



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 ≤ 180 mm (size ≤ 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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Mounting instructions for individual bearings → skf.com/mount

SKF maintenance products

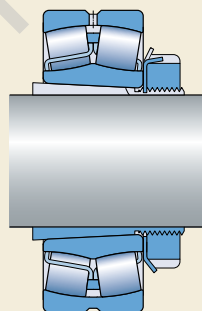
..... → skf.com/mapro

Variants for oil injection

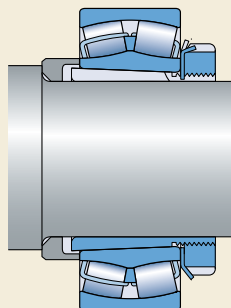
Adapter sleeves with oil supply ducts and distribution grooves are available to enable use of the oil injection method to mount and dismount bearings (OH, OSNW and OSNP series, → **figs. 3 to 6, pages 1271 and 1272**).

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.

Fig. 1

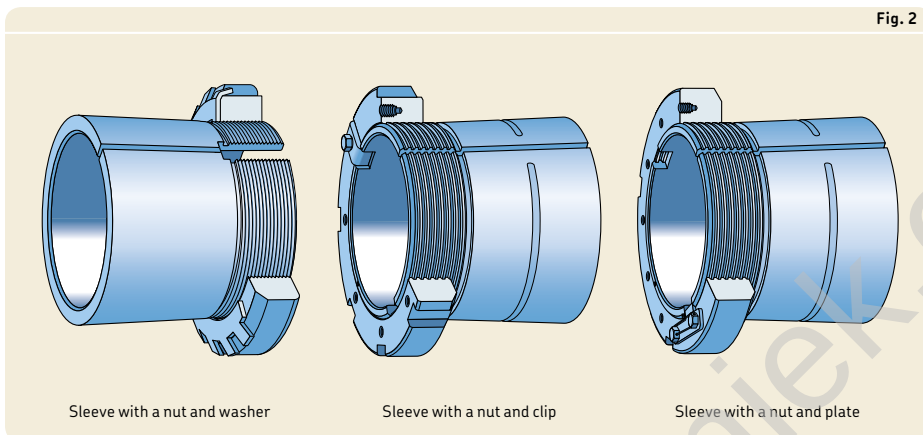


On a plain shaft



On a stepped shaft

Fig. 2

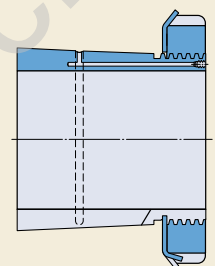


Metric sleeves with a bore diameter ≥ 200 mm (size ≥ 44) are equipped with the necessary ducts and grooves as standard. For metric sleeves with a bore diameter ≥ 140 mm (size ≥ 32) and inch sleeves with a bore diameter $\geq 4 \frac{5}{16}$ in. (size ≥ 26), these features are available on request.

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

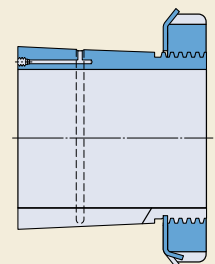
- designation suffix H ($\rightarrow$ fig. 3)
These are the SKF standard adapter sleeves for oil injection. These sleeves have an oil supply duct at the threaded end of the sleeve and a distribution groove on the outside surface.
- no designation suffix ($\rightarrow$ fig. 4)
These sleeves have an oil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

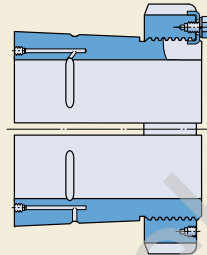


OH .. / OSNW .. / OSNP ..

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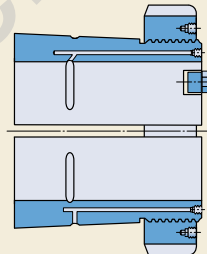
- designation suffix B (→ **fig. 5**)
These sleeves have one or two oil supply ducts at the end opposite the threaded section and a distribution groove in the bore and on the outside surface. Metric and inch sleeves with a bore diameter < 200 mm (size ≤ 40) have one supply duct. Larger metric sleeves 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



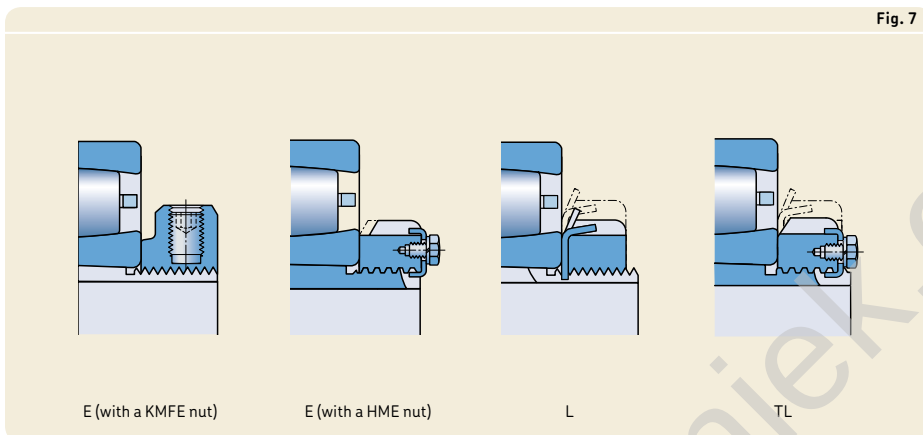
OH..B / OSNW..B / OSNP..B

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

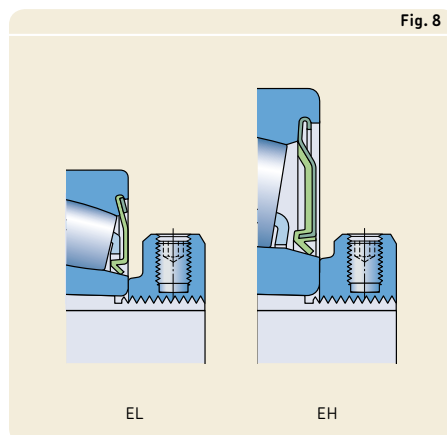
The standard HM .. T lock nut and MB lock washer are replaced with an HM 30 lock nut and an MS 30 locking clip because both have a lower sectional height.

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
Dimension standards	ISO 2982-1, except for the bore diameter of sleeves for inch shafts	ANSI/ABMA Std. 8.2
Tolerances	Bore diameter: JS9 Width: h15	
External taper	1:12 as standard 1:30 as standard in the 40 and 41 dimension series For additional information, contact the SKF application engineering service.	
Thread	Bore diameter < 200 mm (size ≤ 40): metric thread in accordance with ISO 965-3, matching the appertaining SKF lock nut Bore diameter ≥ 200 mm (size ≥ 44): metric trapezoidal thread in accordance with ISO 2903, matching the appertaining SKF lock nut	Bore diameter ≤ 12 in. (size ≤ 64): ANSI/ABMA B1.1 Unified Form Special Bore diameter ≥ 12 7/16 in. (size ≥ 68): ACME thread class 3G
Shaft tolerances	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

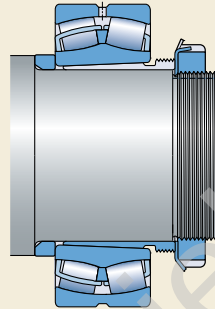
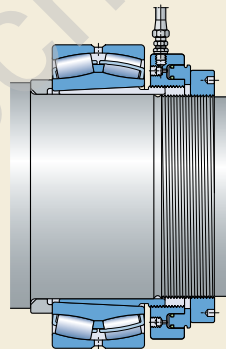


Fig. 10



Designs and variants

Basic design

SKF withdrawal sleeves (→ **fig. 11**) are slit. Sleeves with a bore diameter ≤ 190 mm (size ≤ 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 ≥ 200 mm (size ≥ 44) are equipped with the necessary ducts and grooves as standard. For sleeves with a bore diameter ≥ 150 mm (size ≥ 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.

Fig. 11

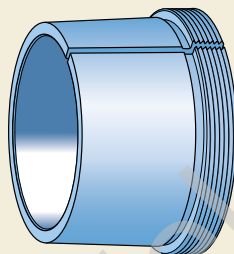
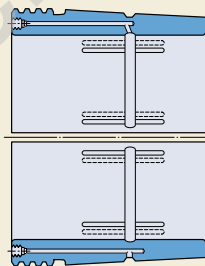


Fig. 12



AOH

Product data

Dimension standards	ISO 2982-1
Tolerances	Bore diameter: JS9 Width: h13
External taper	1:12 as standard 1:30 as standard in the A(O)H 240 and A(O)H 241 series
Thread	Bore diameter ≤ 180 mm (size ≤ 38): metric thread in accordance with ISO 965-3, matching the appropriate SKF nut for dismounting Bore diameter ≥ 190 mm (size ≥ 40): metric trapezoidal thread in accordance with ISO 2903, matching the appropriate SKF nut for dismounting Thread requirements for other lock nuts than listed in the product tables: Bore diameter ≤ 180 mm (size ≤ 38): Tolerance 5H – ISO 965-3 Bore diameter ≥ 190 mm (size ≥ 40): Tolerance 7H – ISO 2903
Shaft tolerances	h9 $\oplus$ Cylindricity: IT5/2 – ISO 1101 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.

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 dismantling 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 ≤ 44) use a lock washer (→ **fig. 14**). Lock nuts with thread diameters $\geq 9 \frac{7}{16}$ in. (size ≥ 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

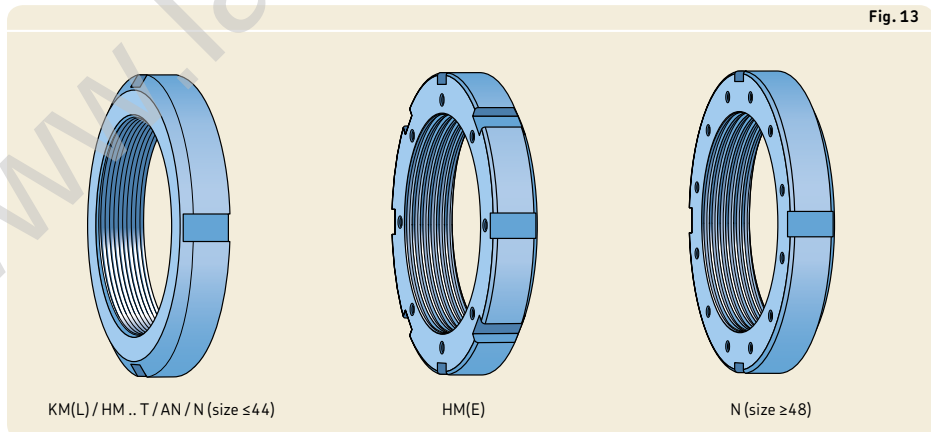
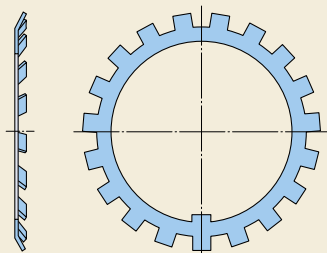
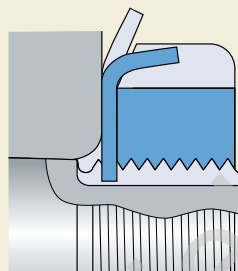


Fig. 14



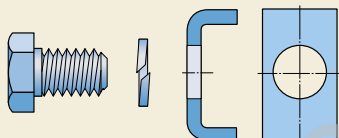
MB / W lock washer

Fig. 17



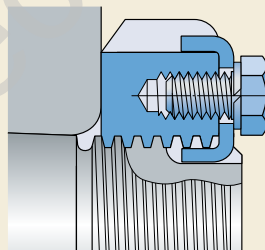
Locking with a washer

Fig. 15



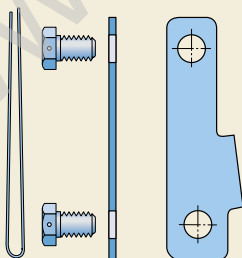
MS locking clip

Fig. 18



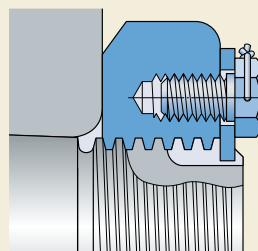
Locking with a clip

Fig. 16



PL locking plate

Fig. 19



Locking with a plate

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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

