FORKARDT

3QLC, 3QLK, 3QLC-KS, 3QLK-KS
2QLC-LS, 3QLC-LS, 3QLC-AG, QLC-KT

Power Chucks

WORKHOLDING SOLUTIONS WORLDWIDE

This catalogue describes the key components of a power chucking system featuring the following FORKARDT power chucks:
QLC, QLK,
QLC/QLK-KS (KING SIZE),
QLC-LS (LONG STROKE) und
QLC-AG (COMPENSATING CLAMPING)
QLC-KT
Should you require further information beyond the data contained in this catalogue, please refer to the following FORKARDT publications for example:

- Chuck Jaws
- Rotating Actuating Cylinders:
  closed-centre hydraulic cylinders OKRJ
  open-centre hydraulic cylinders OKHJ
- Controllers
- Gripping Force Meters SKM 1200 / 1500

- For more information visit:
  www.forkardt.com

As we are constantly striving to improve our products, the dimensions and specifications in this catalogue cannot always represent the latest state of the art;they are therefore given as an indication only and are not binding.

Contents

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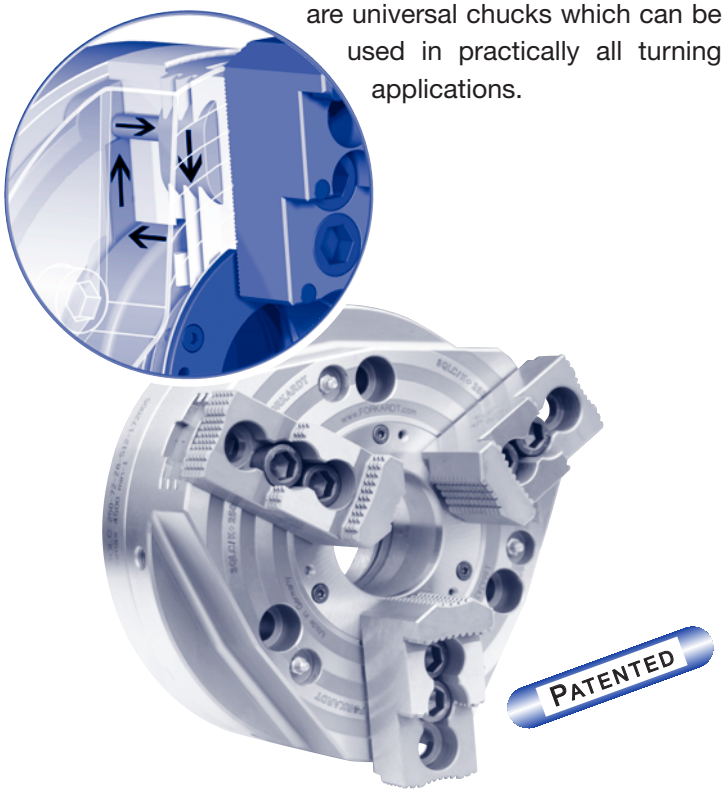
QLC, QLK, QLC/K-KS, QLC-LS, QLC-AG und QLC-KT Power Chucks

Power Chuck range with Wedge Hook, Lubrication System and Centrifugal Force Compensation

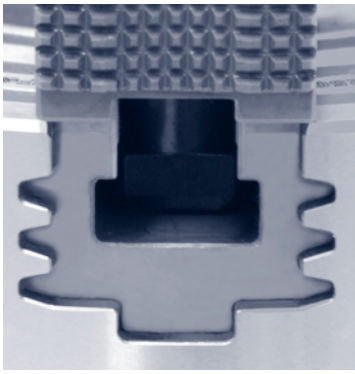
The new range of Power Chucks QLC, QLK, QLC/QLK-KS, QLC-LS, QLC-AG and QLC-KT marks a considerable advance in chucking technology. (A feat so often achieved by FORKARDT that it is becoming a tradition!) The QLC family of chucks is an enviable combination of proven mechanisms, innovative design, highest quality materials and advanced manufacturing techniques. Needless to say, all developed and produced in accordance with the requirements of ISO 9001 - 2000.

QLC/QLK Power Chucks utilize the wedge hook system with a large through hole bore. Centrifugal force compensation is also provided together with an integrated lubricant reserve. QLC/QLK Power Chucks are universal chucks which can be used in practically all turning applications.



Technical features:

- Best possible clamping forces obtained through patented multiple jaw guides
- Backlash free wedge hook mechanism for maximum clamping forces and highest repeatability
- Base jaw profile providing exceptionally long support for greater stability and precision during internal and external clamping
- Nitrided chuck body for long service life
- Improved sealing of protective sleeve
- Minimal loss of lubricating grease through undercuts
- Integrated lubricant reservoir with improved circulation
- QLC variants have centrifugal force compensation for high gripping forces at high speeds, accuracy, reliability and safety
- Carefully selected matching materials – all loaded, sliding surfaces are hardened and ground
- Simplified construction of the guiding piston in the chuck, with no back protrusion of the piston connection when on clamping
- Axial Stroke limitation is integrated into the design of the chucks thus ensuring any over stroke of the cylinder is not problematic
- Optional quick change jaws



Advantages at a glance:

- 30 – 40% lighter that comparable chucks
- Reduced machine wear
- Long maintenance intervals, high productivity
- KING SIZE variants have 40% greater through hole than comparable chucks
- LONG STROKE chucks are capable of clamping workpieces with great variances in diameter due to 95% more clamping stroke
- Sensitive, free of gripping deformation of thin walled parts
- Long, reliable and accurate service life
- 5 years warranty - optionally available (please complete the guarantee card and return to FORKARDT)
  Please contact us!

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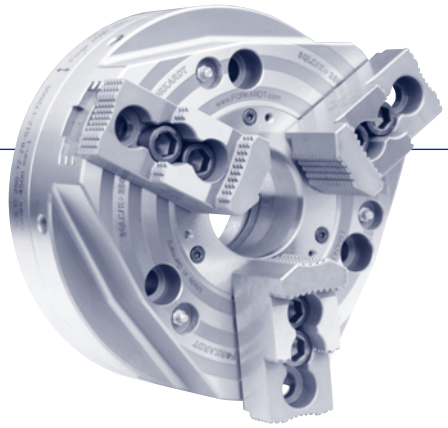
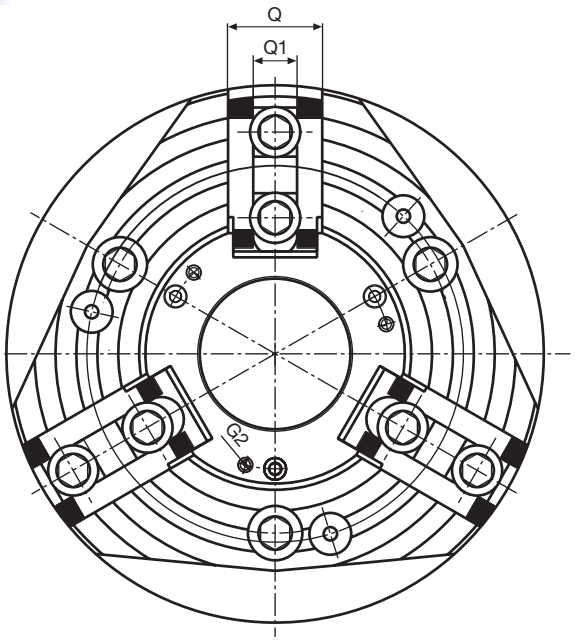
3 QLC/K
Power Chucks

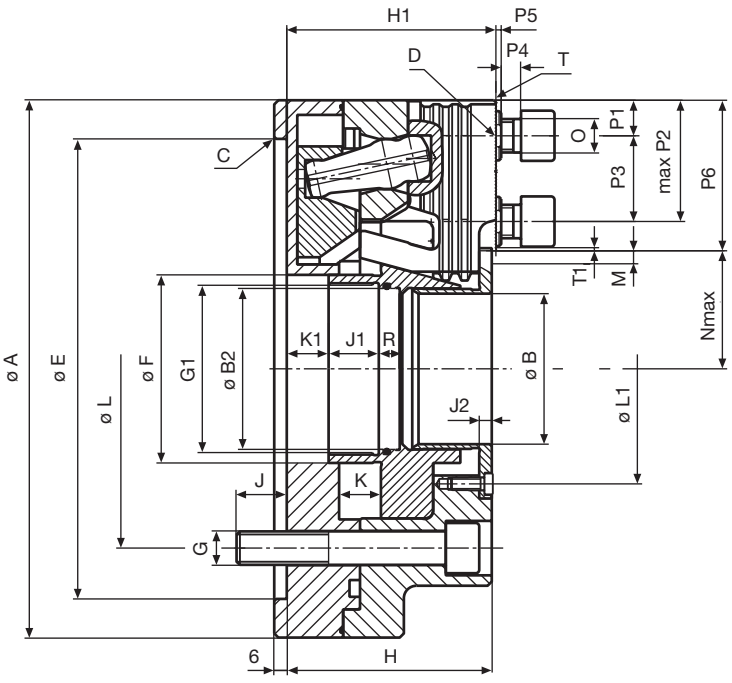


Technical Features:

- Multiple base jaw profile with improved guiding length for greater stability and precision during internal and external clamping
- Minimal loss of lubricating grease through undercuts
- Best possible clamping forces are obtained through multiple jaw guides
- Improved lubrication with additional, integrated lubricant reservoir and improved forced circulation
- Patented backlash free wedge hook mechanism for maximum clamping forces and highest repeatability
- Centrifugal force compensation for highest speeds (QLC version)
- Selected matching highest quality materials –all loaded, sliding surfaces are hardened and ground
- Simplified construction of the guiding piston in the chuck
- MIR / VC quick change jaw system optional

3QLC/K





Dimensions / Performance data 3 QLC/K

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Type 3QLC, 3QLK			Chuck Size										
			110-26* (QLK only)	140-35* (QLK_only)	160-38	200-54	250-72	315-88 Z8	315-88 Z11	400-126 Z11-S12	400-126 Z15-S12	400-126 Z11-S23	400-126 Z15-S23
Dimensions													
Outer diameter	øA	mm	110	140	162	210	257	320	320	400	400	400	400
Bore	$øB^{+0.1}$	mm	26	35	38	54	72	88	88	126	126	126	126
Chuck mounting	øC	mm	Z4	120	Z5	Z6	Z8	Z8	Z11	Z11	Z15	Z11	Z15
Jaw mounting/DIN6353	D		S8	S9	S11	S11	S12	S12	S12	S12	S12	S23	S23
Register ø of draw tube	$B2^{H7}$	mm	32	39	42	65	77	93	93	134	134	134	134
Mounting recess	E^{H6}	mm	100	120	140	170	220	220	300	300	380	300	380
Actuator-ø	F	mm	45	48	52	76	90	110	110	150	150	150	150
Mounting bolts QLC	G		-	-	M10 x 95	M12 x 90	M16 x 100	M16 x 100	M20 x 80	M20 x 130	M24 x 110	M20 x 130	M24 x 110
Mounting bolts QLK	G		M10 x 80	M10 x 90	M10 x 95	M12 x 90	M16 x 100	M16 x 100	M20 x 80	M20 x 130	M24 x110	M20 x 130	M24 x 110
Thread mounting QLC	G1		-	-	M45 x 2	M68 x 2	M82 x 2	M100 x 2	M100 x 2	M140 x 2	M140 x 2	M140 x 2	M140 x 2
Thread mounting QLK	G1		M36 x1.5	M42 x1.5	M45 x 2	M68 x 2	M82 x 2	M100 x 2	M100 x 2	M140 x 2	M140 x 2	M140 x 2	M140 x 2
Puller thread protective sleeve	G2		M4	M4	M4	M5	M6	M6	M6	M6	M6	M6	M6
Chuck width	H	mm	80	86	90	90	98	98	98	128	128	128	128
Chuck width	H1	mm	82	88	92	92	100	100	100	130	130	130	130
Thread length of mounting bolts	J	mm	13	18	19	20	19	21	25	24	25	24	25
Thread length of actuator	J1	mm	19	23	18	18	24	24	24	26	26	26	26
Base jaw protr. over chuck face	J2	mm	6	6	5	5	6	6	6	8	8	8	8
Actuator stroke	K	mm	12	13	17	20	20	20	20	30	30	30	30
Actuator position	K1	mm	12	13	17	20	20	20	20	30	30	30	30
Pitch circle - ø Mounting bolts	$L^{\pm 0.2}$	mm	82.6	104.8	104.8	133.4	171.4	171.4	235	235	330	235	330
Pitchcircle ø of protective sleeve	$L1^{\pm 0.2}$	mm	58.3	74	88	88	110	130	130	173	173	173	173
Jaw stroke	M	mm	3.2	3.5	4.5	5.4	5.4	5.4	5.4	8	8	8	8
Position of master jaw	$N_{max.}$	mm	22.5	28	33	44.5	56.5	61	61	85	85	85	85
Jaw mounting bolts	O		M8	M10	M12	M12	M16	M16	M16	M16	M16	M20	M20
Distance	$P1_{min.}$	mm	4	5	6	6	8	8	8	12	12	15	15
Jaw mounting bolts	$P1_{o}$	mm	13	15	17.5/14.5	27.5	34	58	58	70.5	70.5	60	60
Distance	$P2_{min.}$	mm	18	25	25/28	25	32	32	32	37	37	46	46
Jaw mounting bolts	$P2_{max.}$	mm	27	34	36.5/36.5	46.5	58	82	82	95.5	95.5	91	91
Minimum distance	P3	mm	14	20	19/22	19	25	25	25	25	25	31	31
Minimum distance	P4	mm	6.5	9.5	10	10	10	10	10	10	10	15	15
Distance T-nut and serration	P5	mm	2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.5	3.5
Distance T-nut and serration	P6	mm	32.5	42	48	60.5	72	99	99	115	115	115	115
Jaw width	Q	mm	25	30	35	35	45	45	45	60	60	60	60
Slot width imperial	$Q1^{H7}$	mm	10	12	17	17	21	21	21	21	21	25.5	25.5
Slot width metric	$Q1^{H7}$	mm	10	12	12	14	16	21	21	21	21	21	21
Width	R	mm	7.5	7.6	6.6	6	10	10	10	13	13	13	13
Pitch of serration/imperial QLC	T		-	-	1/16 x 90°	1/16 x 90°	1/16 x 90°	1/16 x 90°	1/16 x 90°	1/16 x 90°	1/16 x 90°	3/32° x 90°	3/32° x 90°
Pitch of serration/imperial QLK	T		1/16 x 90°	1/16 x 90°	1/16 x 90°	1/16 x 90°	1/16 x 90°	1/16 x 90°	1/16 x 90°	1/16 x 90°	1/16 x 90°	3/32° x 90°	3/32° x 90°
Jaw mounting metric	D		MS10	MS12	MS12	MS14	MS16	MS21	MS21	MS21	MS21		
Pitch of serration/metric QLC	T		-	-	1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°		
Pitch of serration/metric QLK	T		1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°		
Distance from 1st serration	T1	mm	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5
Performance data													
Max. actuating force	$F_{max.}$	daN	2000	2500	2500	4000	6000	6000	6000	6000	6000	9000	9000
Max. gripping force	$Fsp_{max.}$	daN	4000	5500	6000	10000	15000	16000	16000	14000	14000	23000	23000
Max. speed QLC	$n_{max.}$	1/min.	-	-	8000	6300	4500	4000	4000	3200	3200	3200	3200
Max. speed QLK	$n_{max.}$	1/min.	8000	7500	6300	5000	4000	3500	3500	2500	2500	2500	2500
Max. Gewicht Aufsatzbacke	**	kg/Stck.	0.13	0.23	0.4	0.5	1.12	1.12	1.12	2.52	2.52	2.52	2.52
Max. Ausladung Aufsatzbacke	**	mm	30	30	40	45	55	55	55	70	70	70	70
Weight	G	kg	5	8.5	11.5	18	26	38	38	90	90	90	90
Moment of inertia QLC	J	kgm^2	-	-	0.055	0.2	0.65	0.65	0.65	2.1	2.1	2.1	2.1
Moment of inertia QLK	J	kgm^2	0.0075	0.02	0.04	0.095	0.2	0.65	0.65	2.1	2.1	2.1	2.1
Ident – Number													
Imperial serration QLC			D172000000	D172001000	D172002000	D172004000	D172005000	D172006000	D172007000	D172008000	D172009000	D172010000	D172011000
Metric serration QLC			D172012000	D172013000	D172014000	D172016000	D172017000	D172018000	D172019000	D172020000	D172021000		
Imperial serration QLK			D172036000	D172037000	D172038000	D172040000	D172041000	D172042000	D172043000	D172044000	D172045000	D172046000	D172047000
Metric serration QLK			D172048000	D172049000	D172050000	D172052000	D172053000	D172054000	D172055000	D172056000	D172057000		
KDIN QLC			D172024000	D172025000	D172026000	D172028000	D172029000	D172030000	D172031000	D172032000	D172033000		
KDIN QLK			D172060000	D172061000	D172062000	D172064000	D172065000	D172066000	D172067000	D172068000	D172069000		

