48	22	58	12	4,3	6	240	0,33	<b>KMTA 9</b> B 68-75	M 6	8
M 50x1,5	63	70	52	24	61,5	13	4,3	6	300	0,34	<b>KMTA 10</b> B 68-75	M 6	8
M 55x1,5	70	75	58	24	66,5	13	4,3	6	340	0,37	<b>KMTA 11</b> B 68-75	M 6	8
M 60x1,5	75	84	62	24	74,5	13	5,3	6	380	0,49	<b>KMTA 12</b> B 80-90	M 8	18
M 65x1,5	80	88	68	25	78,5	13	5,3	6	460	0,52	<b>KMTA 13</b> B 80-90	M 8	18
M 70x1,5	86	95	72	26	85	14	5,3	8	490	0,62	<b>KMTA 14</b> B 95-100	M 8	18
M 75x1,5	91	100	77	26	88	13	6,4	8	520	0,66	<b>KMTA 15</b> B 95-100	M 8	18
M 80x2	97	110	83	30	95	16	6,4	8	620	1	<b>KMTA 16</b> B 110-115	M 8	18
M 85x2	102	115	88	32	100	17	6,4	8	650	1,15	<b>KMTA 17</b> B 110-115	M 10	35
M 90x2	110	120	93	32	108	17	6,4	8	680	1,2	<b>KMTA 18</b> B 120-130	M 10	35
M 95x2	114	125	98	32	113	17	6,4	8	710	1,25	<b>KMTA 19</b> B 120-130	M 10	35
M 100x2	120	130	103	32	118	17	6,4	8	740	1,3	<b>KMTA 20</b> B 120-130	M 10	35
M 110x2	132	140	112	32	128	17	6,4	8	800	1,45	<b>KMTA 22</b> B 135-145	M 10	35
M 120x2	142	155	122	32	140	17	6,4	8	860	1,85	<b>KMTA 24</b> B 155-165	M 10	35
M 130x3	156	165	132	32	153	17	6,4	8	920	2	<b>KMTA 26</b> B 155-165	M 10	35
M 140x3	166	180	142	32	165	17	6,4	10	980	2,45	<b>KMTA 28</b> B 180-195	M 10	35
M 150x3	180	190	152	32	175	17	6,4	10	1 040	2,6	<b>KMTA 30</b> B 180-195	M 10	35

Dimensions				Axial load Mass		Designations		Grub screw						
G	d <sub>1</sub>	d <sub>3</sub>	d <sub>4</sub>	B	J <sub>1</sub>	J <sub>2</sub>	N <sub>1</sub>	N <sub>2</sub>	carrying capacity static	Lock nut	Appropriate spanner	Size	Recommended tightening torque	
mm					kN	kg				–		–	Nm	
<b>M 160x3</b>	190	205	162	32	185	17	8,4	10	1 100	3,15	<b>KMTA 32</b>	B 205-220	M 10	35
<b>M 170x3</b>	205	215	172	32	195	17	8,4	10	1 160	3,3	<b>KMTA 34</b>	B 205-220	M 10	35
<b>M 180x3</b>	215	230	182	32	210	17	8,4	10	1 220	3,9	<b>KMTA 36</b>	B 230-245	M 10	35
<b>M 190x3</b>	225	240	192	32	224	17	8,4	10	1 280	4,1	<b>KMTA 38</b>	B 230-245	M 10	35
<b>M 200x3</b>	237	245	202	32	229	17	8,4	10	1 340	3,85	<b>KMTA 40</b>	B 230-245	M 10	35



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