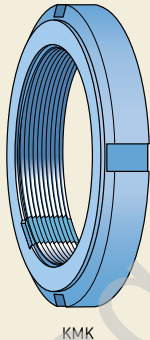


Fig. 22

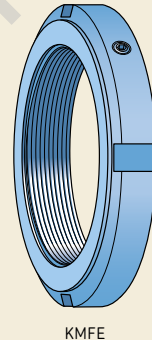


Fig. 21

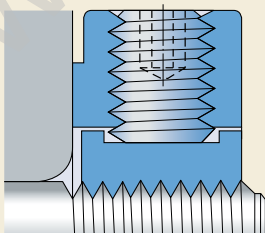
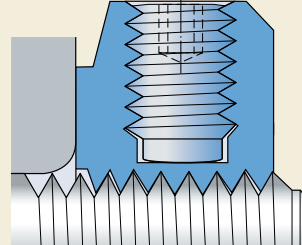


Fig. 23



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

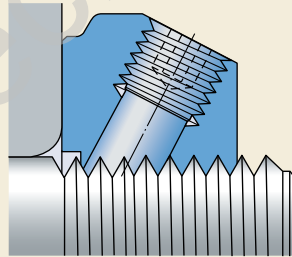
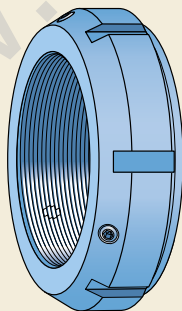
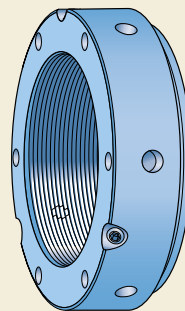


Fig. 24



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

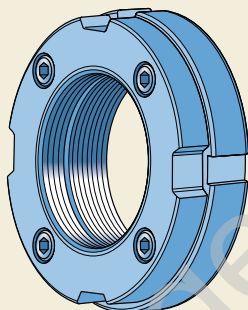
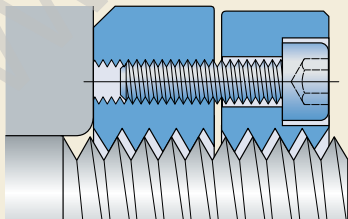


Fig. 27



Product data

	Lock nuts with a lock washer or a locking clip (locking plate)	
	Metric series, KM(L) and HM(E)	Inch series, N and AN
Dimension standards	ISO 2982-2	ANSI/ABMA Std. 8.2
Tolerances	KM(L): 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 HM(E) and HM .. T: 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 (0.002 to 0.012 in.) max., depending on the lock nut size
Mating shaft threads (Recommendation)	Metric thread: Tolerance 6g – ISO 965-3 Metric trapezoidal thread: Tolerance 7e – ISO 2903	ANSI/ABMA Std. 8.2
Loosening torque	– For additional information, contact the SKF application engineering service.	

with an integral locking device KMK series	with a locking screw KMFE series	Precision lock nuts with locking pins KMT(A) series	with axial locking screws 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 Axial run-out locating face / thread: 0,005 mm max., when size ≤ 26	Metric thread: 5H: ISO 965-3 Axial run-out locating face / thread: 0,005 mm max.	
Tolerance 6g: ISO 965-3	Tolerance 6g: ISO 965-3 Thread ≥ 220 mm (size ≥ 44): Trapezoidal thread tolerance 7e – ISO 2903	Tolerance 6g: ISO 965-3	
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.			
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.

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 ≤ 75 mm (size ≤ 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 (→ **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 (→ **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
AOH	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 outside diameter
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** One or two oil supply ducts at the end opposite the threaded section
- D** Split sleeve
- E** Adapter sleeve without key slot, with a KMFE lock nut or standard adapter sleeve with a HME lock nut
- EH** Adapter sleeve without key slot, with a KMFE .. H lock nut
- EL** Adapter sleeve without key slot, with a KMFE .. L lock nut
- G** Thread diameter changed according to revised ISO standard
- H** One oil supply duct at the threaded end
- HB** One or two oil supply ducts at the threaded end
- L** Adapter sleeve with a lock nut with lower sectional height
- TL** Same as L, but with key slot positions for a locking clip

Lock nuts and locking devices

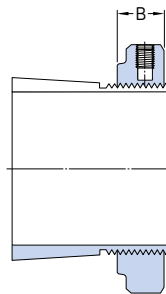
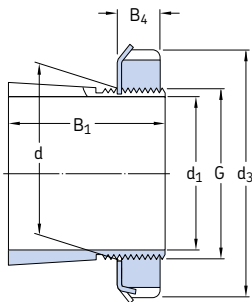
- B** Whitworth thread
- H** KMFE lock nut with a bigger contact diameter
- L** KMFE lock nut with a smaller contact diameter
- P** Sintered material
- T** Trapezoidal thread
- A** Increased plate thickness for MB lock washers

Size identification

Listed in the product tables

16.1 Adapter sleeves for metric shafts

d_1 17 – 100 mm



H

H.. E, H.. EL

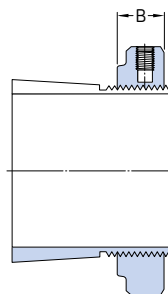
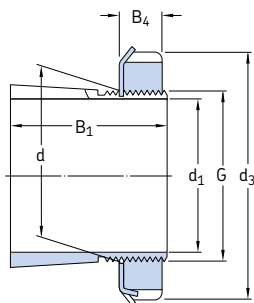
Principal dimensions						Mass	Designations	Appertaining	locking device	Appro-
d_1	d	d_3	B_1	B, B_4	G		Adapter sleeve with nut and locking device	lock nut		prate hydraulic nut
mm						kg	–			
17	20	32	24	7	M 20x1	0,036	H 204	KM 4	MB 4	–
	20	32	28	7	M 20x1	0,04	H 304	KM 4	MB 4	–
	20	32	28	9,5	M 20x1	0,047	H 304 E	KMFE 4	–	–
20	25	38	26	8	M 25x1,5	0,064	H 205	KM 5	MB 5	–
	25	38	29	8	M 25x1,5	0,071	H 305	KM 5	MB 5	–
	25	38	29	10,5	M 25x1,5	0,076	H 305 E	KMFE 5	–	–
	25	38	35	8	M 25x1,5	0,085	H 2305	KM 5	MB 5	–
25	30	45	27	8	M 30x1,5	0,086	H 206	KM 6	MB 6	–
	30	45	31	8	M 30x1,5	0,095	H 306	KM 6	MB 6	–
	30	45	31	10,5	M 30x1,5	0,11	H 306 E	KMFE 6	–	–
	30	45	38	8	M 30x1,5	0,11	H 2306	KM 6	MB 6	–
30	35	52	29	9	M 35x1,5	0,12	H 207	KM 7	MB 7	–
	35	52	35	9	M 35x1,5	0,14	H 307	KM 7	MB 7	–
	35	52	35	11,5	M 35x1,5	0,15	H 307 E	KMFE 7	–	–
	35	52	35	11,5	M 35x1,5	0,16	H 307 EL	KMFE 7 L	–	–
	35	52	43	9	M 35x1,5	0,16	H 2307	KM 7	MB 7	–
35	40	58	31	10	M 40x1,5	0,16	H 208	KM 8	MB 8	–
	40	58	36	10	M 40x1,5	0,17	H 308	KM 8	MB 8	–
	40	58	36	13	M 40x1,5	0,19	H 308 E	KMFE 8	–	–
	40	58	46	10	M 40x1,5	0,22	H 2308	KM 8	MB 8	–
	40	58	46	13	M 40x1,5	0,24	H 2308 E	KMFE 8	–	–
40	45	65	33	11	M 45x1,5	0,21	H 209	KM 9	MB 9	–
	45	65	39	11	M 45x1,5	0,23	H 309	KM 9	MB 9	–
	45	65	39	13	M 45x1,5	0,24	H 309 E	KMFE 9	–	–
	45	65	50	11	M 45x1,5	0,27	H 2309	KM 9	MB 9	–
45	50	70	35	12	M 50x1,5	0,24	H 210	KM 10	MB 10	HMV 10E
	50	70	42	12	M 50x1,5	0,27	H 310	KM 10	MB 10	HMV 10E
	50	70	42	14	M 50x1,5	0,3	H 310 E	KMFE 10	–	HMV 10E
	50	70	55	12	M 50x1,5	0,34	H 2310	KM 10	MB 10	HMV 10E
50	55	75	37	12,5	M 55x2	0,28	H 211	KM 11	MB 11	HMV 11E
	55	75	45	12,5	M 55x2	0,32	H 311	KM 11	MB 11	HMV 11E
	55	75	45	14	M 55x2	0,34	H 311 E	KMFE 11	–	HMV 11E
	55	75	59	12,5	M 55x2	0,39	H 2311	KM 11	MB 11	HMV 11E

Principal dimensions						Mass	Designations	Appertaining	locking device	Appro- priate hydraulic nut
d ₁	d	d ₃	B ₁	B, B ₄	G		Adapter sleeve with nut and locking device	lock 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/L73¹⁾	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

¹⁾ Width reduced to 73 mm

16.1 Adapter sleeves for metric shafts

d_1 110 – 180 mm



H, H..L

H..E, H..EH

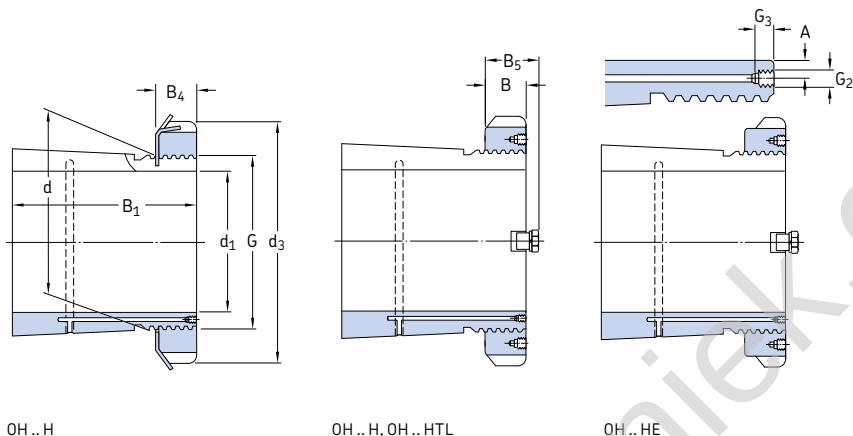
Principal dimensions						Mass	Designations Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	Appro- priate hydraulic nut
d_1	d	d_3	B_1	B, B_4	G					
mm						kg	–			
110	120	145	72	22	M 120x2	1,8	H 3024	KML 24	MBL 24	HMV 24E
	120	145	88	22	M 120x2	2,5	H 3124 L	KML 24	MBL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

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

For oil injection variants not listed, contact SKF.

16.1 Adapter sleeves for metric shafts

d_1 200 – 500 mm



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

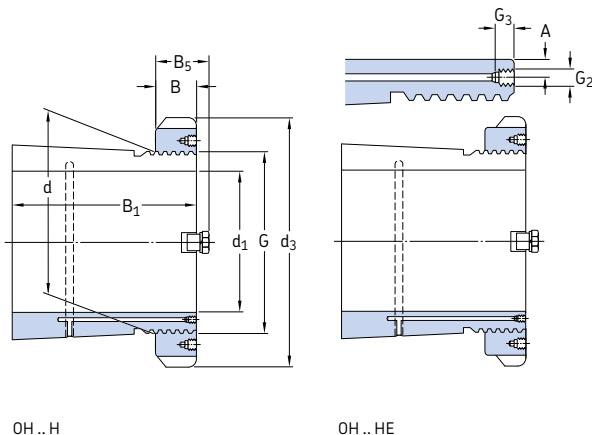
For oil injection variants not listed, contact SKF.

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

For oil injection variants not listed, contact SKF.

16.1 Adapter sleeves for metric shafts

d_1 530 – 1 000 mm



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

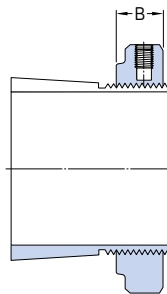
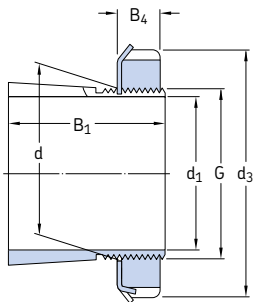
For oil injection variants not listed, contact SKF.

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

For oil injection variants not listed and for bore diameter ≥ 1060 mm, contact SKF.

