KEMROC®

revolution of cutting

English

SPECIAL ROCK CUTTERS

An innovative, German engineering company developing revolutionary excavator attachments — focused on product development, quality engineering and reliability.

Cutter attachments are our passion. With more than 20 years' experience, we develop and manufacture cutter attachments for excavators and backhoe loaders. Our attachments are robust and strong with main components made in Germany.

Together with our customers, we are constantly developing new solutions for demolition, construction, and mining applications. Challenge us! We guarantee specialist information and professional service for our products. Our international team of specialists will be happy to support you with your individual project.

Attention during production and assembly guarantees the highest level of quality and reliability.

Excellent Service. We support you, our team can help install your KEMROC attachment and train your operators.

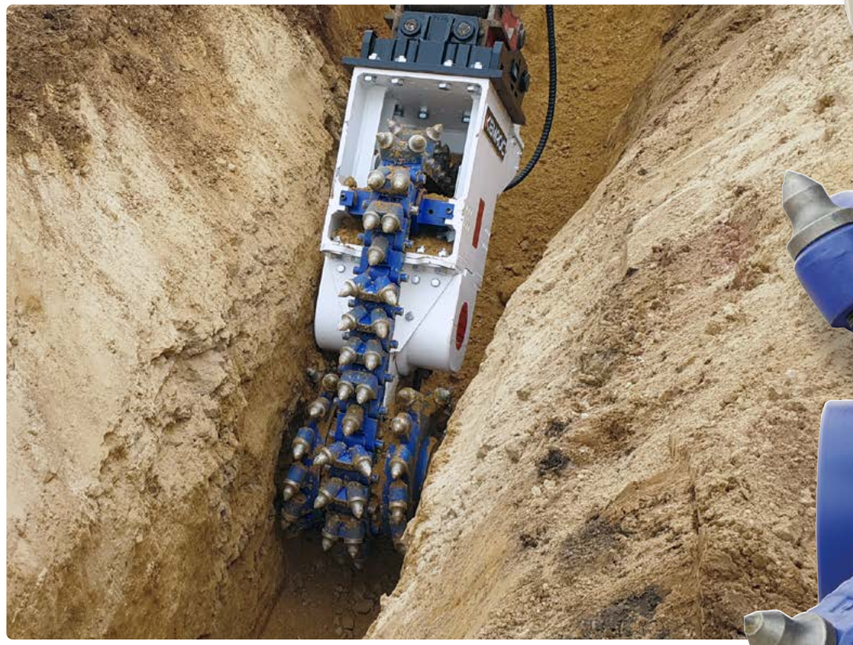
Modern production facilities

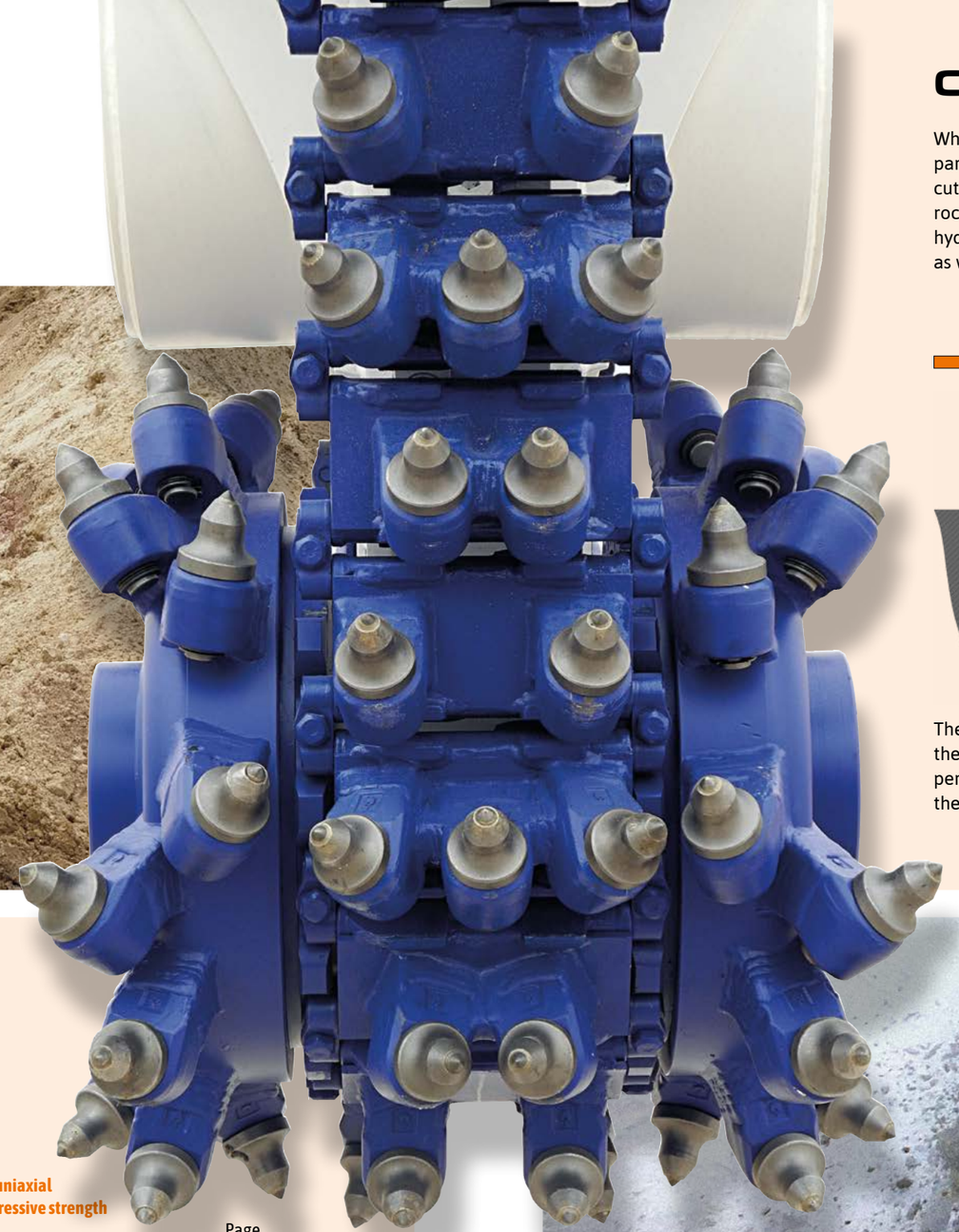
revolution of cutting

CONTENT

FEATURES

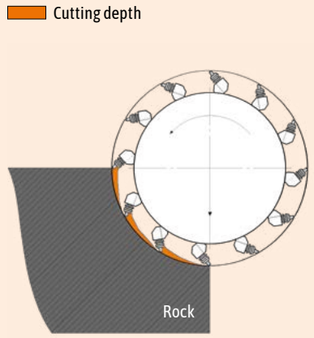
KEMROC cutter attachments work reliably and efficiently in almost any material. Steel, concrete, rock, wood – wherever KEMROC cutter attachments are used, material is removed safely and accurately.

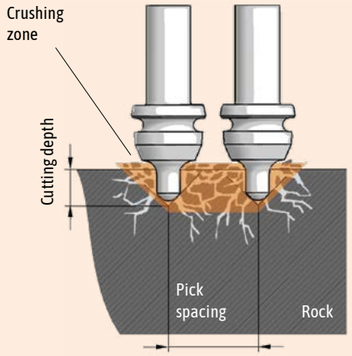




CUTTING TECHNOLOGY

When grinding with round attack picks, each tool penetrates into the rock along parallel paths and breaks material out from the space between the paths. The cutting rate depends to a large degree on the uniaxial compressive strength of the rock being cut. Other significant factors affecting production rates include the hydraulic pressure and flow that the excavator is able to supply to the attachment, as well as the stability and weight of the excavator.





The experience gained from many years of cutting rock has gone into the design of the cutter wheels, drums and chains. They are designed to give maximum cutting performance with minimum wear costs. The selection of picks and boxes, as well as the design of the pick pattern, are part of our continuous product improvement.

ATTACHMENTS FOR ALL TRENCH SIZES

Trenching attachments from KEMROC provide options for trench widths from 4 centimeters.

	Trench width mm	Trench depth mm	Recommended excavator weight t	Max. uniaxial compressive strength MPa	Page
ES Universal Cutters	45 – 150	100 – 1,000	1 – 40	60	30
SMW Cutter Wheels	45 – 150	500 – 1,000	10 – 25	80	22
DMW Cutter Wheels	80 – 400	400 – 1,000	14 – 60	120	18
KTS Trenching Attachments	100 – 350	300 – 1,500	2.5 – 10	20	39
KTR Trenching Attachments	200 – 600	1,000 – 2,000	20 – 80	90	38
KRX Powertool Drives	400 – 500	100 – 3,000	1 – 50	140	24
KR Rotary Drum Cutters	700 – 5,000	200 – 8,000	0.6 – 125	180	12
KRD Rotary Drum Cutters	800 – 5,000	200 – 8,000	0.5 – 70	100	16
EKT Rotary Drum Cutters	900 – 5,000	200 – 8,000	18 – 70	150	10
EK Chain Cutters	480 – 3,000	100 – 8,000	1.5 – 70	120	6

EK RANGE

Chain cutters — reduce wear & tear on the excavator swing gear and save energy

1.5–70 t

The EK range of chain cutters are the first of their type on the market. Designed for use on excavators from 1.5 to 70 tons, they are ideal for cutting stone with an uniaxial compressive strength up to 120 MPa. They are efficient, vibration-free attachments for the excavation of deep narrow trenches with the optimal trench profile. Trench width starts from 480 mm. Another application is mining of medium hard minerals with compressive strength from 15 to 80 MPa, where drill and blast is not possible.

KEMROC chain cutters excavate trenches no wider than absolutely necessary. The continuous chain, driven by the cutter drums, removes the material automatically from the space between the cutter drums. With standard drum cutters, the need to remove this material on technical grounds always results in trenches wider than the cutter. Keeping trenches to the minimum width possible saves unnecessary transport costs for removal of cut material and fill material becomes cheaper. The material produced by the chain cutter is fine grained and is ideal for use as fill.

EK chain cutters reduce wear and tear on the excavator swing gear. In addition, they give a 40 percent energy saving for equivalent production rates compared to conventional rotary drum cutters without the central chain.