**) Limit value for max. speed

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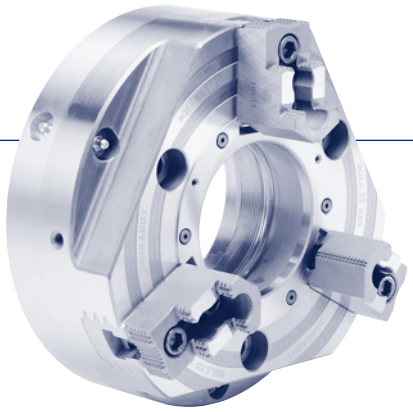
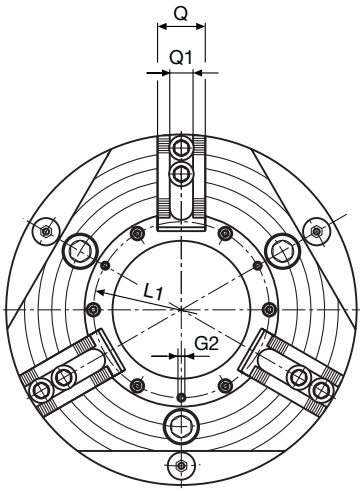
3 QLC/K - KS
Power Chucks

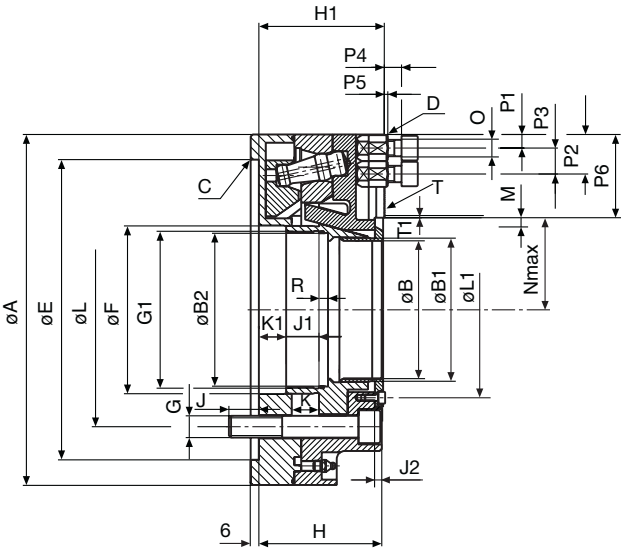


Technical Features:

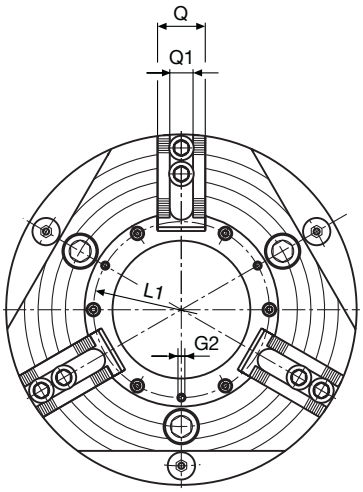
- Larger through hole bore for handling larger diameter work pieces
- Multiple base jaw profile with improved guiding length for greater stability
- Minimal loss of lubricating grease through undercuts
- Best possible clamping forces are obtained through patented multiple jaw guides
- Improved lubrication with additional, integrated lubricant and improved forced circulation
- Patented backlash free wedge hook mechanism for maximum clamping forces and highest repeatability
- Centrifugal force compensation for highest speeds
- Selected matching highest quality materials – all loaded, sliding surfaces are hardened and ground
- Simplified construction of the guiding piston in the chuck
- Axial Stroke limitation is integrated into the design of the chucks thus ensuring any over stroke of the cylinder is not problematic
- MIR / VC quick change jaw system optional

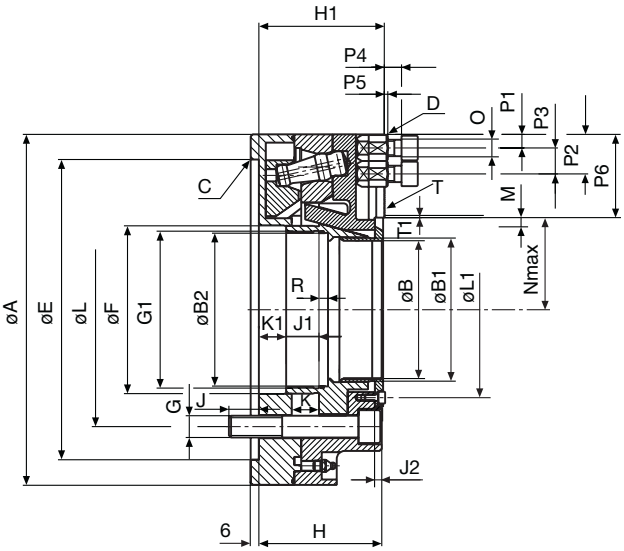
3QLC-KS





3QLK-KS





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Dimensions / Performance data 3 QLC/K - KS

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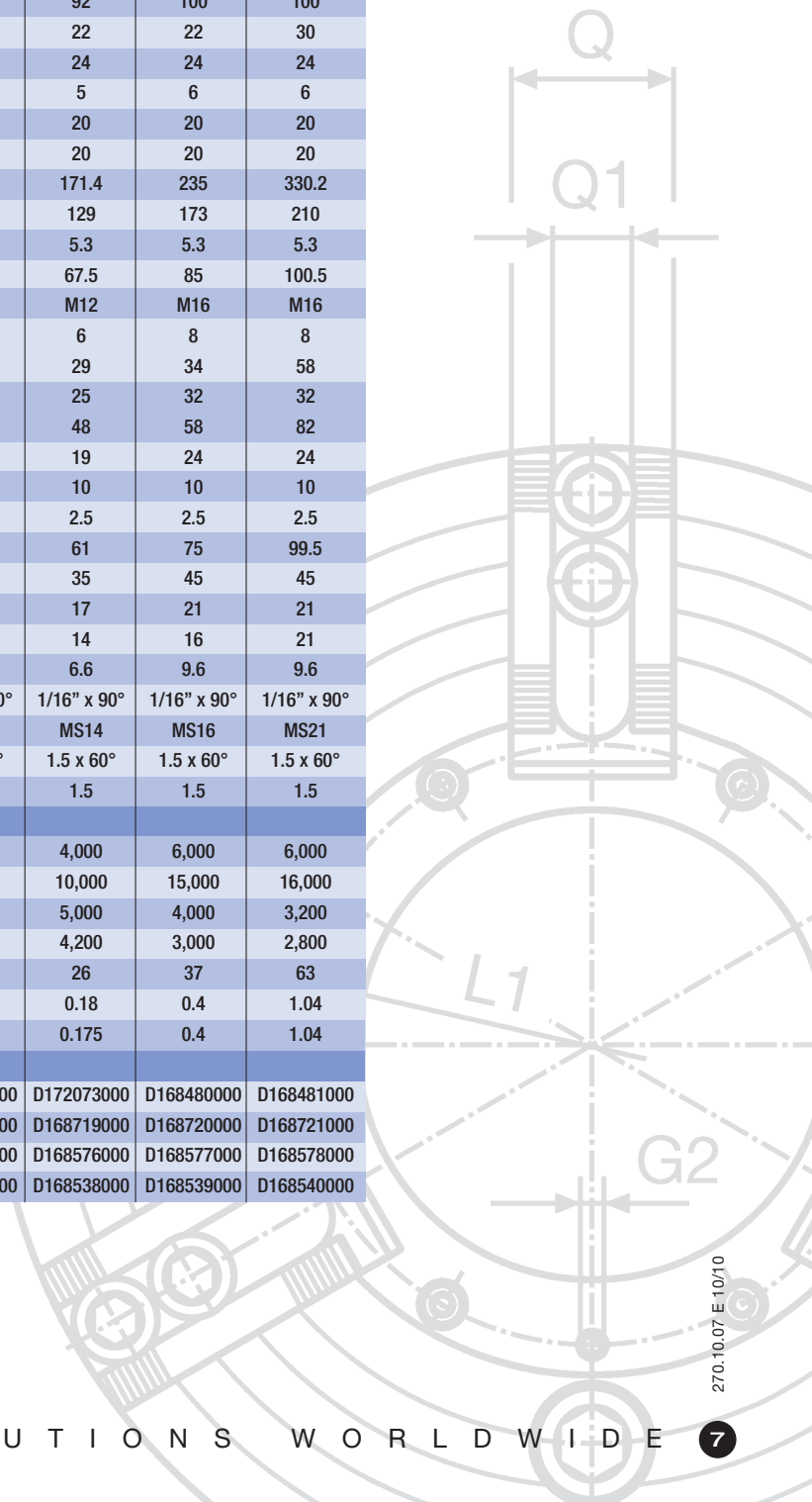
				Chuck Size			
Type 3QLC-KS / QLK-KS				200-77	250-101	315-135	400-168
Dimensions							
Outer diameter		øA	mm	210	257	320	400
Bore		$øB^{+0.1}$	mm	77	101	135	168
Chuck mounting		øC	mm	Z6	Z8	Z11	Z15
Jaw mounting/DIN 6353		D		S11	S11	S12	S12
Register Ø of draw tube		$B2^{H7}$	mm	85	112	140	173
Mounting recess		E^{H6}	mm	170	220	300	380
Actuator Ø		F	mm	97	123	153	190
Mounting bolts		G		M12 x 90	M16 x 95	M20 x 90	M24 x 80
Thread mounting		G1		M90 x 2	M115 x 2	M145 x 2	M180 x 2
Puller thread protective sleeve		G2		M5	M5	M6	M6
Chuck width		H	mm	90	90	98	98
Chuck width		H1	mm	92	92	100	100
Thread length of mounting bolts		J	mm	20	22	22	30
Thread length of actuator		J1	mm	24	24	24	24
Base jaw protrusion over chuck face		J2	mm	5	5	6	6
Actuator stroke		K	mm	18.5	20	20	20
Actuator position		K1	mm	18.5	20	20	20
Pitch circle Ø of Mounting bolts		$L^{\pm 0.2}$	mm	133.4	171.4	235	330.2
Pitch circle Ø of protective sleeve		$L1^{\pm 0.2}$	mm	100	129	173	210
Jaw stroke		M	mm	5	5.3	5.3	5.3
Position of master jaw		N_{max}	mm	52.5	67.5	85	100.5
Jaw mounting bolts		O		M12	M12	M16	M16
Distance		$P1_{min}$	mm	6	6	8	8
Jaw mounting bolts		$P1_{max}$	mm	20	29	34	58
Distance		$P2_{min}$	mm	25	25	32	32
Jaw mounting bolts		$P2_{max}$	mm	39	48	58	82
Minimum distance		P3	mm	19	19	24	24
Minimum distance		P4	mm	10	10	10	10
Distance T-nut and serration		P5	mm	2.5	2.5	2.5	2.5
Length of serrations		P6	mm	52.5	61	75	99.5
Jaw width		Q	mm	35	35	45	45
Slot width imperial		$Q1^{H7}$	mm	17	17	21	21
Slot width metric		$Q1^{H7}$	mm	12	14	16	21
Width		R	mm	6.6	6.6	9.6	9.6
Pitch of serration / imperial		T		1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°
Jaw mounting metric		D		MS12	MS14	MS16	MS21
Pitch of serration metric		T		1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°
Distance from 1st serration		T1	mm	1.5	1.5	1.5	1.5
Performance data							
Max. actuating force		F_{max}	daN	2,500	4,000	6,000	6,000
Max. gripping force		Fsp_{max}	daN	6,000	10,000	15,000	16,000
Max. speed	QLC-KS	n_{max}	1/min	6,300	5,000	4,000	3,200
Max. speed	QLK-KS	n_{max}	1/min	5,000	4,200	3,000	2,800
Weight		G	kg	16	26	37	63
Moment of inertia	QLC-KS		kgm^2	0.076	0.18	0.4	1.04
Moment of inertia	QLK-KS		kgm^2	0.076	0.175	0.4	1.04
Ident–Number							
Imperial serration	QLC-KS			D170130000	D172073000	D168480000	D168481000
Metric serration	QLC-KS			D168718000	D168719000	D168720000	D168721000
Imperial serration	QLK-KS			D170131000	D168576000	D168577000	D168578000
Metric serration	QLK-KS			D170132000	D168538000	D168539000	D168540000



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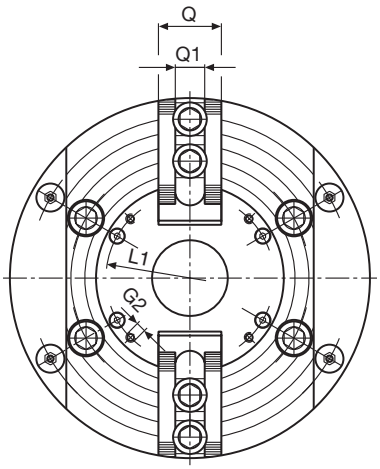
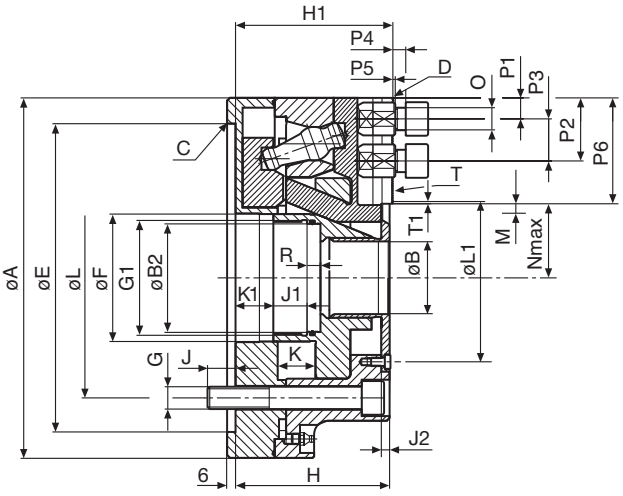
2/3 QLC – LS Power Chucks

Technical Features:

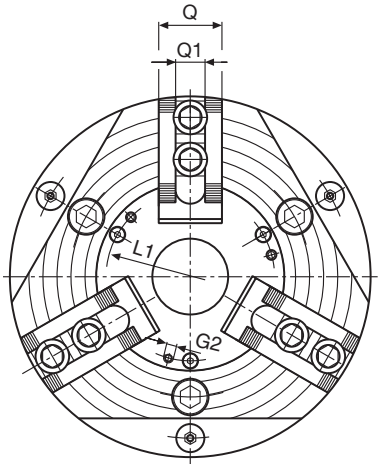
- 95 % more clamping stroke for work pieces with variations in diameter
- Easily grip stepped work pieces
- Available as 2- and 3-jaw QLC versions (QLK variants not available)
- Multiple base jaw profile with improved guiding length for greater stability
- Minimal loss of lubricating grease through undercuts
- Nitrided chuck body for longer service life
- Selected matching highest quality materials – all loaded, sliding surfaces are hardened and ground
- Long maintenance intervals
- Centrifugal force compensation for highest speeds