16.2 Adapter sleeves for inch shafts

d_1 $\frac{3}{4}$ – $3 \frac{3}{16}$ 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	Appertaining	locking	Appro-
d_1	d	d_3	B_1	B	B_4	G		Adapter sleeve with nut and locking device	lock nut	device	prate hydraulic nut
in./mm	mm						kg	–			
$\frac{3}{4}$ 19,05	25	38	26	7	8	M 25x1,5	0,07	HE 205	KM 5	MB 5	–
	25	38	29	7	8	M 25x1,5	0,08	HE 305	KM 5	MB 5	–
	25	38	29	10,5	–	M 25x1,5	0,088	HE 305 E	KMFE 5	–	–
	25	38	35	7	8	M 25x1,5	0,09	HE 2305	KM 5	MB 5	–
$\frac{15}{16}$ 23,813	30	45	27	7	8	M 30x1,5	0,1	HA 206	KM 6	MB 6	–
	30	45	31	7	8	M 30x1,5	0,12	HA 306	KM 6	MB 6	–
	30	45	31	10,5	–	M 30x1,5	0,13	HA 306 E	KMFE 6	–	–
	30	45	38	7	8	M 30x1,5	0,13	HA 2306	KM 6	MB 6	–
1 25,4	30	45	27	7	8	M 30x1,5	0,08	HE 206	KM 6	MB 6	–
	30	45	31	7	8	M 30x1,5	0,1	HE 306	KM 6	MB 6	–
	30	45	31	10,5	–	M 30x1,5	0,11	HE 306 E	KMFE 6	–	–
	30	45	38	7	8	M 30x1,5	0,11	HE 2306	KM 6	MB 6	–
$\frac{13}{16}$ 30,163	35	52	29	8	9	M 35x1,5	0,12	HA 207	KM 7	MB 7	–
	35	52	35	8	9	M 35x1,5	0,14	HA 307	KM 7	MB 7	–
	35	52	35	11,5	–	M 35x1,5	0,15	HA 307 EL	KMFE 7 L	–	–
	35	52	35	11,5	–	M 35x1,5	0,15	HA 307 E	KMFE 7	–	–
$\frac{11}{4}$ 31,75	35	52	43	8	9	M 35x1,5	0,16	HA 2307	KM 7	MB 7	–
	40	58	31	9	10	M 40x1,5	0,19	HE 208	KM 8	MB 8	–
	40	58	36	9	10	M 40x1,5	0,22	HE 308	KM 8	MB 8	–
	40	58	36	13	–	M 40x1,5	0,19	HE 308 E	KMFE 8	–	–
$\frac{17}{16}$ 36,513	40	58	46	9	10	M 40x1,5	0,28	HE 2308	KM 8	MB 8	–
	40	58	46	13	–	M 40x1,5	0,3	HE 2308 E	KMFE 8	–	–
	45	65	33	10	11	M 45x1,5	0,26	HA 209	KM 9	MB 9	–
	45	65	39	10	11	M 45x1,5	0,29	HA 309	KM 9	MB 9	–
$\frac{11}{2}$ 38,1	45	65	39	13	–	M 45x1,5	0,31	HA 309 E	KMFE 9	–	–
	45	65	50	10	11	M 45x1,5	0,35	HA 2309	KM 9	MB 9	–
	45	65	33	10	11	M 45x1,5	0,2	HE 209	KM 9	MB 9	–
	45	65	39	10	11	M 45x1,5	0,24	HE 309	KM 9	MB 9	–
$\frac{113}{16}$ 42,863	45	65	39	13	–	M 45x1,5	0,31	HE 309 E	KMFE 9	–	–
	45	65	50	10	11	M 45x1,5	0,31	HE 2309	KM 9	MB 9	–
	50	70	35	11	12	M 50x1,5	0,28	HA 210	KM 10	MB 10	HMV 10E
	50	70	42	11	12	M 50x1,5	0,32	HA 310	KM 10	MB 10	HMV 10E
$\frac{113}{16}$ 42,863	50	70	42	14	–	M 50x1,5	0,32	HA 310 E	KMFE 10	–	HMV 10E
	50	70	55	11	12	M 50x1,5	0,4	HA 2310	KM 10	MB 10	HMV 10E

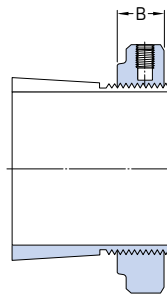
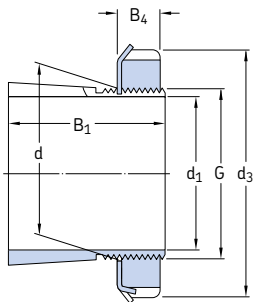
Principal dimensions							Mass	Designations	Adapter sleeve with nut and locking device	Appertaining lock nut	locking device	Appropriate hydraulic nut
d ₁	d	d ₃	B ₁	B	B ₄	G						
in./mm	mm						kg	–				
1 3/4 44,45	50	70	35	11	12	M 50x1,5	0,26	HE 210	KM 10	MB 10	HMV 10E	
	50	70	42	11	12	M 50x1,5	0,29	HE 310	KM 10	MB 10	HMV 10E	
	50	70	42	14	–	M 50x1,5	0,29	HE 310 E	KMFE 10	–	HMV 10E	
	50	70	55	11	12	M 50x1,5	0,36	HE 2310	KM 10	MB 10	HMV 10E	
1 15/16 49,213	55	75	37	11	12,5	M 55x2	0,3	HA 211	KM 11	MB 11	HMV 11E	
	55	75	45	11	12,5	M 55x2	0,34	HA 311	KM 11	MB 11	HMV 11E	
	55	75	45	14	–	M 55x2	0,35	HA 311 E	KMFE 11	–	HMV 11E	
	55	75	59	11	12,5	M 55x2	0,42	HA 2311	KM 11	MB 11	HMV 11E	
2 50,8	55	75	37	11	12,5	W 55x1/19	0,26	HE 211 B	HM 11	MB 11	–	
	55	75	45	11	12,5	W 55x1/19	0,29	HE 311 B	HM 11	MB 11	–	
	55	75	45	14	–	W 55x1/19	0,29	HE 311 BE	KMFE 11 B	–	–	
	55	75	59	11	12,5	W 55x1/19	0,36	HE 2311 B	HM 11	MB 11	–	
2 3/16 55,563	65	85	40	12	13,5	M 65x2	0,49	HA 213	KM 13	MB 13	HMV 13E	
	65	85	50	12	13,5	M 65x2	0,58	HA 313	KM 13	MB 13	HMV 13E	
	65	85	50	15	–	M 65x2	0,59	HA 313 E	KMFE 13	–	HMV 13E	
	65	85	65	12	13,5	M 65x2	0,75	HA 2313	KM 13	MB 13	HMV 13E	
	65	85	65	15	–	M 65x2	0,76	HA 2313 E	KMFE 13	–	HMV 13E	
2 1/4 57,15	65	85	40	12	13,5	M 65x2	0,44	HE 213	KM 13	MB 13	HMV 13E	
	65	85	50	12	13,5	M 65x2	0,52	HE 313	KM 13	MB 13	HMV 13E	
	65	85	50	15	–	M 65x2	0,53	HE 313 E	KMFE 13	–	HMV 13E	
	65	85	65	12	13,5	M 65x2	0,65	HE 2313	KM 13	MB 13	HMV 13E	
	65	85	65	15	–	M 65x2	0,66	HE 2313 E	KMFE 13	–	HMV 13E	
2 7/16 61,913	75	98	43	13	15	M 75x2	0,75	HA 215	KM 15	MB 15	HMV 15E	
	75	98	55	13	15	M 75x2	0,91	HA 315	KM 15	MB 15	HMV 15E	
	75	98	55	16	–	M 75x2	0,93	HA 315 E	KMFE 15	–	HMV 15E	
	75	98	73	13	15	M 75x2	1,15	HA 2315	KM 15	MB 15	HMV 15E	
2 1/2 63,5	75	98	43	13	15	M 75x2	0,7	HE 215	KM 15	MB 15	HMV 15E	
	75	98	55	13	15	M 75x2	0,85	HE 315	KM 15	MB 15	HMV 15E	
	75	98	55	16	–	M 75x2	0,87	HE 315 E	KMFE 15	–	HMV 15E	
	75	98	73	13	15	M 75x2	1,1	HE 2315	KM 15	MB 15	HMV 15E	
2 11/16 68,263	80	105	46	15	17	M 80x2	0,87	HA 216	KM 16	MB 16	HMV 16E	
	80	105	59	15	17	M 80x2	1,05	HA 316	KM 16	MB 16	HMV 16E	
	80	105	59	18	–	M 80x2	1,05	HA 316 E	KMFE 16	–	HMV 16E	
	80	105	78	15	17	M 80x2	1,3	HA 2316	KM 16	MB 16	HMV 16E	
2 3/4 69,85	80	105	46	15	17	M 80x2	0,81	HE 216	KM 16	MB 16	HMV 16E	
	80	105	59	15	17	M 80x2	0,97	HE 316	KM 16	MB 16	HMV 16E	
	80	105	59	18	–	M 80x2	0,98	HE 316 E	KMFE 16	–	HMV 16E	
	80	105	78	15	17	M 80x2	1,2	HE 2316	KM 16	MB 16	HMV 16E	
2 15/16 74,613	85	110	50	16	18	M 85x2	0,94	HA 217	KM 17	MB 17	HMV 17E	
	85	110	63	16	18	M 85x2	1,1	HA 317	KM 17	MB 17	HMV 17E	
	85	110	63	19	–	M 85x2	1,2	HA 317 E	KMFE 17	–	HMV 17E	
	85	110	82	16	18	M 85x2	1,4	HA 2317	KM 17	MB 17	HMV 17E	
3 76,2	85	110	50	16	18	M 85x2	0,87	HE 217	KM 17	MB 17	HMV 17E	
	85	110	63	16	18	M 85x2	1	HE 317	KM 17	MB 17	HMV 17E	
	85	110	63	19	–	M 85x2	0,99	HE 317 E	KMFE 17	–	HMV 17E	
	85	110	82	16	18	M 85x2	1,3	HE 2317	KM 17	MB 17	HMV 17E	
3 3/16 80,963	90	120	52	16	18	M 90x2	1,05	HA 218	KM 18	MB 18	HMV 18E	
	90	120	65	16	18	M 90x2	1,25	HA 318	KM 18	MB 18	HMV 18E	
	90	120	65	19	–	M 90x2	1,25	HA 318 E	KMFE 18	–	HMV 18E	
	90	120	73	19	–	M 90x2	1,4	HA 2318 E/L73¹⁾	KMFE 18	–	HMV 18E	
	90	120	86	16	18	M 90x2	1,5	HA 2318	KM 18	MB 18	HMV 18E	

¹⁾ Width reduced to 73 mm

16.2 Adapter sleeves for inch shafts

d_1 3 1/4 – 5 1/4 in.

82,55 – 133,35 mm



HE, HA, HA .. L

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

Principal dimensions							Mass	Designations	Appertaining	locking	Appro-
d_1	d	d_3	B_1	B	B_4	G		Adapter sleeve with nut and locking device	lock nut	device	prate 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 ¹⁾	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
	100	130	97	21	–	M 100x2	2,2	HE 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
	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
4 101,6	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
	110	145	105	21,5	–	M 110x2	2,4	HE 2322 E	KMFE 22	–	HMV 22E

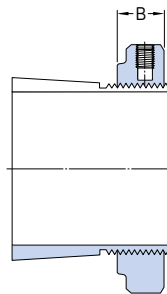
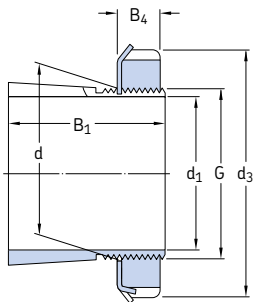
¹⁾ Width reduced to 73 mm

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

16.2 Adapter sleeves for inch shafts

d_1 5 ⁷/₁₆ – 7 ³/₁₆ in.

