KINSHOFER
crane and excavator attachments

ATTACHMENTS FOR LOADER CRANES

2012

KINSHOFER Attachments – in use

Brick Stack Grapple
KM 332

Pallet fork
KM 420

Orange Peel Grapple
KM 650

Clamshell Bucket
KM 604HPX

Clamshell Bucket
KM 626HPX

Clamshell Bucket with open shells
KM 604U HPX

Rock Grapple
KM 613HPX

Timber Grapple
KM 632HPX

Hay and Forestry Grapple
KM 641HPX

Manipulator
KM 930

Barrier Lifter
KM 932MB

Special Manipulator for Barrels
KM 930 F

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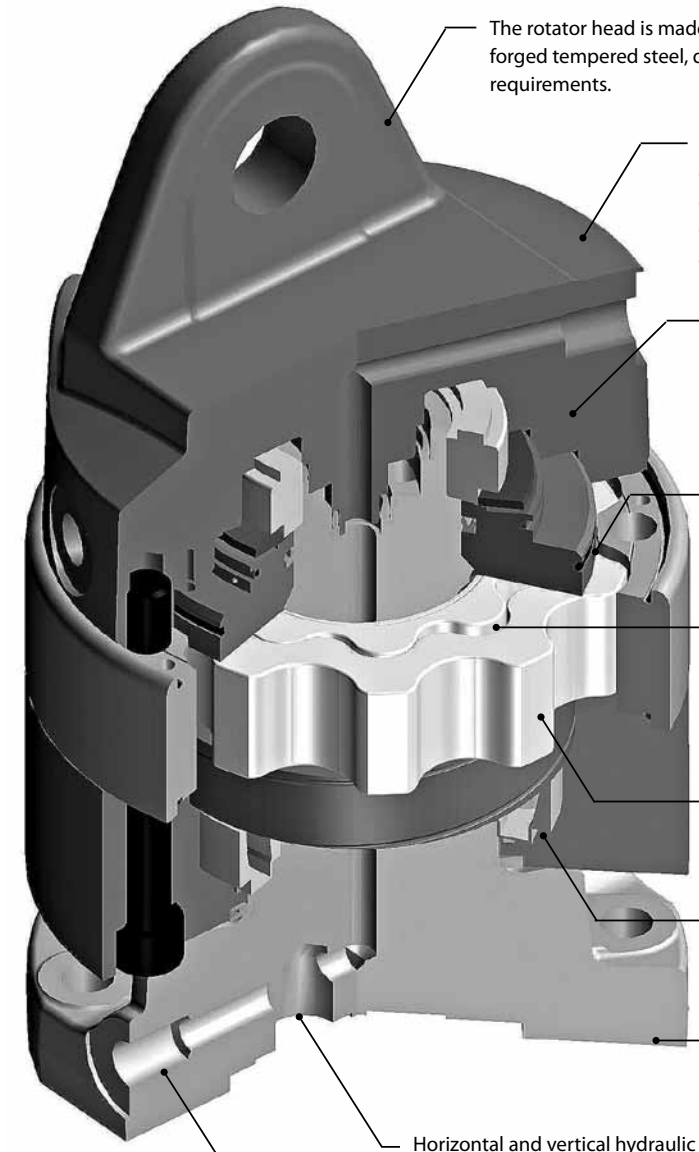
⇨ For further information on KINSHOFER products please visit our website www.kinshofer.com

KINSHOFER Rotator Line

KINSHOFER manufactures rotators for truck loaders, excavators and logging operations. Years of experience in designing rotators and hydraulic load handling equipment guarantee high efficiency, long lasting rotators, specially tailored to meet your requirements.
The gear-type design ensures a very compact and powerful rotator. The precision control and braking ability is especially appreciated by operators. A grapple does not rotate unexpectedly when digging, even under maximum load, and there is no need for stability compensation when handling longer lengths of timber... these are only some of the many working situations where operators appreciate the advantages of using **KINSHOFER** rotators.

KINSHOFER-Rotators are the solution.

Features of KINSHOFER Rotators



The rotator head is made of spherically cast iron or forged tempered steel, depending on operational requirements.

Upper and lower connections are available in a variety of dimensions and are standard. **KINSHOFER** carries upper suspensions for all current makes and models of cranes. Rotator heads with pin connections are equipped with steel bushings.

The pressure relief valve, integrated in the rotator head, allows the rotator independence from the hydraulic system of the crane or excavator - where an extra pressure relief valve does not need to be installed.

All seals are specially designed for the application, and can even run on common vegetable oil.

A very high degree of sealing between the distributor and rotor unit results in minimal internal leakage. Powerful drive and braking moments are therefore possible, even at high oil temperature.

The rotor unit is made of high quality tempered steel and the outer surface is hardened through a nitrate-coating.

Generously dimensioned roller bearings guarantee absorption of rated pressure and tension loads and tilting moments.

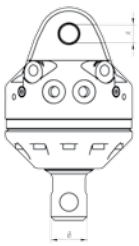
The forged, one-piece flange shaft is made of durable tempered steel.

Horizontal and vertical hydraulic connection of the attaching equipment is possible.

Oil passages for a single hydraulic circuit are standard and generously dimensioned for high capacity flow. Connection with standard fittings is possible because flange and rotator shaft are a single unit, which also means there are no seams between flange and rotator shaft. Rotators with four oil passages are also available.

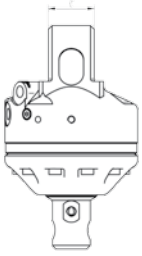
We reserve the right to amend specifications without prior notice. **KINSHOFER** GmbH, 83666 Waakirchen, Germany

KINSHOFER Gear Type Rotator with Shaft up to 6600 lbs Load Capacity (incl. Fittings)



KM 03 S

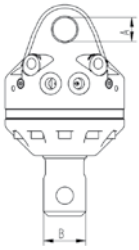
Type	Load capacity (lbs)	Shaft Ø (in)	Upper connection (Width x Pin-Ø) (in)	Torque (ft.lbs.)	Moment of deflection max (ft.lbs.)	Self weight (lbs)
KM 03 S	6600	1.95	2.36 x 0,98	332	1290	53



KM 03 S

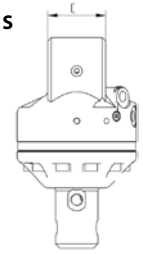
Operating pressure: 4640 psi
Pump capacity: 6.6 up to 15.9 GPM
Upper hydraulic coupling G 3/8´´
Lower hydraulic coupling G 1/4´´

KINSHOFER Gear Type Rotator with Shaft up to 9900 lbs Load Capacity (incl. Fittings)



KM 04 S

Type	Load capacity (lbs)	Shaft Ø B (in)	Upper connection (Width C x Pin-Ø A) (in)	Torque (ft.lbs.)	Moment of deflection max (ft.lbs.)	Self weight (lbs)
KM 04 S59-30	9900	2.32	3.3 x 1.2	627	2213	57
KM 04 S	9900	2.44	3.3 x 1.2	627	2213	57
KM 04 S63-30	9900	2.48	3.3 x 1.2	627	2213	57
KM 04 S68-30	9900	2.68	3.3 x 1.2	627	2213	57
KM 04 S68-30S*	9900	2.68	3.3 x 1.2	627	2213	59
KM 04 S69-30	9900	2.72	3.3 x 1.2	627	2213	57

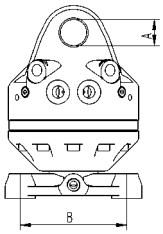


* steel motor-head

KM 04 S69-30

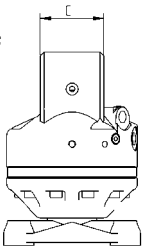
Operating pressure: 4608 psi
Pump capacity: 6.6 up to 15.9 GPM
Hydraulic couplings: M 18 x 1,5

KINSHOFER Gear Type Rotator with Flange up to 9900 lbs Load Capacity (incl. Fittings)



KM 04 F

Type	Load capacity (lbs)	Hole pattern of flange B (in)	Upper connection (Width C x Pin-Ø A) (in)	Torque (ft.lbs.)	Moment of deflection max (ft.lbs.)	Self weight (lbs)
KM 04 F	9900	□5.5	3.3 x 1.2	627	2213	57
KM 04 F140-30S*	9900	□5.5	3.3 x 1.2	627	2213	57
KM 04 F140-30US*	9900	□5.5	3.3 x 1.2	738	6269	68
KM 04 F140-30V**	9900	□5.5	3.3 x 1.2	627	2213	57



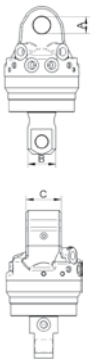
* steel motor-head
**additional vertical connection for the drive unit

KM 04 F

KM 04 F140-30US

Operating pressure: 4608 psi
Pump capacity: 6.6 up to 15.9 GPM
Hydraulic couplings: M 18 x 1,5

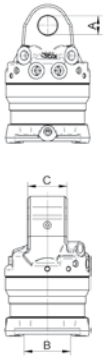
KINSHOFER Gear Type Rotator with Shaft up to 13200 lbs Load Capacity (incl. Fittings)



Type	Load capacity (lbs)	Shaft Ø B (in)	Upper connection (Width C x Pin-Ø A) (in)	Torque (ft.lbs.)	Moment of deflection max (ft.lbs.)	Self weight (lbs)
KM 06 S68-40	13200	2.68	3.3 x 1.6	738	3319	70

Operating pressure:	4608 psi
Pump capacity:	6.6 to 21.1 GPM
Hydraulic couplings – in:	G 1/2´´
Hydraulic couplings – out:	M 18 x 1,5

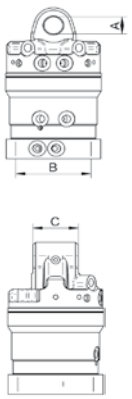
KINSHOFER Gear Type Rotator with Flange up to 13200 lbs Load Capacity (incl. Fittings)



Type	Load capacity (lbs)	Hole pattern of flange B (in)	Upper connection (Width C x Pin-Ø A) (in)	Torque (ft.lbs.)	Moment of deflection max (ft.lbs.)	Self weight (lbs)
KM 06 F140-40	13200	□5.5	3.3 x 1.6	738	6269	75

Operating pressure:	4608 psi
Pump capacity:	6.6 to 21.1 GPM
Hydraulic couplings – in:	G 1/2´´
Hydraulic couplings – out:	M 18 x 1,5

KINSHOFER Gear Type Rotator with Flange and 4 Oil Ducts to operate 2 different Functions (incl. Fittings)



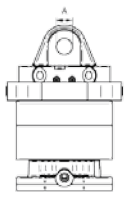
Type	Load capacity (lbs)	Hole pattern of flange B (in)	Upper connection (Width C x Pin-Ø A) (in)	Torque (ft.lbs.)	Moment of deflection max (ft.lbs.)	Self weight (lbs)
KM 04 F140-30-4	9900	□5.5	3.3 x 1.2	629	2213	88
KM 06 F173-35-4	13200	Ø 6.8	3.2 x 1.4	738	6269	99
KM 10 F173-35/2-4	22000	Ø 6.8	3.2 x 1.4	1475	8850	158

	KM 04 F140-30-4	KM 06 F173-35-4	KM 10 F173-35/2-4
Operating pressure:	4608 psi	4608 psi	4608 psi
Pump capacity:	6.6 to 15.9 GPM	6.6 to 26.4 GPM	6.9 to 26.4 GPM
Hydraulic couplings (Rotator and Grapple):	M 18 x 1,5	G 1/2´´	G 1/2´´ and G 3/4´´

KM 04 F140-30-4

KM 04 F140-30-4

KINSHOFER Gear Type Rotator with Flange for Logging (incl. Hose Guard and Fittings)



Type	Load capacity (lbs)	Hole pattern of flange B (in)	Upper connection (Width C x Pin-Ø A) (in)	Torque (ft.lbs.)	Moment of deflection max (ft.lbs.)	Self weight (lbs)
KM 06F 173-35	13200	Ø 6.8	3.2 x 1.4	738	6269	75
KM 10F 173-35/1	22000	Ø 6.8	3.2 x 1.4	1475	8850	136
KM 10F 173-35/2	22000	Ø 6.8	3.2 x 1.4	1475	8850	143
KM 10F 173-45	22000	Ø 6.8	3.9 x 1.8	1475	8850	150
KM 10F 173-52	22000	Ø 6.8	5.4 x 2.1	1475	8850	154

Operating pressure:	4608 psi
Pump capacity:	6.6 to 26.4 GPM
Hydraulic couplings (Rotator and Grapple)	G 1/2´´

KM 10F 173-35/1

KM 10F 173-35/1

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KM 501 – Upper Suspension between Rotator and Crane

KM 501

An upper suspension is a cardan link between rotator and crane. It is available for all current makes and models of cranes. Please specify dimensions when ordering

Type	Load capacity (lbs)	Self weight (approx. lbs)
KM 501 3000	up to 6600	11
KM 501 4500	up to 9900	22
KM 501 6000	up to 13200	33
KM 501 10000	up to 22000	55

KM 511 – Upper Suspension with Pendulum Damper between Rotator and Crane

KM 511

A pendulum damper reduces the horizontal swing of the attachment. It can also be retrofitted to an existing upper suspension

Type	Load capacity (lbs)	Self weight (approx. lbs)
KM 511 4500	up to 9900	33
KM 511 6000	up to 13200	44
KM 511 10000	up to 22000	66

KM 206 – Hose Guard

The hose guard is a metal bow to be attached onto the rotator. It is designed to protect the hoses of the rotator from damage i.e. from protruding branches

		Self weight (approx. lbs)
KM 206	hose guard for the rotator	7

KM 502 – Reduction Link between Rotator and Grapple

KM 502

A reduction link adapts a shaft type rotator to an attachment with a standard hole pattern for a flange

Type	Load capacity (lbs)	Self weight (approx. lbs)
KM 502 3000	up to 6600	4
KM 502 4500	up to 9900	7
KM 502 6000	up to 13200	9

KM 502-AD

KM 502-FL

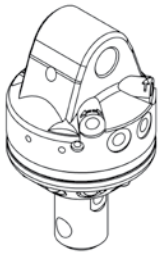
Accessories for Attaching Pallet Forks etc.

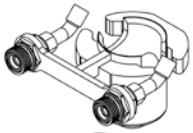
KM 460 03

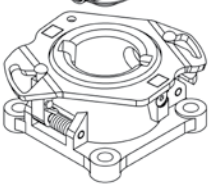
KM 460 04

Type	Description	Type of rotator	Weight (approx. lbs)
KM 460 03 KM 03 S	rigid suspension link with pin for all	KM 03	18
KM 460 03 KM 04 S	KINSHOFER shaft-type rotators	KM 04	22
KM 460 08 KM 03 S	rigid hook for all	KM 03	18
KM 460 08 KM 04 S	KINSHOFER shaft rotators	KM 04	20
KM 460 04 KM 04 S	non-rotating swinging hook for all	KM 04	26
KM 460 04 KM 06 S	KINSHOFER shaft rotators	KM 06	33
KM 460 10	non-rotating swinging hook for all KINSHOFER flange rotators	KM 10 F173 (KM 04 to KM 10)	55

KM 505 – Quick Change System for Shaft-Type Rotators



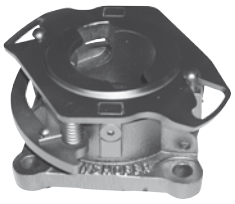




The quick change system enables an easy exchange between different attachments. The mechanical coupling and locking is achieved by the turning motion of the rotator. You simply disconnect quick couplings and disengage the locking device manually. Upper elements of the quick change system are available for all KINSHOFER shaft rotators. The KM 505 system can be used on most attachments which allows the versatility to quickly change the application with a minimum of down-time. Not suitable for heavy duty work.

