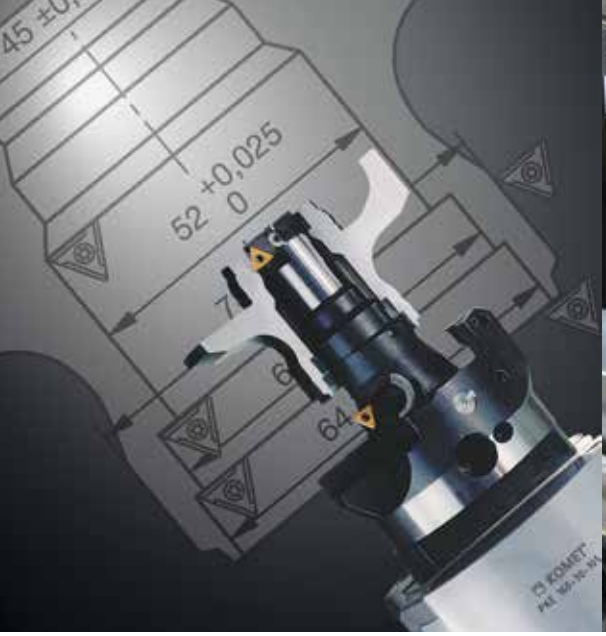
KOMET GROUP

KomDrive
Draw bars tools

for special purpose machines

TOOLS + IDEAS®



KOMET® KomDrive U-axis system

The slides of the facing heads are actuated mechanically through precision ground serrated rack components designed with maximum engagement of the teeth.
The radial stroke is limited through fine adjustable internal stops for safety reasons. Sliding surfaces exhibit high hardness and excellent frictional characteristics through nitride treatment.

BENEFITS for you:

- Low coefficient of friction through special surface treatment of the sliding components
- Max. average backlash of 10 micrometers (0.0004 inches)
- Compact slide designs including integrated ABS® N connections for highest rigidity and metal removal
- High spindle speeds without compromising machining accuracy or service life
- Precision manufacturing processes and extensive research and development warrant the highest technological level

Machine requirements for the operation of facing heads

Besides adequately designed spindle bearings it is imperative to install a drawbar actuation system.

The actuation system operates:

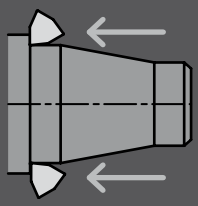
- As hydraulically actuated cylinder, preferably rotating, or
- as CNC controlled electromechanical feed system (servo system), oriented centrally to the spindle,
- and includes fixed stops installed in the actuation system to set limits for the stroke of the drawbar because
- the internal stops of the facing head have limited load capacity.

The drawbar actuation force varies with the spindle speed and the length of stroke. Confirm the selection of the drawbar actuation system with KOMET by providing the following information: Weight of front tool and its center of gravity, spindle speed and length of stroke.

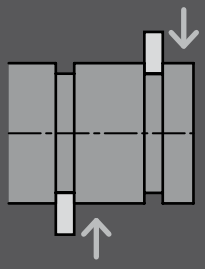
The facing heads are prepared for central lubrication. The connection to the central lubrication system is conducted through the drawbar. Modifications to this lubrication method or other information, such as lubrication cycle and pressure, are available upon request.

Manual lubrication is feasible as substitute for central lubrication without modification to the facing heads.

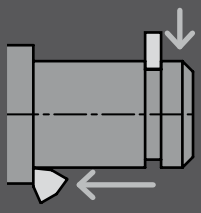
Machining examples



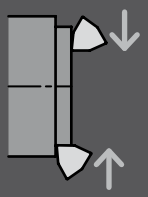
Contour machining



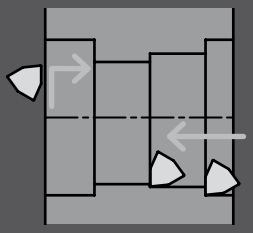
External grooving



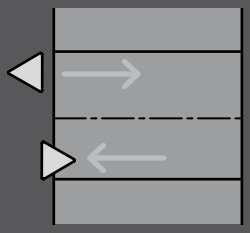
Grooving and facing



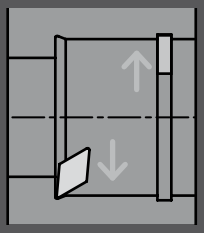
Face turning towards center



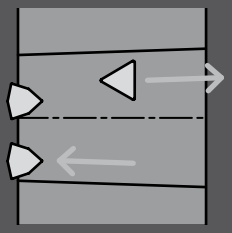
Boring and facing



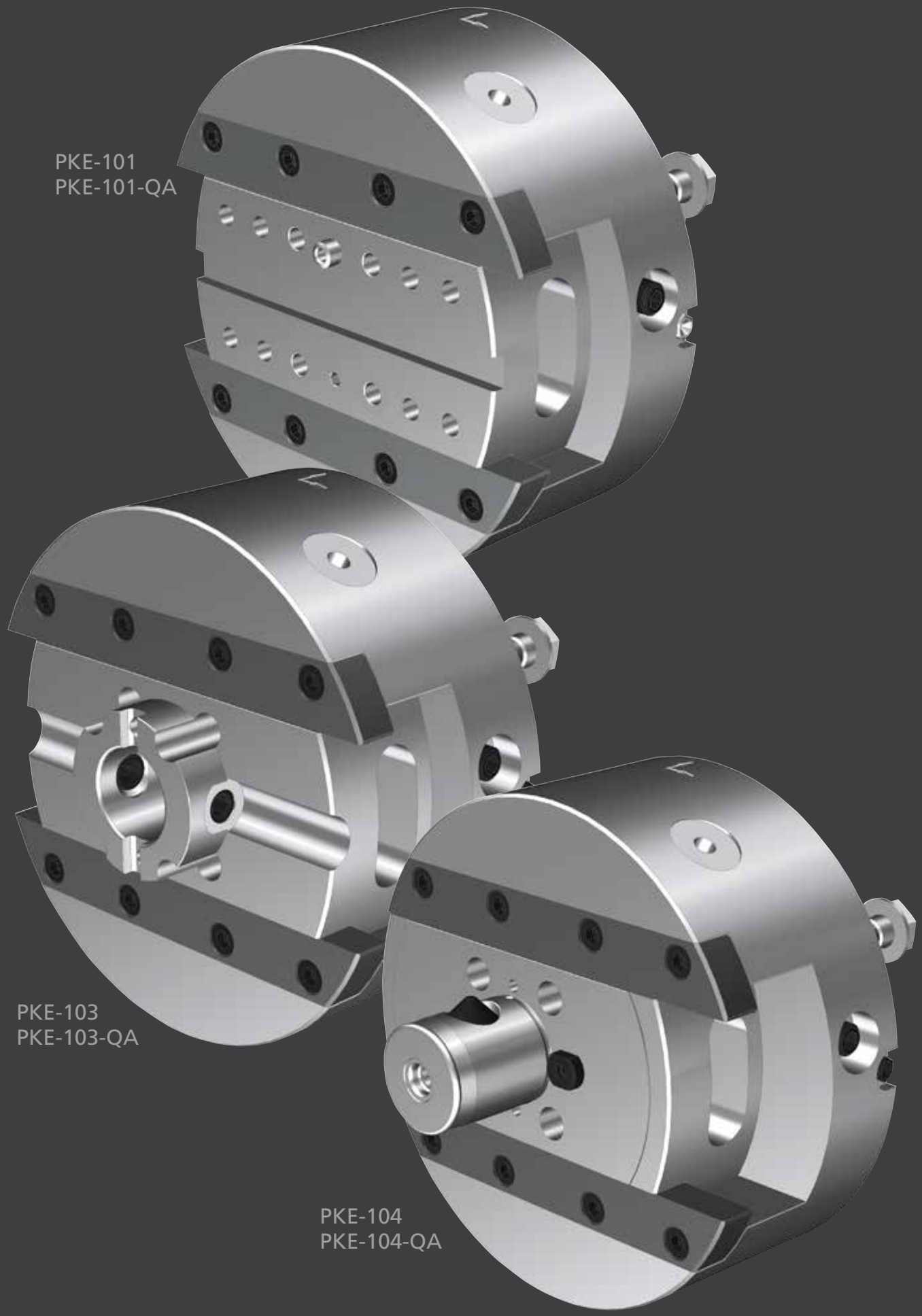
Internal machining



Facing and grooving



Drilling taper and boring



PKE-101
PKE-101-QA

PKE-103
PKE-103-QA

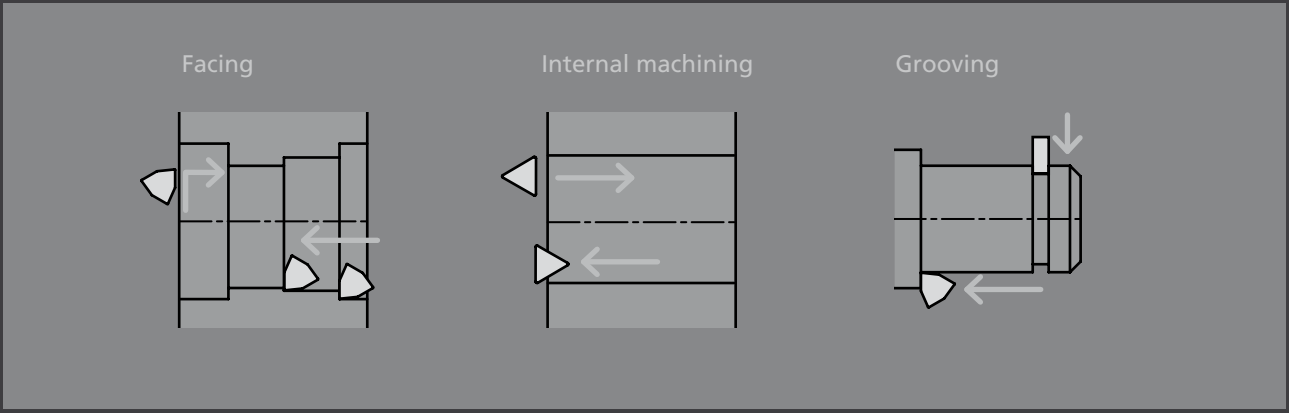
PKE-104
PKE-104-QA

KOMET® KomDrive PKE

Facing head with single slide for low spindle speeds

The PKE-101 and PKE-104 facing heads with single slide offer large tool mounting areas, and therefore permit the most rigid tool design and heavy depth of cut in the low spindle speed range.

The PKE facing head is subject to a spindle speed limit due to the imbalance of the centrifugal masses.



KOMET® KomDrive PKE-QA

The facing head offers a large tool-clamping surface and therefore enables the tool to be fastened very firmly for difficult cutting edges. It is also used for small strokes, such as internal and external contours, recesses for retaining rings or sealing elements.

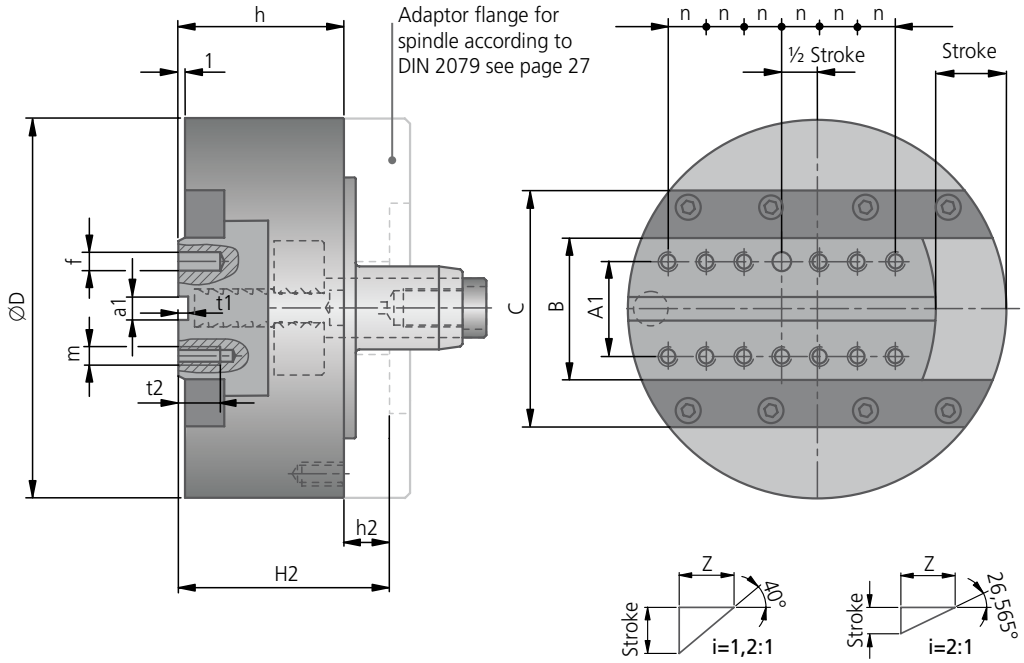
With the PKE-QA KOMET® is launching a completely new type of facing slide concept onto the market. Easy to handle and easy to service - all this at an extremely attractive price.