139,113 – 182,563 mm



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

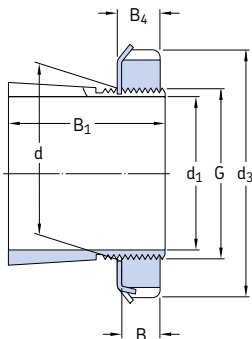
HA .. E, HE .. E

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

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

16.3 Adapter sleeves with inch dimensions

d_1 $\frac{3}{4}$ – $4 \frac{3}{16}$ in.
19,05 – 106,363 mm



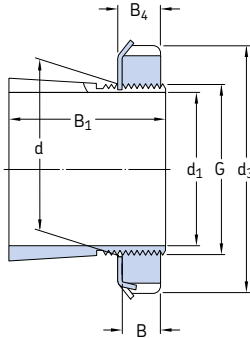
Principal dimensions						Thread	Mass	Designations		Appertaining lock nut	locking device	Appropriate hydraulic nut
d ₁	d	d ₃	B ₁	B	B ₄	G	Threads per inch	Adapter sleeve with nut and locking device				
in./mm	mm	in.				in.	–	kg	–			
3/4 19,05	25	1 9/16	1,269	0,416	0,456	0,969	32	0,1	SNW 5 x 3/4	N 05	W 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	–
	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 3/8 34,925	40	2 1/4	1,504	0,448	0,496	1,563	18	0,19	SNW 8 x 1 3/8	N 08	W 08	–
	45	2 17/32	1,584	0,448	0,496	1,767	18	0,28	SNW 9 x 1 3/8	N 09	W 09	–
1 5/16 33,338	40	2 1/4	1,504	0,448	0,496	1,563	18	0,19	SNW 8 x 1 5/16	N 08	W 08	–
	45	2 17/32	1,584	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	1,584	0,448	0,496	1,767	18	0,28	SNW 9 x 1 7/16	N 09	W 09	–
	45	2 17/32	2,133	0,448	0,496	1,767	18	0,32	SNW 109 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
	50	2 11/16	2,394	0,51	0,558	1,967	18	0,39	SNW 110 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 10 x 1 3/4	N 10	W 10	HMVC 10E
	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
1 13/16 46,038	55	2 31/32	1,845	0,51	0,563	2,157	18	0,36	SNW 11 x 1 13/16	N 11	W 11	HMVC 11E

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	Appertaining locking device	Appropriate hydraulic nut
in./mm	mm	in.				in.	–	kg	–			
1 7/8 47,625	55	2 31/32	1,845	0,51	0,563	2,157	18	0,36	SNW 11 x 1 7/8	N 11	W 11	HMVC 11E
1 15/16 49,213	55	2 31/32	1,845	0,51	0,563	2,157	18	0,36	SNW 11 x 1 15/16	N 11	W 11	HMVC 11E
	55	2 31/32	2,516	0,51	0,563	2,157	18	0,43	SNW 111 x 1 15/16	N 11	W 11	HMVC 11E
2 50,8	55	2 31/32	1,845	0,51	0,563	2,157	18	0,36	SNW 11 x 2	N 11	W 11	HMVC 11E
	55	2 31/32	2,516	0,51	0,563	2,157	18	0,43	SNW 111 x 2	N 11	W 11	HMVC 11E
	65	3 3/8	2,1	0,573	0,626	2,548	18	0,64	SNW 13 x 2	N 13	W 13	HMVC 13E
2 1/16 52,388	60	3 5/32	2,659	0,541	0,594	2,36	18	0,73	SNW 112 x 2 1/16	N 12	W 12	HMVC 12E
2 3/16 55,563	65	3 3/8	2,1	0,573	0,626	2,548	18	0,64	SNW 13 x 2 3/16	N 13	W 13	HMVC 13E
	65	3 3/8	2,771	0,573	0,626	2,548	18	0,79	SNW 113 x 2 3/16	N 13	W 13	HMVC 13E
2 1/4 57,15	65	3 3/8	2,1	0,573	0,626	2,548	18	0,64	SNW 13 x 2 1/4	N 13	W 13	HMVC 13E
	65	3 3/8	2,771	0,573	0,626	2,548	18	0,79	SNW 113 x 2 1/4	N 13	W 13	HMVC 13E
2 5/16 58,738	65	3 3/8	2,1	0,573	0,626	2,548	18	0,64	SNW 13 x 2 5/16	N 13	W 13	HMVC 13E
2 3/8 60,325	75	3 3/8	2,296	0,604	0,666	2,933	12	1	SNW 15 x 2 3/8	AN 15	W 15	HMVC 15E
2 7/16 61,913	75	3 7/8	2,296	0,604	0,666	2,933	12	1	SNW 15 x 2 7/16	AN 15	W 15	HMVC 15E
	75	3 7/8	3,084	0,604	0,666	2,933	12	1,35	SNW 115 x 2 7/16	AN 15	W 15	HMVC 15E
2 11/16 68,263	80	4 5/32	2,376	0,604	0,666	3,137	12	1,1	SNW 16 X 2 11/16	AN 16	W 16	HMVC 16E
	80	4 5/32	3,204	0,604	0,666	3,137	12	1,45	SNW 116 X 2 11/16	AN 16	W 16	HMVC 16E
2 3/4 69,85	80	4 5/32	2,376	0,604	0,666	3,137	12	1,1	SNW 16 X 2 3/4	AN 16	W 16	HMVC 16E
2 5/8 74,613	85	4 13/32	2,486	0,635	0,697	3,34	12	1,3	SNW 17 x 2 5/8	AN 17	W 17	HMVC 17E
	85	4 13/32	3,312	0,635	0,697	3,34	12	1,55	SNW 117 x 2 5/8	AN 17	W 17	HMVC 17E
3 76,2	85	4 13/32	2,486	0,635	0,697	3,34	12	1,3	SNW 17 x 3	AN 17	W 17	HMVC 17E
	85	4 13/32	3,312	0,635	0,697	3,34	12	1,55	SNW 117 x 3	AN 17	W 17	HMVC 17E
3 1/16 80,963	90	4 21/32	2,646	0,698	0,782	3,527	12	1,4	SNW 18 x 3 1/16	AN 18	W 18	HMVC 18E
	90	4 21/32	3,553	0,698	0,782	3,527	12	1,8	SNW 118 x 3 1/16	AN 18	W 18	HMVC 18E
3 1/4 82,55	90	4 21/32	2,645	0,698	0,782	3,527	12	1,4	SNW 18 x 3 1/4	AN 18	W 18	HMVC 18E
3 5/16 84,138	95	4 15/16	2,76	0,729	0,813	3,73	12	1,85	SNW 19 x 3 5/16	AN 19	W 19	HMVC 19E
	95	4 15/16	3,702	0,729	0,813	3,73	12	2,2	SNW 119 x 3 5/16	AN 19	W 19	HMVC 19E
3 7/16 87,313	100	5 3/16	2,869	0,76	0,844	3,918	12	2	SNW 20 x 3 7/16	AN 20	W 20	HMVC 20E
	100	5 3/16	3,971	0,76	0,844	3,918	12	2,85	SNW 120 x 3 7/16	AN 20	W 20	HMVC 20E
3 1/2 88,9	100	5 3/16	2,869	0,76	0,844	3,918	12	2	SNW 20 x 3 1/2	AN 20	W 20	HMVC 20E
	100	5 3/16	3,971	0,76	0,844	3,918	12	2,85	SNW 120 x 3 1/2	AN 20	W 20	HMVC 20E
3 11/16 93,663	105	5 7/16	2,987	0,76	0,844	4,122	12	2,05	SNW 21 x 3 11/16	AN 21	W 21	HMVC 21E
	110	5 23/32	3,206	0,76	0,844	4,325	12	2,25	SNW 121 x 3 11/16	AN 21	W 21	HMVC 21E
3 15/16 100,013	110	5 23/32	3,206	0,791	0,906	4,325	12	2,25	SNW 22 x 3 15/16	AN 22	W 22	HMVC 22E
	110	5 23/32	4,348	0,791	0,906	4,325	12	2,95	SNW 122 x 3 15/16	AN 22	W 22	HMVC 22E
4 101,6	110	5 23/32	3,206	0,791	0,906	4,325	12	2,25	SNW 22 x 4	AN 22	W 22	HMVC 22E
4 3/16 106,363	120	5 11/16	2,947	0,823	0,938	4,716	12	2,8	SNW 3024 x 4 3/16	N 024	W 024	HMVC 24E
	120	5 11/16	3,466	0,823	0,938	4,716	12	2,65	SNW 3124 x 4 3/16	N 024	W 024	HMVC 24E
	120	6 1/8	3,466	0,823	0,938	4,716	12	3	SNW 24 x 4 3/16	AN 24	W 24	HMVC 24E
	120	6 1/8	4,648	0,823	0,938	4,716	12	3,55	SNW 124 x 4 3/16	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	Appertaining locking device	Appropriate hydraulic nut
in./mm	mm	in.				in.	–	kg	–			
4 1/4 107,95	120 120	5 11/16 6 1/8	3,466 3,466	0,823 0,823	0,938 0,938	4,716 4,716	12 12	2,65 3	SNW 3124 x 4 1/4 SNW 24 x 4 1/4	N 024 AN 24	W 024 W 24	HMVC 24E HMVC 24E
4 7/16 112,713	130 130 130 130	6 1/8 6 1/8 6 3/4 6 3/4	3,237 3,762 3,762 4,982	0,885 0,885 0,885 0,885	1 1 1 1	5,106 5,106 5,106 5,106	12 12 12 12	3,4 3,8 4,4 5,65	SNW 3026 x 4 7/16 SNW 3126 x 4 7/16 SNW 26 x 4 7/16 SNW 126 x 4 7/16	N 026 N 026 AN 26 AN 26	W 026 W 026 W 26 W 26	HMVC 26E HMVC 26E HMVC 26E HMVC 26E
4 1/2 114,3	130 130 130	6 1/8 6 1/8 6 3/4	3,237 3,762 3,762	0,885 0,885 0,885	1 1 1	5,106 5,106 5,106	12 12 12	3,4 3,8 4,4	SNW 3026 x 4 1/2 SNW 3126 x 4 1/2 SNW 26 x 4 1/2	N 026 N 026 AN 26	W 026 W 026 W 26	HMVC 26E HMVC 26E HMVC 26E
4 15/16 125,413	140 140 140 140	6 1/2 6 1/2 7 3/32 7 3/32	3,34 3,981 3,981 5,323	0,948 0,948 0,948 0,948	1,063 1,063 1,063 1,063	5,497 5,497 5,497 5,497	12 12 12 12	3,8 4 4,75 5,9	SNW 3028 x 4 15/16 SNW 3128 x 4 15/16 SNW 28 x 4 15/16 SNW 128 x 4 15/16	N 028 N 028 AN 28 AN 28	W 028 W 028 W 28 W 28	HMVC 28E HMVC 28E HMVC 28E HMVC 28E
5 127	140 140 140	6 1/2 6 1/2 7 3/32	3,34 3,981 3,981	0,948 0,948 0,948	1,063 1,063 1,063	5,497 5,497 5,497	12 12 12	3,85 4 4,75	SNW 3028 x 5 SNW 3128 x 5 SNW 28 x 5	N 028 N 028 AN 28	W 028 W 028 W 28	HMVC 28E HMVC 28E HMVC 28E
5 3/16 131,763	150 150 150 150	7 1/8 7 1/8 7 11/16 7 11/16	3,492 4,241 4,241 5,621	0,979 0,979 0,979 0,979	1,094 1,094 1,125 1,125	5,888 5,888 5,888 5,888	12 12 12 12	4,45 6,2 7,25 8,15	SNW 3030 x 5 3/16 SNW 3130 x 5 3/16 SNW 30 x 5 3/16 SNW 130 x 5 3/16	N 030 N 030 AN 30 AN 30	W 030 W 030 W 30 W 30	HMVC 30E HMVC 30E HMVC 30E 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	160 160 160 160	7 1/2 7 1/2 8 1/16 8 1/16	3,711 4,578 4,578 5,92	1,041 1,041 1,041 1,041	1,156 1,156 1,187 1,187	6,284 6,284 6,284 6,284	8 8 8 8	5,45 6,1 7,05 8,15	SNW 3032 x 5 7/16 SNW 3132 x 5 7/16 SNW 32 x 5 7/16 SNW 132 x 5 7/16	N 032 N 032 AN 32 AN 32	W 032 W 032 W 32 W 32	HMVC 32E HMVC 32E HMVC 32E 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.