EK 140
Trenching and pipeline work

EK RANGE

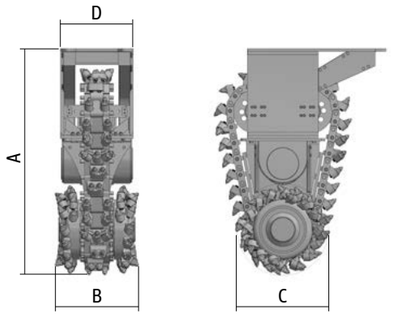
Chain cutters — reduce wear & tear on the excavator swing gear and save energy

+ Minimal wear on excavator as the method of operation is similar to using the bucket i.e. eliminates need for swing motion

+ Needs approx. 40 percent less energy than equivalent drum cutter without a chain between the drums

+ Range of cutting widths available

		EK 15	EK 20	EK 40	EK 60	EK 100	EK 110	EK 140	EK 150	EK 160	EK 220
Recommended excavator weight	t	1.5–3	2–4	5–10	10–17	18–30	25–32	30–45	35–50	35–50	50–70
Rated power	kW	15	22	44	60	100	110	140	150	150	220
Drum cutter length (A)	mm	557	700	1,500	1,900	1,900	1,900	2,050	2,050	2,050	2,400
Cutter head width (B)	mm	370	480	500	500	600 | 700 | 800	600 | 700 | 800	800 | 900 | 1,000	800 | 900 | 1,000	800 | 900 | 1,000	920 | 1,300
Cutter drum diameter (C)	mm	231	260	600	800	800	800	850	850	850	994
Width of gearbox (D)	mm	370	480	450	450	550	550	700	700	700	900
Max. torque at 380 bar	Nm	600	1,000	5,700	11,000	18,300	24,500	26,000	30,000	34,000	63,000
Max. cutting force at 380 bar	N	5,195	7,692	19,000	27,500	46,000	61,000	61,000	71,000	80,000	126,761
Recommended rotation speed	rpm	140	140	90	80	70	65	65	60	60	40
Recommended oil flow	l/min	15–30	20–40	70–90	130–160	190–240	210–260	260–300	280–320	290–330	420–550
Max. oil flow at 10 bar	l/min	40	50	120	220	260	300	420	450	450	800
Max. operating hydraulic pressure	bar	250	300	380	400	400	400	400	400	400	400
Max. uniaxial compressive strength	MPa	15	25	30	50	80	80	100	100	120	140
Weight	kg	90	170	750	1,600	2,400–2,600	2,400–2,600	3,600–3,800	3,600–3,800	3,600–3,800	6,000 | 6,500
Pick box	Type	PH 14	PH 14	PH 20	PH 22	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 38 HD
Number of picks in cutter drums	Pcs	48	44	56	56	28 | 44 | 52	28 | 44 | 52	44 | 48 | 56	44 | 48 | 56	44 | 48 | 56	44 | 60
Number of picks in the cutter chain	Pcs	29	27	55	55	54	54	63	63	63	58
Standard pick	Type	1	1	2	3	4	4	4	5	5	6



1 ER 16/29/25/14 C
2 ER 16/46/38/20 C
3 ER 12/45/38/22 HC
4 ER 17/75/70/30 Q
5 ER 19/75/70/30 Q
6 ER 25/80/80/38 C

For an overview of standard picks, see pages 49 to 51. Depending on application, cutter drums can be supplied with a choice of pick according to the type of pick box used.

The EK range is patent protected. Models EK 15, EK 20 and EK 40 are KEMROC traded products.

+ Fine grained cut material

Low noise and vibration levels

+ Works underwater without need for modifications

APPLICATIONS

Trenching and pipeline work

Mining of soft to medium hard minerals

Can also be used for concrete renovation, profiling, underwater excavations and tunnelling

EK 140 | Gypsum mining


EK 150 | Trenching


EK 150 | Trenching

EK 60 | Digging manholes

Further application examples on

www.kemroc.de

EKT RANGE

Rotary drum cutters — can be converted into EK chain cutters

18–70 t

The patented EK range of chain cutters are one of our core products and continues to be recommended as an ideal tool for trenching contractors. This concept is being expanded with the addition of the new EKT range of traditional style drum cutters. These lower priced models are supplied as rotary drum cutters without a central cutting chain, but conversion kits are available so that cutter chains can be fitted later.

Can be converted to an EK model

Tough, rigid gearbox housing

High torque motors for maximum cutting force

Drums with cutter tool pattern designed for optimum energy saving efficiency

Drums supported on robust bearings

Protection for hydraulic hoses

Works underwater without need for modifications

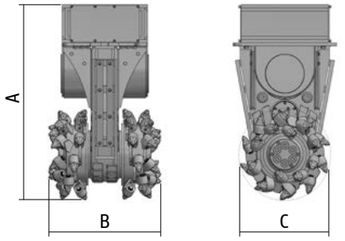
APPLICATIONS

Trenching and pipeline work

Mining of soft to medium hard minerals

Can also be used for concrete renovation, profiling, underwater excavations and tunnelling

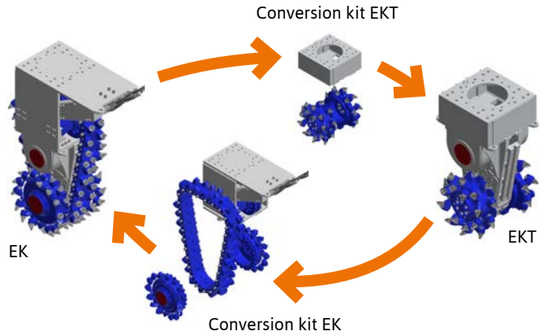
		EKT 100	EKT 110	EKT 140	EKT 150	EKT 160	EKT 160 HD	EKT 220
Recommended excavator weight	t	18–30	20–30	20–40	30–45	35–45	35–50	45–70
Rated power	kW	100	110	140	150	160	160	220
Possibility of conversion to a chain cutter	yes/no	yes	yes	yes	yes	yes	yes	yes
Drum cutter length (A)	mm	1,440	1,440	1,510	1,510	1,510	1,510	1,785
Cutter head width (B)	mm	700 | 800	700 | 800	880	880	880	1,060	925
Cutter drum diameter (C)	mm	688	688	720	720	720	720	860
Max. torque at 380 bar	Nm	18,240	24,500	25,400	30,300	34,000	34,000	63,000
Max. cutting force at 380 bar	N	53,023	71,221	70,556	84,167	94,444	94,444	146,512
Recommended rotation speed	rpm	80	75	70	70	65	65	50
Recommended oil flow	l/min	190–300	250–320	250–320	280–360	300–380	300–380	550–700
Max. oil flow at 10 bar	l/min	350	350	380	400	400	400	800
Max. operating hydraulic pressure	bar	400	400	400	400	400	400	400
Weight	kg	1,300	1,300	2,350	2,350	2,350	2,500	3,000
Pick box	Type	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 38 HD
Number of picks	Pcs	40 | 44	40 | 44	44	44	44	44	44
Standard pick	Type	1	1	1	2	2	2	3



1 ER 17/75/70/30 Q
2 ER 19/75/70/30 Q
3 ER 25/80/80/38 C

For an overview of standard picks, see pages 49 to 51. Depending on application, cutter drums can be supplied with a choice of pick according to the type of pick box used.

Converts from a rotary drum cutter to a chain cutter



EKT 100 | Trenching

Further application examples on

www.kemroc.de

KR RANGE

Rotary drum cutters with spur gears

0.6–125 t

In addition to standard EK and the convertible EKT range, traditional style rotary drum cutters are now also available from KEMROC. They are designated as the new KR range of drum cutters. Designed to be incredibly robust, these attachments are ideal for use on short arm excavators working in confined spaces, especially in tunnelling and also for the vibration free and silent demolition of re-enforced concrete structures.

Effective dust control is particularly importand in demolition and tunneling applications. The KR range of cutters are designed for the installation of an optional, hydraulically controled water jet dust control system.

KR 150
Concrete demolition

KR RANGE

Rotary drum cutters with spur gears

Gear drive

Extra heavy-duty, rigid gear box housing

Exceptional wear protection on the gearbox

Equipped for optional water spray dust suppression system

High torque motors for maximum cutting force

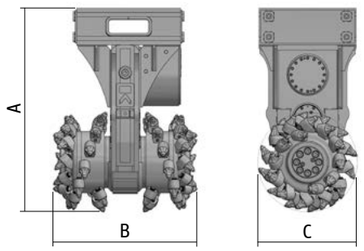
Drums supported on heavy-duty bearings

Protected hose management

Works underwater without need for modifications

		KR 15	KR 18	KR 20	KR 30	KR 35	KR 45	KR 50	KR 65	KR 80	KR 110[1)]	KR 120[1)]	KR 150[1)]	KR 160	KR 165	KR 200	KR 400
Recommended excavator weight	t	0.6–3	2–4	2–4	5–8	5–8	9–15	9–15	12–18	15–25	20–35	25–45 [20–40]	30–50	35–55	35–55	50–70	80–125
Rated power	kW	15	18	18	30	30	45	45	65	80	110	120	120	160	160	200	400
Drum cutter length (A)	mm	628	628	636	846	848	990	1,014	1,195	1,235	1,470	1,470	1,470	1,596	1,590	1,650	1,970
Cutter head width (B)	mm	425	425	495	520	620	600	690	805	805	1,040 [880]	1,040 [880]	1,040 [880]	1,050	1,250	1,330	1,600
Cutter drum diameter (C)	mm	225	225	240	370	370	400	450	587	587	718	718	718	718	720	805	920
Max. torque at 380 bar	Nm	1,000	2,000	2,000	4,500	4,500	6,300	6,300	11,300	15,200	20,200	25,400	30,300	36,400	36,400	51,000	118,500
Max. cutting force at 380 bar	N	8,889	17,778	16,667	24,324	24,324	31,500	28,000	38,501	52,870	56,267	70,752	84,401	101,393	101,111	126,708	257,609
Recommended rotation speed	rpm	100	100	100	100	100	90	90	80	85	75	75	70	65	65	55	50
Recommended oil flow	l/min	15–25	25–40	25–40	50–80	50–80	90–120	90–120	120–150	150–190	200–280	250–320	250–320	300–390	300–390	350–450	700–950
Max. oil flow at 10 bar	l/min	40	60	60	90	90	130	130	170	210	300	350	360	400	400	500	1,000
Max. operating hydraulic pressure	bar	400	400	400	400	400	400	400	400	400	400	400	400	400	400	380	380
Weight	kg	155	155	167	310	340	480	530	892	1,070	2,000 [1,780]	2,000 [1,780]	2,000 [1,780]	2,500	2,800	3,500	6,000
Pick box	Type	PH 14	PH 14	PH 14	PH 20	PH 20	PH 20	PH 22	PH 30 HD	PH 30 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 38 HD	PH 38 HD
Number of picks	Pcs	44	44	56	44	64	44	44	44	44	56 [44]	56 [44]	56 [44]	56	64	64	68
Standard pick	Type	1	1	1	2	2	2	3	4	4	4	4	5	5	5	6	6

[1)] Also available in a C-version with narrower cutter head (KR 110 C | 120 C | 150 C). Revised values shown in square brackets.