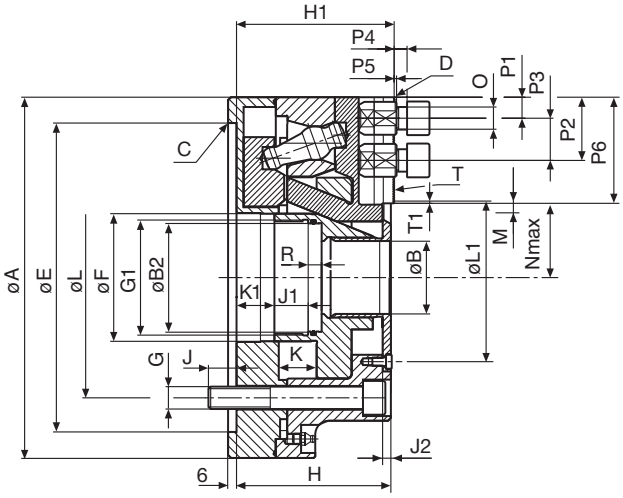
2QLC-LS





3QLC-LS





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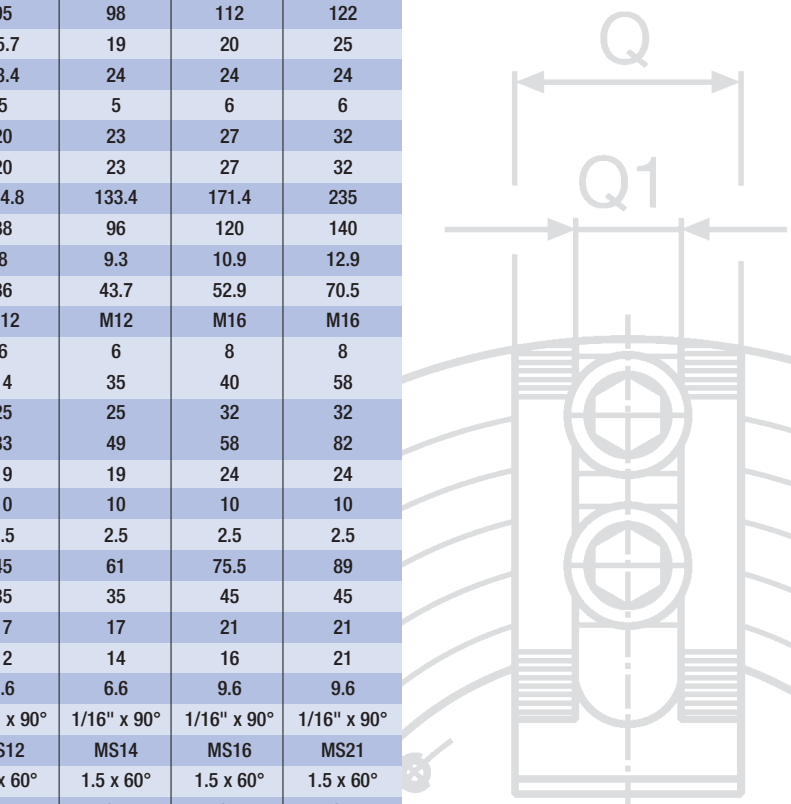
Dimensions / Performance data 2/3 QLC - LS

				Chuck Size			
Typ 2QLC-LS / 3QLC-LS				160-30	200-41	250-52	315-71
Dimensions							
Outer diameter		øA	mm	162	210	257	320
Bore		øB$^{+0.1}$	mm	30	41	52	71
Chuck mounting		øC	mm	Z5	Z6	Z8	Z11
Jaw mounting/DIN 6353		D		S11	S11	S12	S12
Register Ø of draw tube		B2^{H7}	mm	42	65	77	93
Mounting recess		E^{H6}	mm	140	170	220	300
Actuator Ø		F	mm	52	76	91	110
Mounting bolts		G		M10 x 95	M12 x 100	M16 x 110	M20 x 90
Thread mounting		G1		M45 x 2	M68 x 2	M82 x 2	M100 x 2
Puller thread protective sleeve		G2		M4	M5	M6	M6
Chuck width		H	mm	93	96	110	120
Chuck width		H1	mm	95	98	112	122
Thread length of mounting bolts		J	mm	15.7	19	20	25
Thread length of actuator		J1	mm	23.4	24	24	24
Base jaw protrusion over chuck face		J2	mm	5	5	6	6
Actuator stroke		K	mm	20	23	27	32
Actuator position		K1	mm	20	23	27	32
Pitch circle Ø of Mounting bolts		L$^{\pm 0.2}$	mm	104.8	133.4	171.4	235
Pitch circle Ø of protective sleeve		L1$^{\pm 0.2}$	mm	88	96	120	140
Jaw stroke		M	mm	8	9.3	10.9	12.9
Position of master jaw		N$_{max}$	mm	36	43.7	52.9	70.5
Jaw mounting bolts		O		M12	M12	M16	M16
Distance		P1$_{min}$	mm	6	6	8	8
Jaw mounting bolts		P1$_{max}$	mm	14	35	40	58
Distance		P2$_{min}$	mm	25	25	32	32
Jaw mounting bolts		P2$_{max}$	mm	33	49	58	82
Minimum distance		P3	mm	19	19	24	24
Minimum distance		P4	mm	10	10	10	10
Distance T-nut and serration		P5	mm	2.5	2.5	2.5	2.5
Length of serrations		P6	mm	45	61	75.5	89
Jaw width		Q	mm	35	35	45	45
Slot width imperial		Q1^{H7}	mm	17	17	21	21
Slot width metric		Q1^{H7}	mm	12	14	16	21
Width		R	mm	6.6	6.6	9.6	9.6
Pitch of serration / imperial		T		1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°
Jaw mounting metric		D		MS12	MS14	MS16	MS21
Pitch of serration metric		T		1.5 x 60°	1.5 x 60°	1.5 x 60°	1.5 x 60°
Distance from 1st serration		T1	mm	1.5	1.5	1.5	1.5
Performance data							
Max. actuating force	2QLC-LS	F$_{max}$	daN	2,400	3,700	4,600	5,700
Max. gripping force	2QLC-LS	Fsp$_{max}$	daN	3,700	6,000	7,500	10,000
Max. actuating force	3QLC-LS	F$_{max}$	daN	3,500	5,500	7,000	8,500
Max. gripping force	3QLC-LS	Fsp$_{max}$	daN	5,500	9,000	11,000	15,000
Max. speed		n$_{max}$	1/min	6,000	5,500	4,000	3,200
Weight		G	kg	9	18	31	50
Moment of inertia			kgm^2	0.028	0.09	0.25	0.6
Ident-Number							
Imperial serration	2QLC-LS			D169619000	D169621000	D169622000	D169623000
Metric serration	2QLC-LS			D169817000	D169818000	D169819000	D169820000
Imperial serration	3QLC-LS			D169563000	D169565000	D169566000	D169567000
Metric serration	3QLC-LS			D169813000	D169814000	D169815000	D169816000

**) Limit value for max. speed ** Pitch of serration metric * Pitch of serration / imperial



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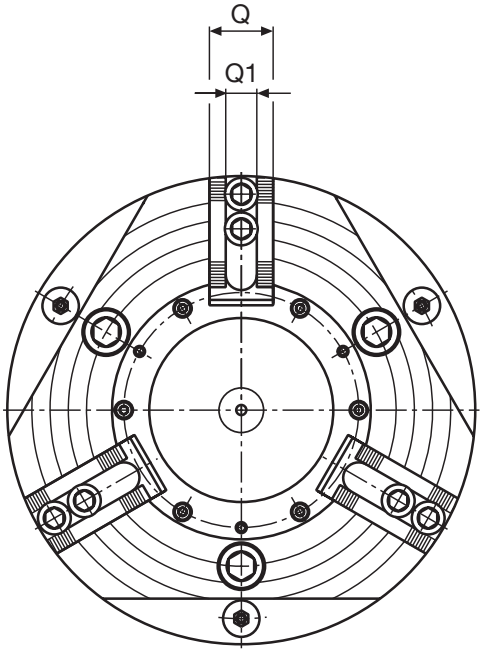
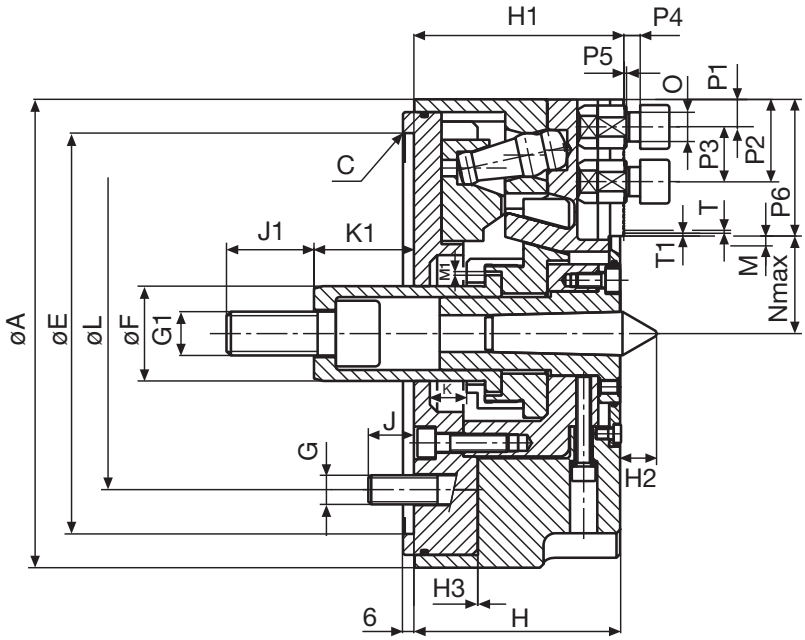
3 QLC – AG
Power Chucks

Technical Features:

- Compensating chuck to clamp off-center parts with high precision
- Easy moving compensation even at high clamping forces
- Ingenious pull-back action for improved part location on center
- Easily interchangeable and finely adjustable center housings
- Simple change-over for self-centering mode for general chucking work
- Centrifugal force compensation for highest speeds (QLK variants not available)
- Axial stroke limitation is integrated, ensuring any over stroke of the cylinder is not problematic

3QLC-AG





Dimensions / Performance data 3 QLC - AG

			Chuck Size		
Type 3QLC-AG			200	250	315
Dimensions					
Outer diameter	øA	mm	210	257	315
Bore	øB	mm	0	0	0
Chuck mounting	øC	mm	Z6	Z8	Z8
Jaw mounting	D		S11	S12	S12
Mounting recess	E	mm	170	220	220
Actuator Ø	F	mm	44	50	50
Mounting bolts	G		3 x M12	3 x M16	3 x M16
Thread mounting	G1		M20	M24	M24
Chuck width	H	mm	106	113	113
Chuck back to serration	H1	mm	108	115	115
Point height	H2	mm	18	22	22
Pull-back stroke	H3	mm	0.2	0.2	0.2
Thread length of mounting bolts	J	mm	18	24	24
Thread length of actuator	J1	mm	40	45	45
Actuator stroke	K	mm	20	20	20
Actuator position	K1	mm	45	55	55
Pitch circle Ø Mounting bolts	L	mm	133.4	171.4	171.4
Jaw stroke	M	mm	5.3	5.3	5.3
Compensating stroke	M1	mm	2	2	2
Position of master jaw	N_{max}	mm	42.9	53.5	55.5
Jaw mounting bolts	O		M12	M16	M16
Distance	$P1_{min}$	mm	6	8	8
Jaw mounting bolts	$P1_{max}$	mm	34	41	65
Distance	$P2_{min}$	mm	25	32	32
Jaw mounting bolts	$P2_{max}$	mm	53	65	89
Minimum distance	P3	mm	19	24	24
Minimum distance	P4	mm	10	10	10
Distance T-nut and serration	P5	mm	2.5	2.5	2.5
Length of serrations	P6	mm	61	75	99.5
Jaw width	Q	mm	35	45	45
Slot width / imperial	Q1	mm	17	21	21
Pitch of serration / imperial	T		1/16" x 90°	1/16" x 90°	1/16" x 90°
Performance data					
Max. actuating force	F_{max}	daN	3,600	5,000	5,500
Max. gripping force	Fsp_{max}	daN	7,000	12,000	13,000
Max. speed	n_{max}	1/min	4,700	4,500	4,000
Weight	G	kg	21	32	44
Moment of inertia	J	kgm^2	0.11	0.3	0.8
Ident–Number					
Imperial serration			D170783000	D170393000	D169907000
Metric serration			D170788000	D170789000	D170790000

Note: QLC-AG chucks may optionally be equipped with spring loaded centres or inserts for concentric operation.

**) Limit value for max. speed

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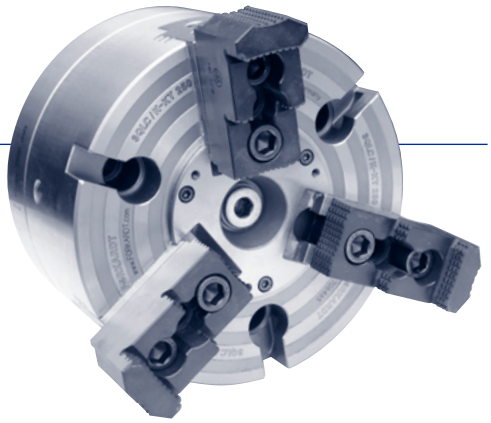


3 QLC – KT Power Chucks

Power chuck for highest standards

In order to fulfil highest requirements the well-established QLC power chuck was altered towards a solid version without bore.
The combination of the patented base jaw guiding shape of the QLC chucks with the rigidity of KT chucks provided chuck characteristics perfectly suitable for heavy cutting applications.
The QLC-KT chucks are determined to be used with high clamping forces plus extraordinary accuracy.

Example:
3 QLC-KT 400 Performance data

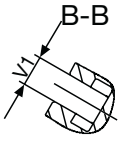
Max. gripping force	=	26 000 daN
Max. rpm	=	3200 1/min

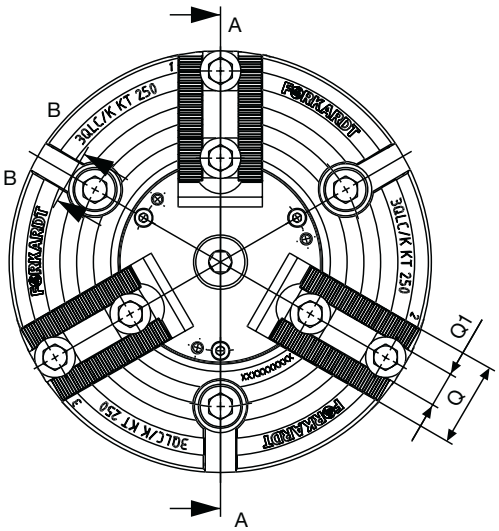
Technical Features:

- Maximum Gripping force
- Maximum Speed
- Quick jaw change
- MIR, VC quick change jaw system optional

3QLC-KT

B-B





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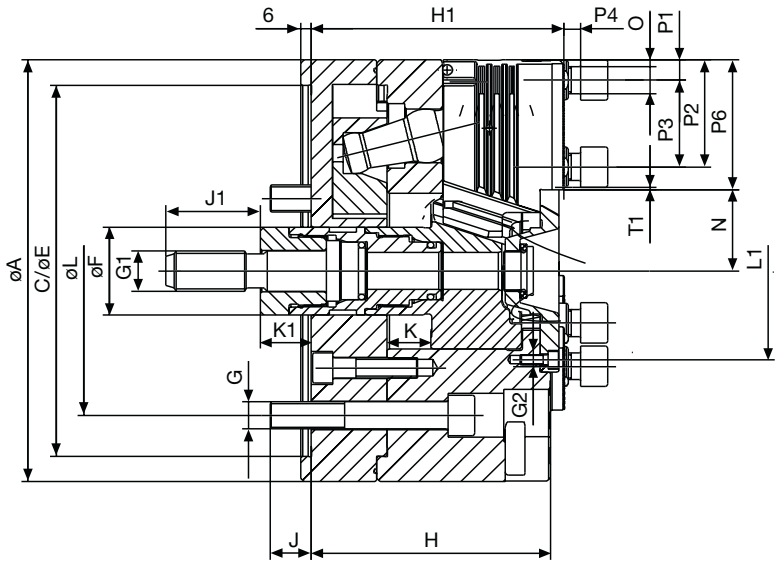