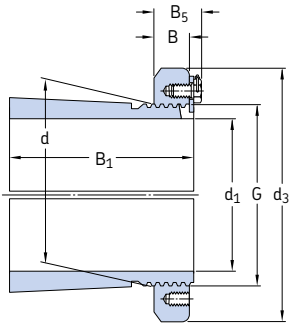
Principal dimensions						Thread	Mass	Designations	Appertaining locking device	Appropriate hydraulic nut
d ₁	d	d ₃	B ₁	B	B ₄	G	Threads per inch	Adapter sleeve with nut and locking device		
in./mm	mm	in.				in.	—	kg	—	
5¹⁵/16	170	7 ⁷ / ₈	4,019	1,073	1,188	6,659	8	6,1	SNW 3034 x 5 15/16	N 034 W 034 HMVC 34E
150,813	170	7 ⁷ / ₈	4,847	1,073	1,188	6,659	8	7,3	SNW 3134 x 5 15/16	N 034 W 034 HMVC 34E
	170	8 ²¹ / ₃₂	4,847	1,073	1,219	6,659	8	8,85	SNW 34 x 5 15/16	AN 34 W 34 HMVC 34E
	170	8 ²¹ / ₃₂	6,188	1,073	1,219	6,659	8	9,55	SNW 134 x 5 15/16	AN 34 W 34 HMVC 34E
6	170	7 ⁷ / ₈	4,019	1,073	1,188	6,659	8	6,1	SNW 3034 x 6	N 034 W 034 HMVC 34E
152,4	170	7 ⁷ / ₈	4,847	1,073	1,188	6,659	8	7,3	SNW 3134 x 6	N 034 W 034 HMVC 34E
	170	8 ²¹ / ₃₂	4,847	1,073	1,219	6,659	8	8,85	SNW 34 x 6	AN 34 W 34 HMVC 34E
	170	8 ²¹ / ₃₂	6,188	1,073	1,219	6,659	8	9,55	SNW 134 x 6	AN 34 W 34 HMVC 34E
6⁷/16	180	8 ¹ / ₄	4,337	1,104	1,219	7,066	8	6,8	SNW 3036 x 6 7/16	N 036 W 036 HMVC 36E
163,513	180	8 ¹ / ₄	5,038	1,104	1,219	7,066	8	7,75	SNW 3136 x 6 7/16	N 036 W 036 HMVC 36E
	180	9 ¹ / ₁₆	5,038	1,104	1,25	7,066	8	9,3	SNW 36 x 6 7/16	AN 36 W 36 HMVC 36E
	180	9 ¹ / ₁₆	6,456	1,104	1,25	7,066	8	10	SNW 136 x 6 7/16	AN 36 W 36 HMVC 36E
6¹/2	180	8 ¹ / ₄	5,038	1,104	1,219	7,066	8	7,75	SNW 3136 x 6 1/2	N 036 W 036 HMVC 36E
165,1	180	9 ¹ / ₁₆	5,038	1,104	1,25	7,066	8	9,3	SNW 36 x 6 1/2	AN 36 W 36 HMVC 36E
6¹⁵/16	190	8 ¹¹ / ₁₆	4,412	1,135	1,25	7,472	8	7,5	SNW 3038 x 6 15/16	N 038 W 038 HMVC 38E
176,213	190	8 ¹¹ / ₁₆	5,261	1,135	1,25	7,472	8	8,95	SNW 3138 x 6 15/16	N 038 W 038 HMVC 38E
	190	9 ¹⁵ / ₃₂	5,261	1,135	1,281	7,472	8	10,5	SNW 38 x 6 15/16	AN 38 W 38 HMVC 38E
	190	9 ¹⁵ / ₃₂	6,758	1,135	1,281	7,472	8	12,5	SNW 138 x 6 15/16	AN 38 W 38 HMVC 38E
7	190	8 ¹¹ / ₁₆	4,412	1,135	1,25	7,472	8	7,5	SNW 3038 x 7	N 038 W 038 HMVC 38E
177,8	190	8 ¹¹ / ₁₆	5,261	1,135	1,25	7,472	8	8,95	SNW 3138 x 7	N 038 W 038 HMVC 38E
	190	9 ¹⁵ / ₃₂	5,261	1,135	1,281	7,472	8	10,5	SNW 38 x 7	AN 38 W 38 HMVC 38E
	190	9 ¹⁵ / ₃₂	6,758	1,135	1,281	7,472	8	12,5	SNW 138 x 7	AN 38 W 38 HMVC 38E
7³/16	200	9 ⁷ / ₁₆	4,75	1,198	1,313	7,847	8	8,85	SNW 3040 x 7 3/16	N 040 W 040 HMVC 40E
182,563	200	9 ⁷ / ₁₆	5,484	1,198	1,313	7,847	8	13	SNW 3140 x 7 3/16	N 040 W 040 HMVC 40E
	200	9 ²⁷ / ₃₂	5,484	1,198	1,344	7,847	8	14	SNW 40 x 7 3/16	AN 40 W 40 HMVC 40E
	200	9 ²⁷ / ₃₂	7,095	1,198	1,344	7,847	8	16	SNW 140 x 7 3/16	AN 40 W 40 HMVC 40E
7¹⁵/16	220	10 ¹ / ₄	5,13	1,26	1,375	8,628	8	11	SNW 3044 x 7 15/16	N 044 W 044 HMVC 44E
201,613	220	10 ¹ / ₄	5,901	1,26	1,375	8,628	8	13	SNW 3144 x 7 15/16	N 044 W 044 HMVC 44E
	220	11	5,901	1,26	1,406	8,628	8	14,5	SNW 44 x 7 15/16	N 44 W 44 HMVC 44E
	220	11	7,287	1,26	1,406	8,628	8	21	SNW 144 x 7 15/16	N 44 W 44 HMVC 44E
8	220	10 ¹ / ₄	5,13	1,26	1,375	8,628	8	11	SNW 3044 x 8	N 044 W 044 HMVC 44E
203,2	220	10 ¹ / ₄	5,901	1,26	1,375	8,628	8	13	SNW 3144 x 8	N 044 W 044 HMVC 44E
	220	11	5,901	1,26	1,406	8,628	8	14,5	SNW 44 x 8	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	Appertaining	Appropriate		
d ₁	d	d ₃	B ₁	B	B ₅	G	Threads per inch	Adapter sleeve with nut and locking device	lock nut	locking device	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
10 254	280	13	6,191	1,51	1,846	11,004	6	20,5	SNP 3056 x 10	N 056	PL 56	HMVC 56E
	280	13	7,766	1,51	1,846	11,004	6	21	SNP 3156 x 10	N 056	PL 56	HMVC 56E
10 7/16 265,113	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
	280	13	8,947	1,51	1,846	11,004	6	27	SNP 3256 x 10 7/16	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
10 15/16 277,813	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
	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
11 279,4	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
11 15/16 303,213	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
	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
12 304,8	320	15	6,946	1,666	2,034	12,562	6	29,5	SNP 3064 x 12	N 064	PL 64	HMVC 64E
	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

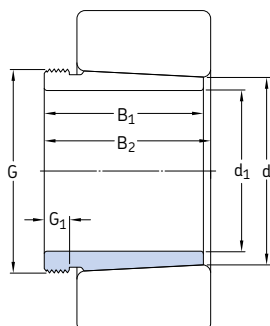
For oil injection variants, contact SKF.

Principal dimensions						Thread	Mass	Designations	Appertaining	locking	Appro-	
d ₁	d	d ₃	B ₁	B	B ₅	G	Threads per inch	Adapter sleeve with nut and locking device	lock nut	device	prate hydraulic nut	
in./mm	mm	in.				in.	–	kg	–			
12 7/16 315,913	340	15 3/4	7,543	1,791	2,159	13,303	5	35,5	SNP 3068 x 12 7/16	N 068	PL 68	HMVC 68E
	340	15 3/4	9,787	1,791	2,159	13,303	5	42,5	SNP 3168 x 12 7/16	N 068	PL 68	HMVC 68E
	340	15 3/4	11,126	1,791	2,159	13,303	5	47,5	SNP 3268 x 12 7/16	N 068	PL 68	HMVC 68E
13 7/16 341,313	360	16 1/2	7,579	1,791	2,159	14,134	5	39	SNP 3072 x 13 7/16	N 072	PL 72	HMVC 72E
	360	16 1/2	9,862	1,791	2,159	14,134	5	54,5	SNP 3172 x 13 7/16	N 072	PL 72	HMVC 72E
	360	16 1/2	11,437	1,791	2,159	14,134	5	61,5	SNP 3272 x 13 7/16	N 072	PL 72	HMVC 72E
13 15/16 354,013	380	17 3/4	7,743	1,916	2,364	14,921	5	43	SNP 3076 x 13 15/16	N 076	PL 76	HMVC 76E
	380	17 3/4	10,066	1,916	2,364	14,921	5	57	SNP 3176 x 13 15/16	N 076	PL 76	HMVC 76E
	380	17 3/4	11,877	1,916	2,364	14,921	5	66	SNP 3276 x 13 15/16	N 076	PL 76	HMVC 76E
14 355,6	380	17 3/4	7,743	1,916	2,364	14,921	5	43	SNP 3076 x 14	N 076	PL 76	HMVC 76E
	380	17 3/4	10,066	1,916	2,364	14,921	5	57	SNP 3176 x 14	N 076	PL 76	HMVC 76E
	380	17 3/4	11,877	1,916	2,364	14,921	5	66	SNP 3276 x 14	N 076	PL 76	HMVC 76E
15 381	400	18 1/2	8,411	2,073	2,521	15,709	5	45,5	SNP 3080 x 15	N 080	PL 80	HMVC 80E
	400	18 1/2	10,459	2,073	2,521	15,709	5	63,5	SNP 3180 x 15	N 080	PL 80	HMVC 80E
	400	18 1/2	12,664	2,073	2,521	15,709	5	75	SNP 3280 x 15	N 080	PL 80	HMVC 80E
15 3/4 400,05	420	19 5/16	8,498	2,073	2,521	16,496	5	47,5	SNP 3084 x 15 3/4	N 084	PL 84	HMVC 84E
	420	19 5/16	11,412	2,073	2,521	16,496	5	66	SNP 3184 x 15 3/4	N 084	PL 84	HMVC 84E
	420	19 5/16	13,302	2,073	2,521	16,496	5	75	SNP 3284 x 15 3/4	N 084	PL 84	HMVC 84E
16 1/2 419,1	440	20 1/2	9,1	2,385	2,913	17,283	5	59	SNP 3088 x 16 1/2	N 088	PL 88	HMVC 88E
	440	20 1/2	11,817	2,385	2,913	17,283	5	68,5	SNP 3188 x 16 1/2	N 088	PL 88	HMVC 88E
	440	20 1/2	13,943	2,385	2,913	17,283	5	86,5	SNP 3288 x 16 1/2	N 088	PL 88	HMVC 88E
17 431,8	460	21 1/4	9,336	2,385	2,913	18,071	5	71,5	SNP 3092 x 17	N 092	PL 92	HMVC 92E
	460	21 1/4	12,368	2,385	2,913	18,071	5	95	SNP 3192 x 17	N 092	PL 92	HMVC 92E
18 457,2	480	22 1/16	9,446	2,385	2,944	18,858	5	75	SNP 3096 x 18	N 096	PL 96	HMVC 96E
	480	22 1/16	12,714	2,385	2,944	18,858	5	91,5	SNP 3196 x 18	N 096	PL 96	HMVC 96E
18 1/2 469,9	500	22 13/16	9,838	2,703	3,262	19,646	5	91	SNP 30/500 x 18 1/2	N 500	PL 500	HMVC 100E
19 1/2 495,3	530	24 13/16	10,679	2,703	3,262	20,827	4	120	SNP 30/530 x 19 1/2	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 Withdrawal sleeve	Appropriate nut for dis- mounting	hydraulic nut
d_1	d	B_1	$B_2^{1)}$	G	G_1				
mm						kg	–		
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

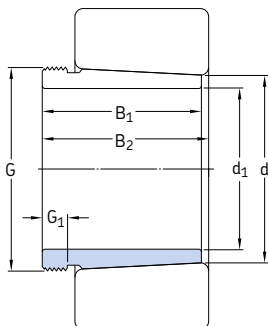
¹⁾ Width before the sleeve is driven into the bearing bore.

Principal dimensions						Mass	Designations	Appropriate	hydraulic
d ₁	d	B ₁	B ₂ ¹⁾	G	G ₁		Withdrawal sleeve	nut for dis- mounting	nut
mm						kg	–		
95	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
105	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
115	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
125	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
135	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
145	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	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	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	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

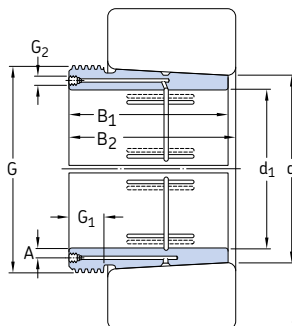
¹⁾ Width before the sleeve is driven into the bearing bore.

16.4 Withdrawal sleeves

d_1 180 – 440 mm



AH



AOH

Principal dimensions							Mass	Designations	Appropriate nut for dis-mounting	hydraulic nut	
d ₁	d	B ₁	B ₂ ¹⁾	G	G ₁	G ₂	A	Withdrawal sleeve			
mm						in.	mm	kg	—		
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	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	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	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	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
	260	205	213	Tr 280x4	30	G 1/4	9	19	AOH 2352 G	HM 3056	HMV 56 E
	260	205	213	Tr 280x4	30	G 1/4	9	19	AOH 2352 G	HM 3056	HMV 56 E

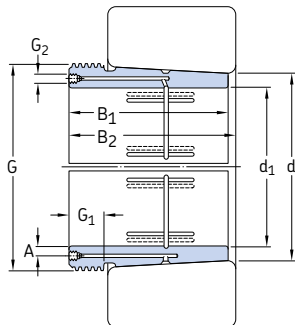
¹⁾ Width before the sleeve is driven into the bearing bore.