1 ER 16/29/25/14 C
2 ER 16/46/38/20 C
3 ER 12/45/38/22 HC
4 ER 17/75/70/30 Q
5 ER 19/75/70/30 Q
6 ER 25/80/80/38 C

For an overview of standard picks, see pages 49 to 51.
Depending on application, cutter drums can be supplied with a choice of pick according to the type of pick box used.

Housing with hydraulic hose protection.

Water jets for dust suppression (optional).

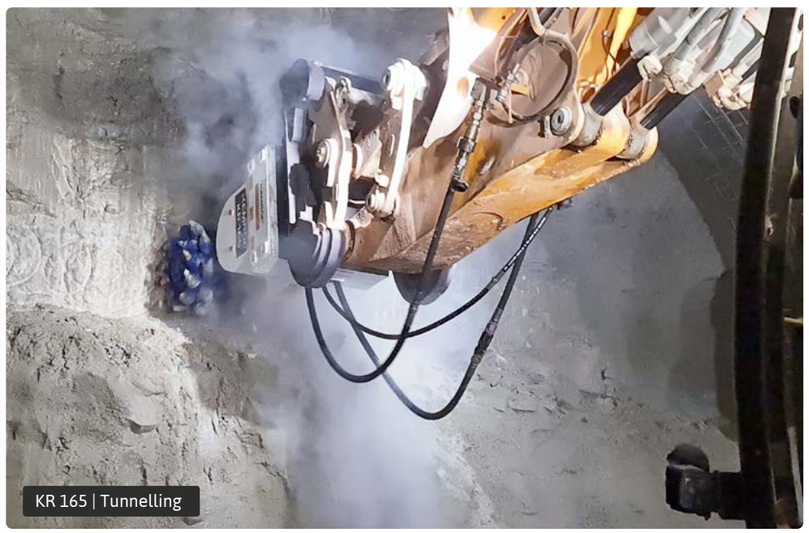
Tool pattern for optimum performance.

APPLICATIONS

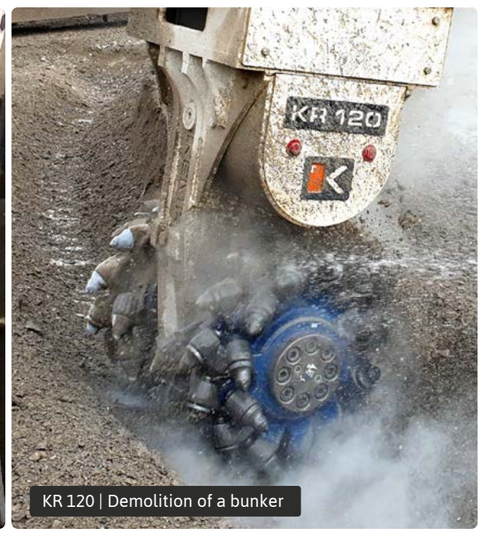
Tunnelling

Demolition

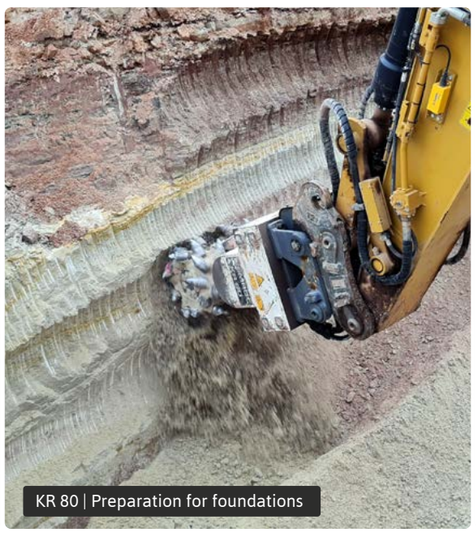
Also used for trenching and pipeline work, renovating concrete, profiling, mining of soft minerals and underwater excavating



KR 165 | Tunnelling



KR 120 | Demolition of a bunker



KR 80 | Preparation for foundations

Further application examples on

www.kemroc.de

KRD RANGE

Rotary drum cutters with direct drive

0.5–50 t

Strong, compact design

Direct drive with particularly strong support for the cutter drums

High power to weight ratio

Protected hose management

Operational to 30 meters underwater without need for modifications

The new KRD range of direct drive drum cutters can be described as compact, lightweight but strong. Lighter and shorter, these attachments are ideal for use on long-arm excavators for demolition and shaft sinking applications. They can also be used for soil stabilisation and concrete renovation applications. Intentionally oversized bearings have been used to support the cutter drums for a long operating life.

APPLICATIONS

Demolition using long arm excavators

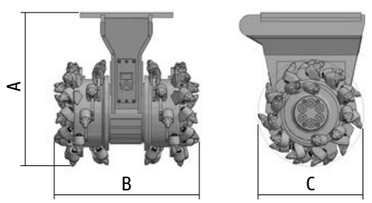
Ground stabilisation

Renovating concrete

Also used for trenching and pipeline work, profiling, mining soft minerals, underwater excavations, tunnelling and shaft sinking


KRD 120 | Trenching and pipeline work

		KRD 15	KRD 18	KRD 30	KRD 45	KRD 70	KRD 100	KRD 120	KRD 150	KRD 165
Recommended excavator weight	t	0.5–2	2–4	5–8	9–16	17–25	20–40	25–40	30–40	35–50
Rated power	kW	15	18	30	45	70	110	120	120	160
Drum cutter length (A)	mm	511	511	632	670	951	1,070	1,070	1,070	1,072
Cutter head width (B)	mm	500	500	650	743	946	1,000	1,000	1,000	1,260
Cutter drum diameter (C)	mm	300	300	370	447	612	730	730	730	720
Max. torque at 380 bar	Nm	950	2,500	4,412	7,543	16,300	20,200	25,400	30,300	43,000
Max. cutting force at 380 bar	N	6,333	16,667	23,849	33,749	53,268	55,342	69,589	83,014	119,444
Recommended rotation speed	rpm	100	100	100	90	75	75	70	65	60
Recommended oil flow	l/min	15–25	25–40	50–80	90–120	150–200	220–300	250–330	280–350	300–390
Max. oil flow at 10 bar	l/min	40	60	90	130	230	350	350	350	400
Max. operating hydraulic pressure	bar	400	400	400	400	400	400	400	400	400
Weight	kg	135	135	250	380	850	1,500	1,500	1,500	2,020
Pick box	Type	PH 14	PH 14	PH 20	PH 22	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD
Number of picks	Pcs	66	66	56	46	40	48	48	48	58
Standard pick	Type	1	1	2	3	4	4	4	4	5



1 ER 16/29/25/14 C
2 ER 16/46/38/20 C
3 ER 12/45/38/22 HC
4 ER 17/75/70/30 Q
5 ER 19/75/70/30 Q

For an overview of standard picks, see pages 49 to 51.
Depending on application, cutter drums can be supplied with a choice of pick according to the type of pick box used.


Direct drive

Further application examples on

www.kemroc.de

DMW RANGE

Cutter wheels with double motor for rock up to 120 MPa

14–60 t

Cutter wheels in the DMW range were designed in cooperation with customers for attachment to hydraulic excavators. Two high torque, lateral hydraulic motors garuantee high production rates and maximum cutting forces. As a result, even in hard rock with a uniaxial compressive strength of 120 MPa as well as reenforced concrete, very high productivy rates can be achieved. KEMROC produces these robust attachments in four sizes for excavators from 14 to 60 tons.

To meet the demands of many applications, KEMROC have developed cutter wheel variations for cutting depths to 1,000 millimeters. A choice of wheels with different tooling configurations and a range of widths up to 400 mm are available. Wheels with non-standard width and cutting depth are available on demand.

The DMW range is designed to work under water to depths of 30 meters, making the cutter wheels ideal for trenching and underwater demolition projects.

C&B CUT & BREAK

DMW 220
Bridge demolition using the Cut & Break process

DMW RANGE

Cutter wheels with double motor for rock up to 120 MPa

- Two high torque hydraulic motors
- Smooth and regular cutting action
- Supports for vibration free cutting

+

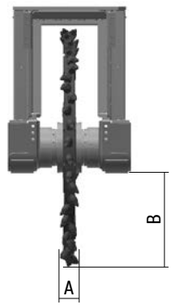
- Cutter wheels for various cutting depths and widths
- Optional – water nozzles for dust suppression

+

- Operational to 30 meters under-water
- Ideally suited for concrete demolition [1)]

+

		DMW 90		DMW 130			DMW 220			DMW 220 HD		
		Wheel 400	Wheel 600	Wheel 400	Wheel 600	Wheel 800	Wheel 600	Wheel 800	Wheel 1000	Wheel 600	Wheel 800	Wheel 1000
Recommended excavator weight	t	14 – 25	14 – 25	18 – 35	18 – 35	18 – 35	35 – 50	40 – 50	40 – 50	35 – 60	40 – 60	40 – 60
Rated power	kW	90	90	130	130	130	220	220	220	220	220	220
Cutting width (A)	mm	80 | 130 | 200	80 | 130 | 200	80 | 130 | 200	80 | 130 | 200	80 | 130 | 200	130 | 200 | 400	130 | 200 | 400	130 | 200 | 400	130 | 200 | 400	130 | 200 | 400	130 | 200 | 400
Cutting depth (B)	mm	400	600	400	600	800	550	750	1,000	550	750	1,000
Cutting depth with shoe	mm	300	500	300	500	700	450	650	900	450	650	900
Cutter wheel diameter	mm	1,210	1,610	1,210	1,610	2,010	1,610	2,010	2,500	1,610	2,010	2,500
Torque at 350 bar	Nm	10,400	10,400	21,000	21,000	21,000	47,000	47,000	47,000	56,000	56,000	56,000
Cutting force at 350 bar	N	17,190	12,919	34,711	26,087	20,896	58,385	46,766	37,600	69,565	55,721	44,800
Recomm. oil flow according to wheel diameter	l/min	120 – 170	120 – 170	230 – 300	230 – 300	230 – 300	300 – 550	300 – 550	300 – 550	350 – 600	350 – 600	350 – 600
Max. oil flow at 50 bar	l/min	200	200	340	340	340	600	600	600	600	600	600
Max. operating hydraulic pressure	bar	380	380	380	380	380	380	380	380	380	380	380
Max. rebar diameter in re-enforced concrete [1)]	mm	16	12	20	20	16	30	30	30	30	30	30
Max. uniaxial compressive strength	MPa	60	40	100	80	60	120	120	100	120	120	100
Weight of drive unit, approx.	kg	1,100	1,100	1,150	1,150	1,150	2,750	2,750	2,750	2,750	2,750	2,750
Weight of cutter wheel, approx. [2)]	kg	400	800	400	800	1,250	800	1,250	2,250	800	1,250	2,250
Weight of dipping device, approx.	kg	250	250	300	300	300	920	920	920	920	920	920
Weight of protection cover, approx.	kg	55	55	55	55	55	180	180	180	180	180	180
Pick box	Type	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD
Standard pick	Type	1	1	1	1	1	2	2	2	2	2	2



1 ER 17/75/70/30 Q
2 ER 22/75/70/30 Q

For an overview of standard picks, see pages 49 to 51. Depending on application, cutter wheels can be supplied with a choice of pick according to the type of pick box used.