Type	Description	Hole pattern of flange (in)	Self weight (lbs)
KM 505	complete, incl. hydraulic couplings (KM 204 01)	0.16 x Ø0.71 / □ 5.51	27
KM 505 01	upper element fitted to rotator incl. 2 mobile parts		11
KM 204 01	mobile part of hydraulic quick coupling (2 pieces) for KM 505 01		
KM 505 02	lower element mounted onto attachment	0.16 x Ø0.71 / □ 5.51	15
KM 505 03	rigid suspension link with non-rotating hook to connect to the KM 505 01		15

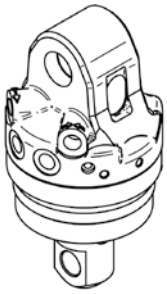
KM 505 01

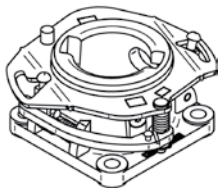


KM 505 02

KM 505 03

KM 505 HD – Heavy Duty Quick Change System for Shaft-Type Rotators





The quick change system enables an easy exchange between different attachments. The mechanical coupling and locking is achieved by the turning motion of the rotator. You simply disconnect quick couplings and disengage the locking device manually. Upper elements of the quick change system are available for all KINSHOFER shaft rotators. The KM 505 system can be used on most attachments which allows the versatility to quickly change the application with a minimum of down-time. For heavy duty works, we recommend the quick change system KM 505 HD, in combination with rotator KM 04 S68-30US or KM 06 S68-40.

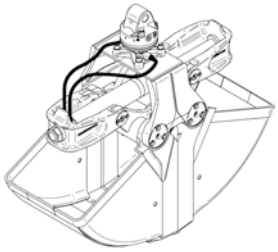
Type	Description	Hole pattern of flange (in)	Self weight (lbs)
KM 505 HD	complete, incl. hydraulic couplings (KM 204 01)	0.16 x Ø0.71 / □ 5.51	40
KM 505 01 HD	upper element HD fitted to rotator incl. 2 mobile parts		15
KM 204 01	mobile part of hydraulic quick coupling (2 pieces) for KM 505 01 HD		
KM 505 02 HD	lower element HD mounted onto attachment	0.16 x Ø0.71 / □ 5.51	24
KM 505 03 HD	rigid suspension link with non-rotating hook to connect to the KM 505 01 HD		31

KM 505 01 HD

KM 505 02 HD

KM 505 03 HD

KM 203 – Connecting Hoses & KM 204 – Hydraulic Quick Change Kit for Hoses



KM 203 01

KM 204 01

KM 204 02

Type	Description
KM 203 01	short connecting hoses between rotator and attachment with standard fittings M 18 x 1,5 (2 pieces)
KM 203 03	long connecting hoses between rotator and crane – please specify dimensions (4 pieces)

KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)
KM 204 03	hydraulic quick change kit incl. mobile and fixed parts (2 pieces each) mounted with adapters to rotator

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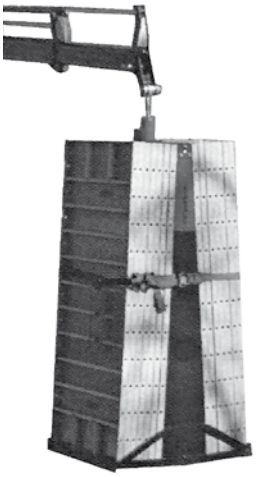
Kwikbel™ and Striker KM 507

A simple, innovative and dependable system for changing lift connections. Consisting of two pieces - the Kwikbel™, which is welded onto a "target" (form basket, skid steer or gas bottle rack) and the Striker, which hangs from a hook.



Benefits include:

- **Fast** - exchange attachments quickly as the self aligning Kwikbel™/Striker system needs no mechanical or hydraulical adjustments.
- **Economical** - the Kwikbel™/Striker system can be handled by the operator alone and no rotator hydraulics are necessary.
- **Safe** - direct contact with loads is eliminated which reduces finger pinch points; color coding allows operator to see work when fully extended.
- **Reliable** - sealed roller thrust bearing for free turning action.
- The Kwikbel™/Striker is suitable for loads up to 6500 lbs.

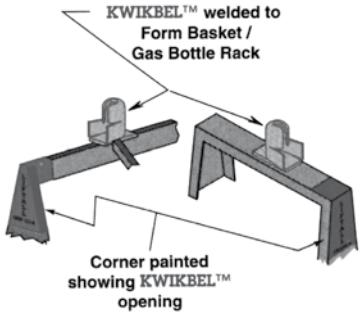
Form Crane Tool KM 507

Type	Description	Load capacity (lbs)	Self weight (lbs)
KM 507 01	Kwikbel™ - welded onto a „target" (form basket, skid steer or gas bottle rack)	6500	12
KM 507 02	Striker - hangs from a non rotating hook	6500	7

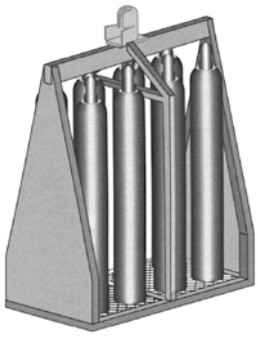
Technical Details

Kwikbel™

Striker



Painted corner showing Kwibel™ opening

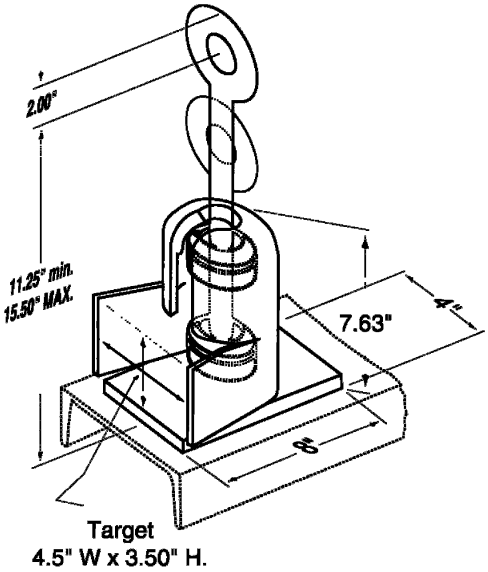


Kwikbel™ application at gas bottle rack

Accessories

Type	Description	Self weight (lbs)
KM 460 04 KM 04 S	non rotating hook	26

Technical Drawings



KM 332/333 Brick Stack Grapple – Parallel Squeeze

The technically unique KM 332 brick stack grapple is a versatile tool for palletized and non-palletized materials.

- **Rigid or adjustable plunge depth** of parallel opening and closing clamping arms - hydraulically operated.
- **Versatile tool** with opening range of 16 in to 55 in i.e. for handling of single concrete products like curbstones, or handling of brick packs.
- **Handling of heavy loads** with reinforced version **KM 333**.
- **Adjustable plunge depth** of **KM 332V** and **KM 333V** can match the size of the stack-easy adaption with a mechanical latch.
- **Precise synchronisation of the arms** as a result of two in series double acting hydraulic cylinders.
- **Safety** through internal pressure relief valve (independent from crane pressure) and non-return valve (safe clamping force at pressure drop).
- **Long life** due to generously dimensioned bearings, integrated grease reservoir, automatic wear compensation of main bearing, spherical central bearing for the cylinders.
- **Easy to use** with durable and replaceable rubber inserts – simple to operate between the stacks.

Package Brick Stack Grapple KM 332V-1100 c

Type	Plunge depth A	Load capacity at min./max. plunge depth	Gripping min./max.	Height (incl. rotator)	Self weight
	(in)	(lbs)	(in)	(in)	(lbs)
KM 332V-1100 c	43 – 65	4180 / 2970	16 – 55	60 – 81	781

Package consists of: brick stack grapple, rotator KM 04 F, short connecting hoses KM 203 01 (rotator to grapple), upper suspension KM 501 4500, compression rails KM 381 29 1000 (length 39.4 in), pressure relief valve, non-return valve

Please note:
– the load capacity listed in the table depends on the load (the surface conditions, the size of individual stones, stack size and kind of banding)
– the capacity listed does not apply to stacks of low-profile and unbanded items.

Brick Stack Grapple KM 332/333

Type	Plunge depth A	Load capacity at min./max. plunge depth	Gripping min./max.	Height (w/o rotator)	Self weight (w/o compression rails)
	(in)	(lbs)	(in)	(in)	(lbs)
KM 332-850	34	4840	16 – 55	42	528
KM 332-1000	39	4400	16 – 55	48	550
KM 332-1300	51	3520	16 – 55	60	572
KM 332V-850	34 – 55	4840 / 3520	16 – 55	42 – 64	605
KM 332V-1100	43 – 65	4180 / 2970	16 – 55	52 – 73	649
KM 333-850	34	6600	16 – 55	43	880
KM 333-1000	39	5500	16 – 55	49	924
KM 333V-1100	43 – 65	5060 / 3520	16 – 55	53 – 74	1078

Please note:
– the load capacity listed in the table depends on the load (the surface conditions, the size of individual stones, stack size and kind of bundling). The capacity listed does not apply to stacks of low-profile and unbundled items
– the price does not include the compression rails
– wider opening ranges 16 – 71 in are available for – KM 332 – KM 333

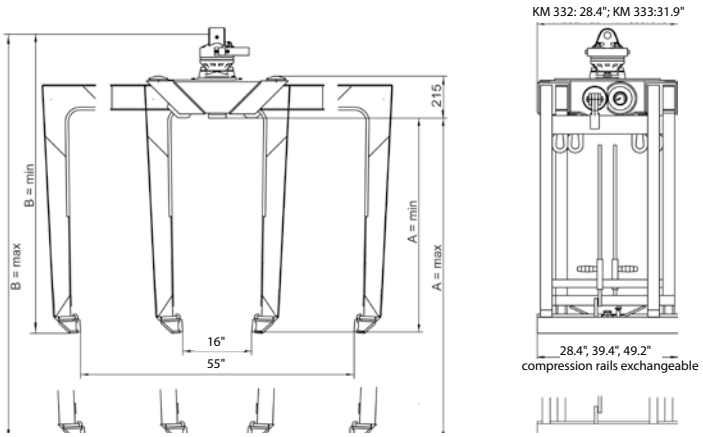
Accessories

Type	Description
KM 04 F	recommended **KINSHOFER** rotator for KM 332/333

Requirements of Truck Crane

Operating pressure: 2880 to 4610 psi
Pump capacity: 6.6 to 19.8 GPM

Technical Drawings



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Compression Rails

KM 381 29

KM 381 39

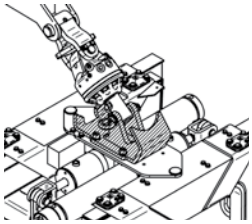
KM 381 32

KM 391 09

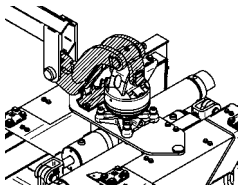
Type	Description	Length (in)	Weight (lbs)
KM 381 29 720	compression rails with smooth rubber inserts (2 pieces)	28	37
KM 381 29 1000		39	53
KM 381 29 1250		49	62
KM 381 39 720	compression rails with two rubber inserts, upper insert contoured, lower insert smooth (2 pieces each)	28	53
KM 381 39 900		35	62
KM 381 39 1000		39	73
KM 381 39 1100		43	84
KM 381 39 1200		47	88
KM 381 39 1250		49	92
KM 381 39 1400		55	97
KM 381 32 1000	spring loaded rails with parallel-action teeth (2 pieces) - fitted in seconds by locking lever	39	136
KM 381 32 1250		49	167
KM 381 09 720	compression rails for adapter KM 381 38 (2 pieces)	28	37
KM 381 09 1000		39	51
KM 381 09 1250		49	62
KM 381 38	**adapter for clamping arms** to take compression rails KM 381 09		88

Please note: additional lengths of compression rails are available on request

Others



KM 381 08



KM 381 18

KM 381 31

Type	Description		Weight (lbs)
	Non-Standard Opening Range: all grapples are available with opening ranges not listed. Call for details		
	Non- Standard Plunge Depth: all grapples are available with plunge depth not listed. Call for details		
KM 381 08	**tilting Device** to reduce overall height of the equipment in transport	for shaft rotators	26
		for flange rotators	40
KM 381 18	**height Reduction Link** to reduce the overall height of the equipment in transport - for flange rotators		33
KM 381 05	**height Stop** for quick adjustment of plunge depth		18
KM 381 06	**spring Loaded Guide Rails** for stabilizing the top layer of the stack		
KM 381 07	**spring Loaded Guide Plates** for lateral stabilizing of the stack		
KM 381 31	**adapter for Concrete Pipes** with diameters from 31.5 to 53.2 in		132

KM 331 Brick Stack Grapple - Scissor Grapple

The robust brick stack grapple KM 331 handles loads up to 4400 lbs.

- **Fixed plunge depth** with pivot clamping arms - hydraulically operated.
- **Versatile tool** with opening range of 1.6 to 59.1 in i.e. for handling of single concrete products like curbstones, or handling of brick packs.
- **Synchronised function of clamping arms** due to sturdy gear-toothed quadrants.
- **Safety** through internal pressure relief valve (independent from crane pressure) and non-return valve (safe clamping force at pressure drop).
- **Reduced overall height** in comparison to the plunge depth due to lower rotator position.
- **Compression rails** with durable and replaceable rubber inserts.

Package Brick Stack Grapple KM 331 c

Type	Plunge depth A (in)	Load capacity (lbs)	Gripping min./max. G (in)	Height B (in)	Self weight (lbs)
KM 331-1000 c	39	4400	8.7 – 55.9	62	693
KM 331-1100 c	43	4400	6.3 – 57.1	66	704
KM 331-1200 c	47	3960	3.9 – 58.1	70	715
KM 331-1300 c	51	3520	1.6 -59.1	73	726

Package consists of: brick stack grapple, KINSHOFER rotator KM 04 F, short connecting hoses KM 203 01 (rotator to grapple), upper suspension KM 501, compression rails KM 381 40 (length 39.4 in), pressure relief valve, non-return valve

Please note:
– the load capacity listed in the table depends on the load (the surface conditions, the size of individual stones, stack size and Type of banding). The capacity listed does not apply to stacks of low-profile and unbanded items
– full plunge depth A is only suitable up to opening range of 43 in (see Technical Drawings)

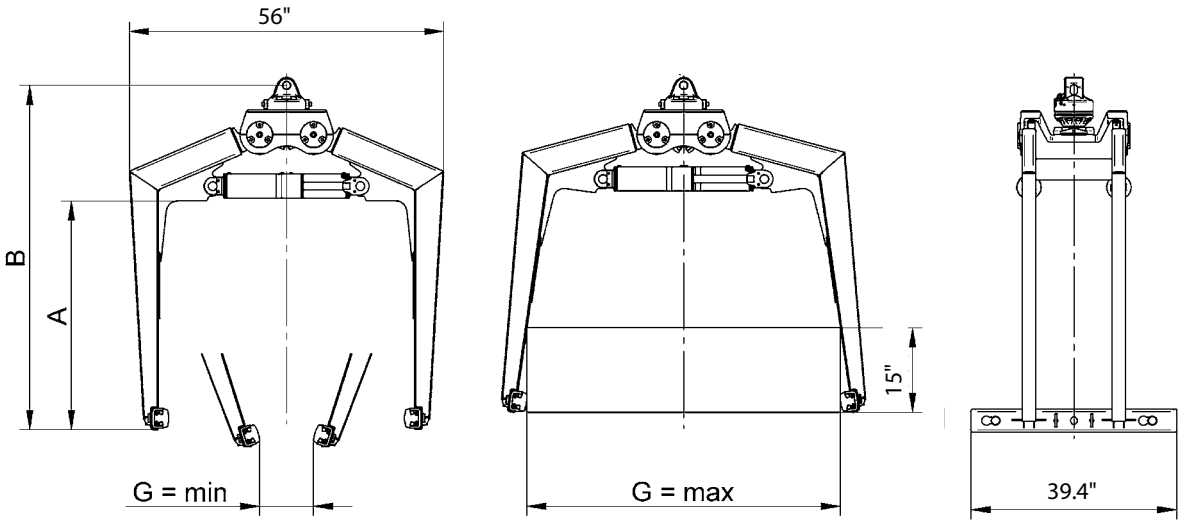
Accessories

Type	Description	Self weight (lbs)
KM 511 4500	upper suspension with pendulum damper	33
KM 381 40 720	compression rails – 28 in (2 pieces)	64
KM 381 40 920	compression rails – 36 in (2 pieces)	81
KM 381 40 1000	compression rails – 39 in (2 pieces)	88
KM 381 40 1120	compression rails – 43 in (2 pieces)	99
KM 381 40 1250	compression rails – 49 in (2 pieces)	114
KM 381 40 1400	compression rails – 55 in (2 pieces)	128
KM 685 06 hook set 4	lifting hooks with safety latches (4 pieces)	
	non-standard compression rails: all grapples are available with compression rail lengths not listed. Call for details	
	non-standard plunge depth: all grapples are available with plunge depths not listed. Call for details	
	alternatively with gear type rotator with shaft	

Requirements of Truck Crane

Operating pressure: 2900 to 4640 psi
Pump capacity: 6.6 to 19.8 GPM

Technical Drawings



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Pallet Fork

Self shifting & adjustable throat & tines with spindle or lock pin adjustment

KM 401Hc

An efficient pallet fork with a hydraulically compensating centre of gravity, the KM 401Hc has a maximum capacity of 6000lbs and can be used on loader cranes.