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

¹⁾ Width before the sleeve is driven into the bearing bore.

16.4 Withdrawal sleeves

d₁ 460 – 1 000 mm



AOH

Principal dimensions									Mass	Designations	Appropriate	hydraulic nut
d ₁	d	B ₁	B ₂ ¹⁾	G	G ₁	G ₂	A			Withdrawal sleeve	nut for dis-	
mm						in.	mm	kg			mounting	
460	480	205	217	Tr 500x5	38	G 1/4	9	34		AOHX 3096 G	HM 30/500	HMV 100 E
	480	250	273	Tr 500x5	32	G 1/4	9	36,5		AOH 24096	HM 31/500	HMV 100 E
	480	295	307	Tr 500x5	45	G 1/4	9	56		AOHX 3196 G	HM 31/500	HMV 100 E
	480	340	363	Tr 500x5	32	G 1/4	9	51,5		AOH 24196	HM 31/500	HMV 100 E
	480	364	376	Tr 500x5	52	G 1/4	9	73,5		AOHX 3296 G	HM 31/500	HMV 100 E
480	500	209	221	Tr 530x6	40	G 1/4	9	41		AOHX 30/500 G	HM 30/530	HMV 106 E
	500	253	276	Tr 530x6	35	G 1/4	9	43		AOH 240/500	HM 31/530	HMV 106 E
	500	313	325	Tr 530x6	47	G 1/4	9	66,5		AOHX 31/500 G	HM 31/530	HMV 106 E
	500	360	383	Tr 530x6	35	G 1/4	9	62,5		AOH 241/500	HM 31/530	HMV 106 E
	500	393	405	Tr 530x6	54	G 1/4	9	89,5		AOHX 32/500 G	HM 31/530	HMV 106 E
500	530	230	242	Tr 560x6	45	G 1/4	10	63,5		AOH 30/530	HM 30/560	HMV 112 E
	530	285	309	Tr 560x6	35	G 1/4	9	64,5		AOH 240/530 G	HM 31/560	HMV 112 E
	530	325	337	Tr 560x6	53	G 1/4	10	93,5		AOHX 31/530	HM 31/560	HMV 112 E
	530	370	394	Tr 560x6	35	G 1/4	9	92		AOH 241/530 G	HM 31/560	HMV 112 E
	530	412	424	Tr 560x6	57	G 1/4	10	127		AOHX 32/530 G	HM 31/560	HMV 112 E
530	560	240	252	Tr 600x6	45	G 1/4	11	73,5		AOHX 30/560	HM 30/600	HMV 120 E
	560	296	320	Tr 600x6	38	G 1/4	9	79,5		AOH 240/560 G	HM 31/600	HMV 120 E
	560	335	347	Tr 600x6	55	G 1/4	11	107		AOHX 31/560	HM 31/600	HMV 120 E
	560	393	417	Tr 600x6	38	G 1/4	9	107		AOH 241/560 G	HM 31/600	HMV 120 E
	560	422	434	Tr 600x6	57	G 1/4	11	143		AOHX 32/560	HM 31/600	HMV 120 E
570	600	245	259	Tr 630x6	45	G 1/4	11	77		AOHX 30/600	HM 30/630	HMV 126 E
	600	310	336	Tr 630x6	38	G 1/4	9	86,5		AOHX 240/600	HM 31/630	HMV 126 E
	600	355	369	Tr 630x6	55	G 1/4	11	120		AOHX 31/600	HM 31/630	HMV 126 E
	600	413	439	Tr 630x6	38	G 1/4	9	118		AOH 241/600	HM 31/630	HMV 126 E
	600	445	459	Tr 630x6	57	G 1/4	11	159		AOHX 32/600 G	HM 31/630	HMV 126 E
600	630	258	272	Tr 670x6	46	G 1/4	11	88,5		AOH 30/630	HM 30/670	HMV 134 E
	630	330	356	Tr 670x6	40	G 1/4	9	101		AOH 240/630 G	HM 31/670	HMV 134 E
	630	375	389	Tr 670x6	60	G 1/4	11	139		AOH 31/630	HM 31/670	HMV 134 E
	630	440	466	Tr 670x6	40	G 1/4	9	139		AOH 241/630 G	HM 31/670	HMV 134 E
	630	475	489	Tr 670x6	63	G 1/4	11	188		AOH 32/630 G	HM 31/670	HMV 134 E

¹⁾ Width before the sleeve is driven into the bearing bore.

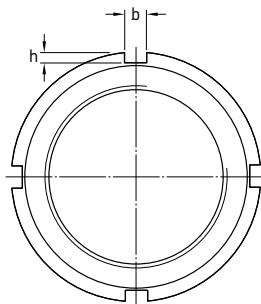
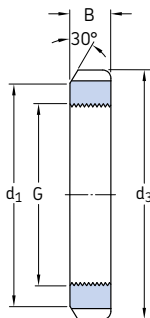
Principal dimensions								Mass	Designations	Appropriate nut for dis-mounting	hydraulic nut
d ₁	d	B ₁	B ₂ ¹⁾	G	G ₁	G ₂	A	Withdrawal sleeve			
mm						in.	mm	kg	–		
630	670	280	294	Tr 710x7	50	G 1/4	12	125	A0H 30/670	HM 30/710	HMV 142 E
	670	348	374	Tr 710x7	40	G 1/4	12	141	A0H 240/670 G	HM 31/710	HMV 142 E
	670	395	409	Tr 710x7	59	G 1/4	12	189	A0HX 31/670	HM 31/710	HMV 142 E
	670	452	478	Tr 710x7	40	G 1/4	12	185	A0H 241/670	HM 31/710	HMV 142 E
	670	500	514	Tr 710x7	62	G 1/4	12	252	A0H 32/670 G	HM 31/710	HMV 142 E
670	710	286	302	Tr 750x7	50	G 1/4	15	139	A0HX 30/710	HM 30/750	HMV 150 E
	710	360	386	Tr 750x7	45	G 1/4	12	155	A0H 240/710 G	HM 31/750	HMV 150 E
	710	405	421	Tr 750x7	60	G 1/4	15	207	A0HX 31/710	HM 31/750	HMV 150 E
	710	483	509	Tr 750x7	45	G 1/4	12	212	A0H 241/710	HM 31/750	HMV 150 E
	710	515	531	Tr 750x7	65	G 1/4	15	278	A0H 32/710 G	HM 31/750	HMV 150 E
710	750	300	316	Tr 800x7	50	G 1/4	15	145	A0H 30/750	HM 30/800	HMV 160 E
	750	380	408	Tr 800x7	45	G 1/4	12	179	A0H 240/750 G	HM 31/800	HMV 160 E
	750	425	441	Tr 800x7	60	G 1/4	15	238	A0H 31/750	HM 31/800	HMV 160 E
	750	520	548	Tr 800x7	45	G 1/4	12	248	A0H 241/750 G	HM 31/800	HMV 160 E
	750	540	556	Tr 800x7	65	G 1/4	15	320	A0H 32/750	HM 31/800	HMV 160 E
750	800	308	326	Tr 850x7	50	G 1/4	15	204	A0H 30/800	HM 30/850	HMV 170 E
	800	395	423	Tr 850x7	50	G 1/4	15	237	A0H 240/800 G	HM 31/850	HMV 170 E
	800	438	456	Tr 850x7	63	G 1/4	15	305	A0H 31/800	HM 31/850	HMV 170 E
	800	525	553	Tr 850x7	50	G 1/4	15	318	A0H 241/800 G	HM 31/850	HMV 170 E
	800	550	568	Tr 850x7	67	G 1/4	15	401	A0H 32/800	HM 31/850	HMV 170 E
800	850	325	343	Tr 900x7	53	G 1/4	15	230	A0H 30/850	HM 30/900	HMV 180 E
	850	415	445	Tr 900x7	50	G 1/4	15	265	A0H 240/850 G	HM 31/900	HMV 180 E
	850	462	480	Tr 900x7	62	G 1/4	15	345	A0H 31/850	HM 31/900	HMV 180 E
	850	560	600	Tr 900x7	60	G 1/4	15	368	A0H 241/850	HM 31/900	HMV 180 E
	850	585	603	Tr 900x7	70	G 1/4	15	461	A0H 32/850	HM 31/900	HMV 180 E
850	900	335	355	Tr 950x8	55	G 1/4	15	250	A0H 30/900	HM 30/950	HMV 190 E
	900	430	475	Tr 950x8	55	G 1/4	15	296	A0H 240/900	HM 31/950	HMV 190 E
	900	475	495	Tr 950x8	63	G 1/4	15	379	A0H 31/900	HM 31/950	HMV 190 E
	900	575	620	Tr 950x8	60	G 1/4	15	402	A0H 241/900	HM 31/950	HMV 190 E
	900	585	605	Tr 950x8	70	G 1/4	15	489	A0H 32/900	HM 31/950	HMV 190 E
900	950	355	375	Tr 1000x8	55	G 1/4	15	285	A0H 30/950	HM 30/1000	HMV 200 E
	950	467	512	Tr 1000x8	55	G 1/4	15	340	A0H 240/950	HM 31/1000	HMV 200 E
	950	500	520	Tr 1000x8	62	G 1/4	15	426	A0H 31/950	HM 31/1000	HMV 200 E
	950	600	620	Tr 1000x8	70	G 1/4	15	533	A0H 32/950	HM 31/1000	HMV 200 E
	950	605	650	Tr 1000x8	60	G 1/4	15	449	A0H 241/950	HM 31/1000	HMV 200 E
950	1 000	365	387	Tr 1060x8	57	G 1/4	15	318	A0H 30/1000	HM 30/1060	HMV 212 E
	1 000	469	519	Tr 1060x8	57	G 1/4	15	369	A0H 240/1000	HM 31/1060	HMV 212 E
	1 000	525	547	Tr 1060x8	63	G 1/4	15	485	A0H 31/1000	HM 31/1060	HMV 212 E
	1 000	630	652	Tr 1060x8	70	G 1/4	15	608	A0H 32/1000	HM 31/1060	HMV 212 E
	1 000	645	695	Tr 1060x8	65	G 1/4	15	519	A0H 241/1000	HM 31/1060	HMV 212 E
1 000	1 060	385	407	Tr 1120x8	60	G 1/4	15	406	A0H 30/1060	HM 30/1120	HMV 224 E
	1 060	498	548	Tr 1120x8	60	G 1/4	15	479	A0H 240/1060	HM 30/1120	HMV 224 E
	1 060	540	562	Tr 1120x8	65	G 1/4	15	599	A0H 31/1060	HM 30/1120	HMV 224 E
	1 060	665	715	Tr 1120x8	65	G 1/4	15	652	A0H 241/1060	HM 30/1120	HMV 224 E

¹⁾ 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 ₁	d ₃	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	KM 0	MB 0	HN 0
M 12x1	17	22	4	3	2	11,8	0,006	KM 1	MB 1	HN 1
M 15x1	21	25	5	4	2	14,6	0,009	KM 2	MB 2	HN 2-3
M 17x1	24	28	5	4	2	19,6	0,012	KM 3	MB 3	HN 2-3
M 20x1	26	32	6	4	2	24	0,025	KM 4	MB 4	HN 4
M 25x1,5	32	38	7	5	2	31,5	0,028	KM 5	MB 5	HN 5-6
M 30x1,5	38	45	7	5	2	36,5	0,039	KM 6	MB 6	HN 5-6
M 35x1,5	44	52	8	5	2	50	0,059	KM 7	MB 7	HN 7
M 40x1,5	50	58	9	6	2,5	62	0,078	KM 8	MB 8	HN 8-9
M 45x1,5	56	65	10	6	2,5	78	0,11	KM 9	MB 9	HN 8-9
M 50x1,5	61	70	11	6	2,5	91,5	0,14	KM 10	MB 10	HN 10-11
M 55x2	67	75	11	7	3	91,5	0,15	KM 11	MB 11	HN 10-11
M 60x2	73	80	11	7	3	95	0,16	KM 12	MB 12	HN 12-13
M 65x2	79	85	12	7	3	108	0,19	KM 13	MB 13	HN 12-13
M 70x2	85	92	12	8	3,5	118	0,23	KM 14	MB 14	HN 14
M 75x2	90	98	13	8	3,5	134	0,27	KM 15	MB 15	HN 15
M 80x2	95	105	15	8	3,5	173	0,36	KM 16	MB 16	HN 16
M 85x2	102	110	16	8	3,5	190	0,41	KM 17	MB 17	HN 17
M 90x2	108	120	16	10	4	216	0,51	KM 18	MB 18	HN 18-20
M 95x2	113	125	17	10	4	236	0,55	KM 19	MB 19	HN 18-20
M 100x2	120	130	18	10	4	255	0,64	KM 20	MB 20	HN 18-20

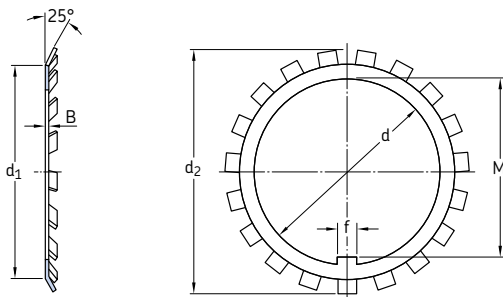
Dimensions						Axial load carrying capacity static	Mass	Designations		
G	d ₁	d ₃	B	b	h			Lock nut	Appropriate lock washer	spanner
mm						kN	kg	–		
M 105x2	126	140	18	12	5	290	0,79	KM 21	MB 21	HN 21-22
M 110x2	133	145	19	12	5	310	0,87	KM 22	MB 22	HN 21-22
M 115x2	137	150	19	12	5	315	0,91	KM 23	MB 23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

¹⁾ Contact SKF for information about axial load carrying capacity.