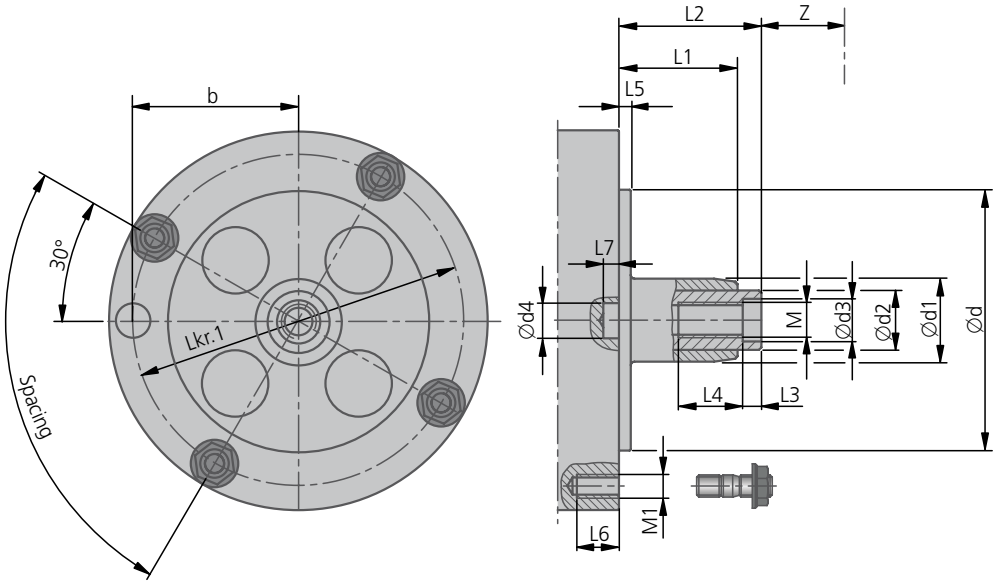
BENEFITS for you:

- Very attractive price
- Available ex stock
- Simple and cost-efficient upgrade for previous models
- Increased service life thanks to the surface-treated gear parts
- Can be used on transfer lines, special purpose machines and automatic rotary indexing machines
- Can be adapted to almost any spindle using the intermediate flange

Facing head with single slide with mounting holes in slide

Adaptor with ABS ® N connection see page 12.





Facing head with single slide with mounting holes in slide

		External dimensions										PKE-101-QA	
												Draw bar and tooth plates	
Article	Order No.	$ØD_{h6}$	Stroke	Traduction i	Z	h	$Ød_{h6}$	Ød1	Ød2	$Ød3^{H7}$	$Ød4^{+0,1}$	Pitch	Order No.
PKE 80-12-101	**P01 00010**	80	12	1,2 : 1	14,3	42	50	25	16	12	10,3		–
PKE100-17-101QA	**P01 10011**	100	17	1,2 : 1	20,3	50	65	25	16	12	10,3	40°	**P01 11011**
PKE100-10-101QA	**P01 10016**		10	2 : 1								26,565°	**P01 12011**
PKE125-22-101QA	**P01 20011**	125	22	1,2 : 1	26,2	58	90	30	20	14	14,6	40°	**P01 21011**
PKE125-13-101QA	**P01 20016**		13	2 : 1								26,565°	**P01 22011**
PKE160-30-101QA	**P01 30011**	160	30	1,2 : 1	35,7	70	110	35	25	18	14,6	40°	**P01 31011**
PKE160-18-101QA	**P01 30016**		18	2 : 1								26,565°	**P01 32011**
PKE200-40-101QA	**P01 40011**	200	40	1,2 : 1	47,7	85	150	44	32	18	16,2	40°	**P01 41011**
PKE200-24-101QA	**P01 40016**		24	2 : 1								26,565°	**P01 42011**
PKE250-50-101QA	**P01 50011**	250	50	1,2 : 1	59,6	100	180	46	32	18	19,4	40°	**P01 51011**
PKE250-30-101QA	**P01 50016**		30	2 : 1								26,565°	**P01 52011**

PKE size 320 | 400 | 500 on request.

	Slide dimensions									
for	B	C	A1	$a1^{H8}$	t1	t2	m	f^{H7}	n	No. of bolt holes
PKE 80...101	36	–	22	8	3	10	M6	6	12	8
PKE100...101	40	72	26	8	3	10	M6	6	11	12
PKE125...101	50	86	32	10	4	12	M8	8	13	12
PKE160...101	60	100	40	10	4	12	M8	8	16	12
PKE200...101	80	130	55	12	4	15	M10	10	20	12
PKE250...101	100	150	70	12	4	18	M12	12	20	16

	Mounting dimensions														DIN 2079
											Bolthole circle		Adaptor flange		Spindle size
for	M	M1	L1	L2±1	L3	L4	L5	L6	L7	b±0,1	Lkr.1	Spacing	H2	h2	
PKE 80...101	M10×1L	M6	28	38	8	14	4	10	5	32	68	4×90° 3×120°	60	18	30
PKE100...101	M10×1L	M8	30	40	8	14	4	12	5	42	84	4×90° 3×120°	65	15	30
PKE125...101	M12×1,5L	M8	37	47	8	16	4	12	6	54	110	6×60°	75	17	40
PKE160...101	M16×1,5L	M10	50	60	10	25	5	15	6	70	140	4×90°	90	20	40
PKE200...101	M16×1,5L	M12	70	80	10	25	5	18	6	87,5	175	4×90°	110	25	50
PKE250...101	M16×1,5L	M16	90	100	10	25	6	22	6	108	216	4×90°	125	25	50

Order example:
Facing head ∅ 100 mm, stroke 17 mm
type 101 QA: Article PKE100-17-101QA
Order No. P01 10011

Further information see:
KOMET KomTronic® Draw bars tools for special purpose machines

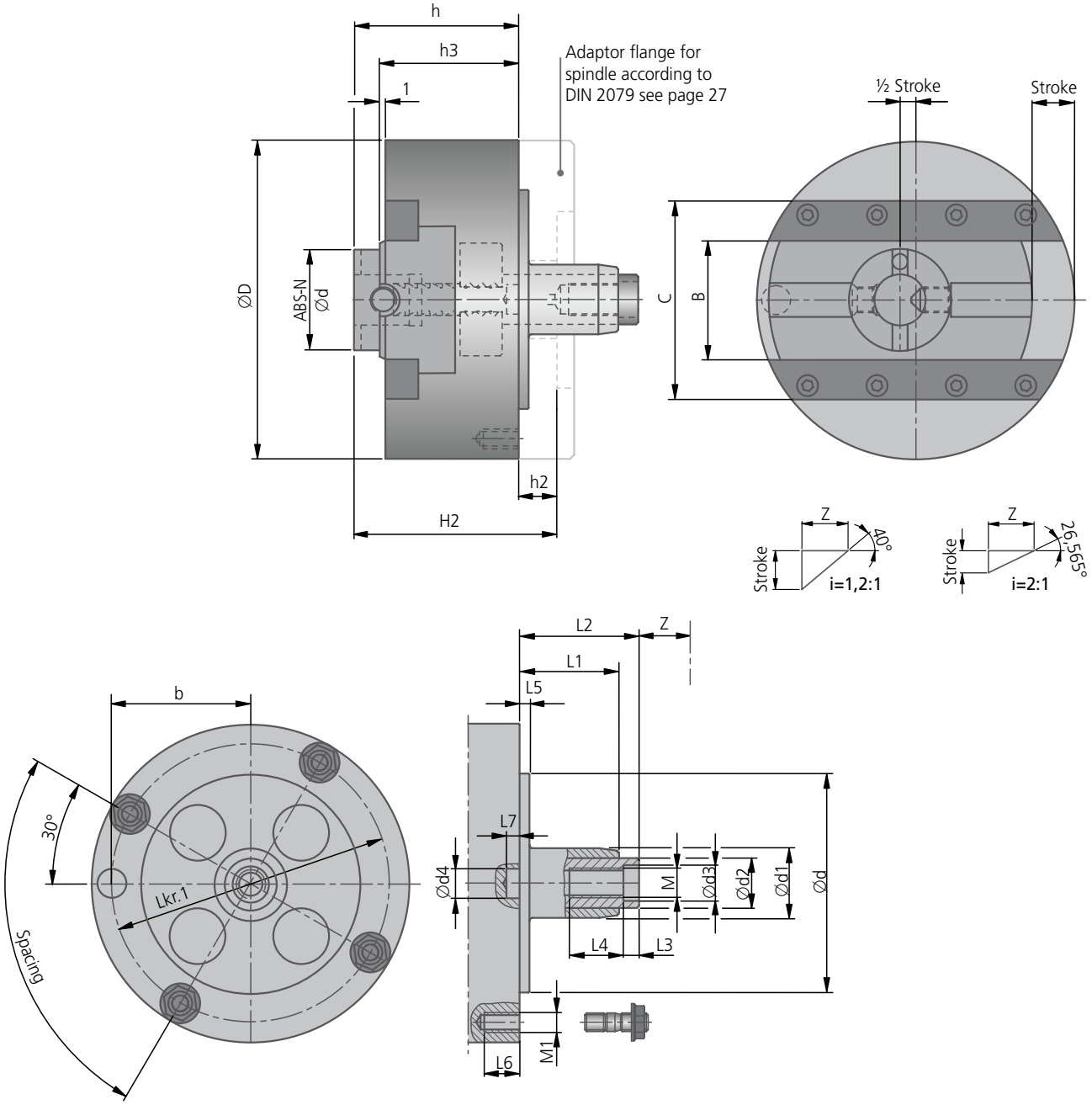
Technical notes see page 13.

KOMET® KomDrive PKE-103 | PKE-103-QA

Facing head with single slide with integrated ABS® N connection

Sshortest overall length at reduced stroke

on request



		External dimensions											PKE-103-QA	
													Draw bar and tooth plates	
Article	Order No.	$ØD_{h6}$	Stroke	Traduction i	Z	h	h3	$Ød_{h6}$	Ød1	Ød2	$Ød3^{H7}$	$Ød4^{+0,1}$	Pitch	Order No.
PKE 80-6-103	**P01 00030**	80	6	1,2 : 1	7,2	52	42	50	25	16	12	10,3		
PKE100-10-103QA	**P01 10031**	100	10	1,2 : 1	11,9	60	50	65	25	16	12	10,3	40°	**P01 11011**
PKE100-6-103QA	**P01 10036**		6	2 : 1									26,565°	**P01 12011**
PKE125-12-103QA	**P01 20031**	125	12	1,2 : 1	14,3	68	58	90	30	20	14	14,6	40°	**P01 21011**
PKE125-7-103QA	**P01 20036**		7	2 : 1									26,565°	**P01 22011**
PKE160-15-103QA	**P01 30031**	160	15	1,2 : 1	17,9	85	70	110	35	25	18	14,6	40°	**P01 31011**
PKE160-9-103QA	**P01 30036**		9	2 : 1									26,565°	**P01 32011**
PKE200-20-103QA	**P01 40031**	200	20	1,2 : 1	23,8	100	85	150	44	32	18	16,2	40°	**P01 41011**
PKE200-12-103QA	**P01 40036**		12	2 : 1									26,565°	**P01 42011**
PKE250-30-103	**P01 50030**	250	30	2 : 1	35,7	120	100	180	46	32	18	19,4		
PKE320-35-103	**P01 60030**	320	35	2 : 1	41,7	144	124	220	63	40	22	24,2		

	Slide dimensions		
for	B	C	ABS-N Ø d
PKE 80...103	36	–	32
PKE100...103	40	72	32
PKE125...103	50	86	40
PKE160...103	60	100	50
PKE200...103	80	130	63
PKE250...103	100	150	80
PKE320...103	110	178	100