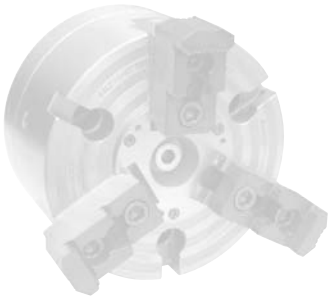
Chuck mounting Z

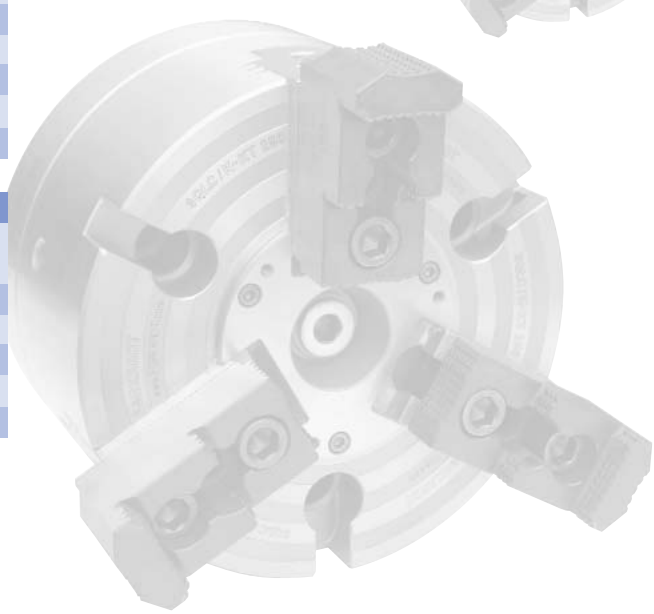
Abbreviation explanation for chuck mountings

Cylindrical recess DIN 6353			
FORKARDT Type designation	DIN Size	Mounting recess H6	Pitch circle
Z5	5	ø 140	Ø 104.8 with M10
Z6	6	ø 170	Ø 133.4 with M12
Z8	8	ø 220	Ø 171.4 with M16
Z11	11	ø 300	Ø 235.0 with M20
Z15	15	ø 380	Ø 330.2 with M24

Short taper - direct recess DIN 55026 shape A			
FORKARDT Type designation	DIN Size	Taper-Ø d2	Pitch circle
K5	5	82.573	Ø 104.8 with M10
K6	6	106.385	Ø 133.4 with M12
K8	8	139.731	Ø 171.4 with M16
K11	11	196.883	Ø 235.0 with M20
K15	15	283.791	Ø 330.2 with M24

Short taper - bayonet mounting DIN 55027			
FORKARDT Type designation	DIN Size	Taper-Ø d2	Pitch circle
J5	5	82.573	Ø 104.8 with M10
J6	6	106.385	Ø 133.4 with M12
J8	8	139.731	Ø 171.4 with M16
J11	11	196.883	Ø 235.0 with M20
J15	15	283.791	Ø 330.2 with M24





Ident-Numbers and connecting dimensions - Performance data

Chuck type	Ident-No. and mounting dimensions									Dimensions		
	Chuck mounting		Pitch of serration	Cross tenon	Quick change jaw system VC	Outer diameter A	Jaw width Q	Mounting thread G1	Chuck width H	Max. actuating force F_{max}	Max. Clamping force F_{SPmax}	Max. speed n_{max}
						mm	mm		mm	daN	daN	min^{-1}
3QLC-KT 160	Z5	S11	D174005000	D174007000	D174008000	184	40	M16	114	3,000	7,000	7,000
3QLC-KT 160	K5	S11	D174010000	D174012000	D174013000	184	40	M16	114	3,000	7,000	7,000
3QLC-KT 200	Z6	S11	D174025000	D174027000	D174005000	200	40	M20	124	5,000	11,500	6,000
3QLC-KT 200	K6	S11	D174030000	D174032000	D174005000	200	40	M20	124	5,000	11,500	6,000
3QLC-KT 250	Z8	S11	D174045000	D174047000	D174005000	250	50	M24	142	7,500	16,000	5,000
3QLC-KT 250	Z8	S11	D174050000	D174052000	D174005000	250	50	M24	152	7,500	16,000	5,000
3QLC-KT 315	Z8	S11	D174065000	D174067000	D174005000	315	50	M24	142	8,000	17,000	4,000
3QLC-KT 315	K8	S11	D174070000	D174072000	D174005000	315	50	M24		8,000	17,000	4,000
3QLC-KT 315	Z11	S11	D174832000	D174834000	D174005000	315	50	M24	142	8,000	17,000	4,000
3QLC-KT 400	Z11	S12	D174840000			400	60	M30	181	7,300	16,000	3,200
3QLC-KT 400	Z15	S12	D174836000			400	60	M30	181	7,300	16,000	3,200
3QLC-KT 400	Z11	S23	D174085000	D174087000	D174088000	400	60	M30	181	12,000	26,000	3,200
3QLC-KT 400	K11	S23	D174090000	D174092000	D174093000	400	60	M30		12,000	26,000	3,200
3QLC-KT 400	Z15	S23	D174841000	D174838000	D174839000	400	60	M30	181	12,000	26,000	3,200

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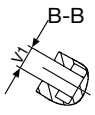
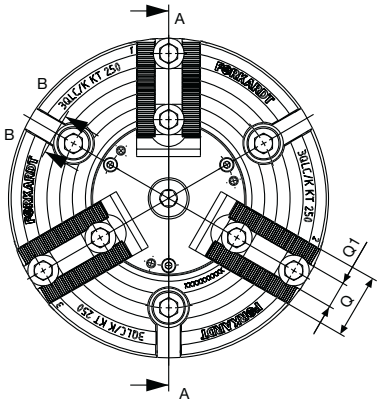
3QLC-KT with jaw mounting S

			Chuck Size								
Type 3QLC-KT			160	200	250	250	315	315	400	400	400
Dimensions											
Outer diameter	A	mm	184	200	250	250	315	315	400	400	400
Bore	B	mm	-	-	-	-	-	-	-	-	-
Chuck mounting	C		Z5	Z6	Z8	K8	Z8	Z11	Z11	Z11	Z15
Jaw mounting	D 1)		S11	S11	S12	S12	S12	S12	S12	S23	S23
	T 1)		(1/16"x 90°)	(1/16"x 90°)	(1/16"x 90°)	(1/16"x 90°)	(1/16"x 90°)	(1/16"x 90°)	(1/16"x 90°)	(3/32"x 90°)	(3/32"x 90°)
Mounting recess	E	mm	140 H6	170 H6	220	139.731	220 H6	300 H6	300 H6	300 H6	380 H6
Actuator	F	mm	34	50	52	52	52	52	68	68	68
Mounting bolts	G		M10 (3x)	M12 (3x)	M16 (3x)	M16 (3x)	M16 (3x)	M20 (3x)	M20 (3x)	M20 (3x)	M24 (3x)
Thread mounting	G1		M16	M20	M24	M24	M24	M24	M30	M30	M30
Thread mounting	G2		M6	M6	M6	M6	M6	M6	M10	M10	M10
Chuck width	H	mm	114	124	142	152	142	142	177	177	177
	H1 1)	mm	120	130	150	160	150	150	185	185	185
Thread length	J	mm	15	18	24	24	24	30	30	30	30
Thread length of actuator	J1	mm	40	45	56	56	56	56	55	55	55
Actuator stroke	K	mm	20	20	26	26	26	26	32	32	32
Actuator position	K1	mm	25	30	30	30	30	30	30	30	30
Pitch circle-Ø	L	mm	104.8	133.4	171.4	171.4	171.4	235	235	235	330.2
Mounting bolts	L1	mm	60	70	105	105	105	235	235	235	330.2
Jaw stroke	M	mm	5.3	6.5	8	8	8	8	10	10	10
Position of master jaw	N 1)	mm	31.7	40.1	48	48	48	48	70	70	70
Jaw mounting bolts	O 1)		M12	M12	M16	M16	M16	M16	M16	M20	M20
Distance min. Jaw mounting bolt	P1 1)	mm	10	10	12	12	12	12	12	14	14
Distance max. Jaw mounting bolt	P2 1)	mm	50.2	50.3	55.5	55.5	96	96	118	115	115
Minimum distance	P3 1)	mm	19	19	25	25	25	25	25	31	31
Minimum distance	P4 1)	mm	9	9	10	10	10	10	10	14	14
Length of serrations	P6	mm	60.3	59.9	77	77	109.5	109.5	130	130	130
Jaw width	Q	mm	40	40	50	50	50	50	50	60	60
Slot width	Q1 1)	mm	17 H7	17 H7	21 H7	21 H7	21 H7	21 H7	21 H7	25.5 H7	25.5 H7
Distance from 1st serration	T1 1)	mm	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.5	2.5
T-slot width	V1	mm	14	14	18	18	18	18	22	22	22
Performance data											
Max. actuating force	F_{AX} 1)	daN	3,000	5,500	7,500	7,500	8,000	8,000	7,300	12,000	12,000
Max. speed	n	n min^{-1}	7,000	6,000	5,000	5,000	4,000	4,000	3,200	3,200	3,200
Max. gripping force	F_{SP} 1)	daN	7,000	11,500	16,000	16,000	17,000	17,000	16,000	26,000	26,000
Weight	G	kg	21	27	51	51	81	81	163	163	163

1) valid only for jaw mounting S

B-B





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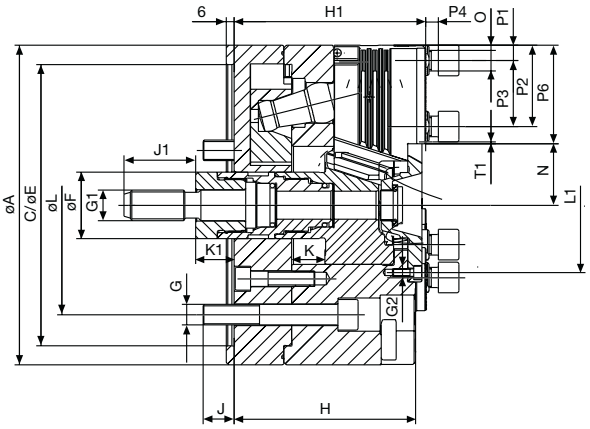
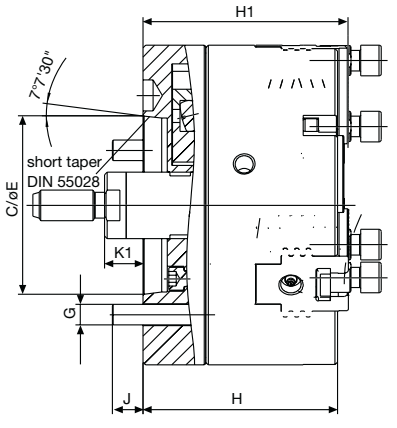


Chuck mounting Z

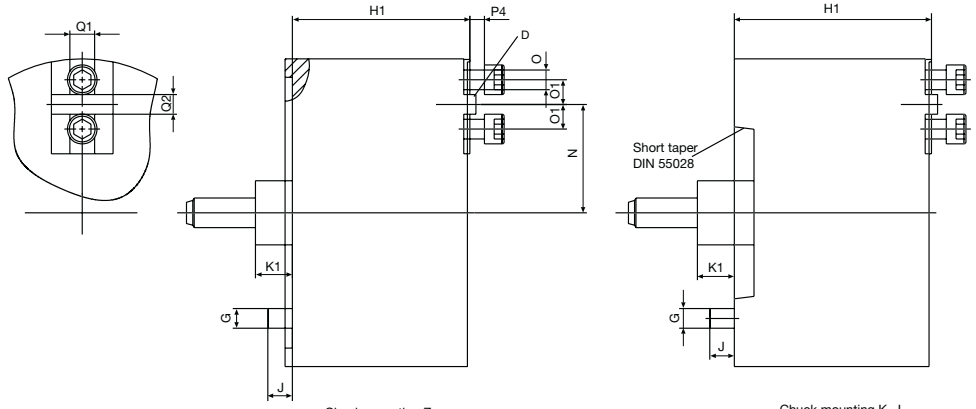


Chuck mounting K, J

3QLC-KT with jaw mounting KDIN

			Chuck Size			
Type 3QLC-KT			200	250	315	400
Dimensions						
Chuck mounting	C	mm	Z6	Z8	Z8 / Z11	Z11 / Z15
Jaw mounting	D		KDIN	KDIN	KDIN	K 25
Chuck width	H1 [2)]	mm	130	150	150	185
Jaw position	N [2)]	mm	70	88	100	13.5
Jaw mounting bolt	O [2)]		M12	M16	M16	M20
Distance jaw mounting bolt	P1 [2)]	mm	30	40	50	70
Minimum distance	P4 [2)]	mm	9	12	10	20
Slot width	Q1 [2)]	mm	16^{H7}	20^{H7}	20^{H7}	25^{H7}
Feather key width	Q2 [2)]	mm	12_{g6}	16_{g6}	16_{g6}	25_{g6}
Performance data						
Max. actuating force	F_{AX} [2)]	daN	5,500	7,500	8,000	12,000
Max. gripping force	F_{SP} [2)]	daN	11,500	16,000	17,000	26,000
Max. speed	n_{max}	1/min	6,000	5,000	4,000	3,200

[2)] valid only for jaw mounting KDIN – other dimensions see jaw mounting S



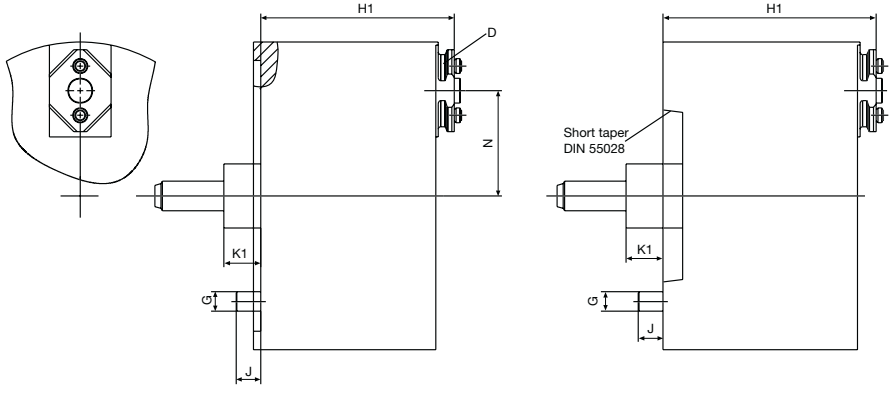
Chuck mounting Z

Chuck mounting K, J

3QLC-KT with jaw mounting VC

			Chuck Size				
Type 3QLC-KT			160	200	250	315	400
Dimensions							
Chuck mounting	C	mm	Z5	Z6	Z8	Z8 / Z11	Z11 / Z15
Jaw mounting	D		VC11	VC21	VC22	VC22	VC31
Chuck width	H1 [3)]	mm	130.5	143	163	163	206
Jaw position	N [3)]	mm	55.9	70	86.5	103	135
Performance data							
Max. actuating force	F_{AX} [3)]	daN	3,000	5,500	7,500	8,000	12,000
Max. gripping force	F_{SP} [3)]	daN	7,000	11,500	16,000	17,000	26,000
Max. speed	n_{max}	1/min	7,000	6,000	5,000	4,000	3,200

[3)] valid only for jaw mounting VC – other dimensions see jaw mounting S



Chuck mounting Z

Chuck mounting K, J

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FORKARDT

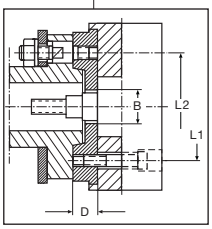
Mounting Flanges, Adaptors and Adaptor Plates:

Flanges with bayonet plate attachment for mounting on spindle J noses to DIN 55022, DIN 55027, ISO 702 / III

J

Spindle nose	Flange type	Ident. No.	Dimensions				Studs and collar nuts		
Size			B	D	L1	L2	FN	Ident. No.	Qty.
4	FF100-J4	D1074085000	45	18	82.6	85.0	322	D1070505000	3
5	FF120-J5	-	50	24	104.8	104.8	322	D1070505000	4
5	FF140-J5	D1074086000	50	24	104.8	104.8	322	D1070505000	44
6	FF170-J6	D1074090000	65	28	133.4	133.4	322	D1070506000	4
8	FF220-J8	D1074097000	80	32	171.4	171.4	322	D1070507000	4
11	FF300-J11	D1074104000	90	35	235.0	235.0	322	D1070508000	6
15	FF380-J15	D1074108000	120	42	330.2	330.2	324	D1070517000	6

Order code example: 1 mounting flange type FF 170-J6, Ident. No. D1074090000,
1 set of studs with collar nuts size 6, Ident. No. D1070506000



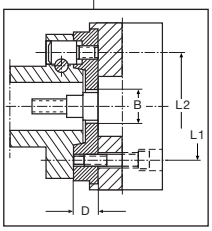
Mounting Flanges J

Flanges with camlock attachment for mounting on spindle D noses to DIN 55029, ISO 702 / II, ASA B 5.9 D1