²⁾ HM ... T nuts having no appropriate lock washer are intended only for removal purposes.

16.6 MB(L) lock washers

MB 0 – MB 56



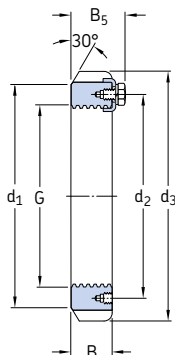
Designation	Dimensions						Mass
	d	d ₁	d ₂	B	f	M	
–	mm						kg
MB 0	10	13,5	21	1	3	8,5	0,001
MB 1	12	17	25	1	3	10,5	0,002
MB 1 A	12	17	25	1,2	3	10,5	0,0025
MB 2	15	21	28	1	4	13,5	0,003
MB 2 A	15	21	28	1,2	4	13,5	0,0035
MB 3	17	24	32	1	4	15,5	0,003
MB 3 A	17	24	32	1,2	4	15,5	0,0035
MB 4	20	26	36	1	4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

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

16.7 HM(E) lock nuts

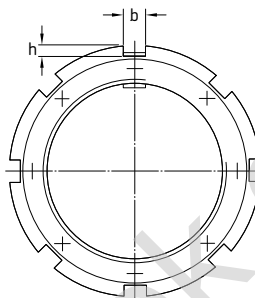
Tr 220x4 – Tr 900x7



HM



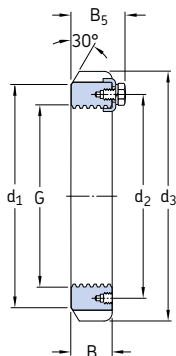
HME



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

Dimensions									Mass	Designations	Appropriate locking clip	spanner
G	d ₁	d ₂	d ₃	B	B ₅	B ₃	b	h	Lock nut			
mm									kg	–		
Tr 440x5	488	463	520	60	77	12	32	15	24	HME 3088	MS 3092-88	TMFN 64-80
	490	463	520	60	77	–	32	15	26	HM 3088	MS 3092-88	TMFN 64-80
	508	478	560	70	90	15	36	20	42,5	HME 3188	MS 3192-88	TMFN 80-500
	510	478	560	70	90	–	36	20	46,5	HM 3188	MS 3192-88	TMFN 80-500
Tr 460x5	510	483	540	60	77	–	32	15	27	HM 3092	MS 3092-88	TMFN 80-500
	535	498	580	75	95	20	36	20	45,5	HME 3192	MS 3192-88	TMFN 80-500
	540	498	580	75	95	–	36	20	50,5	HM 3192	MS 3192-88	TMFN 80-500
Tr 480x5	530	503	560	60	77	12	36	15	26	HME 3096	MS 30/500-96	TMFN 80-500
	530	503	560	60	77	–	36	15	28	HM 3096	MS 30/500-96	TMFN 80-500
	560	528	620	75	95	20	36	20	55	HME 3196	MS 3196	TMFN 80-500
	560	528	620	75	95	–	36	20	62	HM 3196	MS 3196	TMFN 80-500
Tr 500x5	550	523	580	68	85	12	36	15	31,5	HME 30/500	MS 30/500-96	TMFN 80-500
	550	523	580	68	85	–	36	15	33,5	HM 30/500	MS 30/500-96	TMFN 500-600
	580	540	630	80	100	12	40	23	60	HME 31/500	MS 31/500	TMFN 500-600
	580	540	630	80	100	–	40	23	63,5	HM 31/500	MS 31/500	TMFN 500-600
Tr 530x6	571	558	630	68	90	15	40	20	37	HME 30/530	MS 30/600-530	TMFN 500-600
	590	558	630	68	90	–	40	20	42,5	HM 30/530	MS 30/600-530	TMFN 500-600
	610	575	670	80	105	–	40	23	71,5	HM 31/530	MS 31/530	TMFN 500-600
Tr 560x6	610	583	650	75	97	15	40	20	41	HME 30/560	MS 30/560	TMFN 500-600
	610	583	650	75	97	–	40	20	44,5	HM 30/560	MS 30/560	TMFN 500-600
	650	608	710	85	110	15	45	25	80,5	HME 31/560	MS 31/600-560	TMFN 500-600
	650	608	710	85	110	–	45	25	86,5	HM 31/560	MS 31/600-560	TMFN 500-600
Tr 600x6	657	628	700	75	97	18	40	20	47	HME 30/600	MS 30/600-530	TMFN 500-600
	660	628	700	75	97	–	40	20	52,5	HM 30/600	MS 30/600-530	TMFN 500-600
	690	648	750	85	110	15	45	25	85	HME 31/600	MS 31/600-560	TMFN 600-750
	690	648	750	85	110	–	45	25	91,5	HM 31/600	MS 31/600-560	TMFN 600-750
Tr 630x6	690	658	730	75	97	18	45	20	50	HME 30/630	MS 30/630	TMFN 500-600
	690	658	730	75	97	–	45	20	55	HM 30/630	MS 30/630	TMFN 500-600
	730	685	800	95	120	18	50	28	115	HME 31/630	MS 31/630	TMFN 600-750
	730	685	800	95	120	–	50	28	125	HM 31/630	MS 31/630	TMFN 600-750
Tr 670x6	740	703	780	80	102	–	45	20	68,5	HM 30/670	MS 30/670	TMFN 600-750
	775	730	850	106	131	18	50	28	144	HME 31/670	MS 31/670	TMFN 600-750
	775	730	850	106	131	–	50	28	155	HM 31/670	MS 31/670	TMFN 600-750
Tr 710x7	766	742	830	90	112	20	50	25	81	HME 30/710	MS 30/710	TMFN 600-750
	780	742	830	90	112	–	50	25	91,5	HM 30/710	MS 30/710	TMFN 600-750
	825	772	900	106	133	20	55	30	149	HME 31/710	MS 31/710	TMFN 600-750
	825	772	900	106	133	–	55	30	162	HM 31/710	MS 31/710	TMFN 600-750
Tr 750x7	820	782	870	90	112	20	55	25	85,5	HME 30/750	MS 30/800-750	TMFN 600-750
	820	782	870	90	112	–	55	25	94	HM 30/750	MS 30/800-750	TMFN 600-750
	875	813	950	112	139	20	60	34	177	HME 31/750	MS 31/800-750	TMFN 600-750
	875	813	950	112	139	–	60	34	190	HM 31/750	MS 31/800-750	TMFN 600-750
Tr 800x7	870	832	920	90	112	20	55	25	90,5	HME 30/800	MS 30/800-750	TMFN 600-750
	870	832	920	90	112	–	55	25	99,5	HM 30/800	MS 30/800-750	TMFN 600-750
	925	863	1000	112	139	20	60	34	187	HME 31/800	MS 31/800-750	–
	925	863	1000	112	139	–	60	34	202	HM 31/800	MS 31/800-750	–
Tr 850x7	925	887	980	90	115	20	60	25	104	HME 30/850	MS 30/900-850	–
	925	887	980	90	115	–	60	25	115	HM 30/850	MS 30/900-850	–
	975	914	1060	118	145	25	70	38	212	HME 31/850	MS 31/850	–
	975	914	1060	118	145	–	70	38	234	HM 31/850	MS 31/850	–
Tr 900x7	975	937	1030	100	125	25	60	25	117	HME 30/900	MS 30/900-850	–
	975	937	1030	100	125	–	60	25	131	HM 30/900	MS 30/900-850	–
	1030	969	1120	125	154	–	70	38	280	HM 31/900	MS 31/900	–

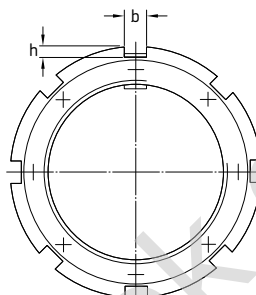
16.7 HM(E) lock nuts Tr 950x8 – Tr 1120x8



HM



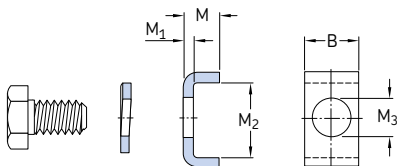
HME



Dimensions									Mass	Designations Lock nut	Appropriate locking clip
G	d ₁	d ₂	d ₃	B	B ₅	B ₃	b	h			
mm									kg	–	
Tr 950x8	1025	985	1080	100	125	25	60	25	124	HME 30/950	MS 30/950
	1025	985	1080	100	125	–	60	25	139	HM 30/950	MS 30/950
	1080	1017	1170	125	154	–	70	38	293	HM 31/950	MS 31/950
Tr 1000x8	1085	1040	1140	100	125	25	60	25	141	HME 30/1000	MS 30/1000
	1085	1040	1140	100	125	–	60	25	157	HM 30/1000	MS 30/1000
	1140	1077	1240	125	154	25	70	38	305	HME 31/1000	MS 31/1000
	1140	1077	1240	125	154	–	70	38	336	HM 31/1000	MS 31/1000
Tr 1060x8	1145	1100	1200	100	125	25	60	25	149	HME 30/1060	MS 30/1000
	1145	1100	1200	100	125	–	60	25	166	HM 30/1060	MS 30/1000
	1210	1137	1300	125	154	–	70	38	354	HM 31/1060	MS 31/1000
Tr 1120x8	1205	1160	1260	100	125	–	60	25	175	HM 30/1120	MS 30/1000

16.8 MS locking clips

MS 3044 – MS 31/1000



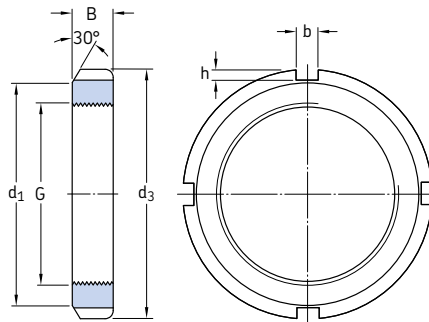
Designations Locking clip	Appertaining hexagonal head bolt		Dimensions					Mass
			B	M	M ₁	M ₂	M ₃	
–			mm					kg
MS 3044	M 6x12	A 6	20	12	4	13,5	7	0,022
MS 3052-48	M 8x16	A 8	20	12	4	17,5	9	0,024
MS 3056	M 8x16	A 8	24	12	4	17,5	9	0,03
MS 3060	M 8x16	A 8	24	12	4	20,5	9	0,033
MS 3068-64	M 8x16	A 8	24	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 ₁	M ₂	M ₃	
–			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

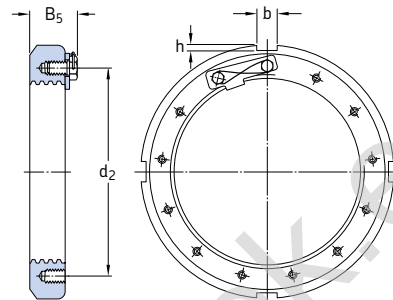
16.9 N and AN inch lock nuts

G 0.391 – 10.192 in.