	Mounting dimensions														DIN 2079
											Bolthole circle		Adaptor flange		Spindle size
for	M	M1	L1	L2±1	L3	L4	L5	L6	L7	b±0,1	Lkr.1	Spacing	H2	h2	
PKE 80...103	M10×1L	M6	28	38	8	14	4	10	5	32	68	4×90° 3×120°	70	18	30
PKE100...103	M10×1L	M8	30	40	8	14	4	12	5	42	84	4×90° 3×120°	75	15	30
PKE125...103	M12×1,5L	M8	37	47	8	16	4	12	6	54	110	6×60°	85	17	40
PKE160...103	M16×1,5L	M10	50	60	10	25	5	15	6	70	140	4×90°	105	20	40
PKE200...103	M16×1,5L	M12	70	80	10	25	5	18	6	87,5	175	4×90°	125	25	50
PKE250...103	M16×1,5L	M16	90	100	10	25	6	22	6	108	216	4×90°	145	25	50
PKE320...103	M20×1,5L	M16	106	116	10	30	6	22	8	137,5	275	6×60°	170	26	60

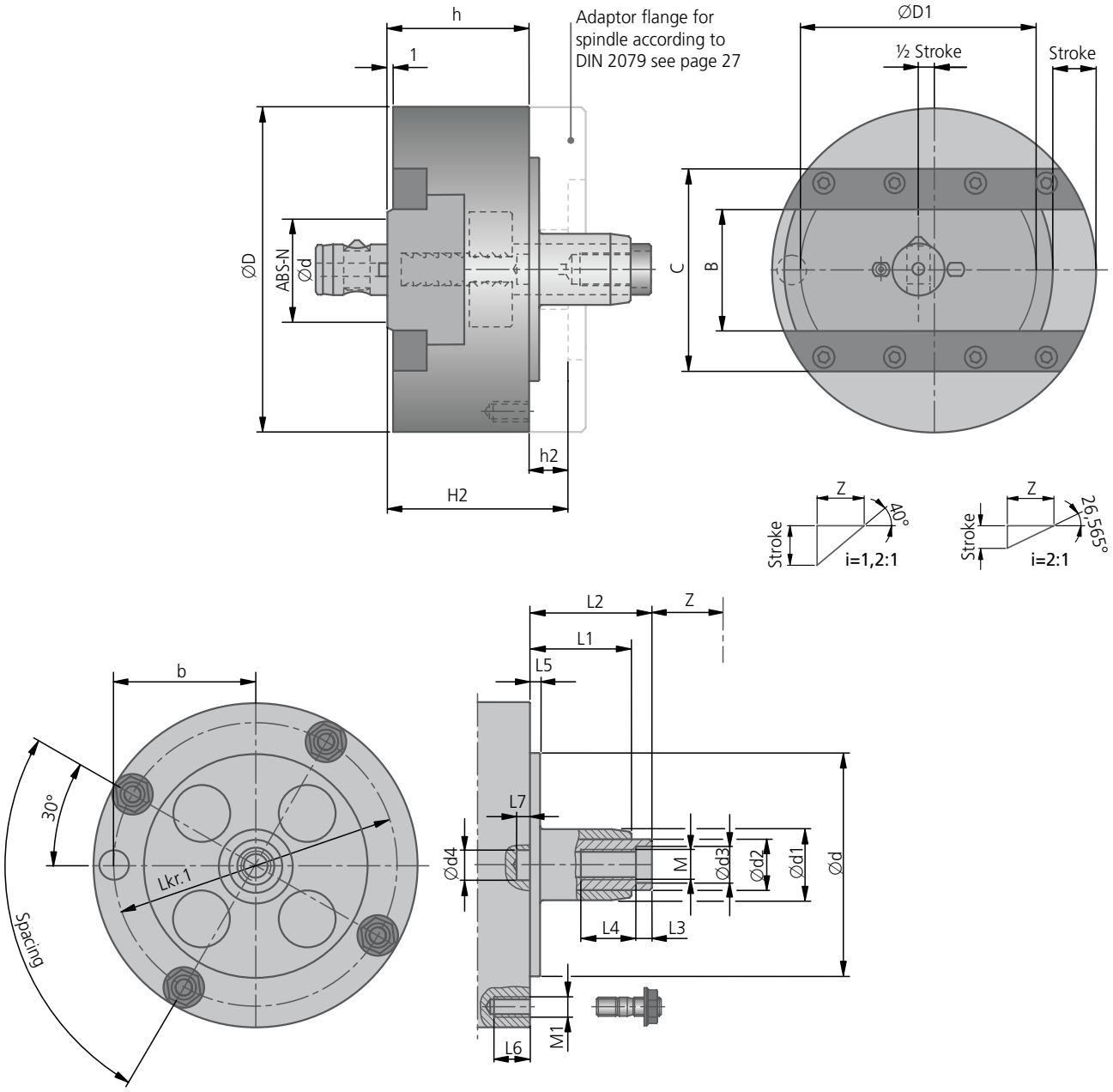
Order example:
Facing head ∅ 250 mm, stroke 30 mm, type 103: Article PKE250-30-103, Order No. P01 50030

Technical notes see page 13.

KOMET® KomDrive PKE-104 | PKE-104-QA

Facing head with single slide with integrated ABS® N location spigot

on request



Facing head with single slide with integrated ABS® N location spigot

		External dimensions										PKE-104-QA	
												Draw bar and tooth plates	
Article	Order No.	$ØD_{h6}$	Stroke	Traduction i	Z	h	$Ød_{h6}$	Ød1	Ød2	$Ød3^{H7}$	$Ød4^{+0,1}$	Pitch	Order No.
PKE 80-12-104	**P01 00040**	80	12	1,2 : 1	14,3	42	50	25	16	12	10,3		
PKE100-15-104QA	**P01 10041**	100	15	1,2 : 1	17,9	50	65	25	16	12	10,3	40°	**P01 11011**
PKE100-9-104QA	**P01 10046**		9	2 : 1								26,565°	**P01 12011**
PKE125-20-104QA	**P01 20041**	125	20	1,2 : 1	23,8	58	90	30	20	14	14,6	40°	**P01 21011**
PKE125-12-104QA	**P01 20046**		12	2 : 1								26,565°	**P01 22011**
PKE160-25-104QA	**P01 30041**	160	25	1,2 : 1	29,8	70	110	35	25	18	14,6	40°	**P01 31011**
PKE160-15-104QA	**P01 30046**		15	2 : 1								26,565°	**P01 32011**
PKE200-30-104QA	**P01 40041**	200	30	1,2 : 1	35,7	85	150	44	32	18	16,2	40°	**P01 41011**
PKE200-18-104QA	**P01 40046**		18	2 : 1								26,565°	**P01 42011**
PKE250-40-104	**P01 50040**	250	40	2 : 1	47,7	100	180	46	32	18	19,4		
PKE320-55-104	**P01 60040**	320	55	2 : 1	65,6	124	220	63	40	22	24,2		

	Slide dimensions			
for	B	C	D1	ABS-N Ø d
PKE 80...104	36	–	60	32
PKE100...104	40	72	75	40
PKE125...104	50	86	95	50
PKE160...104	60	100	115	63
PKE200...104	80	130	140	80
PKE250...104	100	150	170	100
PKE320...104	110	178	200	100

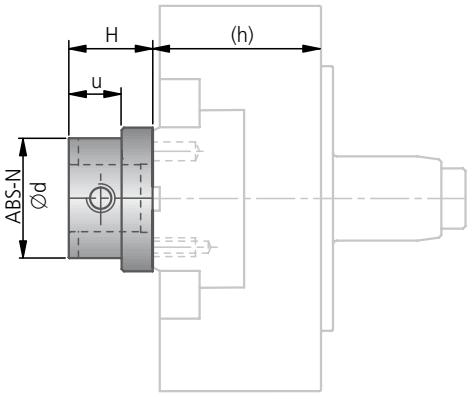
	Mounting dimensions														DIN 2079
											Bolthole circle		Adaptor flange		
for	M	M1	L1	L2±1	L3	L4	L5	L6	L7	b±0,1	Lkr.1	Spacing	H2	h2	Spindle size
PKE 80...104	M10×1L	M6	28	38	8	14	4	10	5	32	68	4×90° 3×120°	60	18	30
PKE100...104	M10×1L	M8	30	40	8	14	4	12	5	42	84	4×90° 3×120°	65	15	30
PKE125...104	M12×1,5L	M8	37	47	8	16	4	12	6	54	110	6×60°	75	17	40
PKE160...104	M16×1,5L	M10	50	60	10	25	5	15	6	70	140	4×90°	90	20	40
PKE200...104	M16×1,5L	M12	70	80	10	25	5	18	6	87,5	175	4×90°	110	25	50
PKE250...104	M16×1,5L	M16	90	100	10	25	6	22	6	108	216	4×90°	125	25	50
PKE320...104	M20×1,5L	M16	106	116	10	30	6	22	8	137,5	275	6×60°	150	26	60

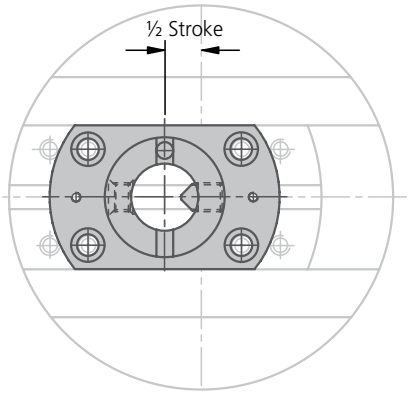
Order example:
Facing head ∅ 250 mm, stroke 40 mm, type 104: Article PKE250-40-104, Order No. P01 50040

Technical notes see page 13.

KOMET® KomDrive PKE-101

Adaptor with ABS® N connection





	ABS® N Adaptor				
for	Order No.	ABS-N Ø d	H	u	(h)
PKE 80...101	**P80 03010**	32	25	15	42
PKE100...101	**P80 13010**	32	25	15	50
PKE125...101	**P80 24010**	40	30	17	58
PKE160...101	**P80 35010**	50	35	22	70
PKE200...101	**P80 46010**	63	40	24	85
PKE250...101	**P80 57010**	80	45	25	100
PKE320...101	**P80 68010**	100	60	40	124

The maximum spindle speed is estimated as follows:

$$\text{r.p.m.}_{\text{max}} = \frac{2500}{\sqrt{\text{stroke}^*}}$$

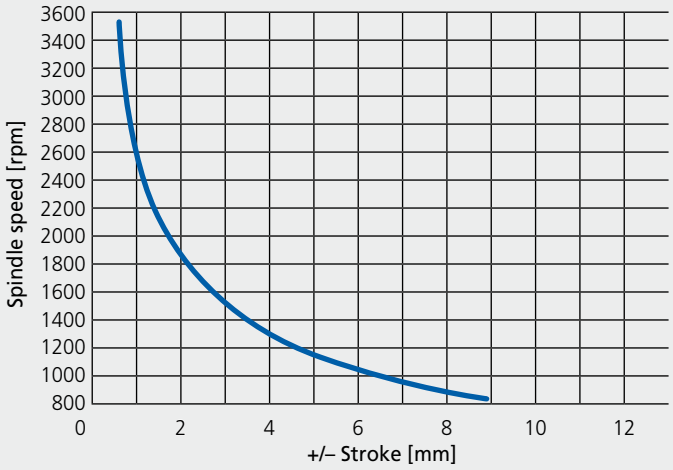
* stroke in mm from /to rotational axis

**** Spindle speed [rpm]**
Drawbar forces shown are valid for maximum weight of front tool.

***max. weight of front tool			
①	PKE100	1,2 kg	2.6 lbs
②	PKE125	2,0 kg	4.4 lbs
③	PKE160	3,2 kg	7.1 lbs
④	PKE200	5,5 kg	12.1 lbs
⑤	PKE250	12,0 kg	26.5 lbs