D

Spindle nose	Flange type	Ident. No.	Dimensions				Camlock studs		
Size			B	D	L1	L2	FN	Ident. No.	Qty.
4	FF100-D4	-	45	28	82.6	82.6	286	D1070511000	3
5	FF120-D5	-	50	30	104.8	104.8	287	D1070512000	6
5	FF140-D5	D1074119000	50	30	104.8	104.8	287	D1070512000	6
6	FF170-D6	D1074123000	65	35	133.4	133.4	288	D1070513000	6
8	FF220-D8	D1074130000	80	40	171.4	171.4	289	D1070514000	6
11	FF300-D11	D1074137000	90	45	235.0	235.0	289	D1070515000	6
15	FF380-D15	D1074141000	120	50	330.2	330.2	291	D1070516000	6

Order code example: 1 mounting flange type FF 170 - D6, Ident. No. D1074123000, 1 set of camlock studs size 6, Ident. No. D1070513000



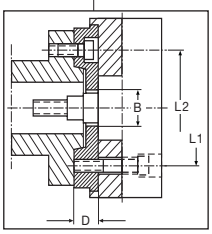
Mounting Flanges D

Adaptor flanges including mounting bolts for spindle noses DIN 55021 A/B, DIN 55026 A/B, ISO 702/I A1/A2, ASA B5.9 A1/A2

K

Spindle nose	Flange type	Ident. No.	Dimensions				Mounting bolts
Size			B	D	L1	L2	DIN 912 10.9
3	ZWF100-K3	-	35	18	70.6	82.6	3 x M10 x 20
4	ZWF120-K4	-	50	20	82.6	104.8	3 x M10 x 20
4	ZWF140-K4	D1074053000	50	20	85.0	104.8	3 x M10 x 20
4	ZWF140-K4	D1074053000	50	18	104.8	85.0	3 x M10 x 20
4	ZWF140-K4	D1044757000	50	18	104.8	82.6	
5	ZWF170-K5	D1074056000	60	24	133.4	104.8	4 x M10 x 25
6	ZWF220-K6	D1074060000	80	28	171.4	133.4	4 x M12 x 30
8	ZWF300-K8	D1074065000	90	32	235.0	171.4	4 x M16 x 35
11	ZWF380-K11	D1074068000	120	35	330.2	235.0	6 x M20 x 40

DIN 55021 Pitch circle diameter 85 mm DIN 55026 Pitch circle diameter 82.6 mm Order code example, 1 adapter flange ZWF 140 - K4, Ident. No. D1044757000



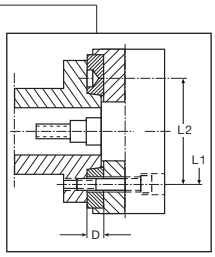
Adaptor Flanges ZWF

Adaptor plates for spindle noses to DIN 55021 A, DIN 55026 A, ISO 702/I A2, ASA B 5.9

K A2

Spindle nose	Flange type	Ident. No.	Dimensions		
Size			D	L2	L*
4	ZWS100-K4	-	12	82.6	10
5	ZWS120-K5	-	14	104.8	15
5	ZWS140-K5	D1074035000	14	104.8	15
6	ZWS170-K6	D1074036000	15	133.4	15
8	ZWS220-K8	D1074038000	17	171.4	15
11	ZWS300-K11	D1074040000	19	235.0	20
15	ZWS380-K15	D1074042000	21	330.2	20

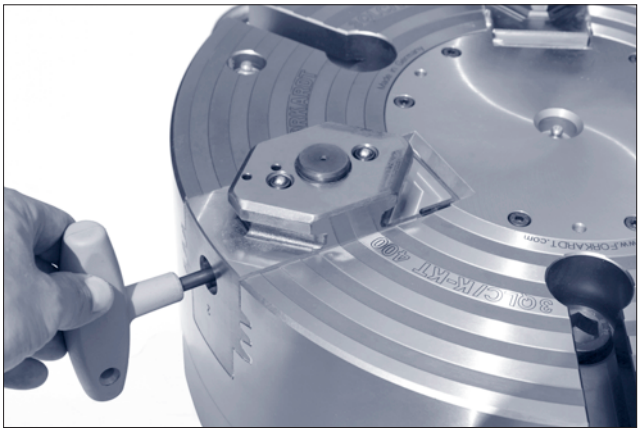
*The length of the chuck mounting bolts must be increased by the amount "L" when using these adapter plates!
Order code example: 1 adaptor plate ZWS-K5. Ident. No. D1074035000.
Note: The respective chuck type must be clearly specified when ordering flanges or adaptors separately.



Adaptor Plates ZWS

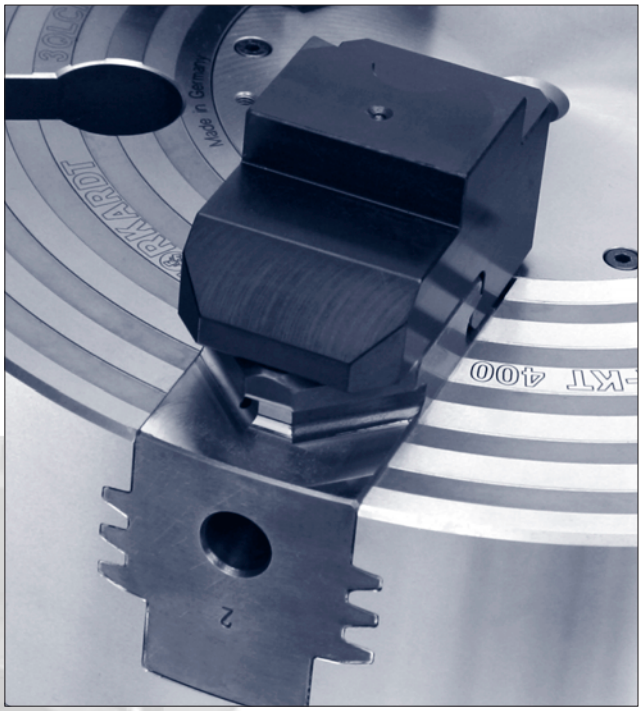
V-Change - Quick change Jaw system VC

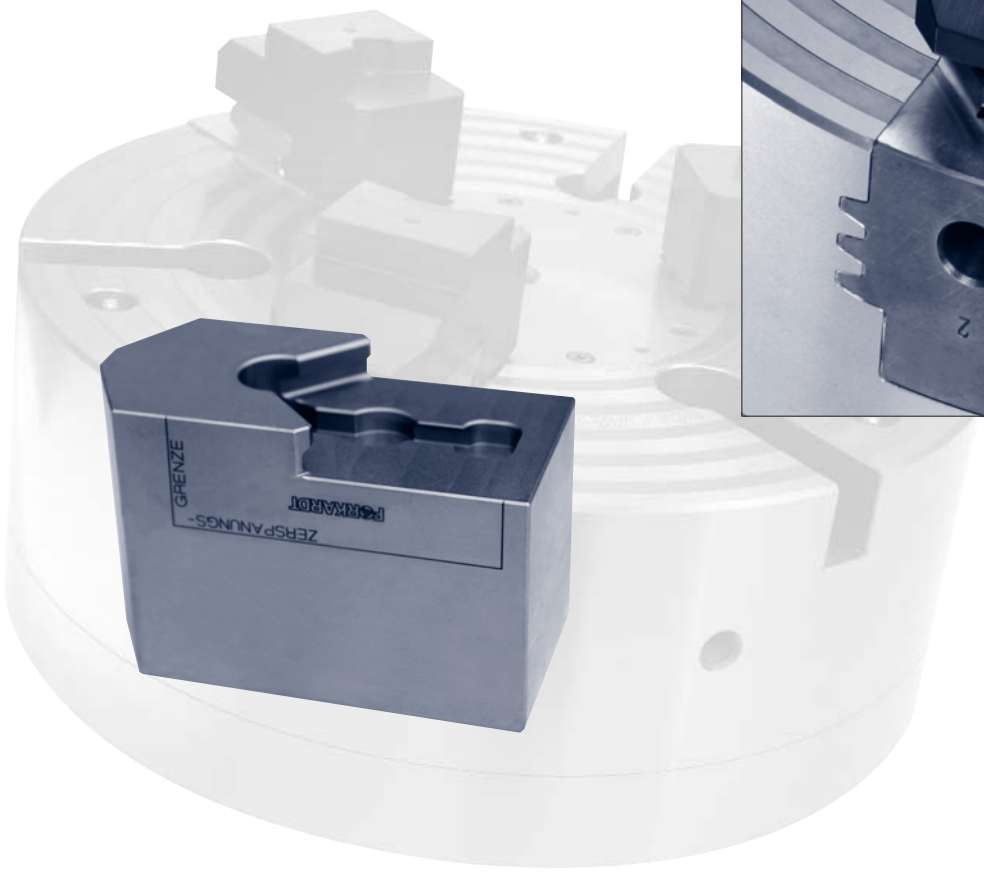
The quick change jaw system VC is as simple in handling as effective in reduction of the set-up time. In spite of the same repeatability and less space requirement - compared to general mounting systems - very high clamping forces are permitted as well. Therefore, this quick change jaw system in connection with a high-quality chuck represents an economic problem solution to improve productivity.



Advantages at a glance:

- Jaw change within seconds
- For I.D. and O.D. clamping
- Jaw change system easily to be realised automatically
- Best repeatability





PATENTED

270.10.07 E 10/10

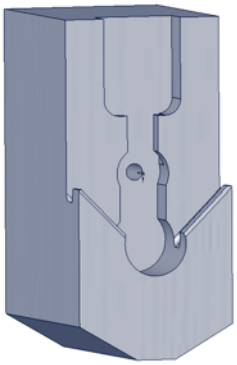
FORKARDT

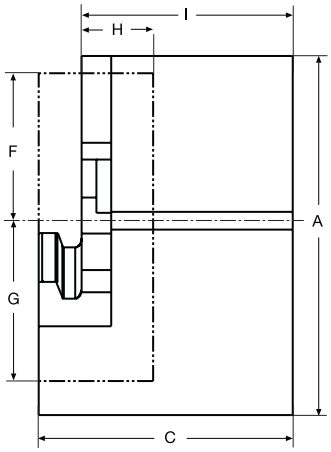
Soft Top Jaws VC
O.D. clamping

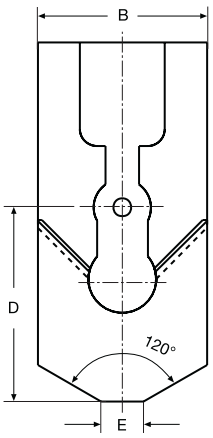
ATTENTION: Treatment permissible just outside the ---- mounting!

Soft Top Jaws
V-Change
EXTERNAL

Material: Heat treatable 42CrMo4







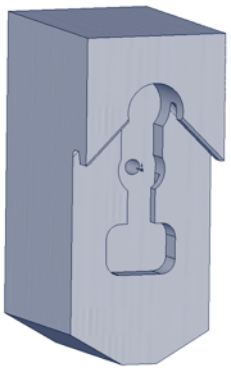
Chuck type	Jaw type	Ident No.	Dimensions (mm) A	B	C	D	E	F	G	H	I	Weight Kg./each	Min. clamping diameter (mm)
QLC 160 VC 11	VC 11	D174546000	85	40	60	46	10	35	31	17	50	1.3	20
QLC KT 160 VC 11	VC 11												25
QLC 200 VC 21	VC 21	D174548000	105	40	60	59	10	40	38	20	50	1.6	30
QLC KT 200 VC 21	VC 21												10
QLC 250 VC 22	VC 22	D174550000	120	60	80	74	10	40	45	20	67.5	3.9	30
QLC KT 250 VC 22	VC 22												12
QLC 315 VC 22	VC 22												65
QLC KT 315 VC 22	VC 22												45
QLC 400 VC 31	VC 31	D174552000	152	60	80	90	10	54	60	22	59.5	4.4	105
QLC KT 400 VC 31	VC 31												75

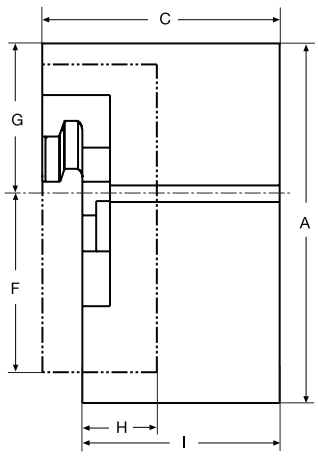
I.D. clamping

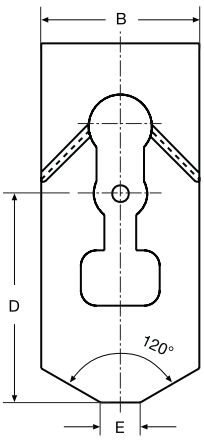
ATTENTION: Treatment permissible just outside the ---- mounting!

Soft Top Jaws
V-Change
INTERNAL

Material: Heat treatable 42CrMo4







Chuck type	Jaw type	Ident No.	Dimensions (mm) A	B	C	D	E	F	G	H	I	Weight Kg./each	Min. clamping diameter (mm)
QLC 160 VC 11	VC 11	D174547000	91	40	60	46	10	35	31	17	50	1.4	25
QLC KT 160 VC 11	VC 11												
QLC 200 VC 21	VC 21	D174549000	99	40	60	59	10	40	38	20	50	1.5	45
QLC KT 200 VC 21	VC 21												35
QLC 250 VC 22	VC 22	D174551000	120	60	80	74	10	40	45	20	67.5	4.0	45
QLC KT 250 VC 22	VC 22												35
QLC 315 VC 22	VC 22												90
QLC KT 315 VC 22	VC 22												70
QLC 400 VC 31	VC 31	D174553000	155	60	80	90	10	54	60	22	59.5	4.4	150
QLC KT 400 VC 31	VC 31												100

NSTK
T-sliding block

General

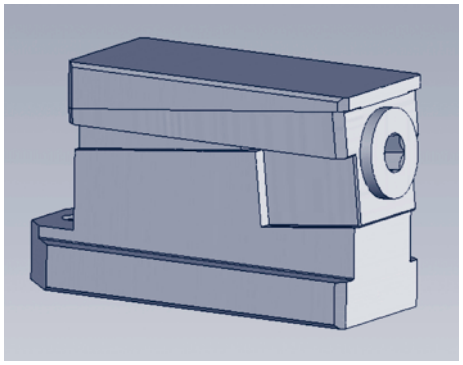
As a further highlight of our jaw holder system, Forkardt offers the NSTK T-sliding block.

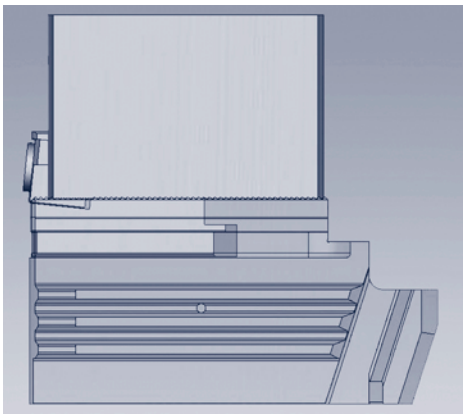
Changing or adjusting chuck jaws to a different clamping diameter involves lengthy setting-up operations.

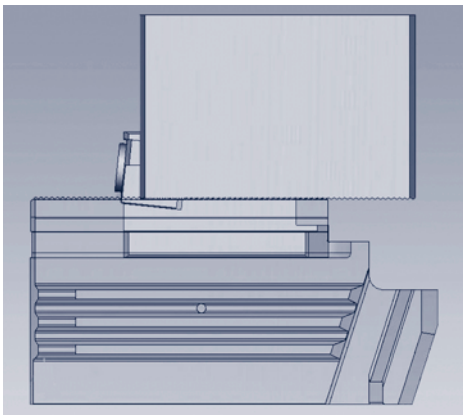
Example:

1st operation:	Chuck jaws with gripping claws
2nd operation:	Chuck jaws with turned inside diameter

The new jaw holder system consists of the NSTK T-sliding block and soft jaws for use with either SKA or SKI clamping inserts for the first operation or for turning to the required clamping diameter under clamping pressure for greater setting up efficiency.