KEMROC can supply wheels to order for various cutting widths and depths. Within technical boundaries, cutter wheels can be made to order.

1) To maintain the warranty, check with the manufacturer before use in re-enforced concrete containing larger diameter rebar.
2) Cutter wheel weight depends on diameter and width.

APPLICATIONS

Concrete demolition

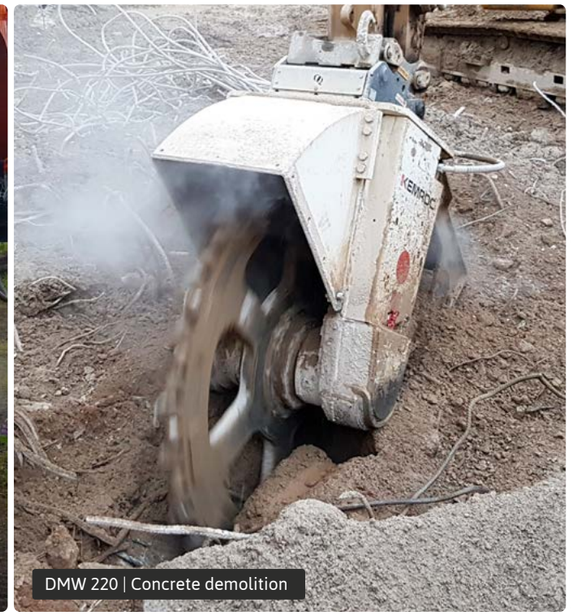
Cable trenching

Tunnelling

Soft rock mining


DMW 130 | Tunnelling


DMW 220 | Cable trenching in lava rock


DMW 220 | Concrete demolition

Further application examples on

www.kemroc.de

APPLICATIONS

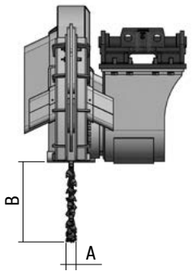
Laying cables

SMW 50 | Cable trenching with spoil remover

SMW 50 | Cable trenching with vacuum extractor

Further application examples on

www.kemroc.de



SMW RANGE

Cutter wheels for narrow trenching in soft and medium hard rock

10–40 t

The SMW range is designed for use as an excavator slot cutting attachment. It can cut narrow trenches, especially for laying cables, quickly and efficiently. The reinforced mounting for the cutter wheel provides the strength required for cutting depths down to 1,000 millimeters.

When starting the cut, the weight of the attachment is supported by the sumping bracket and the wheel is gradually pressed down to the required depth. When the required depth has been reached, the wheel is then pulled along the cutting direction either by movement of the excavator arm or by driving the excavator slowly backwards. The spoil remover guides material out and places it to the side of the trench. Alternatively, spoil can be vacuumed out of the trench.

Specially designed wheel for slots and narrow trenches to a depth of 1,000 millimeters

High performance cutter wheel with optimum pick pattern

Housing with integrated guide to send cut material to the side of the trench

Trench cleaner

Can be used underwater to depths of 30 meters

		SMW 50		SMW 80			SMW 110			
		Wheel 400	Wheel 600	Wheel 400	Wheel 600	Wheel 800	Wheel 400	Wheel 600	Wheel 800	Wheel 1000
Recommended excavator weight	t	10–15	10–15	15–25	15–25	20–30	20–40	20–40	25–40	30–40
Rated power	kW	50	50	80	80	80	110	110	110	110
Cutting width (A)	mm	45–130	45–130	45–130	45–130	45–130	80–150	80–150	80–150	80–150
Cutting depth (B)	mm	400	600	400	600	800	400	600	800	1,000
Cutter wheel diameter	mm	1,260	1,660	1,260	1,660	2,060	1,260	1,660	2,060	2,540
Weight of drive unit, approx.	kg	1,100	1,250	1,100	1,250	1,400	1,600	1,760	1,940	2,050
Weight of cutter wheel, approx.	kg	500	700	500	700	1,100	500	700	1,100	1,400
Torque at 380 bar	Nm	12,700	12,700	15,200	15,200	15,200	27,800	27,800	27,800	27,800
Cutting force at 380 bar	N	20,159	15,301	24,127	18,313	14,757	44,127	33,494	26,990	21,890
Recommended rotation speed	rpm	60	60	60	60	60	60	60	40	30
Recommended oil flow	l/min	125	125	150	150	150	300	300	300	300
Max. oil flow at 50 bar	l/min	210	210	210	210	210	350	350	350	350
Max. hydraulic pressure	bar	380	380	380	380	380	380	380	380	380
Max. rebar diameter in re-enforced concrete	mm	not allowed	not allowed	16	16	12	16	16	12	12

Cutter wheels can be supplied with different picks to suit various applications and KEMROC have a range of picks available to suit.

The weight of the cutter wheel depends on the diameter which determines the maximum cutting depth. The width of the cutter wheel does not have a major impact on the weight of the attachment.

Quotations for wheels for different cutting depths can be supplied on request.

KRX RANGE

Powertool drives with attachments for milling, drilling and mixing

5–50 t

The new range of KRX Powertool drives are extremely robust and use a high torque radial piston motor to generate extremely high torque and cutting forces. Designed for use with a selection of sturdy attachments, they are an ideal addition to your excavator for a wide variety of applications.

Used with a cutter attachment, the KRX drive can be used in trenching, cutting out foundations or for profiling bored pile heads. With a heavy duty hexagonal shaft connection, different attachments can be exchanged quickly and easily.

Milling attachments fitted with dragontooth tools can be used in permafrost or for tree stump grinding. Dragontooth cutters can also be used for mixing and soil stabilisation.

When used with a drilling attachment, the Powertool drive can drill shallow holes up to 1,500 millimeters diameter. With heavy duty bearings and an oversized hexagonal shaft connection, these tools are extremely strong and capable of drilling rock with uniaxial compressive strengths up to 60 MPa.

KRX 120
Working bored pile heads

KRX RANGE

Powertool drives with attachments for milling, drilling and mixing

Multifunctional and versatile thanks to a large selection of attachments

Quick interchangeability of attachments

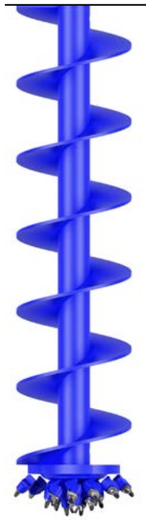
DRIVE

MILLING ATTACHMENT

Cutter head with round attack or dragon tooth picks

Cutter head with spiral extension

DRILLING ATTACHMENT



Drilling auger with pilot bit

		KRX 30	KRX 45	KRX 65	KRX 70	KRX 110	KRX 120	KRX 130	KRX 140
Recommended excavator weight	t	5–8	9–12	13–20	15–25	20–35	25–40	25–40	30–50
Rated power	kW	30	45	65	70	110	120	120	140
Length of drive unit	mm	550	610	610	830	842	842	842	875
Torque at 380 bar	Nm	4,500	7,500	11,300	16,000	25,400	30,300	33,000	36,400
Max. oil flow at 10 bar	l/min	110	130	190	300	320	350	350	390
Max. hydraulic pressure	bar	400	400	400	400	400	400	400	400
Weight without attachment	kg	160	240	260	520	540	540	540	900
Hex connection, standard	mm	80	80	80	160	160	160	160	160
Milling attachment (optional)									
Length of standard cutter head	mm	350	350	350	400	430	430	430	450
Diameter of standard cutter head	mm	370	400	400	450	500	500	500	550
Cutting force at 380 bar	N	24,324	37,500	56,500	71,111	101,600	121,200	132,000	132,364
Recommended rotation speed	rpm	80	70	70	75	70	60	60	50
Recommended oil flow	l/min	50–70	80–110	120–170	130–190	180–300	200–340	230–340	280–370
Pick box	Type	PH 22	PH 22	PH 22	PH 22	PH 32 HD	PH 32 HD	PH 32 HD	PH 32 HD
Number of picks	Pcs	26	29	29	30	26	26	26	30
Standard pick (round shaft)	Type	1	1	1	1	3	3	3	5
Standard pick (dragon tooth)	Type	2	2	2	2	4	4	4	4
Drilling attachment (optional)									
Max. drill diameter	mm	600	800	1,000	1,000	1,200	1,300	1,300	1,500
Min. drill diameter	mm	270	270	270	270	270	270	270	270
Max. drilling depth at max. drill diameter	mm	1,500	1,500	2,000	2,000	3,000	4,000	4,000	4,000
Max. drilling depth at min. drill diameter	mm	2,500	3,000	4,000	7,000	7,000	7,000	7,000	8,000
Max. uniaxial compressive strength of the ground	MPa	10	20	20	30	40	50	50	60
Recommended oil flow	l/min	30–70	40–100	80–150	100–190	150–250	180–300	190–300	220–350

1 ER 12/45/38/22 HC
2 DT 22/46/38/22 HC
3 ER 17/75/70/30 Q
4 DT 22/90/70/30 HQ
5 ER 19/75/70/30 Q

For an overview of standard picks, see pages 49 to 51. Depending on application, cutter heads can be supplied with a choice of pick according to the type of pick box used.