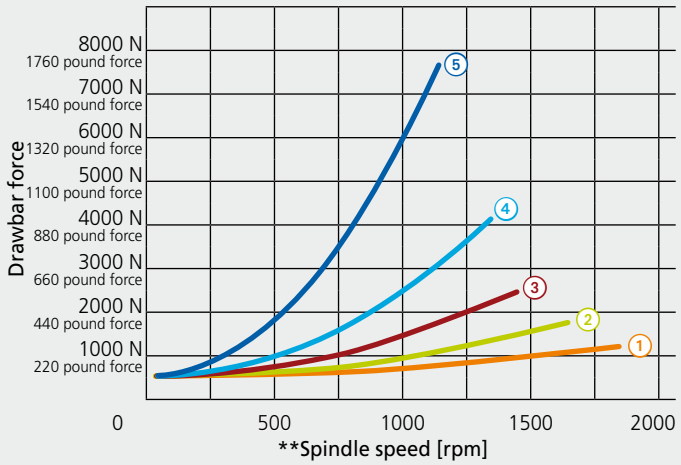
Stroke spindle speed force

***max. weight of front tool



Drawbar force

Full max. stroke

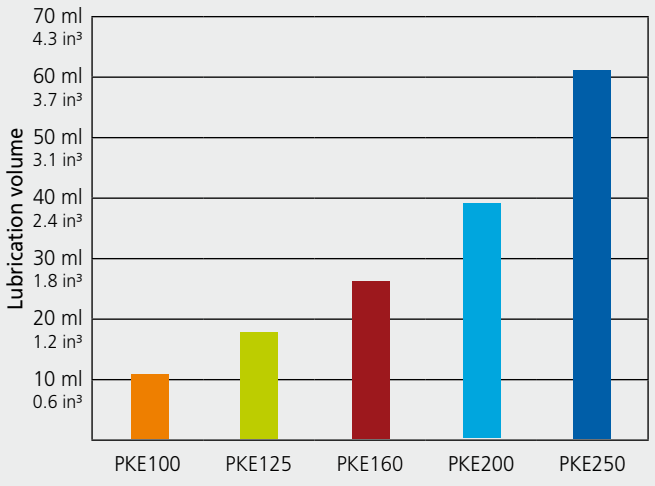


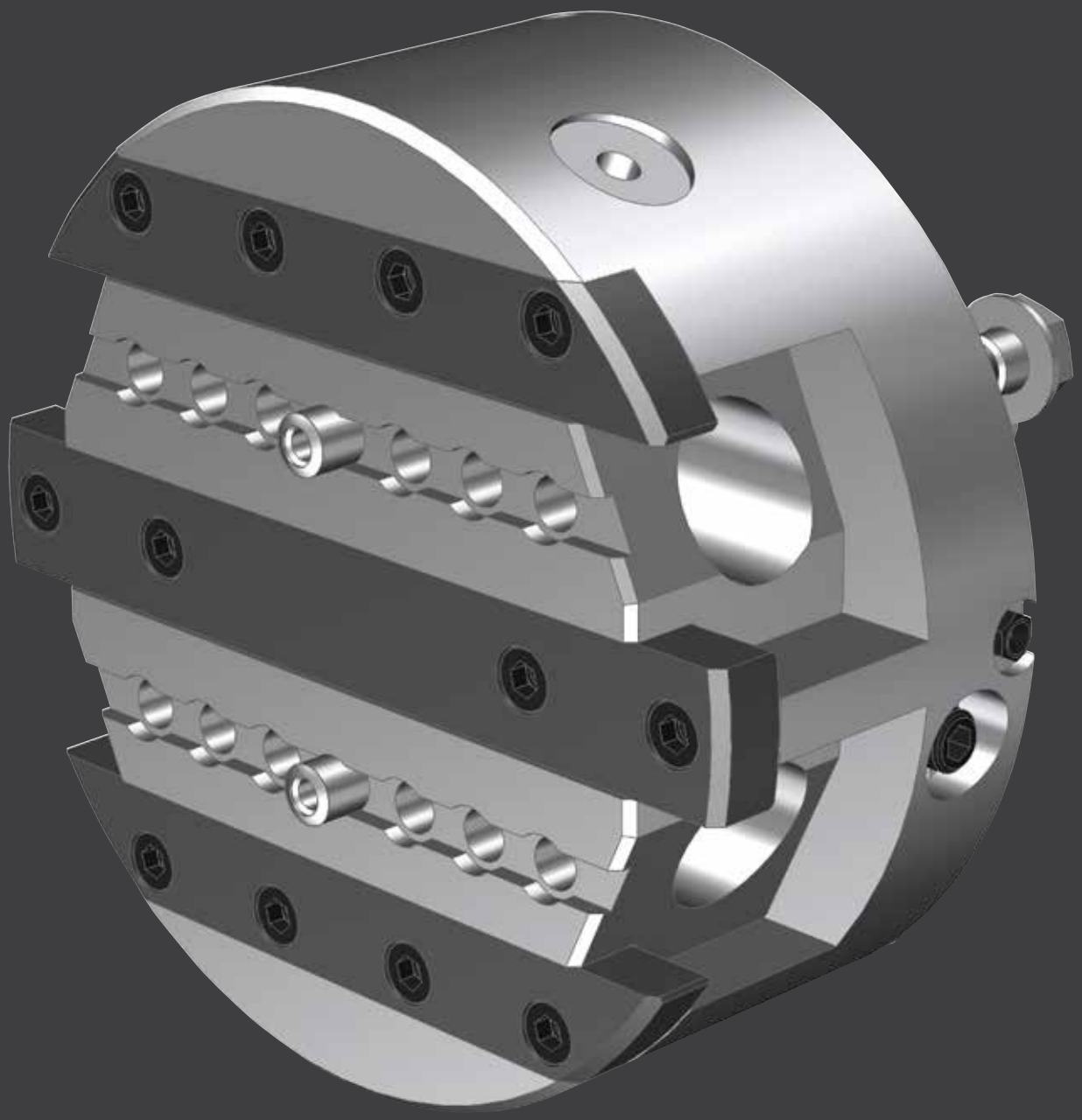
Lubrication volume required for one shift
The values specified are guide values and must, where required, be adjusted to the application conditions such as rotation speed, stroke and environmental influences such as coolant, dirt, etc.

Lubricants
As a lubricant we recommend Mobilux EP004 liquid lubricant and slide-way oils to DIN 51502 with ref. No. CG-L68 and CG-L220. For spindle speeds from 700 rev/min, CG-L220 is advisable. The relevant commercial names of the mineral oil companies for slide-way oils can be ascertained from the machine lubrication instructions.
These lubrication instructions apply to all generating tools supplied by KOMET®.

Lubrication requirements

Slide movement: 150 m / 6,000 in. (corresponds to one shift, 8 h)



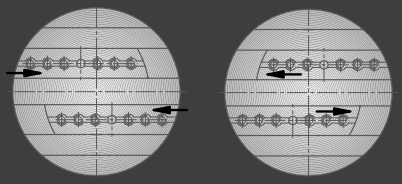


KOMET® KomDrive PKD

Facing head with double slide for medium to high spindle speeds
(depending on size of facing head)

The design of this facing head distinguishes according to the direction of the stroke, between PKD-101 and PKD-105. When pulling the drawbar of PKD-101, the slides move towards the center, while with PKD-105 the slides move away from the center.

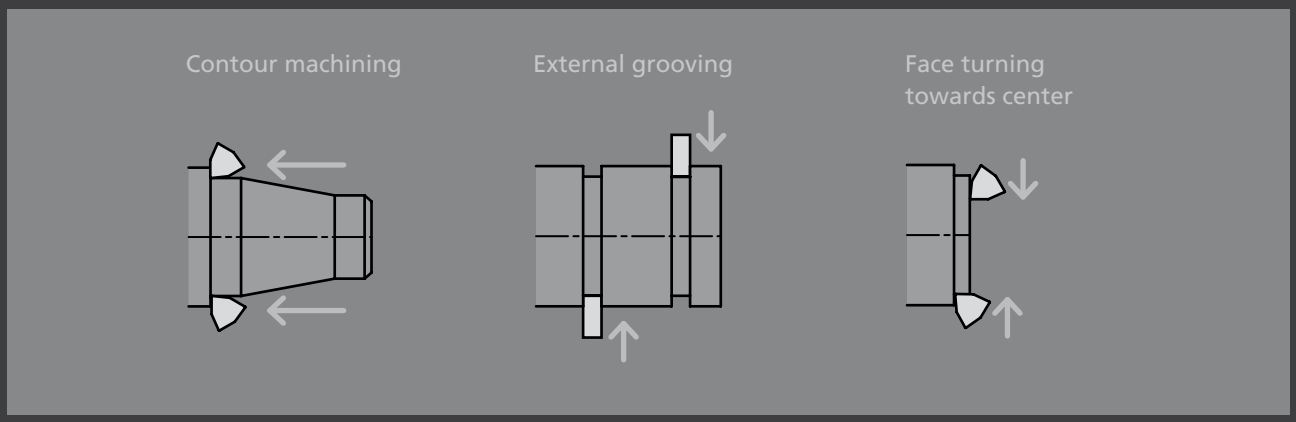
The PKD-105 is quoted upon request. For use in medium and light machining, even in the higher rotation speed range.



PKD-101 PKD-105

BENEFITS for you:

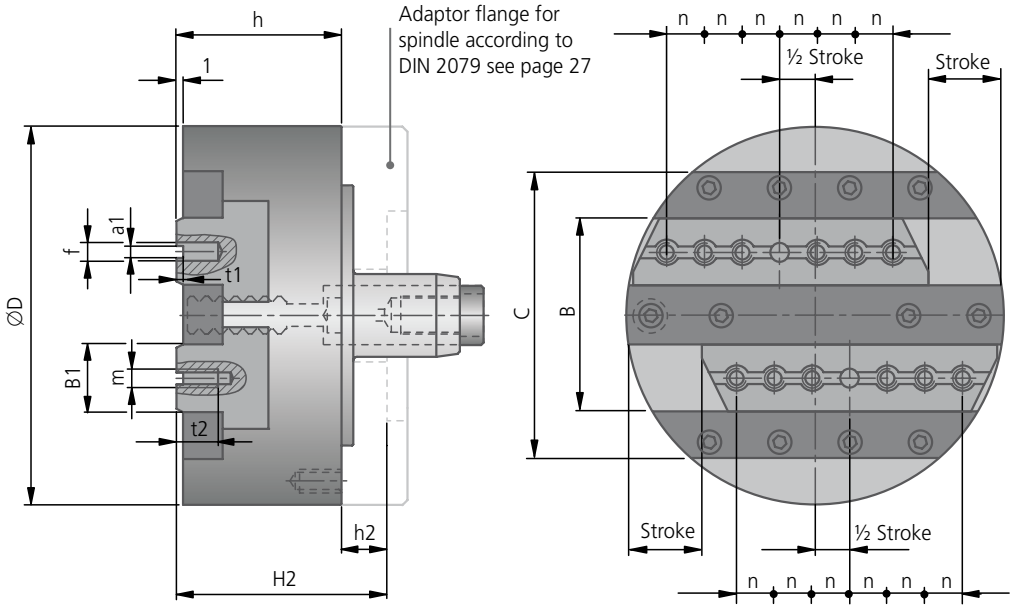
- Design-dependently balanced system
- Long service life thanks to large toothing surfaceche

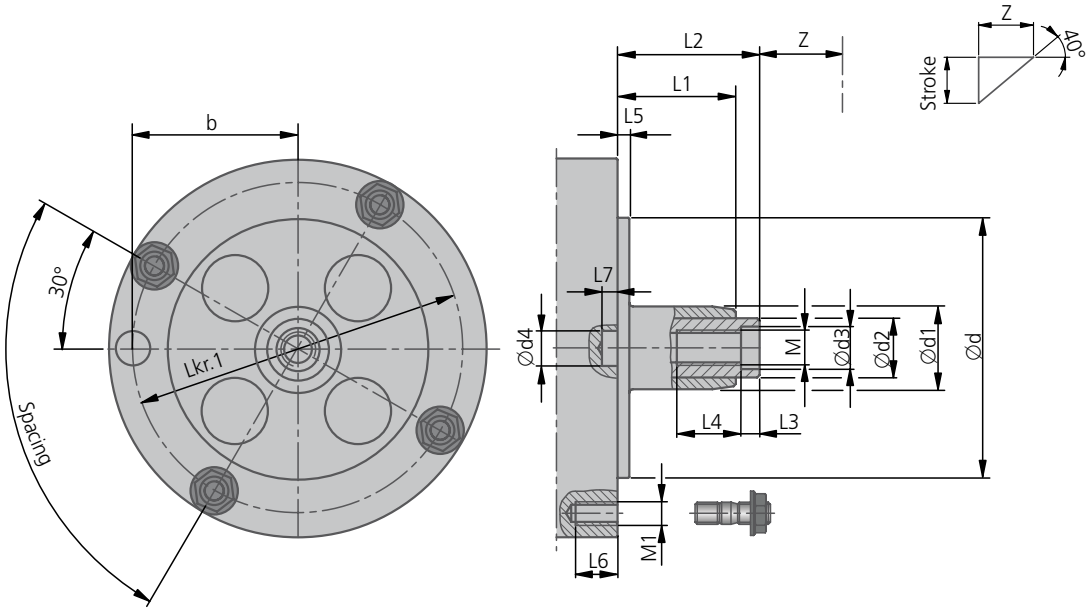


KOMET ® KomDrive PKD-101

Facing head with double slide with mounting holes in slides

Adaptor with
ABS ® N connection
see page 18.