Features

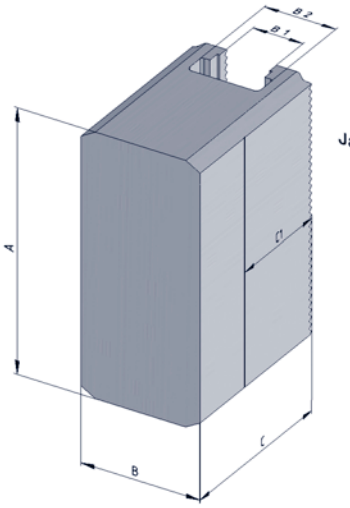
- Standardised soft top jaws – for individual applications.
- Claw jaws for internal and external chucking with SKA and SKI clamping inserts.
- A more variable and wider clamping range is offered by the added option of shifting the chuck jaw and T-sliding block.
- Free arrangement without restrictions through holes compared to conventional WBL system with screw fixing.
- Rapid jaw shifting and changing.
- Suitable for use on all Forkardt chucks with serrated jaws in inches.
- Chuck sizes from 160 m to 630 mm diameter.
- Simplified jaw changing on pick-up machines.

270.10.07 E 10/10

FORKARDT

WBLKL Soft Block Jaws

Dimensions/Performance data WBLKL

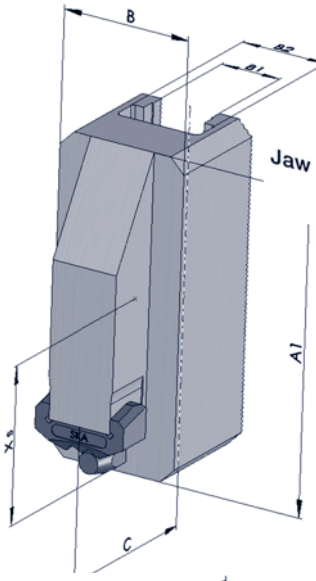


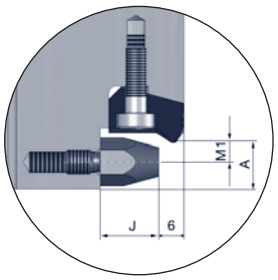
Chuck type	Jaw type	A	B	C	D	Ident No.	B1	B2	C1	J	Weight each jaw (kg)
3QLC/QLK 160	WBLKL 11	60	40	50	S11	D175384000	17	23.5	32	12	0.9
3QLC/QLK 200	WBLKL 11	80	40	50	S11	D175239000	17	23.5	32	12	1.2
3QLC/QLK 250	WBLKL 12	110	50	70	S12	D174913000	21	29.5	40	18	2.9
3QLC/QLK 315	WBLKL 12	110	50	70	S12	D174913000	21	29.5	40	18	2.9
3QLC/QLK 400	WBLKL 12	110	50	70	S12	D174913000	21	29.5	40	18	2.9
3QLC/QLK 400	WBLKL 23	140	60	80	S23	D175241000	25.5	37	50	20	5.2
3NH/NHF 500	WBLKL 23	140	60	80	S23	D175241000	25.5	37	50	20	5.2
3NH/NHF 630	WBLKL 23	140	60	80	S23	D175241000	25.5	37	50	20	5.2

KBNKLA Roughing Jaws

with interchangeable chucking claws

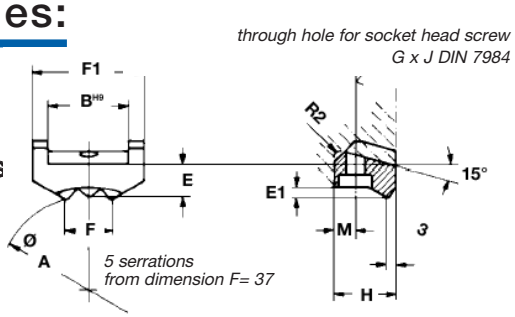
FOR O.D.





Accessories:

SKA
Hard
chucking claws
Material:
Insert steel, hardened

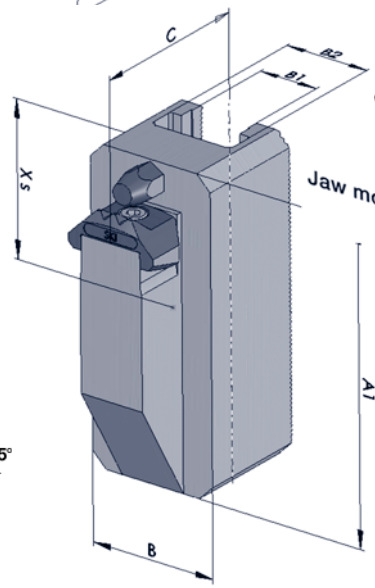


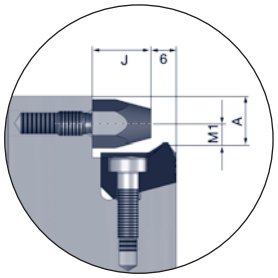
SKA for O.D.

KBNKLI Roughing Jaws

with interchangeable chucking claws

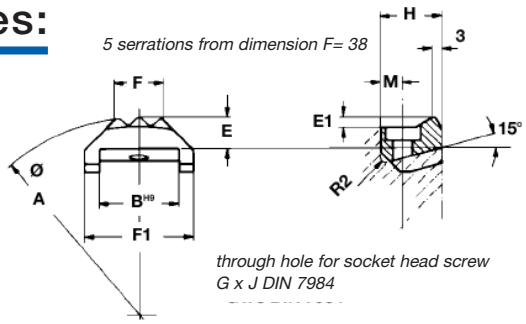
FOR I.D.



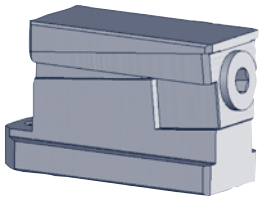


Accessories:

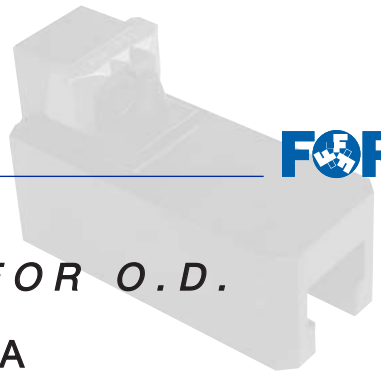
SKI
Hard
chucking claws
Material:
Insert steel, hardened



SKI for I.D.



T-sliding block S11 = 174540000 — S11 = Groove 17 and pitch of serration 1/16" x 90°
T-sliding block S12 = 174339000 — S12 = Groove 21 and pitch of serration 1/16" x 90°
T-sliding block S23 = 174541000 — S23 = Groove 25.5 and pitch of serration 3/32" x 90°



FORKARDT

KBNKLA Roughing Jaws

with interchangeable chucking claws • *FOR O.D.*

Dimensions/Performance data KBNKLA

Chuck-type	Jaw type	A	B	C	D	Ident No.	Clamping range	max. swing diameter	Gravity center distance Xs	A1	B1	B2	M1	J	Weight each jaw (kg)	Individual part - Ident No. Jaw without chucking claw	hard chucking claw	Locator
3QLC/QLK 160	KBNKLA 11	8	40	50	S11	D175378000	30.5 - 76.5	186	29.5	60	17	23.5	4.6	14	0.59	D175378001	D45474002	
		22	40	50	S11	D175379000	61 - 105	186	31.7	60	17	23.5	4.6	14	0.55	D175379001	D45474002	D45463003
		33	40	50	S11	D175380000	80 - 126	186	33.9	60	17	23.5	4.6	14	0.54	D175380001	D45474002	
3QLC/QLK 200	KBNKLA 11	10	40	50	S11	D174957000	44 - 88	232	39.1	80	17	23.5	4.6	14	0.80	D174957001	D45474002	
		32	40	50	S11	D174958000	88 - 134	232	44.35	80	17	23.5	4.6	14	0.72	D174958001	D45475002	D45463003
		50.2	40	50	S11	D174959000	125 - 170	232	46.5	80	17	23.5	4.6	14	0.64	D174959001	D45475002	
3QLC/QLK 250	KBNKLA 12	12.6	50	70	S12	D174960000	63 - 141	338	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45482002	
		47.7	50.	70	S12	D174961000	131 - 210	338	58.4	110	21	29.5	6.3	18	1.65	D174961001	D45483002	D176151002
		81.0	50	70	S12	D174962000	197 - 277	338	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45483002	
3QLC/QLK 315	KBNKLA 12	12.6	50	70	S12	D174960000	89 - 202	399	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45482002	
		65.2	50	70	S12	D174963000	193 - 307	399	67.1	110	21	29.5	6.3	18	1.77	D174963001	D45483002	D176151002
		81.0	50	70	S12	D174962000	225 - 339	399	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45483002	
3QLC/QLK 400	KBNKLA 12	12.6	50	70	S12	D174960000	121 - 268	464	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45482002	
		65.2	50	70	S12	D174961000	225 - 373	464	58.4	110	21	29.5	6.3	18	1.65	D174961001	D45483002	D176151002
		81.0	50	70	S12	D174962000	251 - 404	464	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45483002	
3QLC/QLK 400	KBNKLA 23	22.0	60	80	S23	D175213000	101 - 292	533	70.86	140	25.5	37	12	22	3.25	D175213001	D45488002	D45475003
		83.5	60	80	S23	D175214000	224 - 414	533	77.7	140	25.5	37	12	22	2.75	D175214001	D45489002	
3NH/NHF 500	KBNKLA 23	22.0	60	80	S23	D175213000	131 - 393	633	70.86	140	25.5	37	12	22	3.25	D175213001	D45488002	D45475003
		83.5	60	80	S23	D175214000	253 - 515	633	77.7	140	25.5	37	12	22	2.75	D175214001	D45489002	
3NH/NHF 630	KBNKLA 23	22.0	60	80	S23	D175213000	154 - 522	762	70.86	140	25.5	37	12	22	3.25	D175213001	D45488002	D45475003
		83.5	60	80	S23	D175214000	276 - 645	762	77.7	140	25.5	37	12	22	2.75	D175214001	D45489002	
		A	**B**	**C**	**D**				**Xs**	**A1**	**B1**	**B2**	**M1**	**J**	**(kg)**			
3QLC/K-KS 200	KBNKLA 11	10	40	50	S11	D174957000	44 - 88	232	39.1	80	17	23.5	4.6	14	0.80	D174957001	D45474002	
		32	40	50	S11	D174958000	88 - 134	232	44.35	80	17	23.5	4.6	14	0.72	D174958001	D45475002	D45463003
		50.2	40	50	S11	D174959000	125 - 170	232	46.5	80	17	23.5	4.6	14	0.64	D174959001	D45475002	
3QLC/K-KS 250	KBNKLA 11	10	40	50	S11	D174957000	85 - 129	278	39.1	80	17	23.5	4.6	14	0.80	D174957001	D45474002	
		32	40	50	S11	D174958000	122 - 174	278	44.35	80	17	23.5	4.6	14	0.72	D174958001	D45475002	D45463003
		50.2	40	50	S11	D174959000	165 - 210	278	46.5	80	17	23.5	4.6	14	0.64	D174959001	D45475002	
3QLC/K-KS 315	KBNKLA 12	12.6	50	70	S12	D174960000	125 - 202	399	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45482002	
		47.7	50	70	S12	D174961000	193 - 307	399	58.4	110	21	29.5	6.3	18	1.65	D174961001	D45483002	D176151002
		81	50	70	S12	D174962000	260 - 340	399	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45483002	
3QLC/K-KS 400	KBNKLA 12	12.6	50	70	S12	D174960000	168 - 282	480	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45482002	
		65.2	50	70	S12	D174963000	273 - 387	480	67.1	110	21	29.5	6.3	18	1.77	D174963001	D45483002	D176151002
		81	50	70	S12	D174962000	305 - 418	480	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45483002	
		A	**B**	**C**	**D**				**Xs**	**A1**	**B1**	**B2**	**M1**	**J**	**(kg)**			
2/3QLC-LS 160	KBNKLA 11	8	40	50	S11	D175378000	30.5-76.5	186	29.5	60	17	23.5	4.6	14	0.59	D175378001	D45474002	
		22	40	50	S11	D175379000	61 - 105	186	31.7	60	17	23.5	4.6	14	0.55	D175379001	D45474002	D45463003
		33	40	50	S11	D175380000	80 - 126	186	33.9	60	17	23.5	4.6	14	0.54	D175380001	D45474002	
2/3QLC-LS 200	KBNKLA 11	10	40	50	S11	D174957000	44 - 88	232	39.1	80	17	23.5	4.6	14	0.80	D174957001	D45474002	
		32	40	50	S11	D174958000	88 - 134	232	44.35	80	17	23.5	4.6	14	0.72	D174958001	D45475002	D45463003
		50.2	40	50	S11	D174959000	125 - 170	232	46.5	80	17	23.5	4.6	14	0.64	D174959001	D45475002	
2/3QLC-LS 250	KBNKLA 12	12.6	50	70	S12	D174960000	63 - 141	338	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45482002	
		47.7	50	70	S12	D174961000	131 - 210	338	58.4	110	21	29.5	6.3	18	1.65	D174961001	D45483002	D176151002
		81	50	70	S12	D174962000	197 - 277	338	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45483002	
2/3QLC-LS 315	KBNKLA 12	12.6	50	70	S12	D174960000	89 - 202	399	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45482002	
		65.2	50	70	S12	D174963000	159 - 307	399	67.1	110	21	29.5	6.3	18	1.77	D174963001	D45483002	D176151002
		81	50	70	S12	D174962000	225 - 339	399	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45483002	
		A	**B**	**C**	**D**				**Xs**	**A1**	**B1**	**B2**	**M1**	**J**	**(kg)**			
3QLC-KT 160	KBNKLA 11	8	40	50	S11	D175378000	36 - 101	208	29.5	60	17	23.5	4.6	14	0.59	D175378001	D45474002	
		22	40	50	S11	D175379000	64 - 129	208	31.7	60	17	23.5	4.6	14	0.55	D175379001	D45474002	D45463003
		33	40	50	S11	D175380000	85 - 150	208	33.9	60	17	23.5	4.6	14	0.54	D175380001	D45474002	
3QLC-KT 200	KBNKLA 11	10	40	50	S11	D174957000	44 - 80	222	39.1	80	17	23.5	4.6	14	0.80	D174957001	D45474002	
		32	40	50	S11	D174958000	89 - 124	222	44.35	80	17	23.5	4.6	14	0.72	D174958001	D45475002	D45463003
		50.2	40	50	S11	D174959000	124 - 160	222	46.5	80	17	23.5	4.6	14	0.64	D174959001	D45475002	
3QLC-KT 250	KBNKLA 12	12.6	50	70	S12	D174960000	44 - 134	330	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45482002	
		47.7	50	70	S12	D174961000	113 - 203	330	58.4	110	21	29.5	6.3	18	1.65	D174961001	D45483002	D176151002
		81	50	70	S12	D174962000	179 - 270	330	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45483002	
3QLC-KT 315	KBNKLA 12	12.6	50	70	S12	D174960000	45 - 197	394	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45482002	
		65.2	50	70	S12	D174963000	149 - 302	394	67.1	110	21	29.5	6.3	18	1.77	D174963001	D45483002	D176151002
		81	50	70	S12	D174962000	180 - 334	394	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45483002	
3QLC-KT 400	KBNKLA 12	12.6	50	70	S12	D174960001	101 - 268	464	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45482002	
		65.2	50	70	S12	D174961002	225 - 373	464	58.4	110	21	29.5	6.3	18	1.65	D174961001	D45483002	D176151002
		81.0	50	70	S12	D174962002	265 - 414	464	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45483002	
3QLC-KT 400	KBNKLA 23	22	60	80	S23	D175213000	76 - 292	533	70.86	140	25.5	37	12	22	3.25	D175213001	D45488002	D45475003
		83.5	60	80	S23	D175214000	200 - 414	533	77.7	140	25.5	37	12	22	2.75	D175214001	D45489002	

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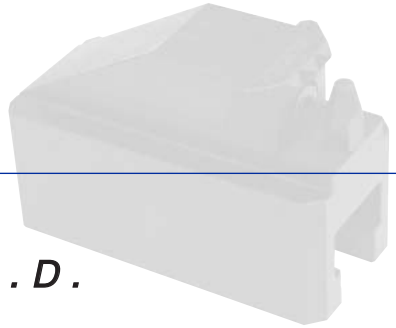