- **Effective** - handling many different kinds of loads, the KM401Hc saves you time and money due to its hydraulic compensation of centre of gravity.
  (The KM 401H allows multiple positioning and removal from under pallet in an economic, one-man operation)
- **Precise** - integrated KM 04 F rotation guarantees the operator the ability to precisely control and place loads
- **Versatile Height** - the lock pin style height adjustment handles loads from 41in to 65in
- **Versatile Width** - the tine spread can also be adjusted. The lock pin version adjusts from 33in to 57in wide, and the spindle version adjusts from 19in to 32in wide.
- **Easy to use** - loading a second row is simple. No part of the KM 401Hc pallet fork is wider than a standard pallet

Pallet Fork KM 401Hc

Type	Load Capacity (lbs.)	Throat Height (in)	Tine Length (in)	Tine Spread (in)	Tine Dimensions (width x height) (in)	Centre of Gravity (in)	Self Weight (lbs.)
KM 401Hc - spindle	6000	41-65	45	19-32	4 x 1.5	24	525
KM 401Hc - lock pin	6000	41-65	45	33-57	4 x 1.5	24	525

Package consists of: pallet fork, KINSHOFER rotator KM 04 F, short connecting hoses KM 203 01 (rotator to grapple), upper suspension KM 501

Please note: For safer handling of loads in higher elevation a protection trellis or protection chain should be used.

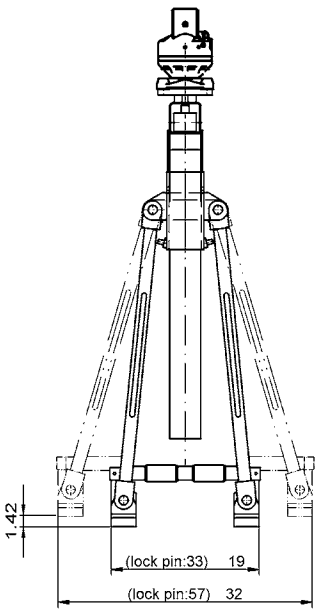
Accessories

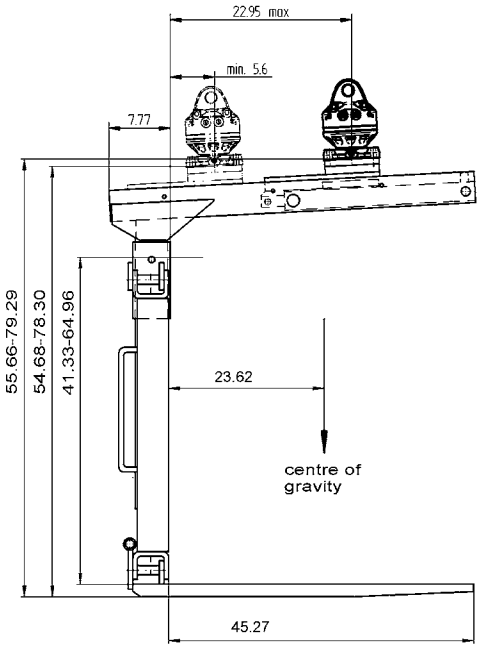
Type	Description
KM 460	protection trellis for loads up to 4400 lbs. (43in x 43in, height 59in)
KM 460	protection trellis for loads up to 4400 lbs. (51in x 51in, height 59in)
KM 460 01	protection chain for loads up to 4400 lbs, for securing loads like shrink wrapped stone
KM 460 03	rigid suspension link with pin – for rotators up to 9900 lbs. capacity
KM 460 04	non rotating hook – for rotators up to 9900 lbs. capacity

Requirements of Loader crane

Operating Pressure: 3000 up to 3800 PSI
Pump Capacity: 2.5 to 10.5 GPM

Technical Drawings





38.6" (20")/45.3" (24")

KM 401 Pallet Fork

Self shifting & adjustable throat & tines with spindle or lock pin adjustment

An efficient pallet fork with spring loaded centre of gravity compensation, the KM 401 is for use on loader cranes for loads up to 6000 lbs

- **Effficient** - handling of different loads saves you time and money
- **Self shifting** - the top arm slide self adjusts to suit the load; travel can be preset depending on the center of gravity of the load to be picked up; compression springs return the slide to its original position once the load has been placed
- **Adjustable Height** - throat height is easily adaptable from 41in to 65in by lock pin
- **Adjustable Width** - tine spread can also be adapted from 33in to 57in using the lock pin version, or 19in to 32in with the spindle version
- **Narrow** - a second row can be easily loaded because no part of the pallet fork is wider than a standard pallet

Pallet Fork KM 401

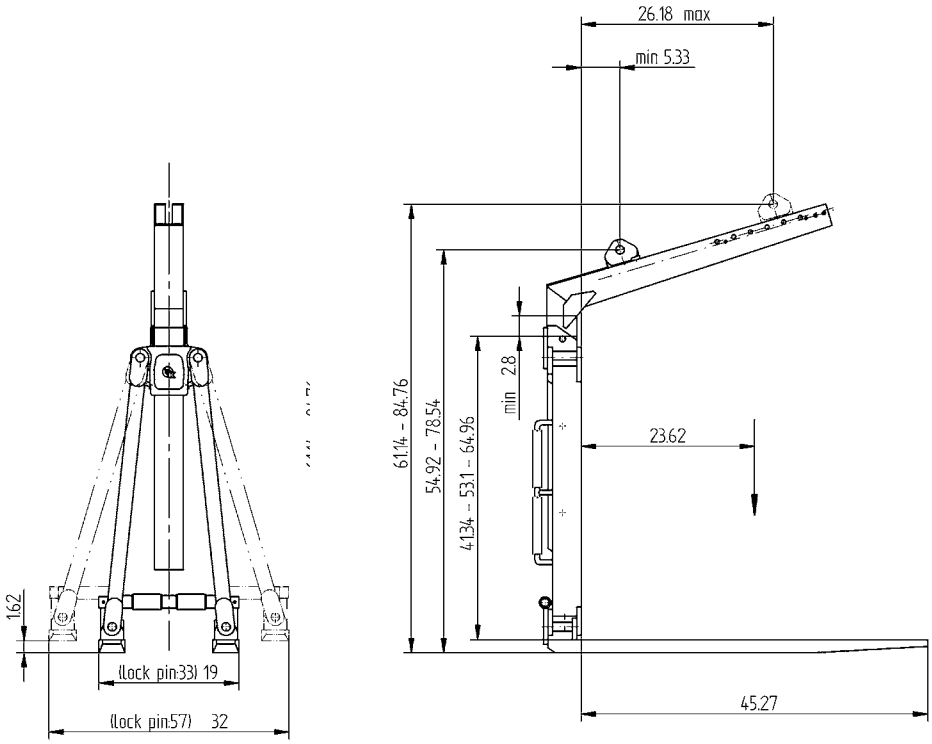
Type	Load Capacity	Throat Height A	Tine Length	Tine spread Z	Tine Dimensions (width x height)	Centre of gravity	Self Weight
	(lbs.)	(in)	(in)	(in)	(in)	(in)	(lbs.)
KM 401 - spindle	6000	41-65	45	19-32	4 x 1.5	24	480
KM 401 - lock pin	6000	41-65	45	33-57	4 x 1.5	24	505

Please note:
– automatic compensation of centre of gravity functions with a minimum pack weight of about 1100 lbs.
– for safer handling of loads in higher elevation a protection trellis or protection chain should be used.

Accessories

Type	Description
KM 460	protection trellis for loads of max. 4400 lbs. (43 x 43 in, height 59 in)
KM 460	protection trellis for loads of max. 4400 lbs. (51 x 51 in, height 59 in)
KM 460 01	protection chain for loads of max. 4400 lbs, for securing loads as shrink wrappped stone stacks to be lifted high above ground
KM 04 S	shaft rotator for controlling the rotation and placement of load
KM 460 03	rigid suspension link with pin – for rotators up to 9900 lbs. capacity
KM 460 04	non rotating hook – for rotators up to 9900 lbs. capacity

Technical Drawings



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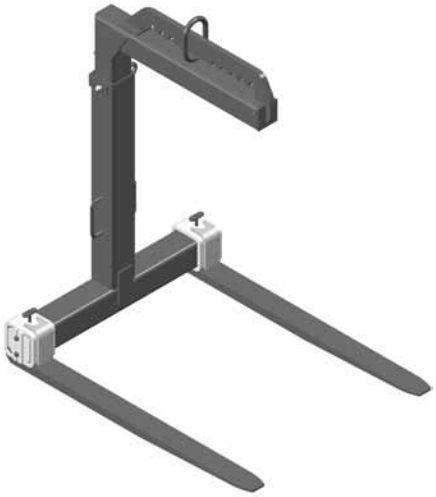
Pallet Fork

manual shifting & fixed or adjustable throat & manually adjustable tines

KM 416

A sturdy pallet fork with mechanical centre of gravity compensation, the KM 416 can be used on loader cranes for loads up to 6000 lbs.



- For **handling palletized and unpalletized loads** of building material or stacked loads of concrete blocks, the KM 416 has a **manually shifting collar** that allows the crane operator to center the pickup trolley over the center of the load.
- The **optional adjustable throat** (KM 416 ADJ), availabe for irregular loads, adjusts from 48 in to 68 in by using a lock pin.
- The tines **can be spread up to 40 in** and have **lock pins** to secure their positions.
- **Easy tine adjustment** allows for optimum load distribution.

Pallet Fork KM 416

Type	Load capacity (lbs)	Throat height A (in)	Tine length (in)	Tine spread Z (in)	Tine dimensions (width x height) (in)	Number of tines	Centre of gravity (in)	Self weight (lbs)
KM 416 - style A	6000	48-68	46	40	4 x 1.5	2	24	490
KM 416 - style B	6000	48-68	47	40	2 x 1.5	6	24	530
KM 416 - style C	6000	48-68	46	40	4 x 1.5	2	24	515
KM 416 - style D	4500	48-68	46	40	4 x 1.25	2	24	475

Please note:
– additional tine spreads, throats, load capacities on request
– different styles of tines see p.18 „Different Styles of manually adjustable Tines"
– For safer handling of loads in higher elevation a protection trellis or protection chain should be used.

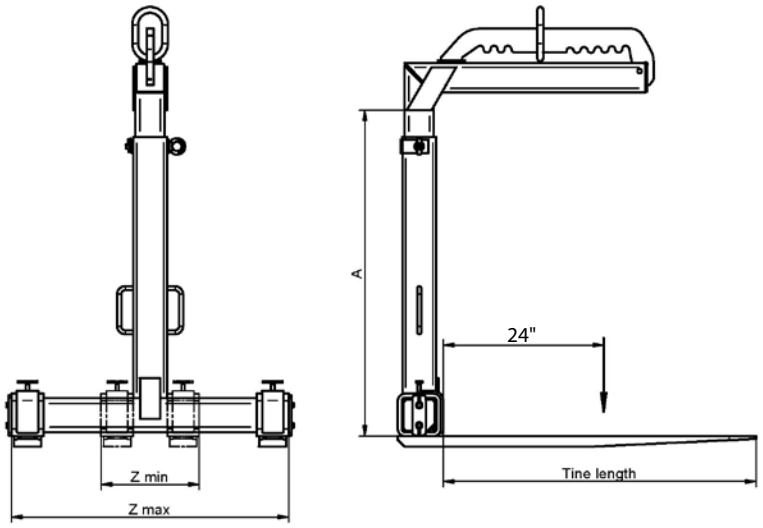
Definition of styles of tines

Type		Description	Number of tines	Tine width (in)	Tine height (in)	Tine length (in)	Load capacity (lbs)
A	Standard		2	4	1.50	46	6000
B	Block	6 tines instead of 2 tines	6	2	1.50	47	6000
C	Offset	bracket is welded to the tine back in an offset of 6 in to the lower end of the tine	2	4	1.50	46	6000
D	Roofers	thinner tines with lower load capacity	2	4	1.25	46	4500

Accessories

Type	Description
KM 460 1100	protection trellis for loads up to 4400 lbs (43 x 43 in, height 59 in)
KM 460 1300	protection trellis for loads up to 4400 lbs (51 x 51 in, height 59 in)
KM 460 01	protection chain for loads up to 4400 lbs for securing loads like shrink wrappped stone stacks to be lifted high above ground backstop for supporting unbalanced loads
KM 04 S	shaft rotator for controlling the rotation and placement of load
KM 460 03	rigid suspension link with pin – for rotators up to 9900 lbs capacity
KM 460 04	non rotating hook – for rotators up to 9900 lbs capacity

Technical Drawings



KM 420

self shifting & adjustable throat & manually adjustable tines

Pallet Fork

The newest in our pallet fork line, the KM 420 incorporates the spring loaded centre of gravity style top arm with the versatility of various lower sections to accommodate your needs.
Handling loads up to 6000 lbs, the pallet fork is for use with loader cranes.

- For **handling palletized and unpalletized loads** of building material or stacked loads of concrete blocks.
- **Efficient handling of different loads** saves time and money due to self shifting slide in the top arm.
- **Travel can be preset** depending on centre of gravity of load to be picked up.
- **Compression springs** return slide to its original position after load is removed.
- **Throat height is easily adjusted** from 48 in to 90 in by lock pin.
- Tine spread can also be adapted **up to 40 in by lock pins.**
- **Easy tine adjustment** allows optimum load distribution.