Facing head with double slide with mounting holes in slides

		External dimensions								
Article	Order No.	$ØD_{h6}$	Stroke	Z	h	$Ød_{h6}$	Ød1	Ød2	$Ød3^{H7}$	$Ød4^{+0,1}$
PKD80-12-101	**P05 00010**	80	12	14,3	42	50	25	16	12	10,3
PKD100-17-101	**P05 10010**	100	17	20,3	50	65	25	16	12	10,3
PKD125-22-101	**P05 20010**	125	22	26,2	58	90	30	20	14	14,6
PKD160-30-101	**P05 30010**	160	30	35,7	70	110	35	25	18	14,6
PKD200-40-101	**P05 40010**	200	40	47,7	85	150	44	32	18	16,2
PKD250-50-101	**P05 50010**	250	50	59,6	100	180	46	32	18	19,4
PKD320-63-101	**P05 60010**	320	63	75,1	124	220	63	40	22	24,2

	Slide dimensions										
for	B	B1	C	A	$a1^{H8}$	t1	t2	m	f^{H7}	n	No. of bolt holes
PKD 80...101	46	15	–	30	6	3	10	M6	6	12	4
PKD100...101	56	20	–	36	8	3	15	M8	8	10	6
PKD125...101	72	26	–	46	8	3	15	M8	8	12	6
PKD160...101	84	30	124	56	8	3	16	M10	10	15	6
PKD200...101	102	36	148	64	8	3	16	M10	10	20	6
PKD250...101	136	50	186	78	10	4	18	M12	12	20	8
PKD320...101	166	60	226	106	12	4	25	M16	16	25	8

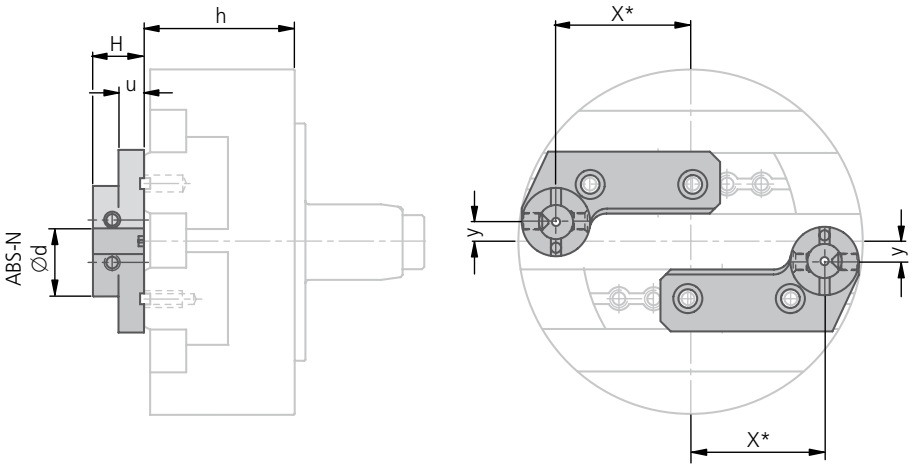
	Mounting dimensions													DIN 2079
											Bolthole circle		Adaptor flange		Spindle size
for	M	M1	L1	$L2^{\pm1}$	L3	L4	L5	L6	L7	$b^{\pm0,1}$	Lkr.1	Spacing	H2	h2	
PKD 80...101	M10×1L	M6	28	38	8	14	4	10	5	32	68	4×90° 3×120°	–	–	30
PKD100...101	M10×1L	M8	30	40	8	14	4	12	5	42	84	4×90° 3×120°	65	15	30
PKD125...101	M12×1,5L	M8	37	47	8	16	4	12	6	54	110	6×60°	75	17	40
PKD160...101	M16×1,5L	M10	50	60	10	25	5	15	6	70	140	4×90°	90	20	40
PKD200...101	M16×1,5L	M12	70	80	10	25	5	18	6	87,5	175	4×90°	110	25	50
PKD250...101	M16×1,5L	M16	90	100	10	25	6	22	6	108	216	4×90°	125	25	50
PKD320...101	M20×1,5L	M16	106	116	10	30	6	22	8	137,5	275	6×60°	150	26	60

Order example:
Facing head ∅ 250 mm, stroke 50 mm, type 101: Article PKD250-50-101, Order No. P05 50010

Technical notes see page 19.

KOMET® KomDrive PKD-101

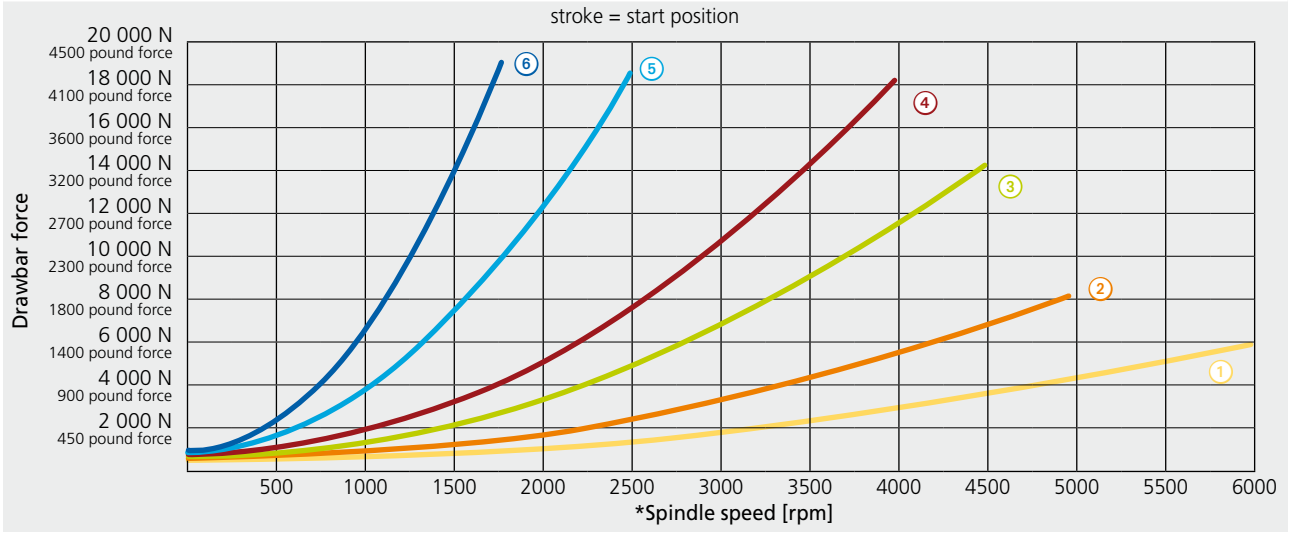
Adaptor with ABS® N connection



ABS® N Adaptor							
for Ø D	Order No.	ABS-N Ø d	H	u	X*		y
80	–						
100	**P80 12050**	25	25	12	35	–	7
125	**P80 22050**	25	25	12	47	35	7
160	**P80 33050**	32	25	10	60	45	8
200	**P80 44050**	40	30	15	80	60	10
250	**P80 55050**	50	35	15	100	80	12
320	**P80 66050**	63	40	15	125	100	14

* ABS® N adapters have two key ways for radial positioning

Drawbar force



***Spindle speed [rpm]**
Drawbar forces shown are valid for maximum weight of front tool.

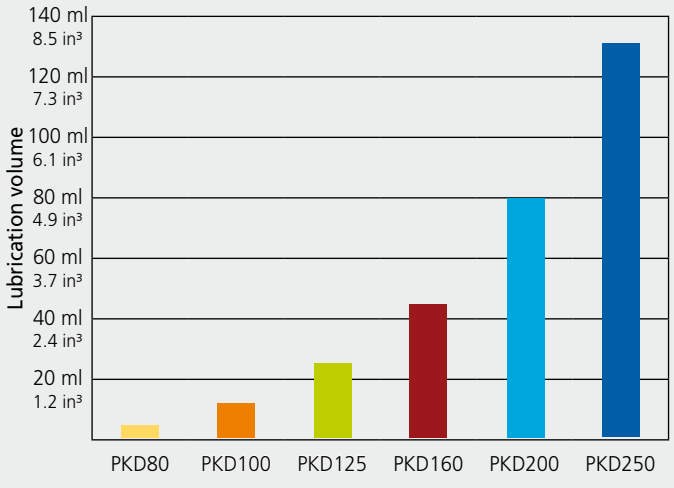
	max. weight of front tool		
1	PKD 80	2× 0,2 kg	2× 0.4 lbs
2	PKD100	2× 0,3 kg	2× 0.7 lbs
3	PKD125	2× 0,45 kg	2× 1.0 lbs
4	PKD160	2× 0,6 kg	2× 1.3 lbs
5	PKD200	2× 0,8 kg	2× 1.8 lbs
6	PKD250	2×1,0 kg	2× 2.2 lbs

Lubrication volume required for one shift
The values specified are guide values and must, where required, be adjusted to the application conditions such as rotation speed, stroke and environmental influences such as coolant, dirt, etc.

Lubricants
As a lubricant we recommend Mobilux EP004 liquid lubricant and slide-way oils to DIN 51502 with ref. No. CG-L68 and CG-L220. For spindle speeds from 700 rev/min, CG-L220 is advisable. The relevant commercial names of the mineral oil companies for slide-way oils can be ascertained from the machine lubrication instructions.
These lubrication instructions apply to all generating tools supplied by KOMET ®.

Lubrication requirements

Slide movement: 150 m / 6,000 in. (corresponds to one shift, 8 h)



PKU-101

PKU-103

PKU-104
Facing head with integrated ABS® location spigot on request.

KOMET® KomDrive PKU

Counterweighted facing head for medium to high spindle speeds
(depending on size of facing head)

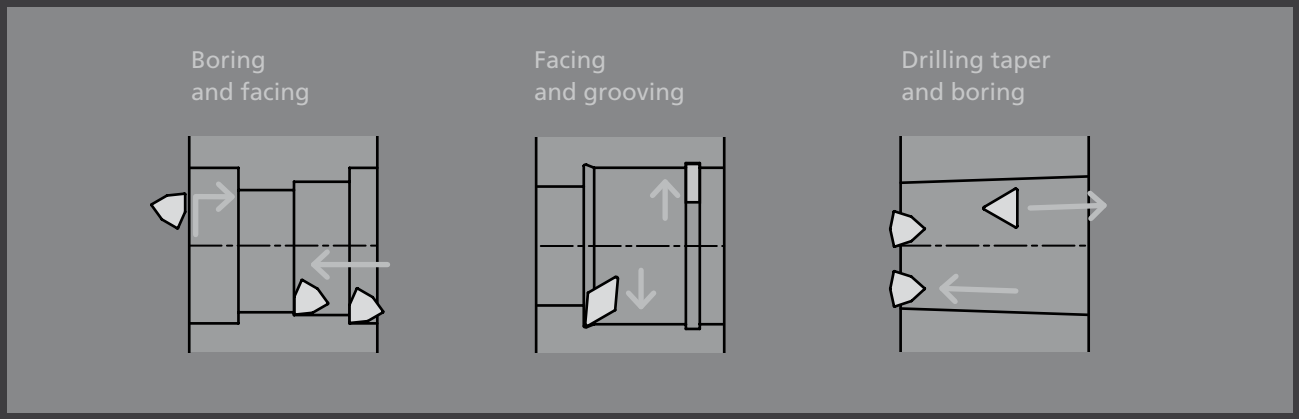
PKU balanced facing heads are suitable for the highest spindle speeds. The tool mounting areas are similar to the facing heads with a single slide, and offer optimum tooling rigidity.