High torque radial piston motors

Heavy duty, long lasting bearings

Exceptionally robust hexagonal shaft connector

APPLICATIONS

Milling attachment

Excavating foundations

Profiling bored pile heads

Tree stump grinding (dragontooth)

Also suitable for use in trenching, mixing soil formations and for cleaning slag out of runners in steel works

Drilling attachment

Enlarging holes for sheet pile ramming

Drilling holes for I-beam shoring

Drilling planting holes for trees

Exploratory drilling for ordnance disposal services

Drilling foundations for sound barriers

KRX 120 | Drilling holes in concrete retaining walls

KRX 120 | Drilling holes for sound barrier walls

Further application examples on

www.kemroc.de

APPLICATIONS

Repairing asphalt surfaces

Removal of contaminated concrete surfaces

Milling asphalt for house connections

Milling walls and plaster removal

Renovating locks

Tunnel renovation

EX 45 HD | Tunnel renovation

EX 45 HD | Asphalt removal

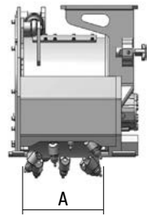
Further application examples on

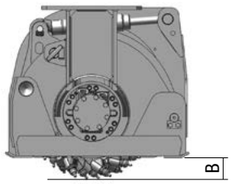
www.kemroc.de

EX RANGE

Patch planers for milling asphalt and concrete with accurate depth control

1–23 t





Patch planers in the EX range are ideally suited for the repair of asphalt surfaces, removal of contaminated concrete or milling layers of screed. Mechanical or hydraulic depth control makes milling to very accurate depth possible, to a maximum of 19 centimeters.

Regardless of whether horizontal, vertical or inclined – the EX range can be used on any surface orientation. KEMROC planers can even be used on overhead surfaces, as can be found for example, in some tunnelling applications. Patch planers produce clean, smooth cut edges (pre-cutting is not necessary) and a fine grained cut material that can be used in other applications.

Depending on the material to be milled, cutter drums can be fitted with different tooling variations. In addition, non-standard drum types and widths can be supplied to meet unusual working conditions and ensure the best performance possible.

+

A rigid support frame with wear resistant slides

High torque, modifiable, hydraulic motor

Robust housing, low vibration

Accurate depth control (mechanical or hydraulic)

Smooth cut edges and fine grained cut material

Integrated water jets for dust control (connections for vacuum dust extraction optional)

		EX 20	EX 20 HD	EX 30 HD	EX 45 HD	EX 60 HD
Recommended excavator weight	t	1–3	2–4	5–10	10–16	15–23
Rated power	kW	22	22	30	65	80
Cutting width, standard (A)	mm	200	200	300	450	600
Cutting depth, adjustable (B)	mm	0–70	0–70	0–120	0–150	0–190
Recommended rotation speed	rpm	80–200	80–200	80–125	70–110	70–95
Recommended oil flow at 100 bar	l/min	20–50	25–65	60–95	110–170	150–200
Min. oil flow	l/min	20	25	60	100	150
Max. oil flow	l/min	70	90	110	180	210
Max. operating hydraulic pressure	bar	310	310	380	380	380
Torque at 350 bar	Nm	660 @ 205 bar	1,000 @ 205 bar	4,100	8,700	9,300
Cutting force at 350 bar	kN	4 @ 205 bar	6 @ 205 bar	16	30	28
Operating weight	kg	165	170	400	730	1,230
Pick box	Type	PH 14	PH 14	PH 20	PH 20	PH 20
Number of picks	Pcs	42	42	35	49	69
Standard pick	Type	1	1	2	2	3

EX RANGE WITH ROTATION UNIT		EXR 20	EXR 20 HD	EXR 30 HD	EXR 45 HD	EXR 60 HD
Recommended excavator weight	t	1–3	2–4	6–10	12–16	16–23
Operating weight	kg	250	255	585	1,010	1,700

1 ER 16/28/26/14 H
2 ER 16/48/32/20 H
3 ER 19/48/36/20 H

For an overview of standard picks, see pages 49 to 51. Depending on application, cutter drums can be supplied with a choice of pick according to the type of pick box used.

ES RANGE

Universal cutters for asphalt, concrete and rock

1–40 t

The ES range of universal cutters are true all-rounder attachments, as effective in cutting slots in asphalt or concrete as they are for accurately profiling horizontal or vertical surfaces.

Universal cutters fitted with disks or drums for use in asphalt, concrete or rock can be mounted on carrier vehicles that also power the attachment.

a) Cutter wheel
Slot cutter for concrete, asphalt and rock

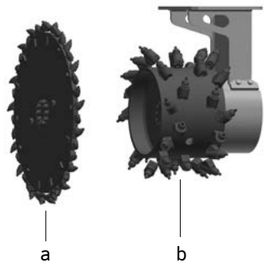
b) Cutter drum
Milling attachment for the precise removal of material from horizontal and vertical surfaces

Tool carrier with high torque hydraulic motor

Multi-purpose, with slotting disc or cutter drum

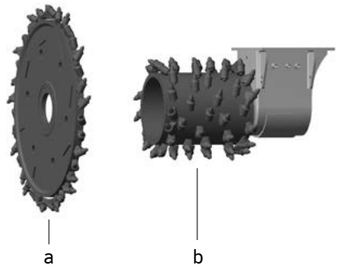
An integrated rotation unit, providing continuous stepless rotation, is availabe as an option

		ES 20	ES 20 HD	ES 30 HD	ES 45 HD	ES 60 HD	ES 80 HD	ES 110 HD
Recommended excavator weight	t	1–3	2–4	5–10	10–16	15–23	15–25	25–40
Rated power	kW	22	22	30	65	80	80	110
Min. oil flow	l/min	20	25	60	100	150	150	210
Max. oil flow	l/min	70	90	110	180	210	210	350
Max. hydraulic pressure	bar	310	310	380	380	380	380	380
Torque at 350 bar	Nm	1,127	1,710	4,100	8,700	11,700	15,200	27,800
Cutter wheel (a)								
Max. cutting depth	mm	150	150	200	300	300	600	1,000
Max. cutting width	mm	70	70	70	80	100	200	400
Min. cutting width	mm	45	45	45	45	50	45	80
Cutter drum (b)								
Diameter of cutter drum	mm	360	360	520	580	670	825	785
Width of cutter drum	mm	200	200	300	450	600	600 | 800	600 | 800 | 1,000
Cutting depth	mm	85	85	110	110	190	150	105 | 150
Pick box	Type	PH 14	PH 14	PH 20	PH 20	PH 20	PH 32 HD	PH 32 HD
Number of picks	Pcs	42	42	35	49	69	69 (800 mm)	44 (600 mm)
Standard pick	Type	1	1	2	2	2	3	4



1 ER 16/28/26/14 H
2 ER 16/48/32/20 H
3 ER 17/75/70/30 Q
4 ER 19/75/70/30 Q

For an overview of standard picks, see pages 49 to 51.
Depending on application, cutter drums can be supplied with a choice of pick according to the type of pick box used.



APPLICATIONS

- Cutting slits in concrete and asphalt (cutter wheel)
- Concrete demolition using Cut & Break process (cutter wheel)
- Grinding HPI material (cutter drum)
- Lock renovation (cutter drum)
- Grinding retaining walls (cutter drum)
- Profiling blocks of natural stone (cutter drum)
- Grinding shotcrete in tunnels (cutter drum)
- Cleaning concrete piled walls (cutter drum)
- Grinding wood

ES 60 HD with cutter wheel | Cutting slots in concrete


ES 60 HD with cutter drum | Profiling stone blocks

Further application examples on

www.kemroc.de

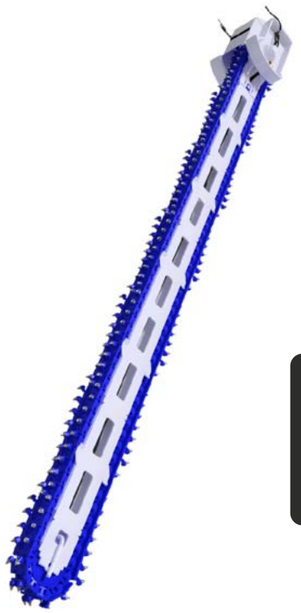
KSI RANGE

Injection attachments for permeating cohesive soils with a cement suspension

40–120 t

The KSI range of injection attachments were developed in cooperation with a German specialist ground engineering company and are at the core of the SCHÖKEM process.

The SCHÖKEM process is a system of soil stabilisation using an excavator attachment to inject and mix a defined concrete suspension in non-load bearing soils (KSI) that, when left to harden, create a homogenous, impermeable and frost resistant soil-cement structure. Depending on soil conditions and desired load bearing requirements, various concentrations of cement and binder fluid are used.



KSI 7000
Installing a diaphragm wall from soil-cement mixture

SCHÖKEM®
SCHÖKEM GROUND STABILISATION

KSI RANGE

Injection attachments for permeating cohesive soils with a cement suspension

The KSI range of injection attachments are available in two sizes for mounting on excavators between 40 and 120 ton operating weight and can be supplied with a range of blade lengths. The drive unit for the KSI 7000 can work with blades for 5, 6 and 7 m mixing depths and the larger KSI 12000 with blades for mixing depths of 6, 8, 10, or 12 m. Both models can be supplied with a rotation module as an optional extra.

		KSI 7000	KSI 12000 [1]
Recommended excavator weight	t	40 – 60	50 – 120
Hydraulic power	kW	130	220
Mixing width (A)	mm	350 – 500	400 – 600
Mixing depth (B)	mm	5,000 | 6,000 | 7,000	6,000 | 8,000 | 10,000 | 12,000
Recommended oil flow at 150 bar	l/min	300 – 400	550 – 700
Max. oil flow	l/min	350	600
Max. uniaxial compressive strength of the ground	MPa	10	10
Standard mixing tool	Type	DT 22/46/38/22 HC	DT 22/90/70/30 HQ
Weight			
Each additional meter of extension	kg	600	750
Weight with largest blade size	kg	5,000	16,000

[1] Attachment connected to the boom with a special bracket. Contact KEMROC for further information.