Pallet Fork KM 420

Type	Load capacity (lbs)	Throat height (in)	Tine length (in)	Tine spread max (in)	Tine dimensions (width x height) (in)	Number of tines	Centre of gravity (in)	Self weight (lbs)
KM 420-4840-6000 - style A	6000	48-68	46	40	4 x 1.5	2	24	445
KM 420-6040-6000 - style A	6000	60-90	46	40	4 x 1.5	2	24	480
KM 420-4840-6000 - style B	6000	48-68	47	40	2 x 1.5	6	24	540
KM 420-6040-6000 - style B	6000	60-90	47	40	2 x 1.5	6	24	570
KM 420-4840-6000 - style C	6000	48-68	46	40	4 x 1.5	2	24	470
KM 420-6040-6000 - style C	6000	60-90	46	40	4 x 1.5	2	24	505
KM 420-4840-4500 - style D	4500	48-68	46	40	4 x 1.25	2	24	420
KM 420-6040-4500 - style D	4500	60-90	46	40	4 x 1.25	2	24	460

Please note:
– automatic compensation of centre of gravity functions with a minimum pack weight of about 1100 lbs
– additional tine spreads, throats, load capacities on request
– different styles of tines see p.18„Different Styles of manually adjustable Tines“
– For safer handling of loads in higher elevation a protection trellis or protection chain should be used.

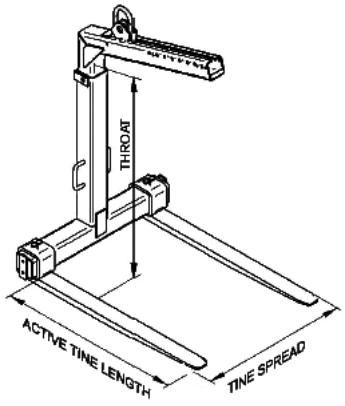
Definition of styles of tines

Type		Description	Number of tines	Dimensions width (in)	Height (in)	Length (in)	Load capacity (lbs)
A	Standard		2	4	1.50	46	6000
B	Block	6 tines instead of 2 tinesw	6	2	1.50	47	6000
C	Offset	bracket is welded to the tine back in an offset of 6 in to the lower end of the tine	2	4	1.50	46	6000
D	Roofers	thinner tines with lower load capacity	2	4	1.25	46	4500

Accessories

Type	Description
KM 460 1100	protection trellis for loads up to 4400 lbs (43 x 43 in, height 59 in)
KM 460 1300	protection trellis for loads up to 4400 lbs (51 x 51 in, height 59 in)
KM 460 01	protection chain for loads up to 4400 lbs, for securing loads like shrink wrappped stone stacks to be lifted high above ground
	backstop for supporting unbalanced loads
KM 04 S	shaft rotator for controlling the rotation and placement of load
KM 460 03	rigid suspension link with pin – for rotators up to 9900 lbs capacity
KM 460 04	non rotating hook – for rotators up to 9900 lbs capacity
KM 04 F	flange rotator for controlling the rotation and placement of the load
	flange adapter for KM 04 F

Technical Drawings



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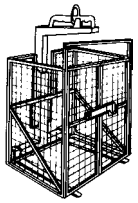
Accessories for Pallet Forks

KM 460 - Protection Trellis

For safer handling of bricks and other stacked goods or loose materials in higher elevation - max. capacity of 4400 lbs. The trellis can be mounted within minutes and is therefore a flexible system on the construction site.



Type	Dimensions (in)	Height (in)	Self weight (lbs)
KM 460 1100	43 x 43	59	150
KM 460 1300	51 x 51	59	175

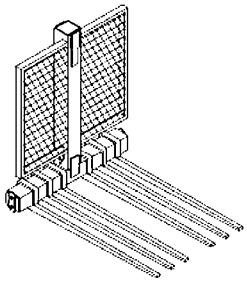
Other dimensions available on request.

KM 460 01 - Protection Chain

For safer handling of loads as stone stacks (shrink wrapped) in higher elevation - max. capacity of 4400 lbs. Hooks on the crane fork are necessary for the use of protection chain.

Type	Length (in)	Self weight (lbs)
KM 460 01	20	9

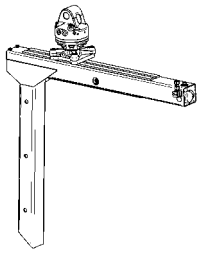
Backstop



A backstop can be welded to the throat of a pallet fork as support for unbalanced loads

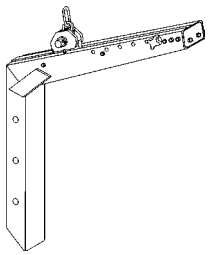
Different Methods for Centre of Gravity Compensation

Hydraulic Shifting



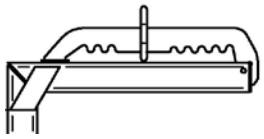
Hydraulic centre of gravity compensation: the slide in the top arm is moved by a cylinder in an economic one-man-operation. In combination with a rotator, precise positioning is no problem.

Self Shifting



Spring loaded centre of gravity compensation: self shifting slide in the top arm; travel can be preset depending on the center of gravity of load to be picked up. Compression springs return slide to initial position after load is removed.

Comb System



Mechanical centre of gravity compensation: manual change of position of shifting collar by the operator. Suspension ring for crane hook or connection plate for use with flange rotator are available.

Different Types of Tine Adjustment

Spindle Adjustment

Tines adjust by turning the spindle style bottom bar.

Lock Pin Adjustment

Tines adjust by changing the position of a lock pin at the bottom bar.

Manual Adjustment

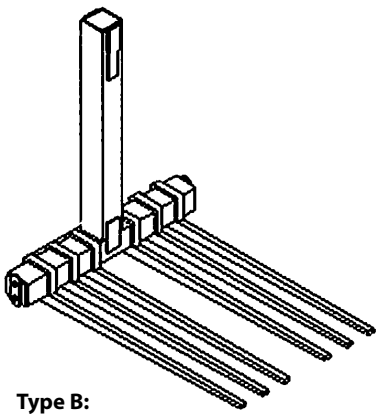
Tines are manually adjusted individually with the help of a spring loaded pin on the bottom bar.

Different Styles of Manually Adjustable Tines

Depending on the requirements of the pallet fork there are different styles of manually adjustable tines

Type	Description		Number of tines	Dimensions width (in)	Height (in)
A	**Standard**		2	4	1.50
B	**Block**	6 tines instead of 2 tines	6	2	1.50
C	**Offset**	bracket is welded to the tine back in an offset of 6 in to the lower end of the tine	2	4	1.50
D	**Roofers**	thinner tines with lower load capacity	2	4	1.25

Type C:
offset tines make it easier to slide out of the pallet especially on rough terrain



Type B:
block tines for wrapped blocks without pallet

Note: "Stub tines" with an active length of 39 in are available on request

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Universal Fork KM 461c

Wallboard fork for loader cranes - load capacity up to 6000 lbs.

- The universal fork is a safe and efficient method for delivering sheets of building materials.
- The tilt cylinder and KINSHOFER rotator ensure accurate positioning.
- Using a hinged lower section, sheets of wallboard can be lifted and folded into a vertical position and clamped between the tines and frame, preventing the boards from sliding during handling.
- Security is assured even in case of a drop in pressure due to the SUN™ counterbalance valve that prevents the fork from opening unintentionally.
- Semi-tapered forged tines, equipped with rollers to protect sheets and pads prevent damage during unloading can be adjusted easily and a standard centre slide gives an additional support point for your loads.

Universal Fork KM 461c

Type	Load Capacity	Flat lift height A	Tine Spread min - max	Throat Height B	Self Weight
	(lbs)	(in)	(in)	(in)	(lbs)
KM 461 -48/63/18 c	6000	48	25 - 63	18	890
KM 461 -48/72/18 c	6000	48	25 - 72	18	915
KM 461 -48/84/18 c	6000	48	25 - 84	18	925
KM 461 -48/63/22 c	6000	48	25 - 63	22	900
KM 461 -48/72/22 c	6000	48	25 - 72	22	925
KM 461 -48/84/22 c	6000	48	25 - 84	22	935
KM 461 -54/63/18 c	6000	54	25 - 63	18	915
KM 461 -54/72/18 c	6000	54	25 - 72	18	970
KM 461 -54/84/18 c	6000	54	25 - 84	18	980
KM 461 -54/63/22 c	6000	54	25 - 63	22	900
KM 461 -54/72/22 c	6000	54	25 - 72	22	925
KM 461 -54/84/22 c	6000	54	25 - 84	22	935

Package consists of: wallboard fork, KINSHOFER rotator KM 04 F140-30US, hoses (rotator to fork), upper suspension KM 501 4500, hose kit, counterbalance valve

Please note: – individual wallboard fork is also available

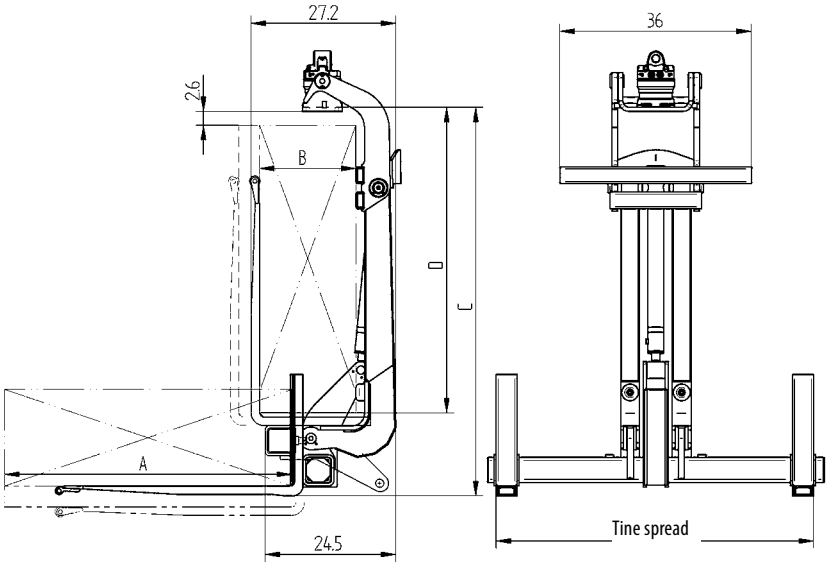
Accessories

Type	Description
KM 04 S68-30US	shaft rotator
KM 505 HD	quick change system for shaft rotator KM 04 S68-30US
KM 461 08	adjustable backstop

Requirements of Loader Crane

Operating Pressure: 3000 psi
Pump Capacity: 15 to 30 GPM

Technical Drawings



KM 461B Universal Fork - Battery Powered

The battery powered universal fork is for loader cranes and tower cranes with no boom tip hydraulics and handles loads up to 6000 lbs.

- The battery powered universal fork is **independent from external hydraulic systems** and works on jobsite tower cranes and telescopic Loader Cranes.
- The **self contained battery powered hydraulic system** converts in minutes to utilize truck´s hydraulic power when used with a boom truck.
- Universal fork is an **efficient and safe method** of delivering building materials.
- Hinged lower section **allows horizontally stored sheets of wallboard to be lifted and folded into a vertical position** and clamped between tines and support beam, preventing the wallboards from sliding during handling.
- **Security is assured** even in case of a drop in pressure due to the SUN™ counterbalance valve that prevents the fork from opening unintentionally.
- Semi-tapered forged tines, equipped with rollers to protect sheets and pads prevent damage during unloading can be adjusted easily and a standard centre slide gives an additional support point for your loads.

Universal Fork KM 461B

Type	Load capacity	Flat lift height A	Tine spread min - max	Throat height B	Self weight
	(lbs)	(in)	(in)	(in)	(lbs)
KM 461B -54/60/22	6000	54	60	22	715
KM 461B -54/60/27	6000	54	60	27	740

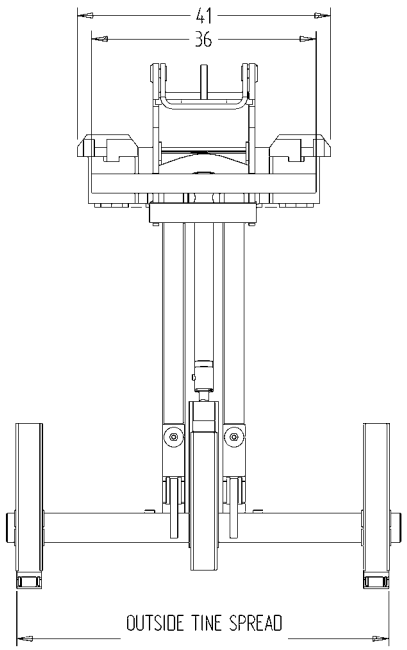
Package consists of: universal fork with
- power pack: rechargeable 12 volt industrial trade batteries operate hydraulic pump when used with non-hydraulic crane
- hydraulic system: operates ram to lower or fold up cradle for loading and carrying; when used with a boom truck a quick and simple conversion connects the truck´s hydraulic power

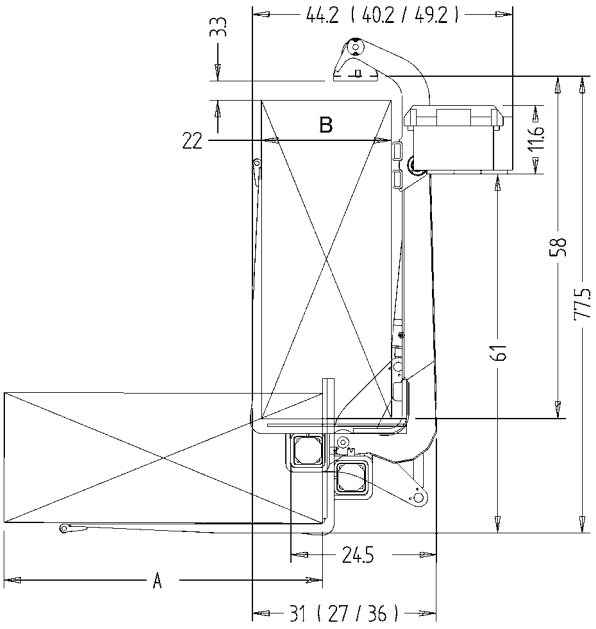
Please note: – additional dimensions on request

Accessories

Type	Description
KM 461 09	fork stand: holds fork upright for storage and transportation, designed for handling with fork lift truck with 48 in tines (weight 150 lbs)

Technical Drawings





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Universal Fork - Low Storage KM 461Lc

A low-profile universal fork for loader cranes, the KM 461L handles up to 6000 lbs.

- **Especially designed for "over-the-cab-storage"** where limited space requires a very narrow fork frame and overall width.
- The **tilt cylinder and KINSHOFER rotator** ensure accurate positioning.
- Using a hinged lower section, **sheets of wallboard can be lifted and folded into a vertical position** and clamped between the tines and frame, preventing the boards from sliding during handling.
- **Security is assured** even in case of a drop in pressure due to the SUN™ counterbalance valve that prevents the fork from opening unintentionally.
- Semi-tapered forged tines, equipped with rollers to protect sheets and pads prevent damage during unloading can be adjusted easily and a standard centre slide gives an additional support point for your loads.