The facing heads may be furnished with an additional tool guide for heavy duty machining conditions.

Please note that the weight of the front tools is limited for this series of facing heads (see page 23 and 25).

BENEFITS for you:

- Cycle time reduction through higher rotation speed ranges
- Optimally balanced system due to balancing weight adjusted to tool weight
- For higher spindle speeds
- Since shorter strokes permit higher weights of the front tools, we offer two different slide designs
- Facing heads with long stroke
  are suitable for facing with short and light front tools.
- Facing heads with short stroke
  are suitable for: Internal machining (grooving, under-cutting and boring) with heavy front tools.

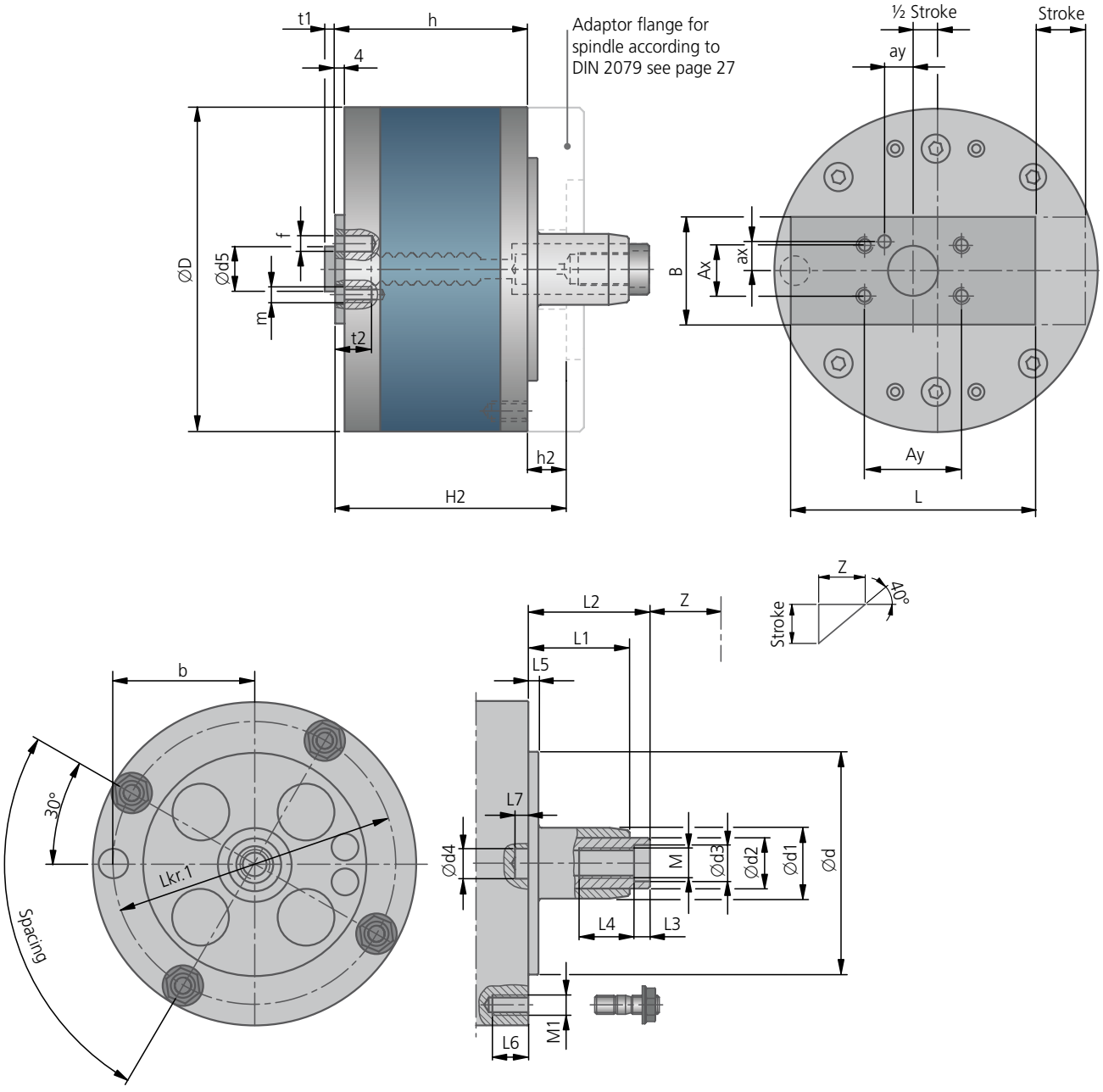


Balancing note:
Balancing of these facing heads is achieved in any slide position through the weighting of the sliding components. The snap-on tools are involved in this dynamic and must therefore be adjusted in respect of weight and centre of gravity (see column "weight"), i.e. facing heads are finely balanced with the snap-on tools.

KOMET ® KomDrive PKU-101

Facing head with counterweighted with mounting holes in slide

on request



Facing head with counterweighted with mounting holes in slide

	External dimensions									
Article	Order No.	$ØD_{h6}$	Stroke	Z	h	$Ød_{h6}$	Ød1	Ød2	$Ød3^{H7}$	$Ød4^{+0,1}$
PKU100-10-101	**P20 10110**	100	10	11,9	66	65	25	16	12	10,3
PKU125-6-101	**P20 20010**	125	6	7,2	73	90	30	20	14	14,6
PKU125-15-101	**P20 20110**		15	17,9						
PKU160-8-101	**P20 30010**	160	8	9,5	95	110	35	25	18	14,6
PKU160-22-101	**P20 30110**		22	26,2						
PKU200-10-101	**P20 40010**	200	10	11,9	115	150	44	32	18	16,2
PKU200-30-101	**P20 40110**		30	35,7						
PKU250-12-101	**P20 50010**	250	12	14,3	140	180	46	32	18	19,4
PKU250-40-101	**P20 50110**		40	47,7						
PKU320-15-101	**P20 60010**	320	15	17,9	174	220	63	40	22	24,2
PKU320-50-101	**P20 60110**		50	59,6						

	Slide dimensions											Tool			
for	B	L	Ax	Ay	ax ±0,02	ay ±0,02	$Ød5_{h6}$	t1	t2	m	f^{H7}	kg min.	kg max.	lbs min.	lbs max.
PKU100-10-101	42	80	18	33	11	7	16	5	9	M6	5	0,22	0,4	0.5	0.9
PKU125-6-101	52	88	28	50	14	15	20	5	16	M8	6	0,55	1,05	1.2	2.3
PKU125-15-101	46	92	22	42	11	12			13	M6	5	0,53	0,9	1.2	2.0
PKU160-8-101	66	106	32	60	16	18	25	5	19	M10	6	0,46	1,5	1.0	3.3
PKU160-22-101	56	120	28	50	14	15			16	M8	6	0,47	1,2	1.0	2.6
PKU200-10-101	78	130	40	80	20	25	30	5	18	M12	8	1,25	3,5	2.8	7.7
PKU200-30-101	68	150	32	60	16	18			18	M10	6	1,15	2,7	2.5	6.0
PKU250-12-101	93	156	50	90	25	30	32	5	18	M12	10	1,51	5,3	3.3	11.7
PKU250-40-101	78	190	40	80	20	25			18	M12	8	1,23	3,8	2.7	6.0
PKU320-15-101	108	194	60	120	30	40	40	5	28	M16	12	0	7,2	0	15.9
PKU320-50-101	92	234	50	90	25	30			22	M12	10	0	5,4	0	11.9

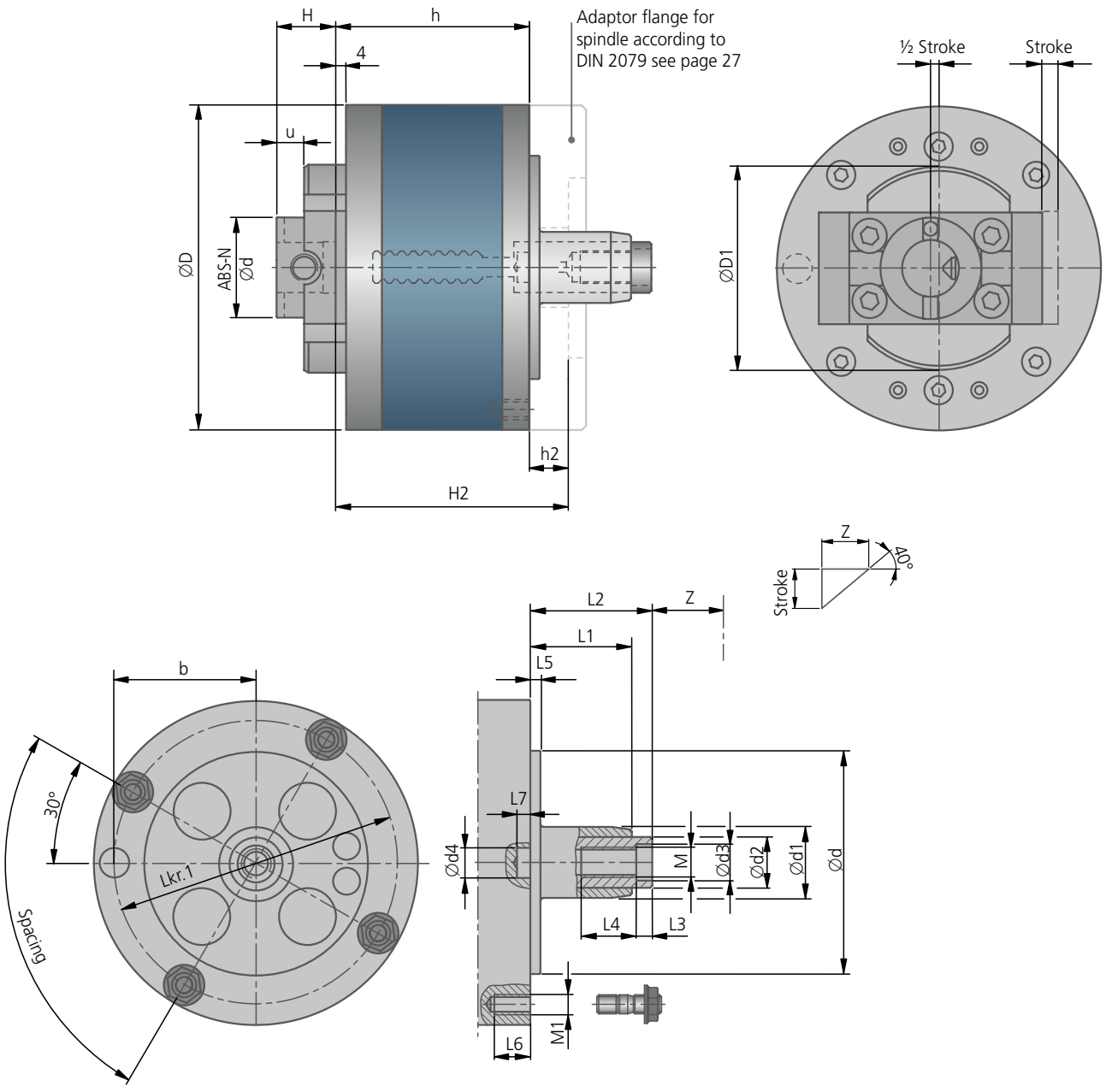
	Mounting dimensions										Bolthole circle		Adaptor flange		DIN 2079
for	M	M1	L1	L2±1	L3	L4	L5	L6	L7	b±0,1	Lkr.1	Spacing	H2	h2	Spindle size
PKU100...101	M10×1L	M8	30	40	8	14	4	12	5	42	84	4×90° 3×120°	81	15	30
PKU125...101	M12×1,5L	M8	37	47	8	16	4	12	6	54	110	6×60°	90	17	40
PKU160...101	M16×1,5L	M10	50	60	10	25	5	15	6	70	140	4×90°	115	20	40
PKU200...101	M16×1,5L	M12	70	80	10	25	5	18	6	87,5	175	4×90°	140	25	50
PKU250...101	M16×1,5L	M16	90	100	10	25	6	22	6	108	216	4×90°	165	25	50
PKU320...101	M20×1,5L	M16	106	116	10	30	6	22	8	137,5	275	6×60°	200	26	60

Order example:
Facing head ∅ 250 mm, stroke 40 mm, type 101: Article PKU250-40-101, Order No. P20 50110

Technical notes see page 26.