FORKARDT

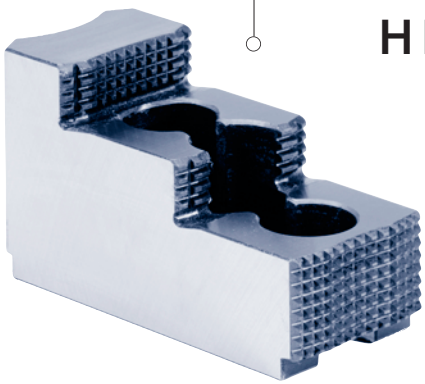
KBNKLI Roughing Jaws

with interchangeable chucking claws • *FOR I.D.*

Dimensions/Performance data KBNKLI

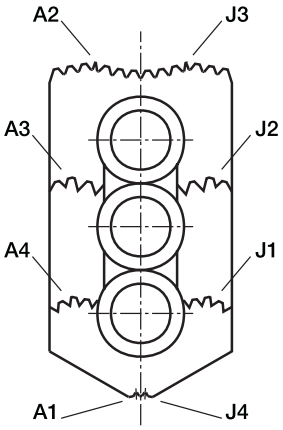
Chuck-type	Jaw type	A	B	C	D	Ident No.	Clamping range	max. swing diameter	Gravity center distance Xs	A1	B1	B2	M1	J	Weight each jaw (kg)	Individual part - Ident No. Jaw without chucking claw	hard chucking claw	Locator
3QLC/QLK		8	40	50	S11	D175381000	125 -169	186	28.2	60	17	23.5	4.6	14	0.58	D175378001	D45478002	
160	KBNKLI 11	22	40	50	S11	D175382000	97 -141	186	26.2	60	17	23.5	4.6	14	0.54	D175379001	D45478002	D45463003
		33	40	50	S11	D176596000	76 -120	186	26.2	60	17	23.5	4.6	14	0.53	D175380001	D45478002	
3QLC/QLK		10	40	50	S11	D175215000	165 -210	232	40.6	80	17	23.5	4.6	14	0.79	D174957001	D45478002	
200	KBNKLI 11	32	40	50	S11	D175216000	121 -166	232	35.6	80	17	23.5	4.6	14	0.71	D174958001	D45479002	D45463003
		50.2	40	50	S11	D175217000	86 -130	232	33.6	80	17	23.5	4.6	14	0.63	D174959001	D45479002	
3QLC/QLK		12.6	50	70	S12	D175218000	259 -373	338	56.7	110	21	29.5	6.3	18	1.84	D174960001	D45486002	
250	KBNKLI 12	47.7	50.	70	S12	D175219000	161 -241	338	51.6	110	21	29.5	6.3	18	1.64	D174961001	D45486002	D176151002
		81	50	70	S12	D175220000	96 -175	338	52.9	110	21	29.5	6.3	18	1.72	D174962001	D45487002	
QLC/QLK		12.6	50	70	S12	D175218000	259 -373	399	56.7	110	21	29.5	6.3	18	1.84	D174960001	D45486002	
315	KBNKLI 12	65.2	50	70	S12	D175221000	154 -203	399	53.9	110	21	29.5	6.3	18	1.75	D174963001	D45487002	D176151002
		81.0	50	70	S12	D175220000	123 -236	399	52.9	110	21	29.5	6.3	18	1.72	D174962001	D45487002	
3QLC/QLK		12.6	50	70	S12	D175218000	291 -439	464	56.7	110	21	29.5	6.3	18	1.84	D174960001	D45486002	
400	KBNKLI 12	65.2	50	70	S12	D175221000	186 -334	464	53.9	110	21	29.5	6.3	18	1.75	D174961001	D45487002	D176151002
		81.0	50	70	S12	D175220000	155 -303	464	52.9	110	21	29.5	6.3	18	1.72	D174962001	D45487002	
3QLC/QLK	KBNKLI 23	22	60	80	S23	D175222000	294 -486	533	68.6	140	25.5	37	12	22	3.21	D175213001	D45492002	D45475003
400		83.5	60	80	S23	D175223000	172 -363	533	62.4	140	25.5	37	12	22	2.73	D175214001	D45493002	
3NH/NHF	KBNKLI 23	22	60	80	S23	D175222000	322 -586	633	68.6	140	25.5	37	12	22	3.21	D175213001	D45488002	D45475003
500		83.5	60	80	S23	D175223000	199 -463	633	62.4	140	25.5	37	12	22	2.73	D175214001	D45489002	
3NH/NHF	KBNKLI 23	22	60	80	S23	D175222000	346 -716	762	68.6	140	25.5	37	12	22	3.21	D175213001	D45488002	D45475003
630		83.5	60	80	S23	D175223000	223 -593	762	62.4	140	25.5	37	12	22	2.73	D175214001	D45489002	
		A	B	C	D				Xs	A1	B1	B2	M1	J	(kg)			
3QLC/K-KS		10	40	50	S11	D175215000	165 - 210	232	40.6	80	17	23.5	4.6	14	0.79	D174957001	D45478002	
200	KBNKLI 11	32	40	50	S11	D175216000	121 - 166	232	35.6	80	17	23.5	4.6	14	0.71	D174958001	D45479002	D45463003
		50.2	40	50	S11	D175217000	86 - 130	232	33.6	80	17	23.5	4.6	14	0.63	D174959001	D45479002	
3QLC/K-KS		10	40	50	S11	D175215000	206 - 251	278	40.6	80	17	23.5	4.6	14	0.79	D174957001	D45478002	
250	KBNKLI 11	32	40	50	S11	D175216000	161 - 206	278	35.6	80	17	23.5	4.6	14	0.71	D174958001	D45479002	D45463003
		50.2	40	50	S11	D175217000	125 - 170	278	33.6	80	17	23.5	4.6	14	0.63	D174959001	D45479002	
3QLC/K-KS		12.6	50	70	S12	D175218000	294 - 374	399	56.7	110	21	29.5	6.3	18	1.84	D174960001	D45486002	
315	KBNKLI 12	47.7	50	70	S12	D175219000	224 - 304	399	51.6	110	21	29.5	6.3	18	1.64	D174961001	D45487002	D176151002
		81	50	70	S12	D175220000	158 - 238	399	52.9	110	21	29.5	6.3	18	1.72	D174962001	D45487002	
3QLC/K-KS		12.6	50	70	S12	D175218000	339 - 453	480	56.7	110	21	29.5	6.3	18	1.84	D174960001	D45486002	
400	KBNKLI 12	65.2	50	70	S12	D175221000	234 - 348	480	53.9	110	21	29.5	6.3	18	1.75	D174963001	D45487002	D176151002
		81	50	70	S12	D175220000	202 - 316	480	52.9	110	21	29.5	6.3	18	1.72	D174962001	D45487002	
		A	B	C	D				Xs	A1	B1	B2	M1	J	(kg)			
2/3QLC-LS		8	40	50	S11	D175378000	125 - 169	186	29.5	60	17	23.5	4.6	14	0.59	D175378001	D45478002	
160	KBNKLI 11	22	40	50	S11	D175379000	97 - 141	186	31.7	60	17	23.5	4.6	14	0.55	D175379001	D45478002	D45463003
		33	40	50	S11	D175380000	76 - 120	186	33.9	60	17	23.5	4.6	14	0.54	D175380001	D45478002	
2/3QLC-LS		10	40	50	S11	D175215000	165 - 210	232	40.6	80	17	23.5	4.6	14	0.79	D174957001	D45478002	
200	KBNKLI 11	32	40	50	S11	D175216000	121 - 166	232	35.6	80	17	23.5	4.6	14	0.71	D174958001	D45479002	D45463003
		50.2	40	50	S11	D175217000	86 - 130	232	33.6	80	17	23.5	4.6	14	0.63	D174959001	D45479002	
2/3QLC-LS		12.6	50	70	S12	D174960000	232 - 312	338	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45486002	
250	KBNKLI 12	47.7	50	70	S12	D174961000	161 - 241	338	58.4	110	21	29.5	6.3	18	1.65	D174961001	D45486002	D176151002
		81	50	70	S12	D174962000	96 - 175	338	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45487002	
2/3QLC-LS		12.6	50	70	S12	D174960000	259 - 373	399	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45486002	
315	KBNKLI 12	65.2	50	70	S12	D174963000	154 - 268	399	67.1	110	21	29.5	6.3	18	1.77	D174963001	D45487002	D176151002
		81	50	70	S12	D174962000	123 - 236	399	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45487002	
		A	B	C	D				Xs	A1	B1	B2	M1	J	(kg)			
3QLC-KT		8	40	50	S11	D175381000	125 - 189	208	28.2	60	17	23.5	4.6	14	0.58	D175378001	D45478002	
160	KBNKLI 11	22	40	50	S11	D175382000	97 - 161	208	26.2	60	17	23.5	4.6	14	0.54	D175379001	D45478002	D45462003
		33	40	50	S11	D176596000	76 - 140	208	26.2	60	17	23.5	4.6	14	0.53	D175380001	D45478002	
3QLC-KT		10	40	50	S11	D175215000	165 - 201	222	40.6	80	17	23.5	4.6	14	0.79	D174957001	D45478002	
200	KBNKLI 11	32	40	50	S11	D175216000	121 - 156	222	35.6	80	17	23.5	4.6	14	0.71	D174958001	D45479002	D45462003
		50.2	40	50	S11	D175217000	85 - 119	222	33.6	80	17	23.5	4.6	14	0.63	D174959001	D45479002	
3QLC-KT		12.6	50	70	S12	D175218000	213 - 304	330	56.7	110	21	29.5	6.3	18	1.84	D174960001	D45486002	
250	KBNKLI 12	47.7	50	70	S12	D175219000	143 - 234	330	51.6	110	21	29.5	6.3	18	1.64	D174961001	D45486002	D176151002
		81	50	70	S12	D175220000	78 - 168	330	52.9	110	21	29.5	6.3	18	1.72	D174962001	D45487002	
3QLC-KT		12.6	50	70	S12	D175218000	214 - 367	394	56.7	110	21	29.5	6.3	18	1.84	D174960001	D45486002	
315	KBNKLI 12	65.2	50	70	S12	D175221000	109 - 262	394	53.9	110	21	29.5	6.3	18	1.75	D174963001	D45487002	D176151002
		81	50	70	S12	D175220000	79 - 231	394	52.9	110	21	29.5	6.3	18	1.72	D174962001	D45487002	
3QLC-KT		12.6	50	70	S12	D174960001	135 - 303	464	53.0	110	21	29.5	6.3	18	1.86	D174960001	D45486002	
400	KBNKLI 12	65.2	50	70	S12	D174961001	186 - 334	464	58.4	110	21	29.5	6.3	18	1.65	D174961001	D45487002	D176151002
		81.0	50	70	S12	D174962001	332 - 439	464	67.2	110	21	29.5	6.3	18	1.73	D174962001	D45487002	
3QLC-KT	KBNKLI 23	22	60	80	S23	D175222000	267 - 486	533	68.6	140	25.5	37	12	22	3.21	D175213001	D45492002	D45475003
400		83.5	60	80	S23	D175223000	146 - 363	533	62.4	140	25.5	37	12	22	2.73	D175214001	D45493002	

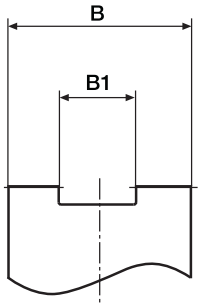
HB Hard top jaw

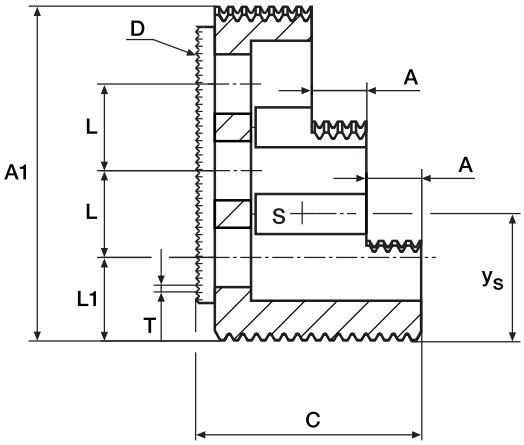


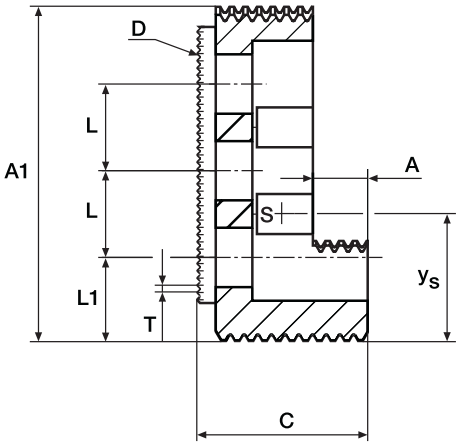
HB

- **HB Hard top jaw**
- Hardened top jaw for universal application
- Jaws can be ground in the chuck when mounted
- Higher clamping force due to diamond style serration
- Ready ground when delivered with a FORKARDT chuck









HB 23/140

Main dimensions

Typ	Dimensions A	B	C	D	Ident. No.	A_1	B_1	L	L_1	T	Y_s	Weight Kg./each
HB 08	5.5	26	31	S 08	D168904000	47	10	24.4	12.3	1 /16" x 90°	22.0	0.13
HB 09	6.5	32	39	S 09	D168905000	57.5	12	25.4	14.9	1 /16" x 90°	25.4	0.23
HB 11/65	10	35	44	S 11	D38762014	64.7	17	19	28	1 /16" x 90°	27.5	0.39
HB 11	12	40	49	S 11	D1071961000	72.6	17	19	18	1 /16" x 90°	32.5	0.47
HB 11/110	12	40	49	S 11	D1071416000	80.8	17	19	26.2	1 /16" x 90°	34.0	0.56
HB 12	14	50	58	S 12	D1071915000	103.5	21	25	33.5	1 /16" x 90°	42.5	1.12
HB 23/18	18	60	75	S 23	D45702000	139.7	25.5	31	53	3 /32" x 90°	56.5	2.52
HB 23/140	26	60	65	S 23	D1071922000	139.7	25.5	31	53	3 /32" x 90°	57.5	2.15
HBT 09	6.5	30	35	S 09	D154254000	63	12	17	16.5	1 /16" x 90°	34.2	0.19
HBT 10	8	32	42	S 10	D154255000	73	14	19.5	19.5	1 /16" x 90°	33.7	0.29
HBT 11	12	40	53	S 11	D154256000	89	17	23	27	1 /16" x 90°	38.1	0.56

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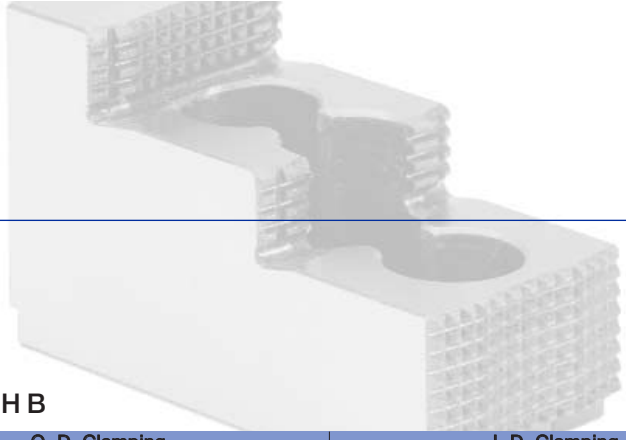