9,931 – 258,877 mm



AN, N (size ≤ 44)



N (size ≥ 48)

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

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

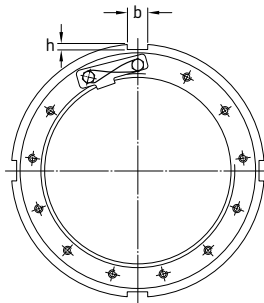
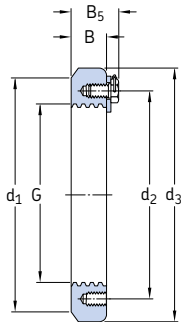
Threads ¹⁾ G	Threads per inch	Dimensions							Mass kg	Designations		
		d ₁	d ₂	d ₃	B	B ₅	b	h		Lock nut	Appropriate locking device	spanner
in./mm	–	in.							kg	–		
2.548 64,719	18	3.063	–	3 3/8	9/16	–	0.24	0.135	0,29	N 13	W 13	HN 12-13
2.751 69,875	18	3.313	–	3 5/8	9/16	–	0.24	0.135	0,33	N 14	W 14	HN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

¹⁾ 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

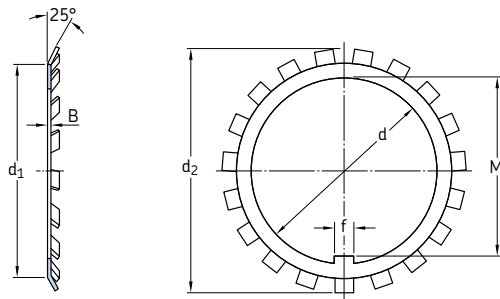


Threads ¹⁾ G	Threads per inch	Dimensions							Mass	Designations		
		d ₁	d ₂	d ₃	B	B ₅	b	h		Lock nut	Appropriate locking device	spanner
in./mm	–	in.							kg	–		
11.004 279,502	6	12.219	12,11	13	1 1/2	1,854	0.98	0.385	7,7	N 056	PL 56	TMFN 52-64
11.785 299,339	6	13.219	13,11	14 3/16	1 9/16	1,948	0.98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

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

16.10 W inch lock washers

W 00 – W 44

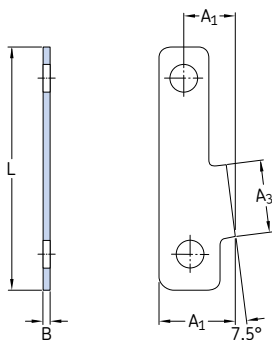


Designation	Dimensions						Mass
	d	d ₁	d ₂	B	f	M	
–	in.						kg
W 00	0.406	0.655	0.875	0.032	0.12	0.334	0,094
W 01	0.484	0.749	1.016	0.032	0.12	0.412	0,1
W 02	0.601	0.843	1.156	0.032	0.12	0.529	0,13
W 03	0.679	0.968	1.328	0.032	0.12	0.607	0,24
W 04	0.801	1.155	1.531	0.032	0.176	0.729	0,002
W 05	0.989	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 ₁	d ₂	B	f	M	
–	in.						kg
W 21	4.192	5.03	5.703	0.084	0.353	4.013	0,094
W 022	4.395	4.951	5.688	0.115	0.35	4.185	0,15
W 22	4.395	5.311	6.063	0.115	0.353	4.185	0,1
W 024	4.801	5.363	6.188	0.115	0.35	4.591	0,19
W 24	4.801	5.718	6.469	0.115	0.353	4.591	0,16
W 026	5.191	5.753	6.625	0.115	0.469	4.969	0,2
W 26	5.191	6.218	7.031	0.115	0.435	4.969	0,17
W 028	5.582	6.159	7.094	0.115	0.594	5.36	0,23
W 28	5.582	6.561	7.438	0.115	0.59	5.36	0,22
W 030	5.983	6.738	7.719	0.115	0.594	5.73	0,25
W 30	5.983	7.093	8.063	0.146	0.59	5.73	0,22
W 032	6.389	7.144	8.156	0.115	0.594	6.128	0,29
W 32	6.389	7.468	8.438	0.146	0.59	6.128	0,33
W 034	6.764	7.538	8.594	0.115	0.719	6.503	0,3
W 34	6.764	8.061	9.063	0.146	0.715	6.503	0,34
W 036	7.171	7.929	9	0.115	0.719	6.91	0,6
W 36	7.171	8.405	9.438	0.146	0.715	6.91	0,42
W 038	7.577	8.32	9.438	0.115	0.719	7.316	0,002
W 38	7.577	8.811	9.875	0.146	0.715	7.316	0,43
W 040	7.982	8.804	9.969	0.115	0.844	7.721	0,003
W 40	7.982	9.186	10.313	0.146	0.84	7.721	0,46
W 044	8.701	9.6	10.406	0.115	0.945	8.327	0,005
W 44	8.701	9.905	11.438	0.146	0.94	8.327	0,47

16.11 PL inch locking plates

PL 48 – 530

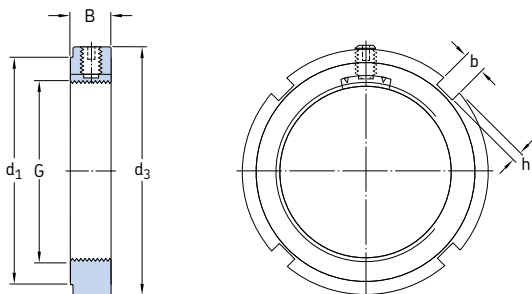


Designations Locking plate	Appertaining hexagonal head bolt	Dimensions					Mass
		A ₁	A ₂	A ₃	B	L	
–		in.					kg
PL 48	5/16–18x5/8	1.125	0.813	1	0.126	3.5	0,06
PL 52	5/16–18x5/8	1.156	0.804	1.063	0.126	3.75	0,07
PL 56	5/16–18x5/8	1.156	0.822	1.125	0.126	3.938	0,07
PL 60	3/8–16x3/4	1.375	0.915	1.25	0.126	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.

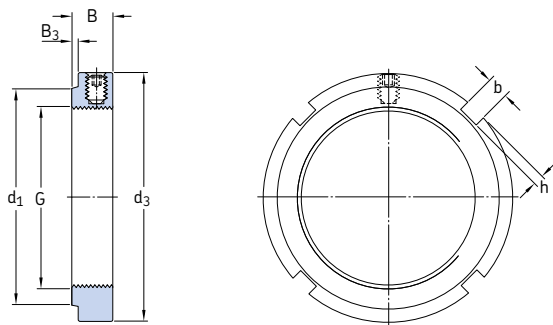
16.12 KMK lock nuts with an integral locking device

M 10x0,75 – M 100x2



Dimensions						Axial load carrying capacity static	Mass	Designations		Grub screw	
G	d ₁	d ₃	B	b	h			Lock nut	Appropriate spanner	Size	Recommended tightening torque
mm						kN	kg	–		–	Nm
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

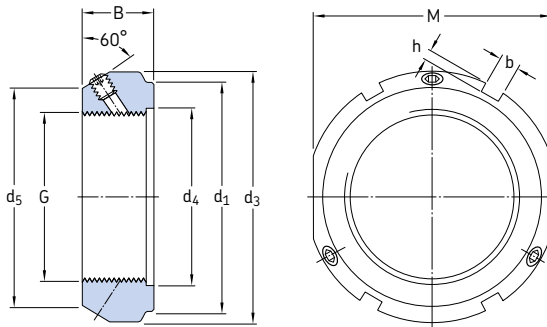


Dimensions								Axial load carrying capacity static	Mass	Designations		Grub screw	
G	d ₁	d ₃	B	B ₃	b	h				Lock nut	Appropriate spanner	Size	Recommended tightening torque
mm								kN	kg	–		–	Nm
M 20x1	26	32	9,5	1	4	2	24	0,031	0,031	KMFE 4	HN 4	M 5	4
M 25x1,5	30	38	10,5	2	5	2	31,5	0,041	0,041	KMFE 5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

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

16.14 KMT precision lock nuts with locking pins

M 10x0,75 – M 200x3

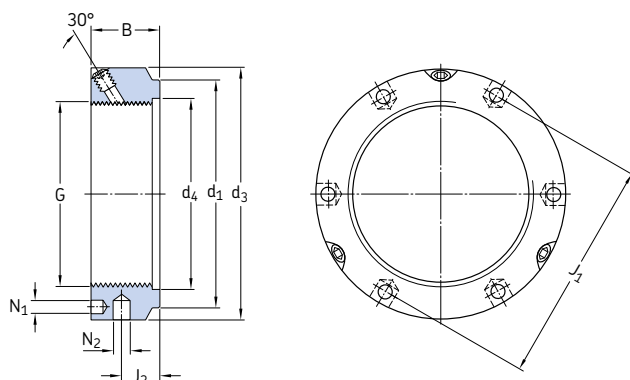


Dimensions									Axial load carrying capacity static	Mass	Designations Lock nut	Appropriate spanner	Grub screw Size	Recommended tightening torque
G	d ₁	d ₃	d ₄	d ₅	B	b	h	M						
mm									kN	kg	–		–	Nm
M 10x0,75	23	28	11	21	14	4	2	24	35	0,045	KMT 0	HN 2-3	M 5	4,5
M 12x1	25	30	13	23	14	4	2	27	40	0,05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

Dimensions								Axial load carrying capacity static	Mass	Designations		Grub screw	
G	d ₁	d ₃	d ₄	d ₅	B	b	h			Lock nut	Appropriate spanner	Size	Recommended tightening torque
mm								kN	kg	–		–	Nm
M 110x2	134	145	112	132	32	10	4	800	1,45	KMT 22	HN 21-22	M10	35
M 120x2	144	155	122	142	32	10	4	860	1,6	KMT 24	HN 21-22	M10	35
M 130x2	154	165	132	152	32	12	5	920	1,7	KMT 26	TMFN 23-30	M10	35
M 140x2	164	175	142	162	32	14	5	980	1,8	KMT 28	TMFN 23-30	M10	35
M 150x2	174	185	152	172	32	14	5	1040	1,95	KMT 30	TMFN 23-30	M10	35
M 160x3	184	195	162	182	32	14	5	1100	2,1	KMT 32	TMFN 23-30	M10	35
M 170x3	192	205	172	192	32	14	5	1160	2,2	KMT 34	TMFN 30-40	M10	35
M 180x3	204	215	182	202	32	16	5	1220	2,3	KMT 36	TMFN 30-40	M10	35
M 190x3	214	225	192	212	32	16	5	1280	2,4	KMT 38	TMFN 30-40	M10	35
M 200x3	224	235	202	222	32	18	5	1340	2,5	KMT 40	TMFN 30-40	M10	35

16.15 KMTA precision lock nuts with locking pins

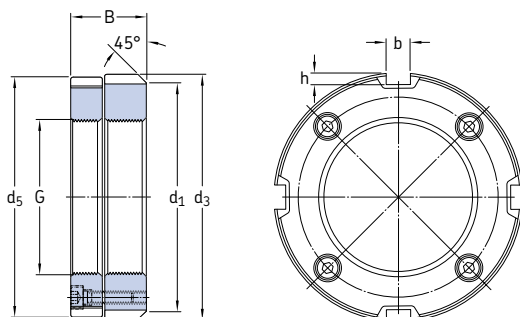
M 25x1,5 – M 200x3



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

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

16.16 KMD precision lock nuts with axial locking screws M 20x1 – M 105x2



Dimensions								Axial load carrying capacity static	Mass	Designation	Locking screws	
G	d ₁	d ₃	d ₅	B	b	h					Size	Recommended tightening torque
mm								kN	kg	–	–	Nm
M 20x1	38	40	39	18	5	2		70	0,11	KMD 4	M 4	4,2
M 25x1,5	43	45	44	20	5	2		95	0,14	KMD 5	M 4	4,2
M 30x1,5	48	50	49	20	5	2		105	0,2	KMD 6	M 4	4,2
M 35x1,5	53	58	57	22	6	2,5		120	0,24	KMD 7	M 4	4,2
M 40x1,5	58	63	62	22	6	2,5		130	0,27	KMD 8	M 4	4,2
M 45x1,5	66,5	71,5	70,5	22	7	3		150	0,36	KMD 9	M 4	4,2
M 50x1,5	70	75	74	25	7	3		200	0,41	KMD 10	M 4	4,2
M 55x2	75	80	79	25	7	3		160	0,46	KMD 11 P	M 4	4,2
M 60x2	80	85	84	26	7	3		175	0,5	KMD 12 P	M 4	4,2
M 65x2	85	90	89	28	8	3,5		295	0,63	KMD 13	M 5	8,4
M 70x2	90	95	94	28	8	3,5		320	0,67	KMD 14	M 5	8,4
M 75x2	95	100	99	28	8	3,5		340	0,72	KMD 15	M 5	8,4
M 80x2	105	110	109	32	8	3,5		445	1,05	KMD 16	M 6	14,2
M 85x2	110	115	114	32	10	4		470	1,2	KMD 17	M 6	14,2
M 90x2	115	120	119	32	10	4		500	1,2	KMD 18	M 6	14,2
M 95x2	120	125	124	32	10	4		525	1,25	KMD 19	M 6	14,2
M 100x2	125	130	129	32	10	4		555	1,32	KMD 20	M 6	14,2
M 105x2	130	135	134	32	10	4		580	1,37	KMD 21	M 6	14,2