Mixing blade extendable to 12 m

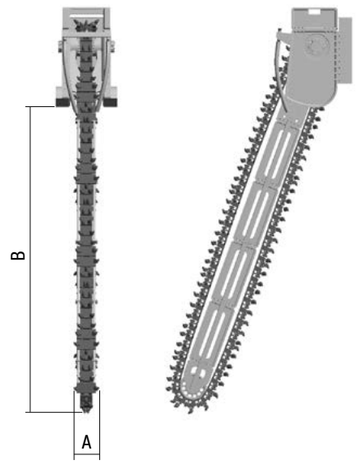
The attachment can be mounted on standard excavators

Optimal pattern of tungsten carbide tipped tools for the mixing process

High torque drive motors provide enough power to mix heavy soils

Simple, heavy-duty construction

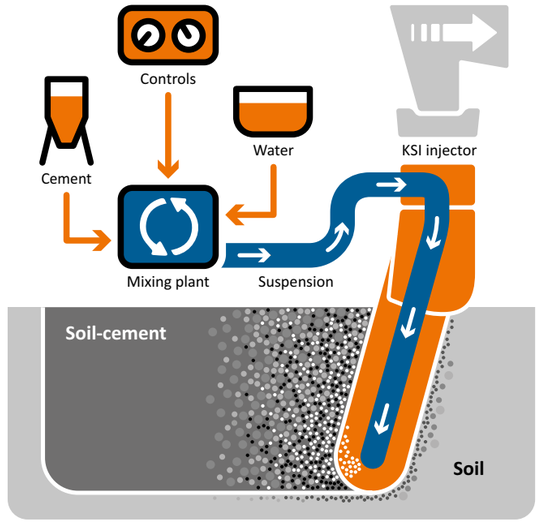
Hydraulic tensioning of the mixing chain is possible



SCHÖKEM®

SCHÖKEM GROUND STABILISATION

SCHÖKEM Process schematic



APPLICATIONS

Road construction – soil cement, edge beams, shoulder renovation, slope and embankment stabilisation

Flood defences – sealing walls, dam stabilisation, diaphragm walls

De-contamination

Retaining walls – building construction, civil engineering, pipelines

Foundations

Railway construction

KSI 7000 | Installing a diaphragm wall from soil-cement mixture


A completed soil cement structure exposed for inspection and testing


KSI 12000

Further application examples on

www.kemroc.de

EBA RANGE

Auger drive attachments for excavators, backhoes and skid-steer loaders

1–50 t

The EBA range of auger drive units allows you to quickly convert your excavator, backhoe or skid-steer loader into a drill rig by simply changing the attachment.

These auger drive units are ideal for drilling holes in soft to compact soils, cobbles and in soft rock with compressive strengths up to 50 MPa.

For use in harder rock, KEMROC have developed special drilling tools to ensure higher drilling speeds.

+

Robust and rigid bracket

Heavy dut bearings

Wear resistant augers

Auger drives for tough applications

Allignment monitor to garuantee vertical drilling

APPLICATIONS

Pre-drilling for rammed sheet piles

Drilling holes for I-beam shored walls

Drilling holes for tree planting

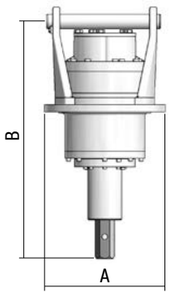
Exploration drilling for ordnance disposal services

Further application examples on

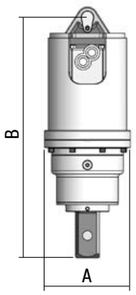
www.kemroc.de

EBA 2300-D | Special foundation work

EBA-D



EBA-P



EBA-D range:
Direct drive, short and heavy duty construction, hexagonal drive shaft

EBA-P range:
Planetary gear drive, high torque in a compact size, square drive shaft or round key

Allignment monitor

Notes for drilling with KEMROC auger drive units:
When mounted on an excavator arm, the augers are not supported in a feeder. Due to the natural curve of the excavator arm, augers can be bent during drilling. Therefore, special care must be taken to ensure that the augers are always working vertically. Only by keeping the auger in the vertical position can you guarantee a straight bore hole. Take great care to avoid bending the augers. Excessive bending of the auger can result in the hex drive breaking and damage to the auger drive. Select the auger rotation speed that corresponds to the auger diameter and material being drilled. Generally, rotation speeds should be lower for larger diameter augers or when drilling in harder material.

		EBA 150-P	EBA 300-P	EBA 700-P	EBA 500-D	EBA 1000-D	EBA 2300-D	EBA 2800-D	EBA 3300-D	EBA 3500-P	EBA 6500-P
Recommended excavator weight	t	1–2	2–4	5–7	7–13	14–17	18–35	25–40	25–40	25–45	25–50
Adaptable to skid-steer loaders	yes/no	yes	yes	yes	no	no	no	no	no	no	no
Max. drill diameter	mm	400	600	900	800	1,000	1,200	1,500	1,500	1,500	2,400
Min. drill diameter	mm	100	100	150	200	200	300	300	300	300	300
Max. drilling depth at max. drill diameter	mm	1,200	1,800	2,500	2,000	3,000	4,000	4,000	4,000	5,000	4,000
Max. drilling depth at min. drill diameter	mm	2,000	3,000	5,000	5,000	5,000	8,000	8,000	8,000	8,000	8,000
Diameter of drive unit (A)	mm	200	244	269	390	390	500	500	500	406	406
Length of drive unit (B)	mm	585	665	780	600	600	980	980	980	1,400	1,400
Max. torque	Nm	1,500	3,000	7,000	5,200	10,400	23,400	28,000	33,000	35,000	65,000
Recommended oil flow	l/min	15–30	25–50	40–70	50–70	80–150	150–250	180–280	180–280	180-280	220–300
Max. oil flow	l/min	45	85	135	85	150	300	300	300	225	280
Max. operating hydraulic pressure	bar	205	240	260	380	380	380	380	380	310	310
Max. rotation speed	rpm	98	85	80	90	80	75	75	75	30	25
Auger connection	Type	R 65	R 65	S 75	H 80	H 80	H 80	H 80	H 80	S 110	S 110
Weight excl. hydraulic hoses and mounting plate	kg	38	73	112	160	180	360	360	360	442	472

Models in the EBA-P range are KEMROC traded products.

KTR RANGE

Trenching attachments for medium hard rock

20–80 t

The KTR range of trenchers can produce trenches with perfect profiles in widths from 20 to 60 centimeters to a maximum depth of 2 meters. Chose from a range of cutting chain widths, each fitted with wear resistant picks.

When starting the trench, the KTR is supported while sumping down to the desired cutting depth. When the trencher has reached the required depth, the excavator is driven backwards or the trencher is pulled forward with the excavator arm. The housing has a spoil discharger to deposit spoil to the side of the trench.

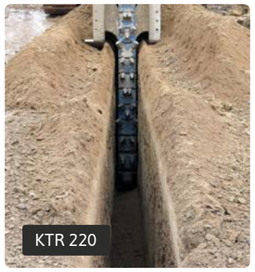
		KTR 90	KTR 130	KTR 220
Recommended excavator weight	t	20–35	25–35	50–80
Rated power	kW	90	130	220
Cutting width, standard	mm	200–450	200–450	300–600
Cutting depth	mm	1,000–1,500	1,000–1,500	1,500–2,000
Recommended oil flow at 150 bar	l/min	170–200	250–350	350–500
Max. oil flow	l/min	220	350	600
Max. uniaxial compressive strength	MPa	40	50	90
Weight	kg	2,800	3,000	6,000
Pick box	Type	PH 22	PH 22	PH 32 HD
Standard pick	Type	ER 12/45/38/22 HC	ER 12/45/38/22 HC	ER 17/75/70/30 Q

For an overview of standard picks, see pages 49 to 51. Depending on application, cutter chains can be supplied with a choice of pick according to the type of pick box used.

- **Driven by two high torque hydraulic motors to obtain maximum cutting force**
- **Housing with spoil discharger and sumping aid**
- **Adjustable length cutter chain**
- **Maintenance free cutter chain with high operating life**
- **As an option, attachment can be used with a material extractor**

APPLICATIONS

Trenching and pipeline work



KTR 220

KTR 130 | Trenching and pipeline work

KTS RANGE

Trenching attachments for soils and soft rock

2.5–10 t

The KTS range of trenchers can be used for producing clean, correctly profiled trenches quickly in cohesive soils as well as in soft rocks with uniaxial compressive strengths up to a maximum of 20 MPa.

The cutter chain can be fitted with tungsten carbide tipped tools for soft rock or with tools designed for use in soils. In mixed ground, cutter chains with mixed tooling have given good results. [1)]

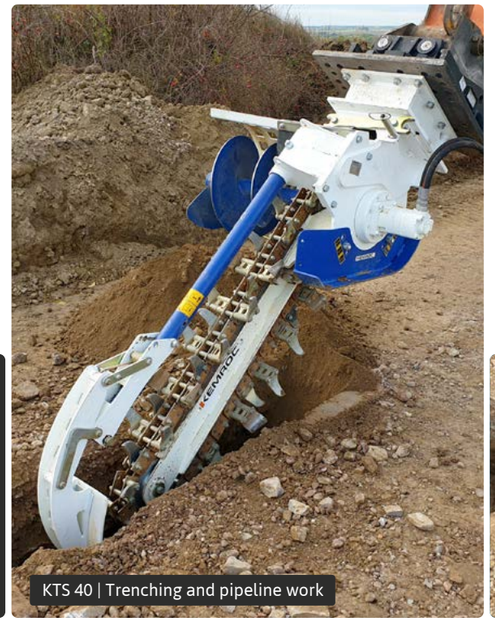
Trenchers are designed for use on excavators from 2.5 to 10 tons and can be mounted on skid steer loaders with a suitable adaptor bracket.

		KTS 10	KTS 20	KTS 30	KTS 40	KTS 50
Recommended excavator weight	t	2.5–4.5	3.0–5.0	5.0–7.5	5.0–7.5	5–10
Adaptable to skid-steer loaders	yes/no	yes	yes	yes	yes	yes
Trench cleaner available	yes/no	yes	yes	yes	yes	yes
Cutting width	mm	100–300	100–300	150–350	150–300	150–200
Cutting depth	mm	300–600	600–900	600–900	800–1,200	1,000–1,500
Recommended oil flow at 150 bar	l/min	35–65	45–80	60–95	70–115	80–135
Max. oil flow	l/min	65	80	95	115	135
Max. operating hydraulic pressure	bar	240	240	240	240	240
Max. uniaxial compressive strength	MPa	15	15	20	20	20

Models in the KTS range are KEMROC traded products.

[1)] An overview of cutter tools can be found on page 54.