HB Hard Top Jaws

Clamping range QLC/K with HB

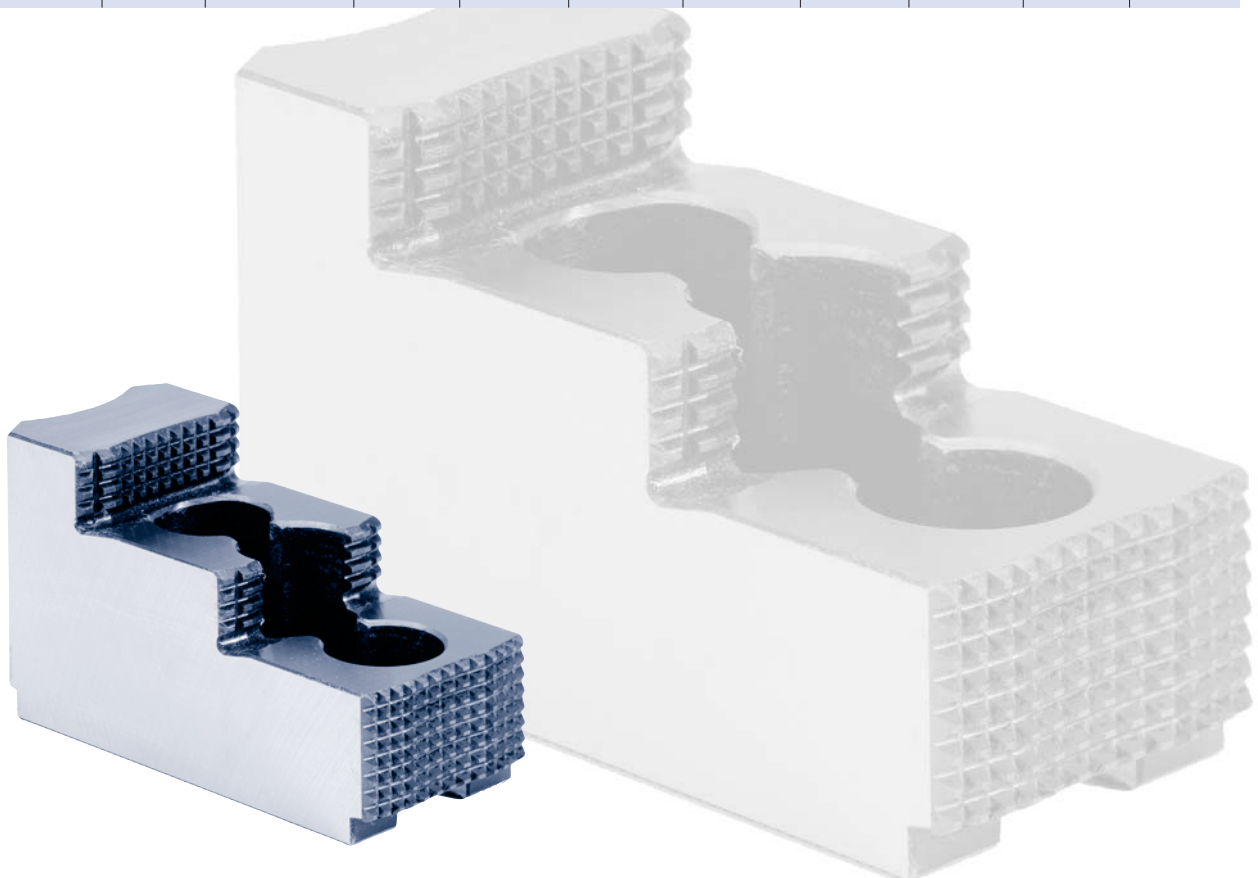
Type	Top Jaw	Ident. No.	O. D. Clamping				I. D. Clamping			
			A1	A2	A3	A4	J1	J2	J3	J4
3QLC/K 160	HB11/65	D38762014000	22-56	47-81	92-125	135-170	65-97	108-141	153-187	172-206
3QLC/K 200	HB11	D1071961000	32-122	38-126	89-188	140-230	80-168	130-219	179-268	180-270
3QLC/K 250	HB12	D1071915000	24-120	49-155	131-238	212-361	75-165	147-246	255-326	253-313
3QLC/K 315	HB12	D1071915000	28-182	64-217	146-300	227-381	80-226	155-308	234-388	268-423
3QLC/K 400	HB12	D1071915000	90-256	109-291	191-373	273-455	120-300	199-381	279-462	314-497
3QLC/K 400	HB23/18	D4570200000	41-208	89-262	193-365	294-467	115-281	213-322	312-484	369-541

Clamping range QLC/K-KS with HB

Type	Top Jaw	Ident. No.	O. D. Clamping				I. D. Clamping			
			A1	A2	A3	A4	J1	J2	J3	J4
3QLC/K-KS 200	HB11/65	D38762014000	65-114	89-128	135-173	179-218	106-145	151-189	196-235	216-255
3QLC/K-KS 250	HB11	D1071961000	75-171	80-175	131-226	183-278	121-216	172-268	221-317	223-319
3QLC/K-KS 315	HB12	D1071915000	76-183	111-218	193-301	275-283	122-227	201-309	281-389	316-424
3QLC/K-KS 400	HB12	D1071915000	107-254	142-300	224-382	306-464	141-308	232-390	312-471	347-506

Clamping range QLC/K-LS with HB

Type	Top Jaw	Ident. No.	O. D. Clamping				I. D. Clamping			
			A1	A2	A3	A4	J1	J2	J3	J4
2QLC-LS 160	HB11/65	D38762014000	24-55	49-80	94-125	138-170	67-97	110-141	155-186	174-206
2QLC-LS 200	HB11	D1071961000	20-124	26-128	77-179	128-231	70-169	118-221	166-270	167-272
2QLC-LS 250	HB12	D1071915000	20-123	37-158	119-240	200-322	68-168	140-248	218-329	241-363
2QLC-LS 315	HB12	D1071915000	32-183	68-218	150-300	231-382	83-227	159-308	238-389	272-423
3QLC-LS 160	HB11/65	D38762014000	24-55	49-80	94-125	138-170	67-97	110-141	155-186	174-206
3QLC-LS 200	HB11	D1071961000	20-124	26-128	99-179	129-231	70-169	118-221	166-270	168-272
3QLC-LS 250	HB12	D1071915000	20-123	37-158	119-240	200-322	74-168	140-248	218-329	241-363
3QLC-LS 315	HB12	D1071915000	32-183	68-218	150-300	231-382	83-227	159-308	238-389	272-423



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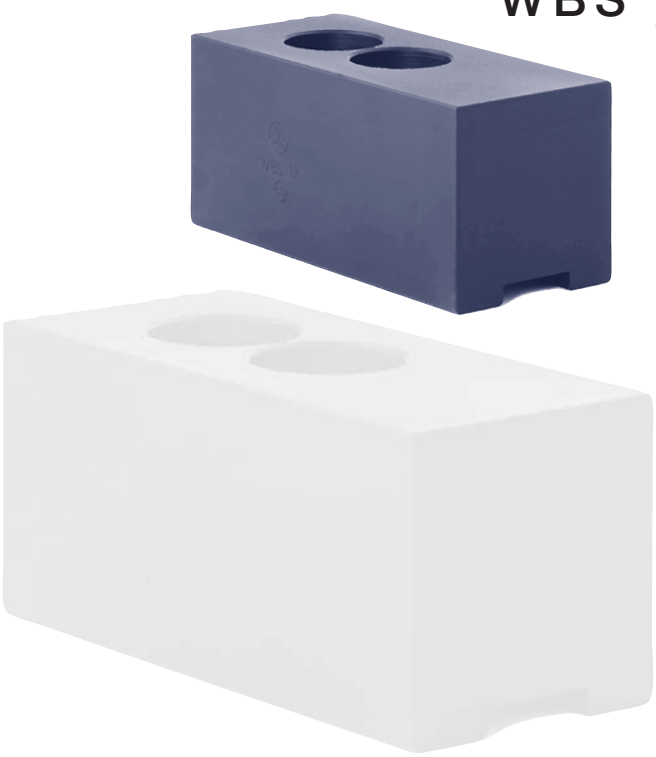
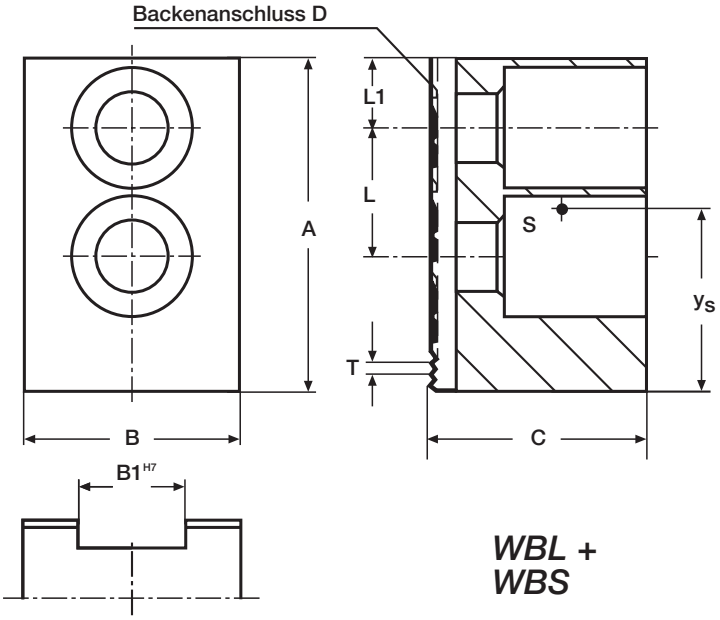
WBL/WBS Soft top jaw

WBL
WBS



WBL/WBS Soft top jaws

Soft jaws (type WBL) are used for the accurate clamping of already machined work pieces, on which the clamping surfaces must not be damaged.
These jaws are turned, by the user, under clamping pressure, to the respective clamping diameter to ensure extremely high accuracy and repeatability.



WBL + WBS

	Dimensions										Weight
Type	A	B	C	D	Ident. No.	B1	L	L1	T	ys	Kg./each
WBL 08	47	25	22.5	S 9	D168906000	10.0	14	6.5	1/16" x 90°	19.5	0.15
WBL 09	60	30	25	S 9	D168907000	12.0	20	8.0	1/16" x 90°	26.0	0.25
WBL 11	70	40	40	S 11	D49302000	17.0	22	15	1/16" x 90°	31.5	0.68
WBS 11	70	40	60	S 11	D49829001	17.0	22	15	1/16" x 90°	31.5	1.02
WBS 11	70	60	60	S 11	D49830001	17.0	22	15	1/16" x 90°	31.5	1.67
WBL 11	80	40	40	S 11	D49303000	17.0	22	25	1/16" x 90°	35.0	0.89
WBS 11	90	40	40	S 11	D49831001	17.0	22	25	1/16" x 90°	35.0	0.91
WBS 11	90	40	60	S 11	D49831002	17.0	22	25	1/16" x 90°	35.0	1.38
WBS 11	90	40	80	S 11	D49831003	17.0	22	25	1/16" x 90°	35.0	1.84
WBS 11	90	60	60	S 11	D49832001	17.0	22	25	1/16" x 90°	35.0	2.22
WBS 11	90	60	80	S 11	D49832004	17.0	22	25	1/16" x 90°	35.0	2.97
WBL 12	110	50	50	S 12	D49304000	21.0	28	30	1/16" x 90°	51.0	1.70
WBS 12	120	50	50	S 12	D49834001	21.0	28	30	1/16" x 90°	59.0	1.91
WBS 12	120	50	80	S 12	D49834002	21.0	28	30	1/16" x 90°	59.0	3.07
WBS 12	120	50	100	S 12	D49834009	21.0	28	30	1/16" x 90°	59.0	3.85
WBS 12	120	60	60	S 12	D49835001	21.0	28	30	1/16" x 90°	59.0	2.86
WBS 12	120	60	80	S 12	D49835007	21.0	28	30	1/16" x 90°	59.0	3.87
WBS 12	120	60	90	S 12	D49835002	21.0	28	30	1/16" x 90°	59.0	4.50
WBL 23	140	60	60	S 23	D49306000	25.5	35	30	3/32" x 90°	58.0	3.12
WBS 23	155	60	60	S 23	D49839001	25.5	35	30	3/32" x 90°	58.0	3.55
WBS 23	155	60	90	S 23	D49839002	25.5	35	30	3/32" x 90°	58.0	5.34
WBS 23	155	60	120	S 23	D49839003	25.5	35	30	3/32" x 90°	58.0	7.12
WBS 23	155	80	80	S 23	D49840001	25.5	35	30	3/32"x 90°	58.0	6.68

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Some other products by FORKARDT

Gripping force meter

- Electronic/mechanical compact unit for the routine testing of clamping devices
- Increases the safety of production processes
- Designed in C-MOS technology

SKM

Power chucks

- Highly developed universal chuck
- With open centre, centrifugal force compensation and integrated lubricant reserve
- Precise finish-machining at maximum speeds
- Chuck variants for diverse applications
  type QLC/KS with extremely large bore
  type QLC/LS with very long clamping stroke
  type QLC/AG for compensating clamping
  type QLC/KT the solid version for highest standards

3 QLC/K series

Special chucking systems

- Specially designed and manufactured to customer requirements
- Combined centering and clamping function for precise driving
- Example: Axle chuck for car body parts
- Sealed and oil-filled for continuous duty

Special chucks

Precision power chucks
for grinding and hard turning

- Hermetically sealed, with permanent lubrication for freedom from maintenance and wear
- Chucking repeat accuracy < 0.0025 mm
- Jaw changing without loss of accuracy

High-precision chucks

Expanding mandrels/Collets

- Clamping range between 12.5-178.0 mm
- Double angle collet system with split sleeves
- Variable range for the development of optimal clamping systems
- Ground to customer requirements

EM

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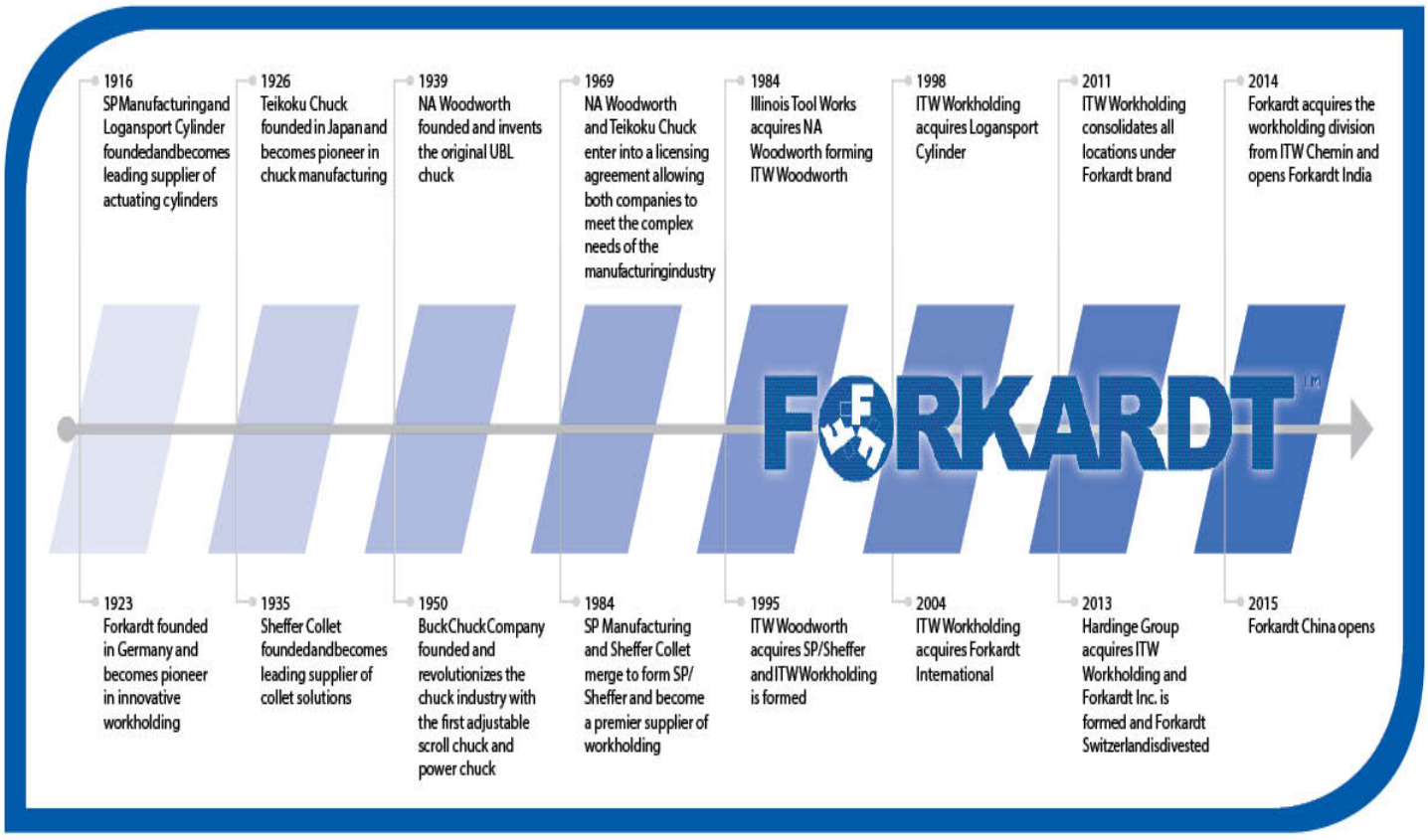
NOTES

OUR HISTORY



Innovative Technology by FORKARDT

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