Universal Fork KM 461Lc

Type	Load capacity (lbs)	Flat lift height (in)	Tine spread A (in)	Throat height (in)	Self weight (lbs)
KM 461L -54/63/22 c	6000	54	25-63	22	835

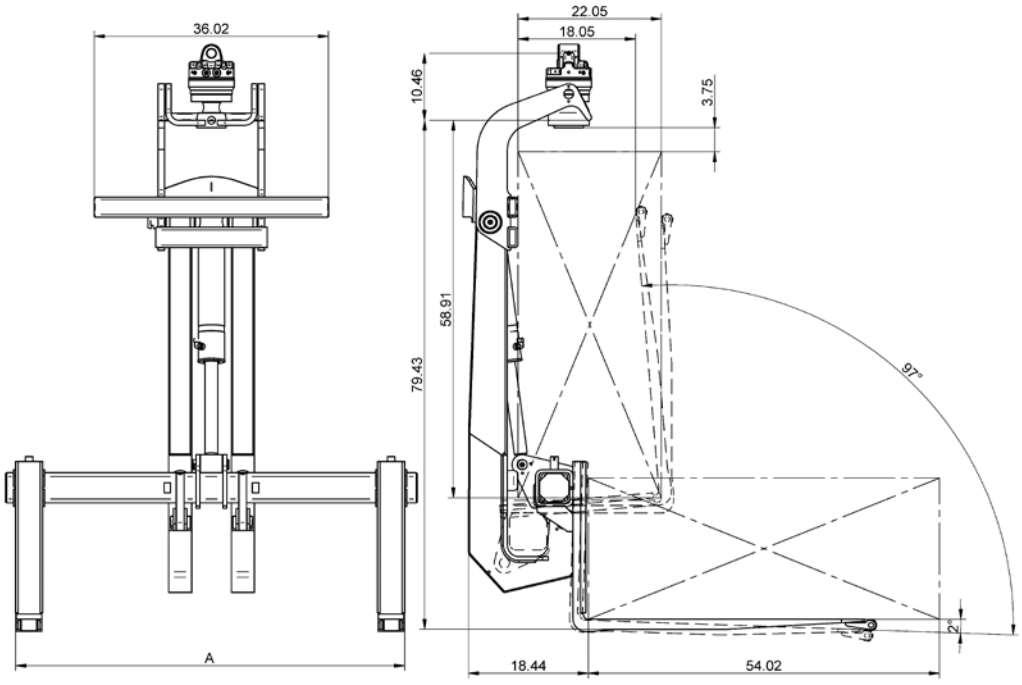
Package consists of: universal fork, KINSHOFER rotator KM 04 S 68-30US, hoses (rotator to fork), upper suspension KM 501 4500, hose kit, counterbalance valve

Please note:
– individual universal fork is also available
– additional dimensions on request
– other bottom bar lengths on request

Requirements of Truck Crane

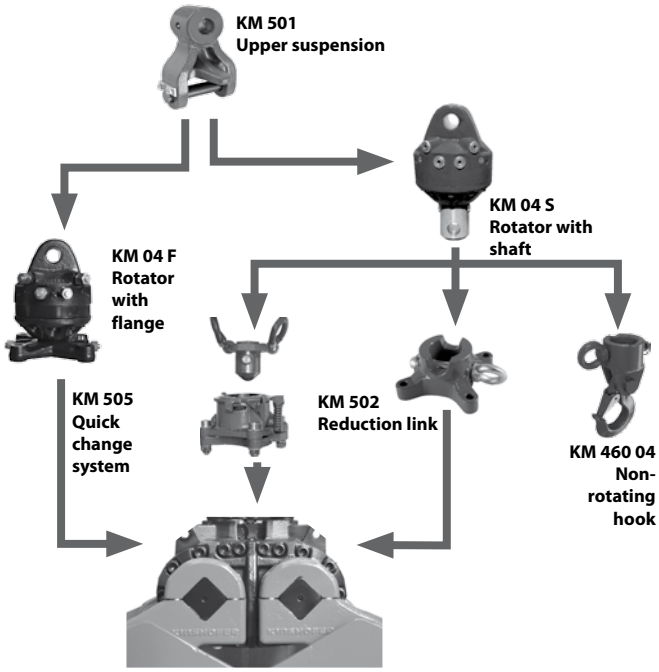
Operating pressure: 2200 - 3750 psi
Pump capacity: 6.5 to 20 GPM

Technical Drawings



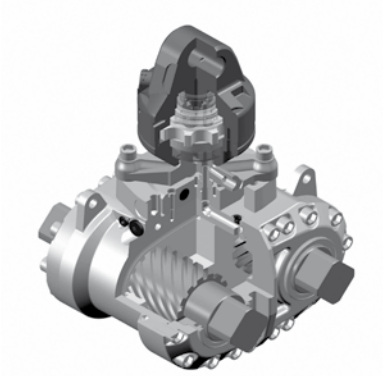
The *HPXdrive Standard* as an allround unit is perfect for the daily routine jobs. The advantages of the *HPXdrive*-technology – the constant high closing force and the compact design – guarantee a long life and rentability.

The standard rotator of the ***HPXdrive Standard*** is the **KINSHOFER** rotator with flange KM 04 F140-30V. In case a quick change to a non-rotating hook is necessary, the ***HPXdrive*** can be delivered with the **KINSHOFER** Rotator with shaft KM 04 S - in combination with the quick change system KM 505 or reduction link KM 502.



Technical Information *HPXdrive Standard*:

Torque (at 3770 psi):	8850 ft.lbs.
Operating pressure:	3750 to 4640 psi
Pump capacity:	6.6 to 19.8 GPM

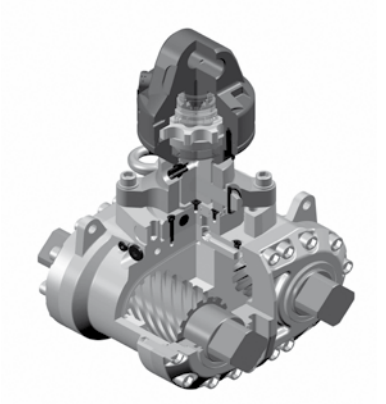


HPXdrive Standard with Flange Rotator HPX-SD-04F-30V

Package consists of: upper suspension KM 501 4500, rotator KM 04 F140-30V, drive unit ***HPXdrive Standard*** with pressure relief valve and non-return valve

Self weight: 352 lbs

Height: 19 in

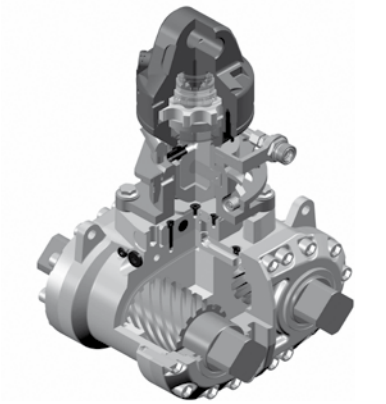


HPXdrive Standard/502 with Shaft Rotator and Reduction Link HPX-SD-502

Package consists of: upper suspension KM 501 4500, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses
KM 203 01, drive unit ***HPXdrive Standard*** with pressure relief valve and non-return valve

Self weight: 363 lbs

Height: 21 in



HPXdrive Standard/505 with Shaft Rotator and Quick Change System HPX-SD-505

Package consists of: upper suspension KM 501 4500, rotator KM 04 S, quick exchange system KM 505, connecting hoses
KM 203 01, drive unit ***HPXdrive Standard*** with pressure relief valve and non-return valve

Self weight: 374 lbs

Height: 23 in

Note: for heavy duty tasks we recommend the quick change system KM 505 HD in combination with KM 04 S68-30US

Please note: The drive unit ***HPXdrive Standard*** can only be used in combination with **KINSHOFER** Rotator and **KINSHOFER** Shells

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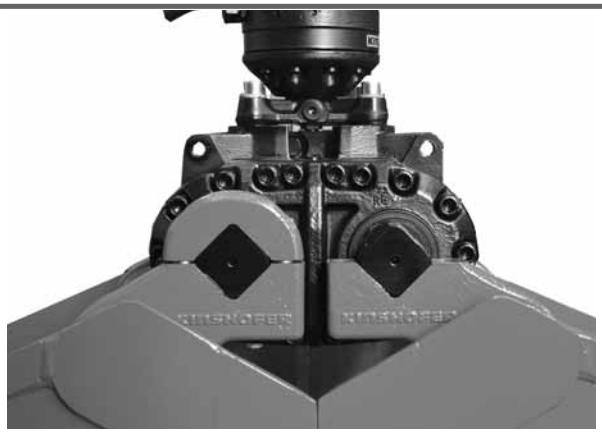
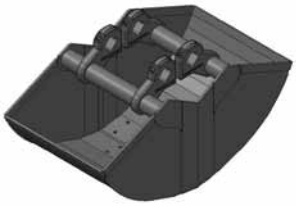
The bucket shells of the *HPXdrive Standard* are bolted to the shafts, and therefore it is very easy to replace them with another set of shells. Different types of shells for different applications can be refitted onto the driving unit, e.g. clamshell bucket, rock grapple, timber grapple, hay and forestry grapple and multi purpose clamshell. Other types of shells are available on request.



The interchangeable shells are delivered with an exchange aid that guarantees that the ***HPXdrive Standard*** can be positioned with ease.

Package consists of: exchangeable shells, bolt-on teeth (for KM 604HPX, KM 626HPX), exchange aid kit



Type	Volume (c.y.)	Width (in)	max. Opening (in)	Number of teeth/tines	Self weight (lbs)
Shells for Clamshell Bucket – KM 604HPX					
KM 604HPX-200S	0.26	16	55	4	286
KM 604HPX-250S	0.33	20	55	4	319
KM 604HPX-325S	0.43	24	55	6	352
KM 604HPX-350S	0.46	26	55	6	363
KM 604HPX-450S	0.59	32	55	6	396

Shells for small Clamshell Bucket – KM 626HPX					
KM 626HPX-95S	0.12	16	35	4	198
KM 626HPX-100S	0.13	18	35	4	209
KM 626HPX-150S	0.20	24	35	6	264

Shells for Clamshell Bucket with open shells – KM 604U HPX					
KM 604U HPX-250S	0.33	22	63	-	473
KM 604U HPX-300S	0.39	26	63	-	517
KM 604U HPX-400S	0.52	32	63	-	561
KM 604U HPX-500S	0.65	40	63	-	627

Shells for Rock Grapple – KM 613HPX					
KM 613HPX-0,16S	0.11 cords	16	48	-	165

Shells for Timber Grapple – KM 632HPX					
KM 632HPX-0,16S	0.11 cords	16	48	-	165

Shells for Hay and Forestry Grapple – KM 641HPX					
KM 641HPX-0,2S	0.13 cords	26	47	7	209
KM 641HPX-0,4S	0.27 cords	37	67	7	352

Please note: The drive unit ***HPXdrive Standard*** can only be used in combination with **KINSHOFER** Rotator and **KINSHOFER** Shells

KM 604HPX — Clamshell Bucket with *HPXdrive*

An allround clamshell bucket using the *HPXdrive Standard* for digging and handling, the KM 604HPX is ideal for the daily routine work. The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.

- **Reliability** of the *HPXdrive*! The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. No more hydraulic cylinders!
- **Longer life cycle** up to 50%! The drive unit runs in a permanent oil bath – no lubrication service is necessary. The compact design makes the *HPXdrive* resistant to dirt and debris.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type KINSHOFER rotator and shells synchronised by the single piston turning both shafts.
- **Rotator with shaft** is available as an alternative, in case a quick change to a non-rotating hook is favoured.
- **Constant closing force** (4180 lbf at 3770 psi operating pressure) for the entire opening and closing process.

Package Clamshell Bucket KM 604HPX with KINSHOFER Flange Rotator

Type	Volume	Width B	Height	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)		(lbs)	(lbf)	(lbs)
KM 604HPX-200 c	0.26	16	40	55	4	638	4180	6600
KM 604HPX-250 c	0.33	20	40	55	4	671	4180	6600
KM 604HPX-325 c	0.43	24	40	55	6	704	4180	6600
KM 604HPX-350 c	0.46	26	40	55	6	715	4180	6600
KM 604HPX-450 c	0.59	32	40	55	6	748	4180	6600

Package consists of: clamshell bucket, bolt-on teeth, rotator KM 04 F140-30V, upper suspension KM 501 4500, pressure relief valve, non-return valve

Please note:
– the KM 604HPX is also available with a shaft rotator and quick change system KM 505
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US

Package Clamshell Bucket KM 604HPX/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Volume	Width B	Height	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)		(lbs)	(lbf)	(lbs)
KM 604HPX-200/502 c	0.26	16	42	55	4	649	4180	6600
KM 604HPX-250/502 c	0.33	20	42	55	4	682	4180	6600
KM 604HPX-325/502 c	0.43	24	42	55	6	715	4180	6600
KM 604HPX-350/502 c	0.46	26	42	55	6	726	4180	6600
KM 604HPX-450/502 c	0.59	32	42	55	6	759	4180	6600

Package consists of: clamshell bucket, bolt-on teeth, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, pressure relief valve, non-return valve

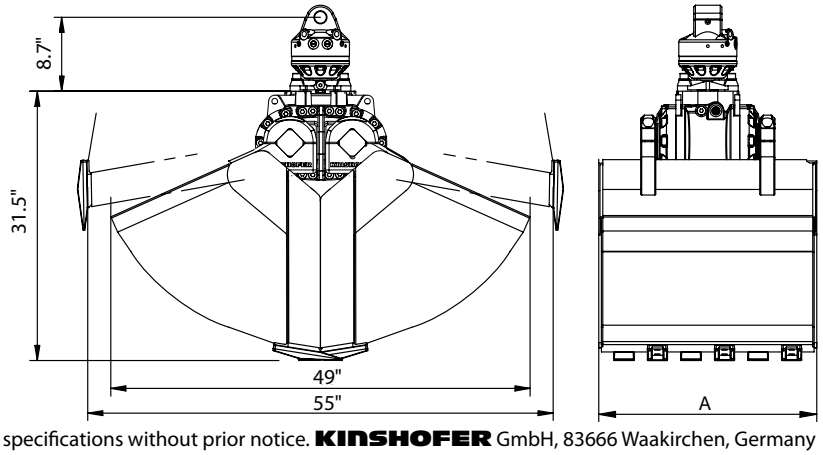
Accessories

Type	Description
KM 680 01	scraper
KM 685 05	adapters for compression rails
KM 685 06 HPX SD	central lifting device
KM 685 07 set	wear plates to protect horizontal cutting edges (2 pieces)
KM 685 08	extension for excavating e.g. trenches (for canal and civil engineering) – 18 in (66 lbs)
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)

Requirements of Truck Crane

Operating pressure: 3770 to 4640 psi
Pump capacity: 6.6 to 19.8 GPM

Technical Drawings



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Small Clamshell Bucket with *HPXdrive*

KM 626HPX

The KM 626HPX with the *HPXdrive Standard* for digging and handling, is due to its size ideal for small cranes. The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.

- **Reliability** of the ***HPXdrive***! The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. No more hydraulic cylinder.
- **Longer life cycle** up to 50%! The drive unit runs in a permanent oil bath – no lubrication service is necessary. The compact design makes the ***HPXdrive*** resistant to dirt and debris.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type **KINSHOFER** rotator and shells synchronised by the single piston turning both shafts.
- **Rotator** with shaft is available as an alternative, in case a quick change to a non-rotating hook is favoured
- **Constant closing force** (6820 lbf at 3770 psi operating pressure) for the entire opening and closing process.