- **Accurate, clean trenches to depths of 1.5 m**
- **Easy to alter cutting width by changing cutter teeth**
- **Cutting depths vary according to model**
- **Transporting auger to clean soil out of trench**
- **Trench cleaner to suit all trench widths**



KTS 40 | Trenching and pipeline work

KTS 40

Further application examples on

www.kemroc.de

KDS 50 | Cutting concrete

KDS RANGE

Diamond saws for rock, concrete, plastic, GRP, aluminium, wood and foil

2–30 t

The KDS range of diamond saws were designed to cut concrete, stone and GRP (glass fiber reinforced plastic) as used for wind turbine blades. High rotation speeds combined with a large choice of different saw blade types makes them very effective in a wide range of applications.

Saw blades for:

+ Natural stone, granite, concrete and reinforced concrete
+ Asphalt and plastics (as e.g. wind turbines)
+ Wood, plastics, foil and aluminium

For an overview of range of saw blades, see page 53.

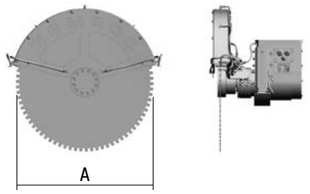
+

High rotation speed up to 2,000 rpm

Drive motors with heavy-duty bearings

Effective cooling of saw blades

Lateral pull-out protective covers for all saw blade diameters



		KDS 20	KDS 30	KDS 40	KDS 50	KDS 50 HD
Recommended excavator weight	t	2–4	5–10	10–16	15–25	18–30
Rated power	kW	55	80	130	135	230
Max. saw blade diameter (A)	mm	800	1,200	1,500	1,500	1,800
Max. torque at 350 bar	Nm	140	311	600	721	1,528
Max. rotation speed	rpm	1,200	2,000	2,000	2,000	1,700
Max. oil flow	l/min	40	115	180	260	470
Max. operating hydraulic pressure	bar	350	350	350	350	350
Weight of drive unit	kg	70	210	310	720	850

KDS 50 | Recycling wind turbine components made from glass fibre reinforced plastic

APPLICATIONS

Cutting rotor blades from wind turbines

Cutting asphalt in road works

Demolition of reinforced concrete

Cutting aluminium sheets

Cutting wood

Cutting natural stone such as granite, sandstone, etc

KDS 30 | Cutting asphalt

Further application examples on

www.kemroc.de

KST RANGE

Grinding attachments for wood and removal of tree stumps

2–25 t

You have dificult or unsightly tree stumps that need to be removed? The newly developed range of KST wood grinders can remove them cleanly, quickly and effectively.

Models, available for use on excavators from 2 to 25 ton operating weight as well as backhoe and skid steer loaders, can operate with rotation speeds up to 2,000 rpm. Due to the design of the cutter disk, hard wood can be ground very effectively as well as soft woods. All of our cutter disks are fitted with tungsten carbide tipped teeth.

+

Expensive excavation of tree stumps, earth works and recycling are no longer necessary

Roots left in the ground will rot away over time

		KST 20	KST 30	KST 40	KST 50
Recommended excavator weight	t	2–4	5–10	10–16	15–25
Rated power	kW	55	80	130	135
Max. torque at 350 bar	Nm	140	311	600	721
Recommended rotation speed	rpm	1,000	1,100	1,100	1,100
Max. rotation speed	rpm	1,200	2,000	2,000	2,000
Recommended oil flow at 150 bar	l/min	25	60	120	140
Max. oil flow	l/min	40	115	180	260
Max. operating hydraulic pressure	bar	350	350	350	350
Weight of drive unit	kg	70	210	350	490
Cutter disc					
Weight with protection cover	kg	70	120	175	225
Number of cutting tools	Pcs	20	30	36	42
Standard cutting tool	Type	1	1	1	1

1 Wood cutting tool set

For an overview of standard milling tools, see page 53.

APPLICATIONS

Grinding tree stumps

KST 20 | Tree stump grinding

EXRUST RANGE

Surface cleaners for use on flat metalic surfaces

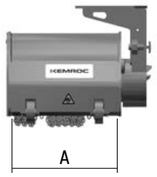
8–15 t

The EXRUST range of cleaning head attachments were developed by KEMROC to clean flat metal surfaces such as those found in the holds of cargo ships.

The drums rotate at a speed of 800 rpm. During operation, a specialy made chain reomoves paint or other materials from the metal surface.

Hearing protection must be worn while working with EXRUST cleaning heads.

		EXRUST 60
Recommended excavator weight	t	8–15
Rated power	kW	45
Cleaning width, standard (A)	mm	600
Recommended rotation speed	rpm	750–820
Recommended oil flow at 100 bar	l/min	75–90
Min. oil flow	l/min	75
Max. oil flow	l/min	95
Max. operating hydraulic pressure	bar	350
Operating weight	kg	780



APPLICATIONS

Removing rust and paint from smooth metal surfaces

EXRUST 60 | Removing paint from surfaces on container ships

Further application examples on

www.kemroc.de

KRM RANGE

Rotation units with endless rotation

2–70 t

Rotation units in the KRM range have been developed for use with KEMROC milling attachments. In combination with rotation units, milling attachments can always be placed in the correct position while facing in the right direction. As a result, in most cases work is completed faster and with more accuracy.

When used with EX patch planers, it is possible to mill longitudinally in front of the excavator as well as 90° across the excavator without having to move the excavator. You can even work to the side of the excavator. DMW, SMW, EK or KTR attachments working in combination with KRM rotation units can also benefit from this flexibility of working position. Horizontal slots can be cut easily using a KDS attachment together with a KRM rotation unit.

Depending on the application, productivity can be increased by up to 50 percent when using KRM rotation units – especially in sewer and pipeline construction, profiling and tunneling.

Compact and low maintenance

Continuous and stepless rotation

High holding torques

Durable worm gear drive

Heavy duty bearings

Save up to 50 percent working time

Oil distributors developed in-house guarantee flow rates of oil and water

APPLICATIONS

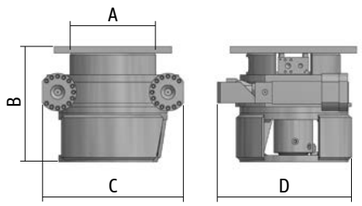
Trenching and pipeline work

Tunnelling

Demolition and renovation

Profiling

		KRM 20	KRM 30	KRM 35	KRM 40	KRM 50	KRM 60	KRM 70	KRM 80
Recommended excavator weight	t	2–6	5–12	7–15	12–18	19–27	25–40	30–50	50–70
Diameter (A)	mm	240	320	320	460	488	610	700	900
Height (B)	mm	330	371	371	520	394	636	620	820
Length (C)	mm	510	610	640	760	720	780	910	1,170
Width (D)	mm	350	500	620	600	700	770	800	1,000
Max. oil flow at 10 bar	l/min	40	40	40	40	40	40	40	40
Max. holding torque	Nm	6,000	9,000	18,000	44,700	95,000	200,000	270,000	350,000
Weight	kg	150	275	320	440	700	900	1,000	2,000
Number of drive motors	Pcs	1	1	2	2	2	2	2	2
Recommended KEMROC attachments									
EK Chain Cutters	Type		EK 20	EK 40	EK 60		EK 100 | 110	EK 140 | 150	EK 220
EKT Rotary Drum Cutters	Type						EKT 100 | 110	EKT 140 | 150	EKT 220
KR Rotary Drum Cutters	Type		KR 18	KR 30	KR 45 | 65	KR 80	KR 120 | 150	KR 165	KR 200
KRD Rotary Drum Cutters	Type		KRD 18	KRD 30	KRD 45	KRD 70	KRD 100 | 120	KRD 150 | 165	
DMW Cutter Wheels	Type					DMW 90	DMW 130	DMW 220	DMW 220 HD
SMW Cutter Wheels	Type			SMW 50 | 80			SMW 110		
EX Patch Planers	Type	EX 20	EX 30 | 45 | 60						
ES Universal Cutters	Type	ES 20	ES 30		ES 45	ES 60 | 80	ES 110		
KTR Trenching Attachments	Type						KTR 90 | 130	KTR 220	
KTS Trenching Attachments	Type		KTS 20 | 30 | 40	KTS 50					
KDS Diamond Saw Attachments	Type	KDS 20	KDS 30 | 40	KDS 50 | 50 HD					



KRM 50 | Trenching and pipeline work

KRM 60 | Demolition

Further application examples on

www.kemroc.de

TOOLS

Picks with matching retainers

Pick boxes

Diamond saw blades

Wood grinding tools

Mounting and dismantling tools

KEMROC cutters and cutting wheels work under extremely hard conditions in trenching, demolition, rock excavation and tunnelling, in steel mills as in other unusual applications. This puts very high demands on the cutter drums and cutting tools.

The result of many years experience, with machines working around the world, can be seen in the type of picks used and their placement on the drums. This unique combination provides maximum productivity with minimum wear, ensuring the economical performance of KEMROC products even in the hardest conditions.

Modern technology and continuous product development are the basics for ensuring the economic benefits of using our cutting tools and attachments. In our range of cutter picks, we have paid special attention to the optimum shape, high quality materials and sustainable quality of the production process. This helps you to keep your consumable costs to a minimum.

The following pages are intended to provide an overview of our standard range of picks, retainers and pick boxes suitable for the majority of applications.

In addition to alternative design cutter drums, we also offer a large variety of pick types even for unusual applications. If you have an extremely unusual application or requirement, don’t hesitate to contact us. Our specialists are pleased to provide advice and support in your search for the most suitable cutter tools.

Simple facts about picks

PICKS

The tungsten carbide insert braised into the body of the pick is at the heart of the cutting operation and is subject to extreme stresses due to it coming continuously into contact with the rock. The pick body (head and shaft) is made from heat-treated steel and serves as the support for the tungsten carbide insert and also as protection for the pick box.

The tungsten carbide insert is extremely wear resistant and tough to withstand impact. The insert is a sintered material made up of tungsten carbide with a cobalt binder. Depending on application, a variety of carbide grades and shapes are available.