KOMET® KomDrive PKU-103

Facing head with counterweighted with integrated ABS® N connection



Facing head with counterweighted with integrated ABS® N connection

		External dimensions									
Article	Order No.	$ØD_{h6}$	Stroke	Z	h	ØD1	$Ød_{h6}$	Ød1	Ød2	$Ød3^{H7}$	$Ød4^{+0,1}$
PKU100-10-103	**P20 10130**	100	10	11,9	61	64	65	25	16	12	10,3
PKU125-6-103	**P20 20030**	125	6	7,2	73	85	90	30	20	14	14,6
PKU125-15-103	**P20 20130**		15	17,9							
PKU160-8-103	**P20 30030**	160	8	9,5	95	100	110	35	25	18	14,6
PKU160-22-103	**P20 30130**		22	26,2							
PKU200-10-103	**P20 40030**	200	10	11,9	115	125	150	44	32	18	16,2
PKU200-30-103	**P20 40130**		30	35,7							
PKU250-12-103	**P20 50030**	250	12	14,3	140	150	180	46	32	18	19,4
PKU250-40-103	**P20 50130**		40	47,7							
PKU320-15-103	**P20 60030**	320	15	17,9	174	180	220	63	40	22	24,2
PKU320-50-103	**P20 60130**		50	59,6							

	Slide dimensions			Tool			
for	ABS-N Ø d	H	u	min. (kg)	max. (kg)	min. (lbs)	max. (lbs)
PKU100-10-103	32	24	20	0,09	0,29	0.2	0.6
PKU125-6-103	40	25	12	0,2	0,8	0.4	1.8
PKU125-15-103	32	20	10	0,34	0,8	0.7	1.8
PKU160-8-103	50	30	14	0	1,0	0	2.2
PKU160-22-103	40	25	12	0,21	0,9	0.5	2.0
PKU200-10-103	63	35	16	0,32	2,5	0.7	5.5
PKU200-30-103	50	30	14	0,7	2,2	1.5	4.9
PKU250-12-103	80	40	20	0	3,7	0	8.2
PKU250-40-103	63	35	16	0,27	2,9	0.6	6.4
PKU320-15-103	100	55	30	0	4,17	0	9.2
PKU320-50-103	80	40	20	0	3,9	0	8.6

	Mounting dimensions														DIN 2079
											Bolthole circle		Adaptor flange		Spindle size
for	M	M1	L1	$L2^{\pm1}$	L3	L4	L5	L6	L7	$b^{\pm0,1}$	Lkr.1	Spacing	H2	h2	
PKU100...103	M10×1L	M8	30	40	8	14	4	12	5	42	84	4×90° 3×120°	81	15	30
PKU125...103	M12×1,5L	M8	37	47	8	16	4	12	6	54	110	6×60°	90	17	40
PKU160...103	M16×1,5L	M10	50	60	10	25	5	15	6	70	140	4×90°	115	20	40
PKU200...103	M16×1,5L	M12	70	80	10	25	5	18	6	87,5	175	4×90°	140	25	50
PKU250...103	M16×1,5L	M16	90	100	10	25	6	22	6	108	216	4×90°	165	25	50
PKU320...103	M20×1,5L	M16	106	116	10	30	6	22	8	137,5	275	6×60°	200	26	60

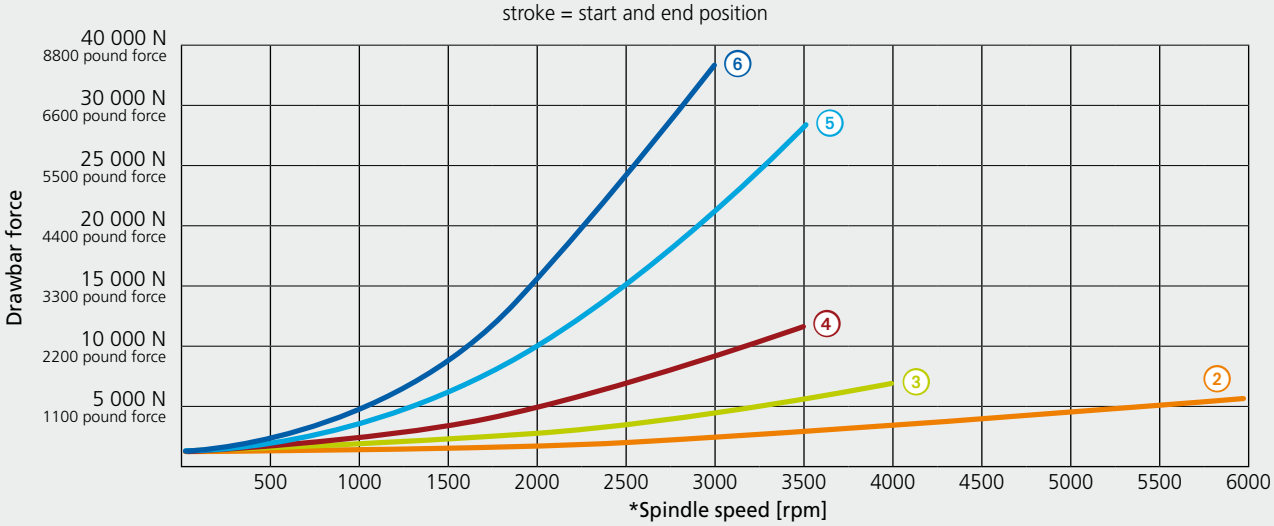
Order example:
Facing head ∅ 250 mm, stroke 40 mm, type 103: Article PKU250-40-103, Order No. P20 50130

Technical notes see page 26.

Technical notes

Drawbar force

stroke = start and end position



***Spindle speed [rpm]**
Drawbar forces shown are valid for maximum weight of front tool.

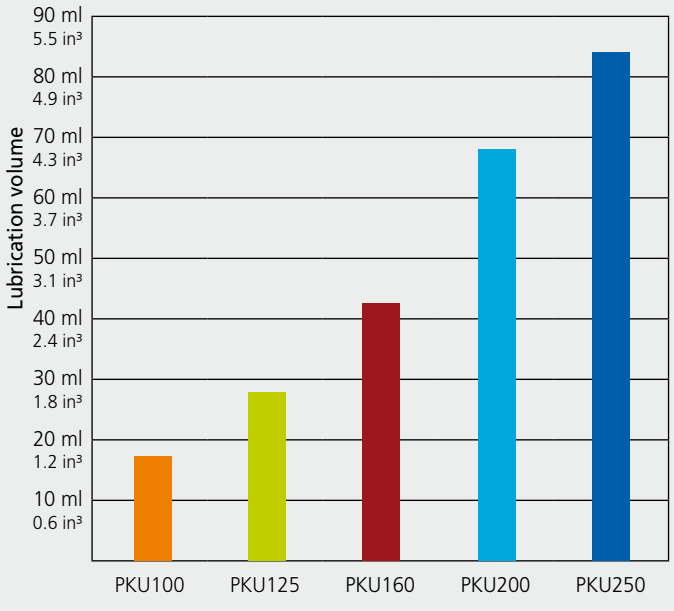
	max. weight of front tool		
2	PKU100	0,4 kg	0.9 lbs
3	PKU125	0,6 kg	1.3 lbs
4	PKU160	0,9 kg	2.0 lbs
5	PKU200	2,0 kg	4.4 lbs
6	PKU250	2,8 kg	6.17 lbs

Lubrication volume required for one shift
The values specified are guide values and must, where required, be adjusted to the application conditions such as rotation speed, stroke and environmental influences such as coolant, dirt, etc.

Lubricants
As a lubricant we recommend Mobilux EP004 liquid lubricant and slide-way oils to DIN 51502 with ref. No. CG-L68 and CG-L220. For spindle speeds from 700 rev/min, CG-L220 is advisable. The relevant commercial names of the mineral oil companies for slide-way oils can be ascertained from the machine lubrication instructions.
These lubrication instructions apply to all generating tools supplied by KOMET ®.

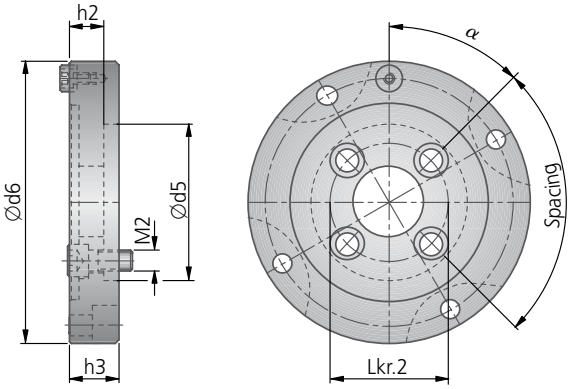
Lubrication requirements

Slide movement: 150 m / 6,000 in. (corresponds to one shift, 8 h)



Important: See page 31 for more application details and safety notes!

Adaptor flange for spindle according to DIN 2079



		Mounting dimensions, spindle								DIN 2079
for Ø D	Order No.	Ø $d5^{H6}$	Ø d6	h3	h2	α	M2	Bolthole circle Lkr.2 ±0,2	Bolthole circle Spacing	Spindle size
80	**P00 00300**	69,832	80	26	18	15°	10	54	4×90°	30
100	**P00 10300**	69,832	100	23	15	15°	10	54	4×90°	30
125	**P00 20400**	88,882	125	25	17	45°	12	66,7	4×90°	40
160	**P00 30400**	88,882	160	28	20	45°	12	66,7	4×90°	40
200	**P00 40500**	128,57	200	35	25	45°	16	101,6	4×90°	50
250	**P00 50500**	128,57	250	35	25	45°	16	101,6	4×90°	50
320	**P00 60600**	221,44	320	41	26	45°	20	177,8	4×90°	60

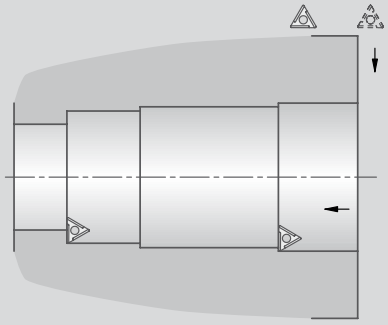
Machining examples

Gear case

- Finishbore bearing ∅ 80^{H7} / ∅ 100^{H7} (∅ 3.149”+0.00125” and ∅ 3.937”+0.0014”) with bridge mounted tools
- Retract after boring
- Face turn with slide

Cutting data:

∅ 80 / 100 mm	3.149" / 3.937"
v_c = 400 m/min	1,300 sfm
n = 1591 min^{-1}	1,591 rpm
f = 0,11 mm/rev	0.0044 ipr
v_f = 175 mm/min	6.89 ipm

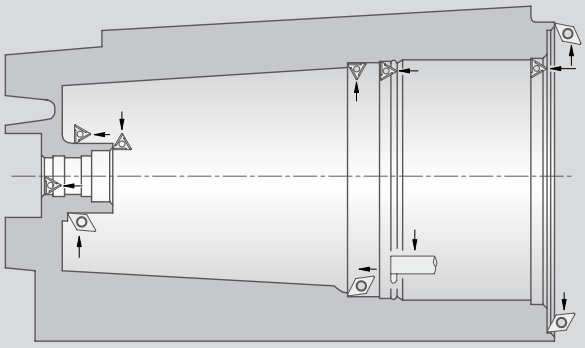


Gear case

- Bore ∅ 25/220/227 mm (∅ 0.984”/8.661”/8.937”) and turn ∅ 46 mm (∅ 1.811”) with fixed tools
- Operate slide to face turn ∅ 226 / 206 mm (∅ 8.897”/8.110”)
- Face turn ∅ 220 mm (∅ 8.661”) and ∅ 46 mm (∅ 1.811”)
- Groove bottom of gear case with grooving insert

Cutting data:

∅ 25 - 227 mm	
∅ 0.984" to ∅ 8.937"	
v_c = 161 - 1450 m/min	500-4800 sfm
n = 2000 min^{-1}	2,000 rpm
f = 0,1 mm/rev	0.004 ipr
v_f = 200 mm/min	7.87 ipm

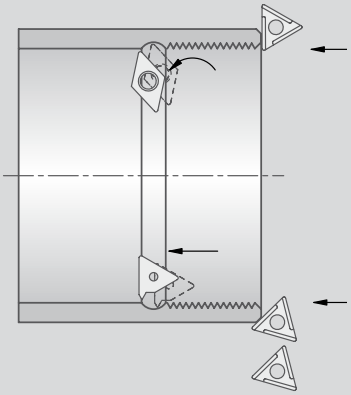


Tube end machining

- Chamfer bore
- Bore inner contour including undercut
- Chamfer outer diameter and plungecut the face
- Cut thread in multiple passes
- Centrally located front tool is exchangeable for machining different tube diameters