Package Clamshell Bucket KM 626HPX with KINSHOFER Flange Rotator

Type	Volume	Width B	Height	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)		(lbs)	(lbf)	(lbs)
KM 626HPX-95 c	0.12	16	30	35	4	550	6820	4400
KM 626HPX-100 c	0.13	18	30	35	4	561	6820	4400
KM 626HPX-150 c	0.20	24	30	35	6	616	6820	4400

Package consists of: clamshell bucket, bolt-on teeth, rotator KM 04 F140-30V, upper suspension KM 501 4500, pressure relief valve, non-return valve

Please note:
– the KM 626HPX is also available with a shaft rotator and quick change system KM 505
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US

Package Clamshell Bucket KM 626HPX/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Volume	Width B	Height	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)		(lbs)	(lbf)	(lbs)
KM 626HPX-95/502 c	0.12	16	32.5	35	4	561	6820	4400
KM 626HPX-100/502 c	0.13	18	32.5	35	4	572	6820	4400
KM 626HPX-150/502 c	0.20	24	32.5	35	6	627	6820	4400

Package consists of: clamshell bucket, bolt-on teeth, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, pressure relief valve, non-return valve

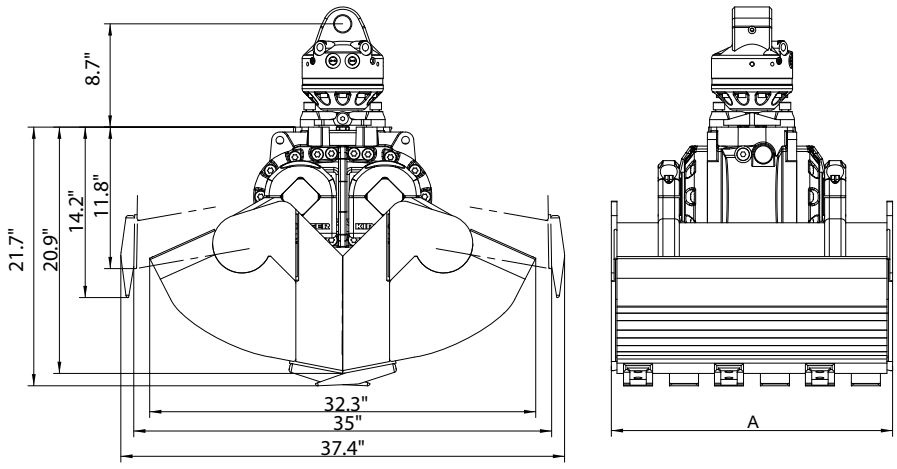
Accessories

Type	Description
KM 680 02	scraper
KM 685 05	adapters for compression rails
KM 685 06 HPX SD	central lifting device
KM 685 07 set	wear plates to protect horizontal cutting edges (2 pieces)
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)

Requirements of Truck Crane

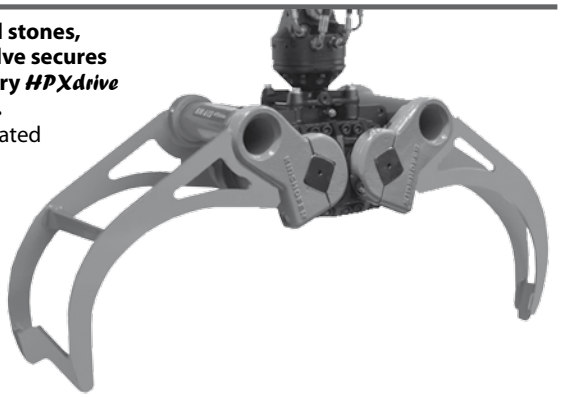
Operating pressure: 3770 to 4640 psi
Pump capacity: 6.6 to 19.8 GPM

Technical Drawings



KM 613HPX

Rock Grapple with *HPXdrive*



The KM 613HPX with *HPXdrive Standard* for positioning and handling natural stones, curbstones etc. is an ideal tool for landscaping architecture. A non-return valve secures constant pressure even in case of unexpected pressure drop. The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.

- **Reliability** of the ***HPXdrive***! The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. No more hydraulic cylinder.
- **Longer life cycle** up to 50%! The drive unit runs in a permanent oil bath no lubrication service is necessary. The compact design makes the ***HPXdrive*** resistant to dirt and debris.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type **KINSHOFER** rotator and shells synchronised by the single piston turning both shafts.
- **Rotator with shaft** is available as an alternative, in case a quick change to a non-rotating hook is favoured.
- **Constant closing force** (3960 lbf at 3770 psi operating pressure) for the entire opening and closing process.

Package Rock Grapple KM 613HPX with KINSHOFER Flange Rotator

Type	Capacity (cords)	Width B (in)	Height (in)	max. Opening (in)	Self weight (lbs)	Closing force (lbf)	Load capacity (lbs)
KM 613HPX-0,16 c	0.11	32	39	47	517	3960	2200

Package consists of: rock grapple, rotator KM 04 F140-30V, upper suspension KM 501 4500, pressure relief valve, non-return valve
Please note:
– KM 613HPX is also available with a shaft rotator and quick change system KM 505
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US

Package rock grapple KM 613HPX/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Capacity (cords)	Width B (in)	Height (in)	max. Opening (in)	Self weight (lbs)	Closing force (lbf)	Load capacity (lbs)
KM 613HPX-0,16/502 c	0.11	16	41.5	47	528	3960	2200

Package consists of: rock grapple, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, pressure relief valve, non-return valve

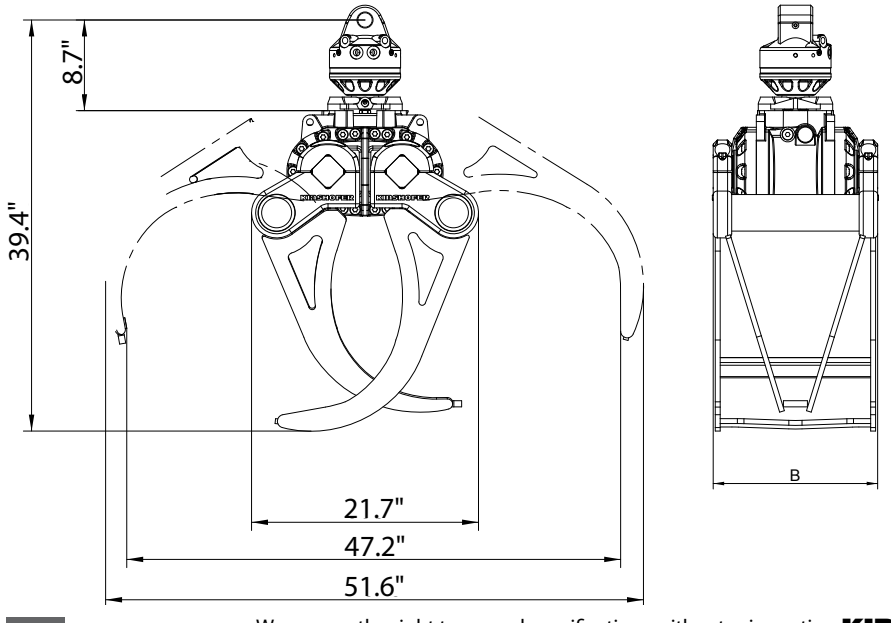
Accessories

Type	Description
KM 685 06 HPX SD	central lifting device
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)

Requirements of Truck Crane

Operating pressure: 3750 to 4610 psi
Pump capacity: 6.6 to 19.8 GPM

Technical Drawings



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Timber Grapple with *HPXdrive* KM 632HPX

The KM 632HPX with *HPXdrive Standard* for loading short logs, shrubbery, branches etc. A non-return valve secures constant pressure even in case of unexpected pressure drop. The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.

- **Reliability** of the *HPXdrive*! The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. No more hydraulic cylinder.
- **Longer life cycle** up to 50%! The drive unit runs in a permanent oil bath – no lubrication service is necessary. The compact design makes the *HPXdrive* resistant to dirt and debris.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type KINSHOFER rotator and shells synchronised by the single piston turning both shafts.
- **Rotator with shaft** is available as an alternative, in case a quick change to a non-rotating hook is favoured.
- **Constant closing force** (3960 lbf at 3770 psi operating pressure) for the entire opening and closing process.

Package Timber Grapple KM 632HPX with KINSHOFER Flange Rotator

Type	Capacity	Width B	Height	min. Log-Ø	max. Opening	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)	(in)	(lbs)	(lbf)	(lbs)
KM 632HPX-0,16 c	0.11	32	39	6.7	48	517	3960	2200

Package consists of: timber grapple, rotator KM 04 F140-30V, upper suspension KM 501 4500, pressure relief valve, non-return valve
Please note: – KM 632HPX is also available with a shaft rotator and quick change system KM 505
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US

Package Timber Grapple KM 632HPX/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Capacity	Width B	Height	min. Log-Ø	max. Opening	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)	(in)	(lbs)	(lbf)	(lbs)
KM 632HPX-0,16/502 c	0.11	16	41.5	6.7	48	528	3960	2200

Package consists of: timber grapple, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, pressure relief valve, non-return valve

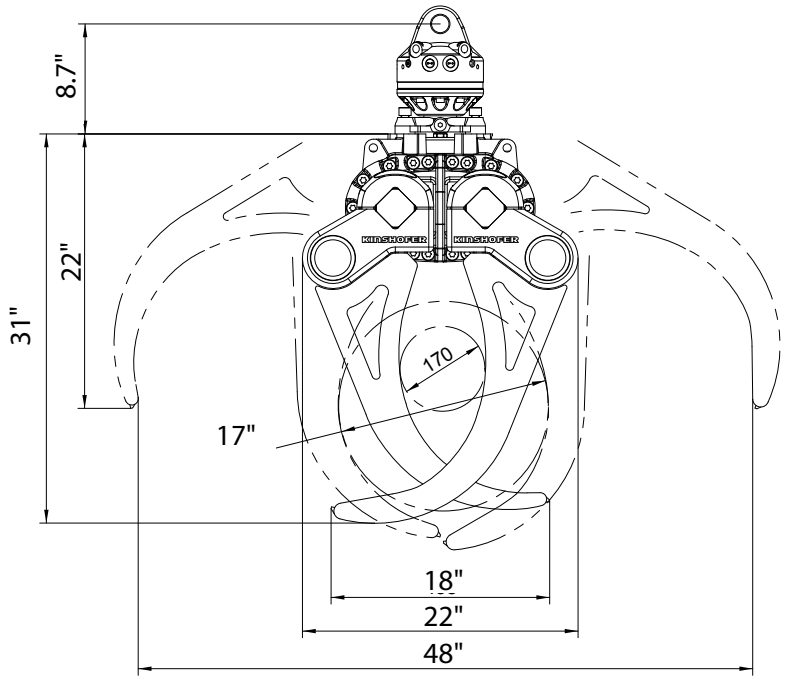
Accessories

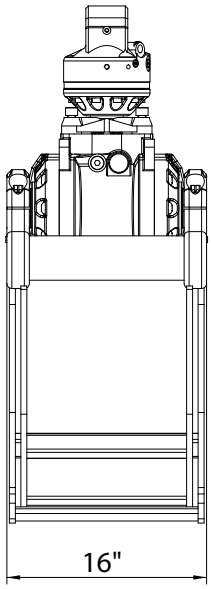
Type	Description
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)

Requirements of Truck Crane

Operating pressure: 3750 to 4610 psi
Pump capacity: 6.6 to 19.8 GPM

Technical Drawings





KM 641HPX — Hay and Forestry Grapple with *HPXdrive*

The hay and forestry grapple KM641 HPX using the *HPXdrive Standard* is ideal for handling hay, brushwood, compost or manure – often used for municipal operations and road work. The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.

- **Reliability** of the *HPXdrive*! The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single pisto n. No mor hydraulic cylinder.
- **Longer life cycle** up to 50%! The drive unit runs in a permanent oil bath – no lubrication service is necessary. The compact design makes the *HPXdrive* resistant to dirt and debris.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type KINSHOFER rotator and shells synchronised by the single piston turning both shafts.
- **Rotator with shaft** is available as an alternative, in case a quick change to a non-rotating hook is favoured
- **Constant closing force** (3960 lbf / 3080 lbf at 3770 psi operating pressure) for the entire opening and closing process.

Package Hay and Forestry Grapple KM 641HPX with KINSHOFER Flange Rotator

Type	Capacity	Width B	Height C + rotator	max. Opening A	Number of tines	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)		(lbs)	(lbf)	(lbs)
KM 641HPX-0,2 c	0.13	26	37	47	7	561	3960	2200
KM 641HPX-0,4 c	0.27	37	47	67	7	704	3080	4400

Package consists of: hay and forestry grapple, rotator KM 04 F140-30V, upper suspension KM 501 4500, pressure relief valve, non-return valve

Please note:
– KM 641HPX is also available with a shaft rotator and quick change system KM 505
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US

Package Hay and Forestry Grapple KM 641HPX/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Capacity	Width B	Height C + rotator	max. Opening A	Number of tines	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(mm)		(lbs)	(lbf)	(lbs)
KM 641HPX-0,2/502 c	0.13	26	40	47	7	572	3960	2200
KM 641HPX-0,4/502 c	0.27	37	49	67	7	715	3080	4400

Package consists of: hay and forestry grapple, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, pressure relief valve, non-return valve

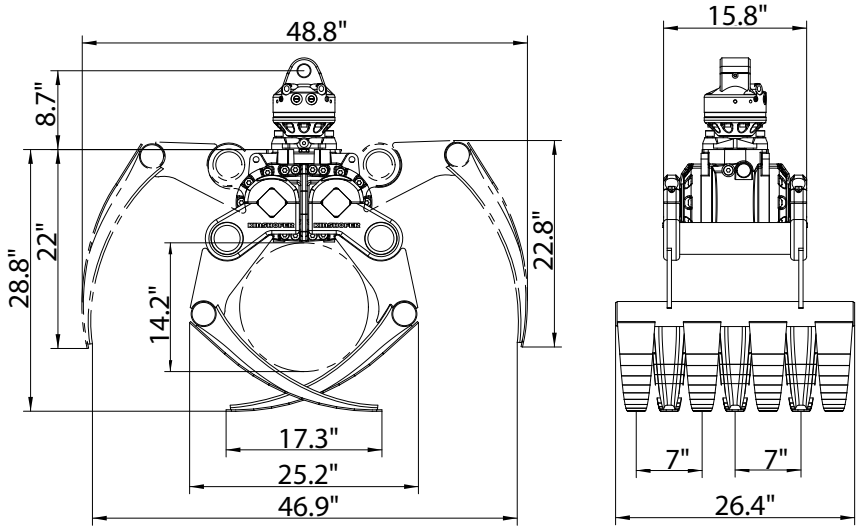
Accessories

Type	Description
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)

Requirements of Truck Crane

Operating pressure: 3750 to 4610 psi
Pump capacity: 6.6 to 19.8 GPM

Technical Drawings



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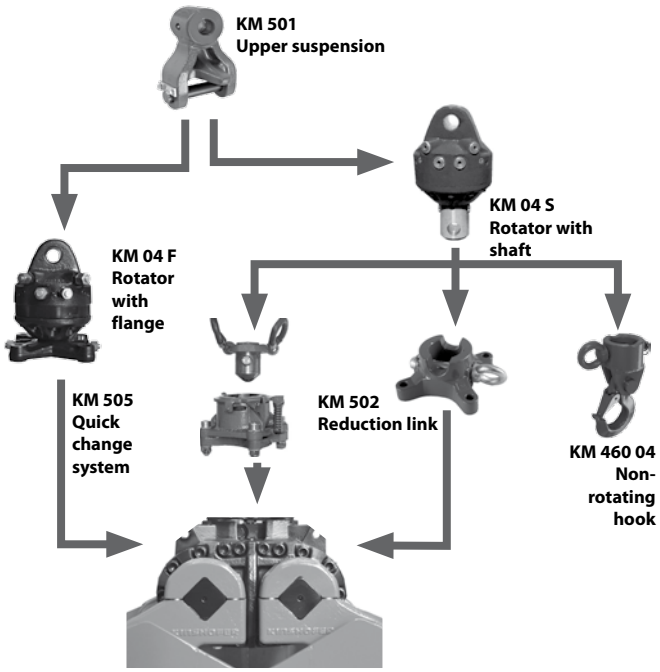
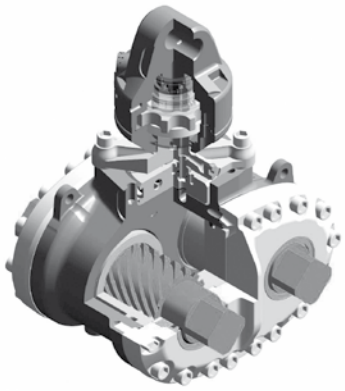
The *HPXdrive Heavy Duty* is a powerful version for difficult tasks. The advantages of the *HPXdrive*-technology – the constant high closing force and the compact design – guarantee a long life and rentability.