Pick dimensions can be found from the numbers in the four-part numbering system:

XX/xx/xx/xx 1. Number: Diameter of tungsten carbide insert (mm)

xx/**XX**/xx/xx 2. Number: Length of the head of the pick (mm)

xx/xx/**XX**/xx 3. Number: Diameter of pick shoulder (mm)

xx/xx/xx/**XX** 4. Number: Diameter of shaft of the pick (mm)

Example:

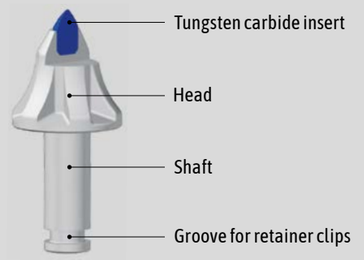
Round attack pick ER 19/75/70/30 Q:

1. Number - Diameter of tungsten carbide insert:	19 mm
2. Number - Length of the head of the pick:	75 mm
3. Number - Diameter of pick shoulder:	70 mm
4. Number - Diameter of shaft of the pick:	30 mm

THE RETAINER

Retaining clips ensure that picks do not fly out of the pick boxes. Various types of retaining clip are available depending on pick type and application area e.g. retaining collars for soft rock or circlip type systems for hard rock applications.

For quick and easy changing of picks, KEMROC offers the QuickSnap retaining system, which allows picks to be changed in a matter of seconds. This represents a saving of over 50 percent in time compared with normal circlip or knock on retainer systems. Due to the deeper grove in the shaft of the pick and the larger surface area between pick and holder, the KEMROC QuickSnap system is more secure and has less wear.



Pick parts and dimensions

1 Diameter of tungsten carbide insert (mm) XX/xx/xx/xx

2 Length of the head of the pick (mm) xx/XX/xx/xx

3 Diameter of pick shoulder (mm) xx/xx/XX/xx

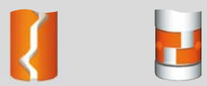
4 Diameter of shaft of the pick (mm) xx/xx/xx/XX

Q KEMROC QuickSnap

C Retaining clip

S Circlip retainer

HC/HQ Retainer sleeve on the shaft plus retaining clip/ QuickSnap



H Retainer sleeve on the shaft

K Knock on retaine

Easier and quicker pick changes with KEMROC QuickSnap.

Picks with matching retainers

PH 14

Round attack pick
ER 16/29/25/14 C

Application
Asphalt, concrete, soft to medium hard rock

Part No. 16292514

Retaining clip
ES 14

Part No. 99999976

Round attack pick
ER 16/28/26/14 H

Application
Asphalt, concrete, soft to medium hard rock

Part No. 16282614

PH 15

Round attack pick
ER 19/33/30/15 S

Application
Asphalt, concrete, soft to medium hard rock

Part No. 19333015

Circlip retainer
SG 15

Part No. 99999990

PH 20

Round attack pick
ER 12/45/38/20 K

Application
Concrete, soft to medium hard rock

Part No. 12453821

Round attack pick
ER 16/46/38/20 C

Application
Concrete, soft to medium hard rock

Part No. 16463820

Retaining clip
ES 20

Part No. 99999991

Round attack pick
ER 16/48/32/20 H

Application
Asphalt

Part No. 16483220

Round attack pick
ER 19/48/36/20 H

Application
Asphalt

Part No. 19483620

Picks with matching retainers

PH 22

Round attack pick
ER 12/45/38/22 HC

Application
Concrete, medium hard and abrasive rock

Part No. 12453823

Retaining clip
ES 22

Part No. 99999996

Round attack pick
ER 15/46/38/22 C

Application
Concrete, medium hard rock

Part No. 15463822

Retaining clip
ES 22

Part No. 99999996

Round attack pick
ER 19/51/45/22 H

Application
Asphalt, soft and abrasive rock

Part No. 19514522

Dragontooth pick
DT 22/46/38/22 HC

Application
Soft and abrasive ground and rock, wood

Part No. 22463822

Retaining clip
ES 22

Part No. 99999996

PH 25

Round attack pick
ER 17/64/60/25 Q

Application
Concrete, medium hard rock

Part No. 17646026

QuickSnap
QS 25

Part No. 99250025

Round attack pick
ER 17/64/60/25 C

Application
Concrete, medium hard rock

Part No. 17646025

Retaining clip
ES 25

Part No. 99999994

Round attack pick
ER 19/64/60/25 Q

Application
Concrete, medium hard rock

Part No. 19646026

QuickSnap
QS 25

Part No. 99250025

Round attack pick
ER 22/64/60/25 H

Application
Asphalt, soft and abrasive rock

Part No. 22646025

Dragontooth pick
DT 22/58/46/25 K

Application
Soft and abrasive ground and rock, wood

Part No. 22465825

PH 30 | 30 HD | 32 HD

Round attack pick
ER 17/75/70/30 Q

Application
Concrete, medium hard rock

Part No. 17757036

QuickSnap [1)]
QS 30

Part No. 99500030

Round attack pick
ER 19/75/70/30 Q

Application
Concrete, medium hard rock

Part No. 19757035

QuickSnap [1)]
QS 30

Part No. 99500030

NEW: Triple-plane milling teeth

For better rotation in soft rock

Round attack pick
ER 17/75/70/30 HD TP Q

Application
Soft and medium hard rock

Part No. 17757037

QuickSnap [1)]
QS 30

Part No. 99500030

Round attack pick
ER 19/75/70/30 HD TP Q

Application
Soft and medium hard rock

Part No. 19757036

QuickSnap [1)]
QS 30

Part No. 99500030

Round attack pick
ER 22/75/70/30 Q

Application
Concrete, medium hard to hard rock

Part No. 22757032

QuickSnap [1)]
QS 30

Part No. 99500030

Round attack pick
ER 15/90/70/30 Q

Application
Salt, gypsum, medium hard, fractured rock

Part No. 15907035

QuickSnap [1)]
QS 30

Part No. 99500030

Round attack pick
ER 30/77/70/29 Q

Application
Asphalt, soft, medium hard and abrasive rock

Part No. 30777032

QuickSnap [1)]
QS 30

Part No. 99500030

Only suitable for PH 32 HD

Dragontooth pick
DT 22/90/70/30 HQ

Application
Soft and abrasive rock, wood

Part No. 22907030

QuickSnap [1)]
QS 30

Part No. 99500030

PH 38 HD

Round attack pick
ER 25/80/80/38 C

Application
Concrete, medium hard to very hard rock

Part No. 25808039

Retaining clip
ES 38

Part No. 99500034

[1)] QuickSnap QS 30 is the standard retainer for this pick. Retaining clip ES 30 available as an alternative.

Retaining clip
ES 30

Part No. 99500032

Pick boxes

Pick boxes welded onto the cutter head or cutter wheel determine where and how picks penetrate into the rock. The special attack angle ensures a continuous rotation of the pick creating a self sharpening action for the tungsten carbide insert during the cutting action. The correct angle ensures maximum productivity with minimum wear.

Pick boxes are made from specially heat treated steel and depending on applications, are available with exchangeable wear sleeves.

Standard pick box without wear sleeve

Pick box with wear resistant, exchangeable wear sleeve

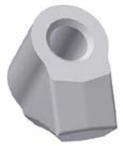
Pick box
PH 14
Part No. 711222

Pick box
PH 15
Part No. 791004E

Pick box
PH 20
Part No. 721024E

Pick box
PH 22
Part No. 721025UA

Pick box
PH 25
Part No. 761025UA



Pick box
PH 30
Part No. 711610

Pick box
PH 30 HD
Part No. 711084

Replacement wear sleeve
Part No. 711029

Pick box
PH 32 HD
Part No. 711039

Pick box
PH 38 HD
Part No. 753022

Replacement wear sleeve
Part No. 753021

Diamond saw blades for models in the KDS range

Diamond saw blades for natural stone, granite, concrete and reinforced concrete

- Diameter 800 mm
- Diameter 1,000 mm
- Diameter 1,200 mm
- Diameter 1,400 mm
- Diameter 1,500 mm
- Diameter 1,600 mm
- Diameter 1,800 mm

Diamond saw blades for asphalt and plastics (as e.g. wind turbines)

- Diameter 800 mm
- Diameter 1,000 mm
- Diameter 1,200 mm
- Diameter 1,400 mm
- Diameter 1,500 mm
- Diameter 1,600 mm
- Diameter 1,800 mm

Carbide tipped saw blades for wood, plastics, foil and aluminium

- Diameter 400 mm
- Diameter 600 mm
- Diameter 900 mm
- Diameter 1,000 mm
- Diameter 1,100 mm

Wood grinding tools for models in the KST range

Straight tooth with hole
Part No. 571373

Inclined tooth (right) with hole
Part No. 571371

Straight tooth with thread connection
Part No. 571370

Inclined tooth (left) with thread connection
Part No. 571372

Tools for KTS range of trenching attachments

Rock teeth for KTS 20|30

Left side cutter pick

Part No. 44-2001

Straight cutter pick

Part No. 44-2002

Right side cutter pick

Part No. 44-2003

Rock teeth for KTS 30|40|50

Left side cutter pick

Part No. 44-3003

Straight cutter pick

Part No. 44-3004

Right side cutter pick

Part No. 44-3005

Soil teeth for KTS 20|30

Left side blade

Part No. 44-2010

Right side blade

Part No. 44-2011

Soil teeth for KTS 30|40|50

Left side blade

Part No. 44-3001

Right side blade

Part No. 44-3002

Mounting and dismantling tools

Knock-out tool

For picks with shaft diameter 20 – 30 mm as for all dragontooth picks

Part No. 99 99 99 95

Puller tool for picks with retaining sleeves

For picks with shaft diameter 20 – 25 mm

Part No. 99 99 99 97

Puller tool for QuickSnap retainers

Part No. 99 99 50 00

Mounting tool for retaining clips

For retaining clip ES 20
Part No. 99 99 99 42

For retaining clip ES 22
Part No. 99 99 99 47

For retaining clip ES 25
Part No. 99 99 99 83

For retaining clip ES 30
Part No. 99 99 99 39

For retaining clip ES 38
Part No. on request

Mounting gripper for circlip retainers

For picks with shaft diameter up to 25 mm
Part No. 99 99 99 40

For picks with shaft diameter from 30 mm
Part No. 99 99 99 46

Dismantling tool for retaining clips

For retaining clip ES 20
Part No. 99 99 99 43

For retaining clip ES 22
Part No. 99 99 99 48

For retaining clip ES 25
Part No. 99 99 99 82

For retaining clip ES 30
Part No. 99 99 99 36

For retaining clip ES 38
Part No. on request

Knock-out tool for stuck picks

For picks with shaft diameter 20 – 25 mm
Part No. 99 99 99 38

For picks with shaft diameter 30 – 38 mm
Part No. 99 99 99 37

NOTES

www.kemroc.de

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2021-04

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revolution of cutting