Cutting data:

∅ 94 mm	3.700"
v_c = 220 m/min	725 sfm
n = 1350 min^{-1}	1,350 rpm
f = 0,12 mm/rev	1,35053 ipr
v_f = 162 mm/min	6.75 ipm

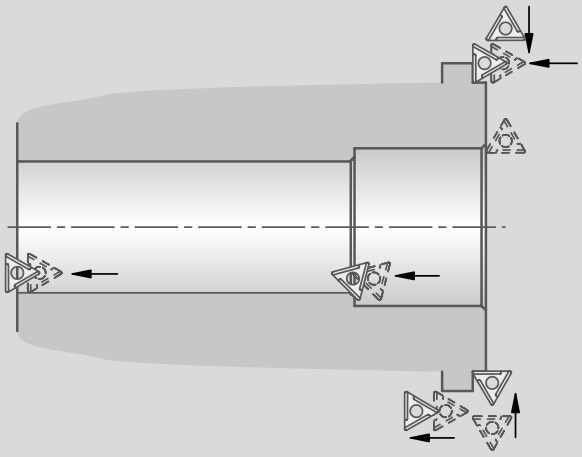


Bearing housing

- Bore ∅ 40 mm (∅ 1.575″) and chamfer 1×45°; Turn outer ∅ 95 mm (∅ 3.740″) and step ∅ 86 mm (∅ 3.386″)
- Lift of cutting edges
- Turn both faces

Cutting data:

$\varnothing_1$ 50 mm	1.575"
$\varnothing_2$ 110 mm	2 4.331"
v_c = 180 m/min	600 sfm
n_1 = 1150 min^{-1}	1,550 rpm
n_2 = 520 min^{-1}	520 rpm
f = 0,15 mm/rev	0.006 ipr
v_{f1} = 172 mm/min	6.77 ipm
v_{f2} = 80 mm/min	3.15 ipm

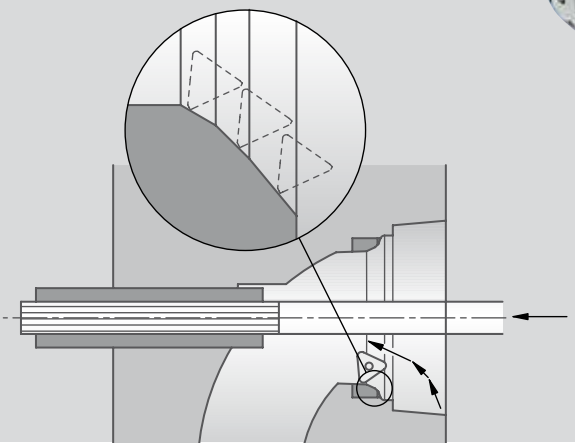


Cylinder head / valve seat

- Generate 120° outer relief angle through coordinated axial movement of the machine spindle and drawbar
- Machine valve sealface 90°$_{-30'}$ through drawbar actuation
- Generate 60° inner relief angle
- Ream valve guide bushing

Cutting data:

∅ 38,6 - 23 mm	1.520" to 0.906"
v_c= 242-144 m/min	800-475 sfm
n = 2000 min^{-1}	2,000 rpm
f = 0,08 mm/rev	0.003 ipr
v_f = 160 mm/min	6.30 ipm

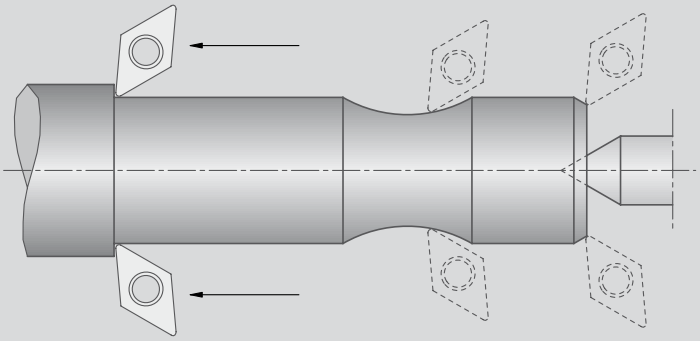


Shaft machining

Turn contour with double slide generating heading furnished with central throughbore (also available with rotating center support)

Cutting data:

∅ 37 - 12 mm	
∅ 1.457" to ∅ 0.472"	
v_c=	260-34 m/min
	850 sfm
n =	2240 min^{-1}
	2,240 rpm
f =	0,1 mm/rev
	0.004 ipr
v_f =	224 mm/min
	8.82 ipm

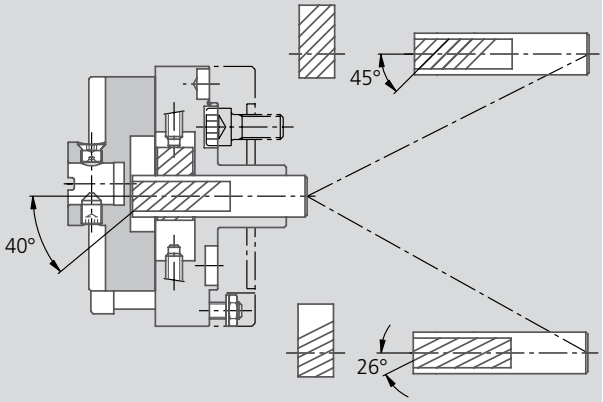


Important: See page 31 for more application details and safety notes!

Modified standard facing heads

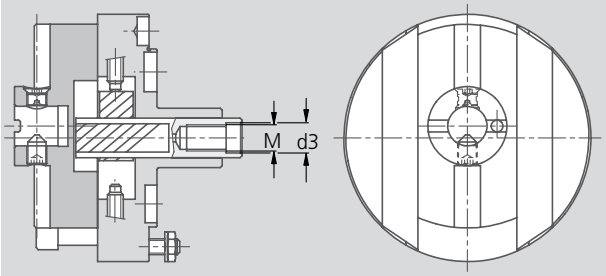
Modification 1

Rack angle for various transmission ratios. All facing heads are also available with transmission ratios of 1:1 and 1:2.



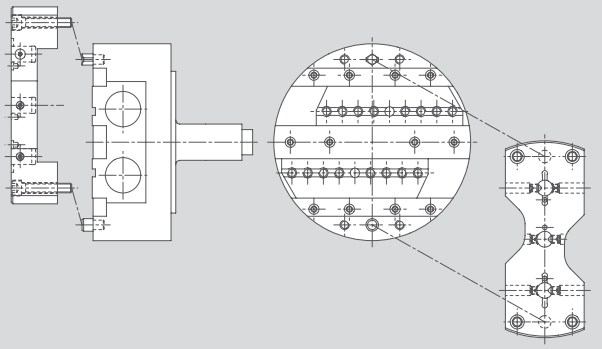
Modification 2

Drawbar connection with different locating diameter and thread. Capable to connect with existing machines.



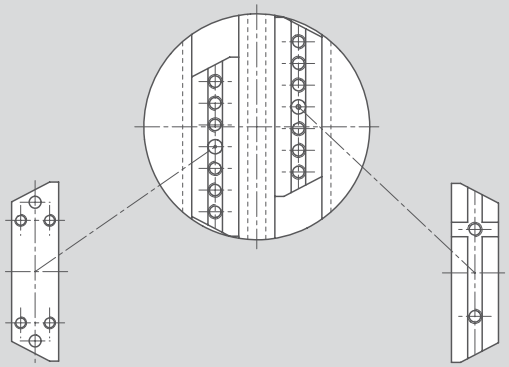
Modification 3

Additional mounting holes to install bridge. Installation of fixed tools to combine boring and facing operations.



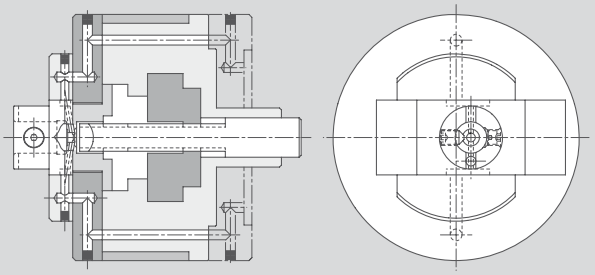
Modification 4

Modified mounting hole pattern in slides allows the installation of existing cutting tools.



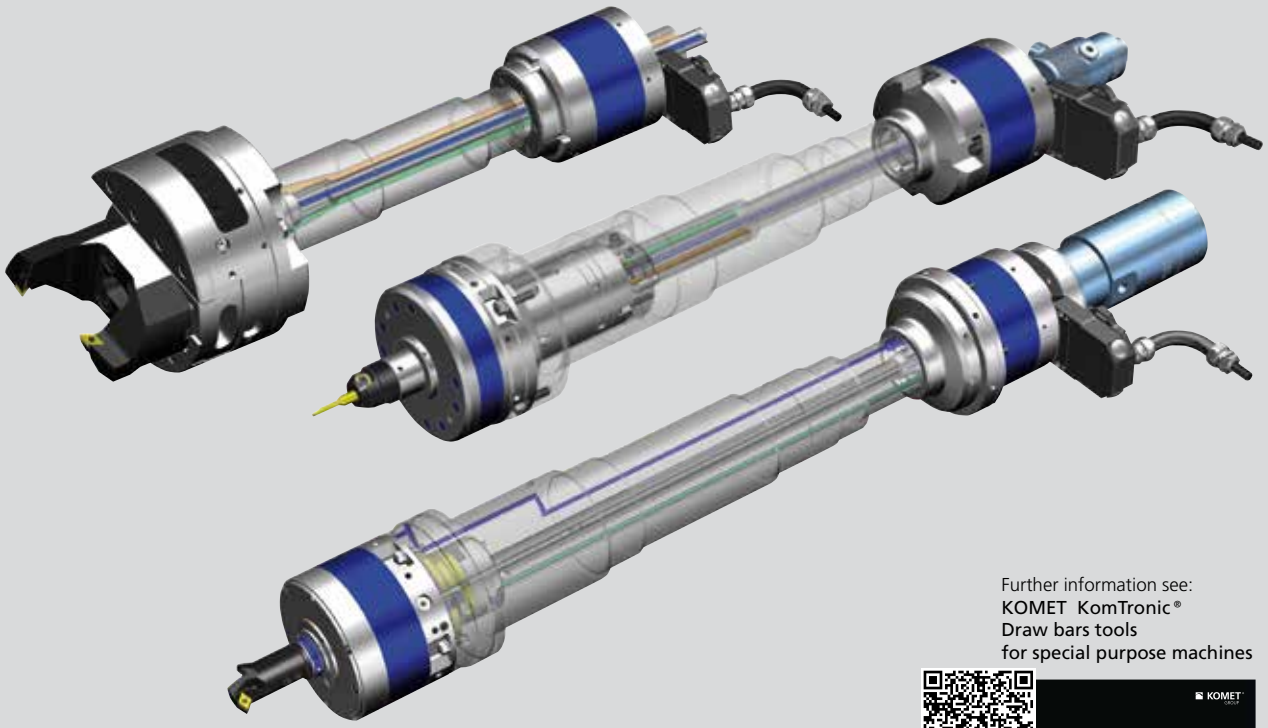
Modification 5

Coolant supply through the face of the spindle. Improved chip control and chip removal in drilling and boring operations.



Below is a listing of modifications to standard facing heads which are available upon request. Replacement parts such as drawbars, gear racks and slides are stocked as semifinished components.

Facing heads with integrated measuring system and KomTronic® U-axis systems for spindle integration



Further information see:
KOMET KomTronic®
Draw bars tools
for special purpose machines

Produce turning contours economically when working with a stationary workpiece

Based on decades of experience producing facing heads for special purpose machines, KOMET® is expanding its product range to include KomTronic® systems for spindle integration for different installation and usage requirements for facing heads.

- Facing heads with direct encoder on the slide
- KomTronic® systems for spindle integration with own drive

Usage and safety notes

The application details given depend on the environmental and application conditions (e.g. machine, ambient temperature, lubricant/coolant used and machining result required): they are based on the correct application conditions, correct use and compliance with the spindle speed limits given for the tools.

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