The standard rotator of the ***HPXdrive Heavy Duty*** is the **KINSHOFER** rotator with flange KM 04F140-30V. In case a quick change to a non-rotating hook is necessary, the ***HPXdrive*** can be delivered with the **KINSHOFER** Rotator with shaft KM 04 S – in combination with the quick change system KM 505 or reduction link KM 502.



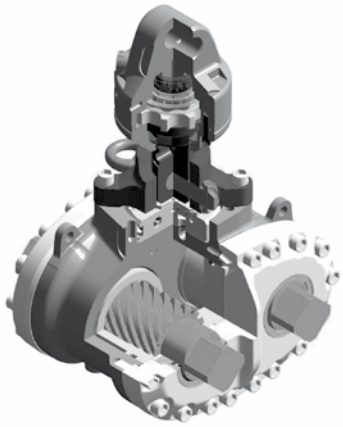
Technical Information *HPXdrive Heavy Duty*:

Torque (at 4640 psi):	15488 Nm
Operating pressure:	3750 to 4610 psi
Pump capacity:	10.6 to 23.8 GPM



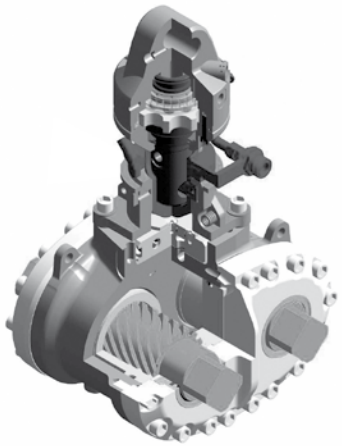
HPXdrive Heavy Duty with Flange Rotator HPX-HD-04F-30V

Package consists of:	upper suspension KM 501 4500, rotator KM 04 F140-30V, drive unit ***HPXdrive Heavy Duty*** with non-return valve
Self weight:	429 lbs
Height:	20 in



HPXdrive Heavy Duty/502 with Shaft Rotator and Reduction Link HPX-HD-502

Package consists of:	upper suspension KM 501 4500, rotator KM 04 S, eduction link KM 502 4500, short connecting hoses KM 203 01, drive unit ***HPXdrive Heavy Duty*** with non-return valve
Self weight:	440 lbs
Height:	22 in



HPXdrive Heavy Duty/505 with Shaft Rotator and Quick Change System HPX-HD-505

Package consists of:	upper suspension KM 501 4500, rotator KM 04 S, quick change system KM 505, short connecting hoses KM 203 01, drive unit ***HPXdrive Heavy Duty*** with non-return valve
Self weight:	451 lbs
Height:	24 in
Note:	for heavy duty tasks we recommend the quick change system KM 505 HD in combination with KM 04 S68-30US

Please note: The drive unit ***HPXdrive Heavy Duty*** can only be used in combination with **KINSHOFER** Rotator and **KINSHOFER** Shells

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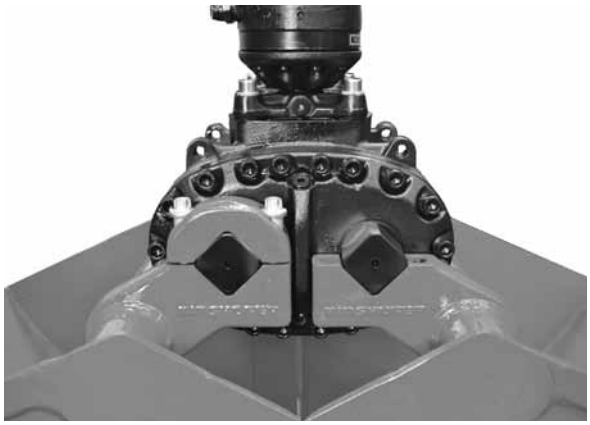
Exchangeable Shells

The bucket shells of the *HPXdrive Heavy Duty* are bolted to the shafts, and therefore it is very easy to replace them with another set of shells. Different types of shells for different applications can be refitted onto the driving unit, e.g. clamshell bucket, rock grapple, timber grapple, hay and forestry grapple. Other types of shells are available on request.



The interchangeable shells are delivered with an exchange aid that guarantees that the ***HPXdrive Heavy Duty*** **can be positioned with ease.**

Package consists of: exchangeable shells, bolt-on teeth (for KM 605HPX), exchange aid kit

Type	Volume	Width	max. Opening	Number of teeth/tines	Self weight
	(c.y.)	(in)	(in)		(lbs)
Shells for Heavy Duty Clamshell Bucket – KM 605HPX					
KM 605HPX-200S	0.26	16	56	4	308
KM 605HPX-250S	0.33	20	56	4	374
KM 605HPX-350S	0.46	26	56	6	440
KM 605HPX-450S	0.59	32	56	6	495
KM 605HPX-550S	0.72	39	56	8	583

Shells for Heavy Duty Clamshell Bucket with Open Shells – KM 605U HPX					
KM 605U HPX-300S	0.39	26	61	5 *	528
KM 605U HPX-400S	0.52	32	61	7 *	572
KM 605U HPX-450S	0.59	36	61	7 *	605
KM 605U HPX-500S	0.65	40	61	9 *	649

* optional available with bolt-on teeth

Shells for Heavy Duty Rock Grapple – KM 613HPX-HD					
KM 613HPX-HD-0,35S	0.23 cords	16	67	-	297

Shells for Heavy Duty Timber Grapple – KM 632HPX-HD					
KM 632HPX-HD-0,16S	0.11 cords	16	51	-	198

Shells for Heavy Duty Hay and Forestry Grapple – KM 641HPX-HD					
KM 641HPX-HD-0,4S	0.27 cords	37	68	7	429

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Heavy Duty Clamshell Bucket with *HPXdrive*

KM 605HPX

A powerful clamshell bucket with the *HPXdrive Heavy duty* manages even difficult tasks thanks to its high closing force – ideal for digging and handling. The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.

- **Reliability** of the *HPXdrive*! The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. No more hydraulic cylinder.
- **Longer life cycle** up to 50%! The drive unit runs in a permanent oil bath – no lubrication service is necessary. The compact design makes the *HPXdrive* resistant to dirt and debris.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type KINSHOFER rotator and shells synchronised by the single piston turning both shafts.
- **Rotator with shaft** is available as an alternative, in case a quick change to a non-rotating hook is favoured.
- **Constant closing force** (7480 lbf at 4640 psi operating pressure) for the entire opening and closing process; high efficiency provided by hydro static bearings of the axes.

Package Clamshell Bucket KM 605HPX with KINSHOFER Flange Rotator

Type	Volume	Width B	Height	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)		(lbs)	(lbf at 4640 psi)	(lbs)
KM 605HPX-200 c	0.26	16	41	56	4	737	7480	6600
KM 605HPX-250 c	0.33	20	41	56	4	792	7480	6600
KM 605HPX-350 c	0.46	26	41	56	6	858	7480	6600
KM 605HPX-450 c	0.59	32	41	56	6	924	7480	6600
KM 605HPX-550 c	0.72	39	41	56	8	1001	7480	6600

Package consists of: clamshell bucket, bolt-on teeth, rotator KM 04 F140-30V, upper suspension KM 501 4500, non-return valve

Please note:
– the KM 605HPX is also available with a shaft rotator and quick change system KM 505
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US

Package Clamshell Bucket KM 605HPX/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Volume	Width B	Height	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)		(lbs)	(lbf at 4640 psi)	(lbs)
KM 605HPX-200/502 c	0.26	16	43	56	4	748	7480	6600
KM 605HPX-250/502 c	0.33	20	43	56	4	803	7480	6600
KM 605HPX-350/502 c	0.46	26	43	56	6	869	7480	6600
KM 605HPX-450/502 c	0.59	32	43	56	6	935	7480	6600
KM 605HPX-550/502 c	0.72	39	43	56	8	1012	7480	6600

Package consists of: clamshell bucket, bolt-on teeth, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, pressure relief valve, non-return valve

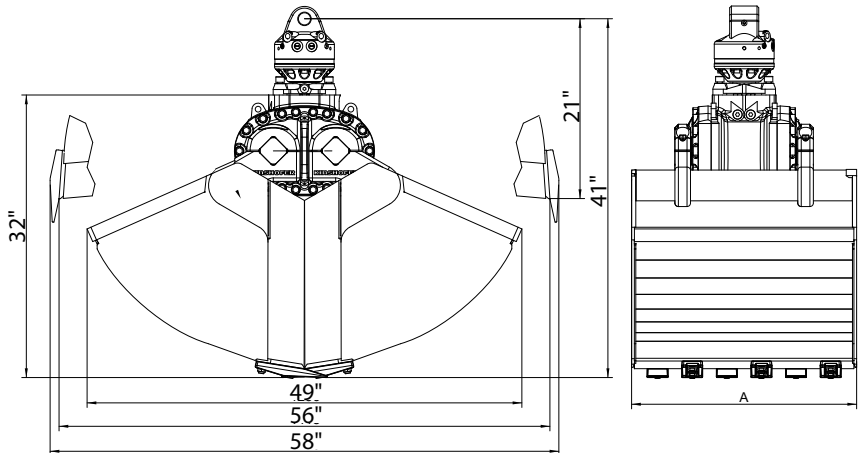
Accessories

Type	Description
KM 680 01	scraper
KM 685 05	adapters for compression rails
KM 685 06 HPX HD	central lifting device
KM 685 07 set	wear plates to protect horizontal cutting edges (2 pieces)
KM 685 08	extension for excavating e.g. trenches (for canal and civil engineering) – 18 in (66 lbs)
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)

Requirements of Truck Crane

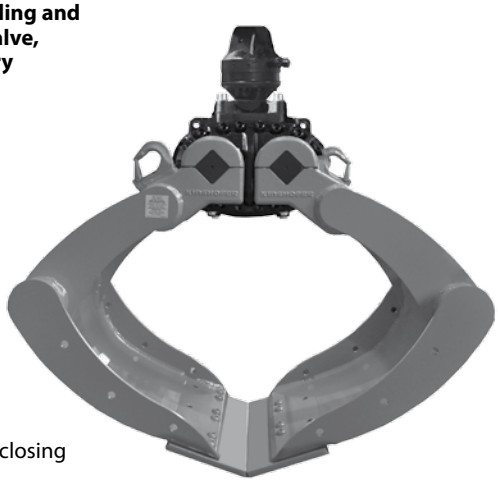
Operating pressure: 3770 to 4640 psi
Pump capacity: 10.6 to 23.8 GPM

Technical Drawings



KM 605U HPX Heavy Duty Clamshell Bucket with Open Shells and *HPXdrive*

The KM 605U HPX is a powerful clamshell bucket using the *HPXdrive Heavy Duty* for handling and easy digging tasks. The open shells enable the handling of bulky materials. Non-return valve, welded hooks and reversible wear plates are delivered on each grapple. The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.



- **Reliability** of the *HPXdrive*! The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. No more hydraulic cylinder.
- **Longer life cycle up** to 50%! The drive unit runs in a permanent oil bath – no lubrication service is necessary. The compact design makes the *HPXdrive* resistant to dirt and debris.
- Versatility with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type KINSHOFER rotator and shells synchronised by the single piston turning both shafts.
- **Rotator with shaft** is available as an alternative, in case a quick change to a non-rotating hook is favoured.
- **Constant closing force** (6600 lbf at 4640 psi operating pressure) for the entire opening and closing process; high efficiency provided by hydro static bearings of the axes.

Package Clamshell Bucket KM 605U HPX with KINSHOFER Flange Rotator

Type	Volume	Width B	Height	Max. Opening	Number of teeth (optional)	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)		(lbs)	(lbf at 4640 psi)	(lbs)
KM 605U HPX-300 c	0.39	26.5	44	61	5	946	6600	6600
KM 605U HPX-400 c	0.52	32.5	44	61	7	1001	6600	6600
KM 605U HPX-450 c	0.59	36	44	61	7	1034	6600	6600
KM 605U HPX-500 c	0.65	40	44	61	9	1067	6600	6600

Package consists of: clamshell bucket, rotator KM 04 F140-30V, upper suspension KM 501 4500, wear plates KM 685 07 set, welded hooks KM 685 06 hook set 2, non-return valve

Please note:
– optional the grapple is available with bolt-on teeth
– KM 605U HPX is also available with a shaft rotator and quick change system KM 505
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US

Package Clamshell Bucket KM 605U HPX/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Volume	Width B	Height	Max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)	(optional)	(lbs)	(lbf at 4640 psi)	(lbs)
KM 605U HPX-300/502 c	0.39	26.5	46	61	5	957	6600	6600
KM 605U HPX-400/502 c	0.52	32.5	46	61	7	1012	6600	6600
KM 605U HPX-450/502 c	0.59	36	46	61	7	1045	6600	6600
KM 605U HPX-500/502 c	0.65	40	46	61	9	1078	6600	6600

Package consists of: clamshell bucket, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, wear plates KM 685 07, welded hooks KM 685 06 hook set 2, non-return valve

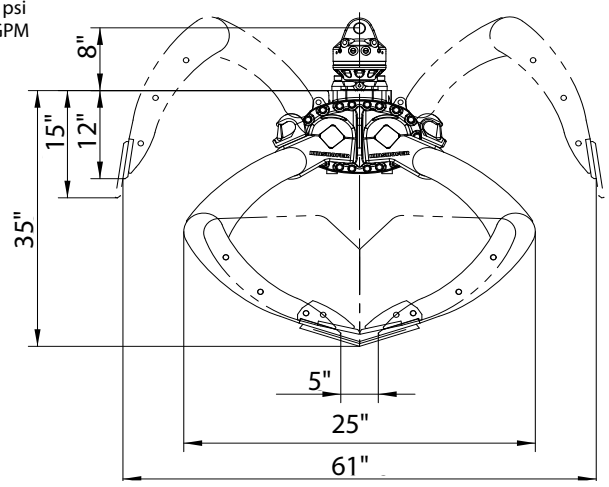
Accessories

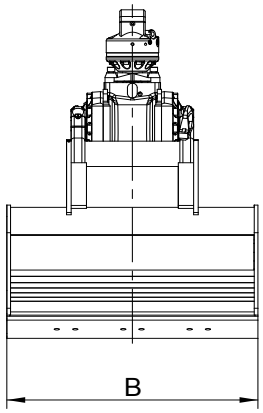
Type	Description
KM 685 05	adapters for mounting of compression rails (non-return valve necessary)
KM 381 09 720	compression rails – length 28.4 in (2 pieces)
KM 381 09 1000	compression rails – length 39.4 in (2 pieces)
KM 685 09 C	side plates to screw onto the grapple for easy digging tasks (4 pieces)
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.39 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.39 in, 2 pieces)

Requirements of Truck Crane

Operating pressure: 3770 to 4640 psi
Pump capacity: 10.6 to 23.8 GPM

Technical Drawings





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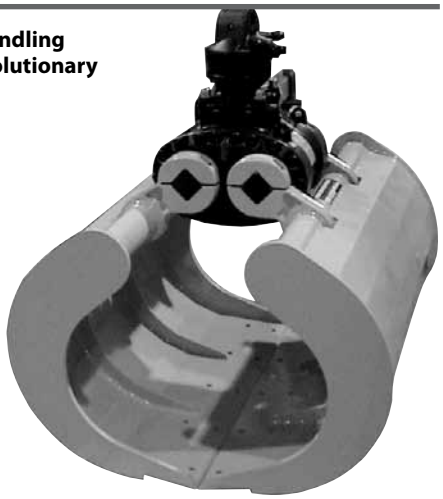
Heavy Duty Refuse Grapple with *HPXdrive* KM 605Uc HPX

The KM 605Uc HPX is a powerful clamshell bucket using the HPXdrive Heavy Duty for handling and easy digging tasks. The open shells enable the handling of bulky materials. The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.



- **Reliability** of the ***HPXdrive***. The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. No more hydraulic cylinder.
- **Longer life cycle up** to 50%! The drive unit runs in a permanent oil bath - no lubrication service is necessary. The compact design makes the ***HPXdrive*** resistant to dirt and debris.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type **KINSHOFER** rotator and shells synchronised by the single piston turning both shafts.
- **Rotator with shaft** is available as an alternative, in case a quick change to a non-rotating hook is favoured.
- **Constant closing force** (4800 lbf at 4640 psi operating pressure) for the entire opening and closing process; high efficiency provided by hydro static bearings of the axes.

Package Refuse Grapple KM 605U HPX with KINSHOFER Flange Rotator

Type	Volume	Width B	Height C	max. Opening A	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)	(lbs)	(lbf at 4640 psi)	(lbs)
KM 605Uc HPX-420	0.55	39.40	42	60	915	4800	6600
KM 605Uc HPX-510	0.67	48.00	42	60	970	4800	6600
KM 605Uc HPX-660	0.86	39.40	51	78	1015	3700	6600

Package consists of: clamshell bucket, **KINSHOFER** rotator KM 04 F140-30V, upper suspension KM 501 4500, non-return valve

Please note:
– KM 605U HPX is also available with a **KINSHOFER** shaft rotator and quick change system KM 505.
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US

Package Refuse Grapple KM 605U HPX/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Volume	Width B	Height C	max. Opening A	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)	(lbs)	(lbf at 4640 psi)	(lbs)
KM 605Uc HPX-420/502	0.55	39.40	45	60	930	4800	6600
KM 605Uc HPX-510/502	0.67	48.00	45	60	985	4800	6600
KM 605Uc HPX-660/502	0.86	39.40	54	78	1030	3700	6600

Package consists of: clamshell bucket, **KINSHOFER** rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, non-return valve

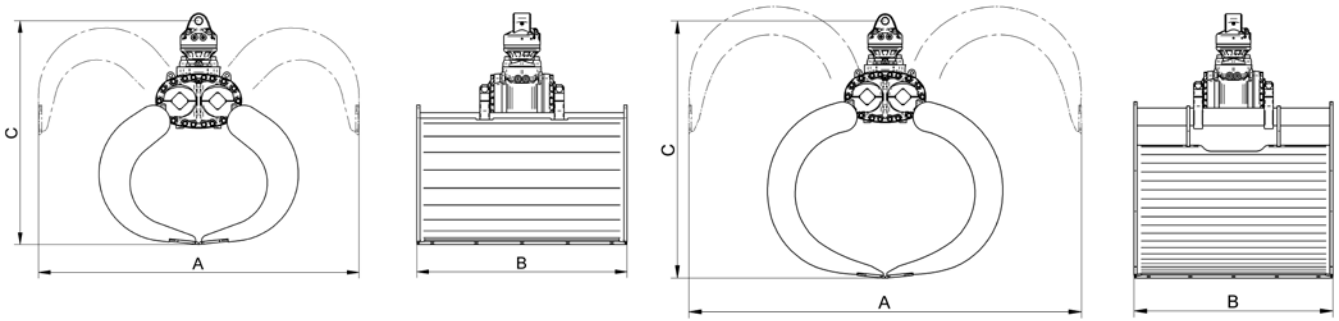
Accessories

Type	Description
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)

Requiremetns of Truck Crane

Operating pressure: 4640 psi
Pump capacity: 10.6 to 23.8 GPM

Technical Drawings



KM 613HPX-HD Heavy Duty Rock grapple with *HPXdrive*

The KM 613HPX-HD with *HPXdrive Heavy Duty* for positioning and handling natural stones, curbstones etc. is an ideal tool for landscaping architecture. A non-return valve secures constant pressure even in case of unexpected pressure drop. The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.

- **Reliability** of the ***HPXdrive***! The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. No more hydraulic cylinder.
- **Longer life cycle** up to 50%! The drive unit runs in a permanent oil bath no lubrication service is necessary. The compact design makes the ***HPXdrive*** resistant to dirt and debris.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type **KINSHOFER** rotator and shells synchronised by the single piston turning both shafts.
- **Rotator with shaft** is available as an alternative, in case a quick change to a non-rotating hook is favoured.
- **Constant closing force** (4840 lbf at 4640 psi operating pressure) for the entire opening and closing process; high efficiency provided by hydro static bearings of the axes.

Package Rock Grapple KM 613HPX-HD with KINSHOFER Flange Rotator

Type	Capacity	Width	Height	max. Opening	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)	(lbs)	(lbf at 4640 psi)	(kg)
KM 613HPX-HD-0,35 c	0.23	16	50	67	737	4840	2000

Package consists of: rock grapple, rotator KM 04 F140-30V, upper suspension KM 501 4500, non-return valve
Please note: – KM 613HPX-HD is also available with a shaft rotator and quick change system KM 505
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US

Package Rock grapple KM 613HPX-HD/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Capacity	Width	Height	max. Opening	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)	(lbs)	(lbf at 4640 psi)	(kg)
KM 613HPX-HD-0,35/502 c	0.23	16	52	67	748	4840	2000

Package consists of: rock grapple, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, non-return valve

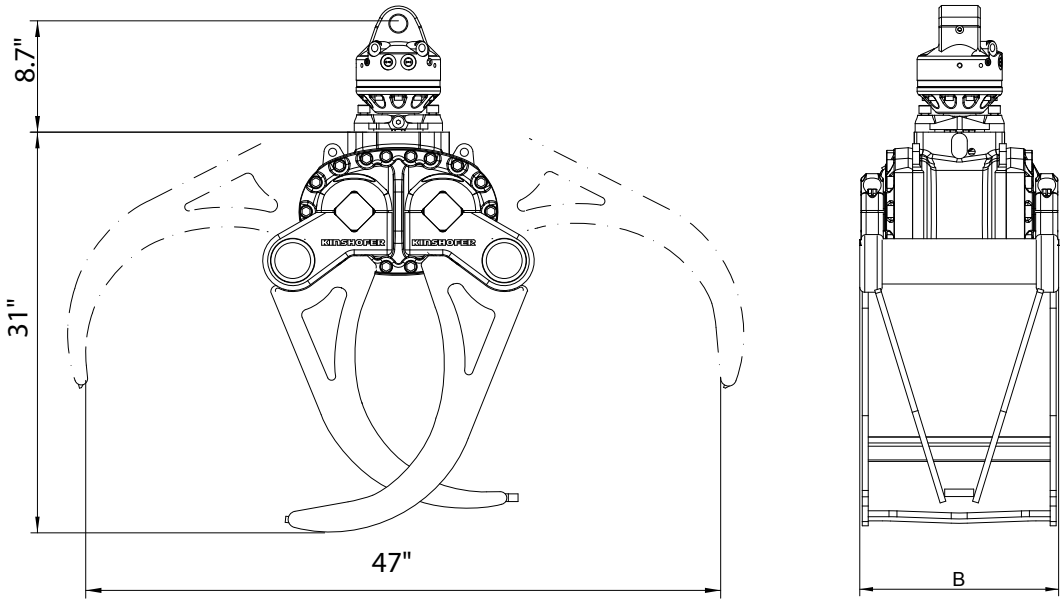
Accessories

Type	Description
KM 685 06 HPX HD	central lifting device
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)

Requirements of Truck Crane

Operating pressure: 3770 to 4640 psi
Pump capacity: 10.6 to 23.8 GPM

Technical Drawings



We reserve the right to amend specifications without prior notice. KINSHOFER GmbH, 83666 Waakirchen, Germany

Heavy Duty Timber Grapple with *HPXdrive* KM 632HPX-HD

**The KM 632HPX with *HPXdrive Heavy Duty* for loading short logs, shrubbery, branches etc.
A non-return valve secures constant pressure even in case of unexpected pressure drop.
The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.**

- **Reliability** of the *HPXdrive*! The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. No more hydraulic cylinder.
- **Longer life cycle** up to 50%! The drive unit runs in a permanent oil bath no lubrication service is necessary. The compact design makes the *HPXdrive* resistant to dirt and debris.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type KINSHOFER rotator and shells synchronised by the single piston turning both shafts.
- **Rotator with shaft** is available as an alternative, in case a quick change to a non-rotating hook is favoured.
- **Constant closing force** (6820 lbf at 4640 psi operating pressure) for the entire opening and closing process; high efficiency provided by hydro static bearings of the axes.

Package Timber grappple KM 632HPX-HD with KINSHOFER Flange Rotator

Type	Capacity	Width	Height	min. Log-Ø	max. Opening	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)	(in)	(lbs)	(lbf at 4640 psi)	(lbs)
KM 632HPX-HD-0,16 c	0.11	16	40	6.7	51	627	6820	4400

Package consists of: timber grapple, rotator KM 04 F140-30V, upper suspension KM 501 4500, non-return valve
Please note:
– KM 632HPX-HD is also available with a shaft rotator and quick change system KM 505
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US

Package Timber grappple KM 632HPX-HD/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Capacity	Width	Height	min. Log-Ø	max. Opening	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)	(in)	(lbs)	(lbf at 4640 psi)	(lbs)
KM 632HPX-HD-0,16/502 c	0.11	16	42	6.7	51	638	6820	4400

Package consists of: timber grapple, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, non-return valve

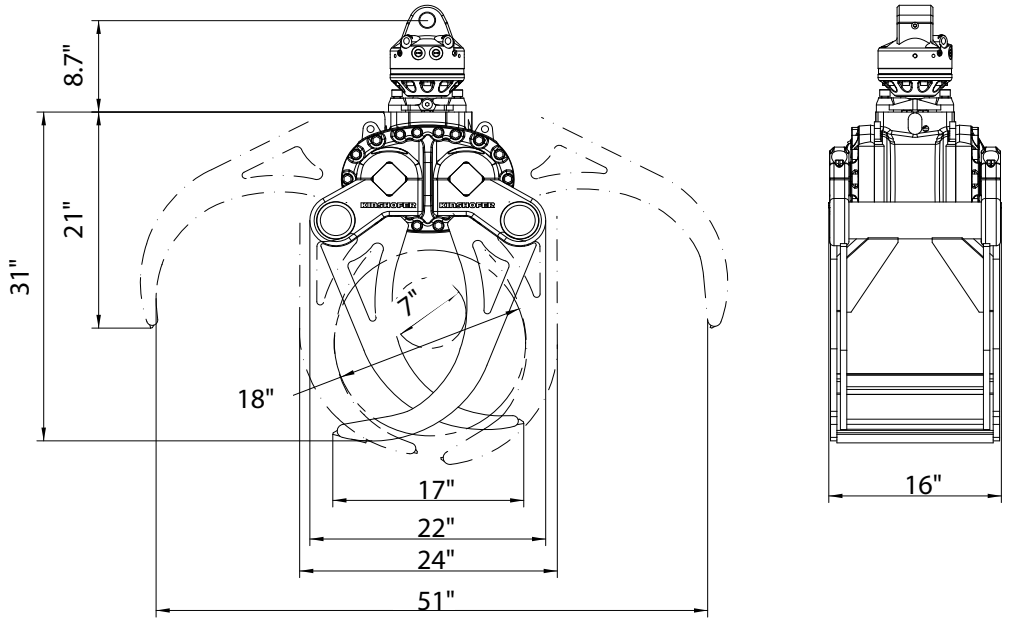
Accessories

Type	Description
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)

Requirements of Truck Crane

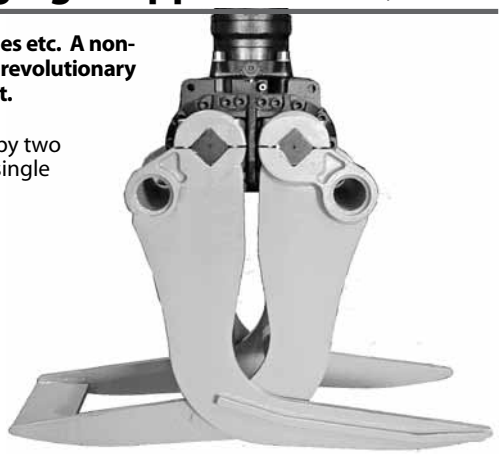
Operating pressure: 3770 to 4640 psi
Pump capacity: 10.6 to 23.8 GPM

Technical Drawings



KM 632L HPX-HD

Logging Grapple with *HPXdrive*



The KM 632L HPX with *HPXdrive Heavy Duty* for loading short logs, shrubbery, branches etc. A non-return valve secures constant pressure even in case of unexpected pressure drop. The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.

- **Reliability** of the ***HPXdrive***. The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. No more hydraulic cylinder.
- **Longer life cycle** up to 50%! The drive unit runs in a permanent oil bath no lubrication service is necessary. The compact design makes the ***HPXdrive*** resistant to dirt and debris.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type **KINSHOFER** rotator and shells synchronised by the single piston turning both shafts.
- **Rotator with shaft** is available as an alternative, in case a quick change to a non-rotating hook is favoured.
- **Constant closing force** (3900 lbf. at 4640 psi operating pressure) for the entire opening and closing process; high efficiency provided by hydro static bearings of the axes.

Package Logging Grappple KM 632L HPX-HD with KINSHOFER Flange Rotator

Type	Capacity	Width	max. Opening A		Height B		Self weight		Load capacity
			bypass type	butt type	bypass type	butt type	bypass type	butt type	
	(cord / sq ft)	(in)	(in)	(in)	(in)	(in)	(lbs)		(lbs)
KM 632L HPX -HD-0.25	1/4 / 3 3/4	18	50	57	45	32.5	790	820	6600
KM 632L HPX -HD-0.33	1/3 / 5 1/2	18	60	67	49	36.3	850	885	6600
KM 632L HPX -HD-0.40	2/5 / 6 1/2	18	67	73	52	39.5	890	985	6600

Package consists of: logging grapple, **KINSHOFER** rotator KM 04 F140-30US, upper suspension KM 501 4500, non-return valve
Please note:
– KM 632HPX-HD is also available with a **KINSHOFER** shaft rotator and quick change system KM 505
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US
– The grapple is available with two different closing styles: „Butt" (tines tip to tip) or „Bypass" (interlocking tines)

Package Logging Grappple KM 632L HPX-HD/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Capacity	Width	max. Opening A		Height B		Self weight		Load capacity
			bypass type	butt type	bypass type	butt type	bypass type	butt type	
	(cord / sq ft)	(in)	(in)	(in)	(in)	(in)	(lbs)		(lbs)
KM 632L HPX -HD-0.25/502	1/4 / 3 3/4	18	50	57	47	44	800	830	6600
KM 632L HPX -HD-0.33/502	1/3 / 5 1/2	18	60	67	51	47	860	895	6600
KM 632L HPX -HD-0.40/502	2/5 / 6 1/2	18	67	73	54	51	900	995	6600

Package consists of: logging grapple, **KINSHOFER** rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, non-return valve

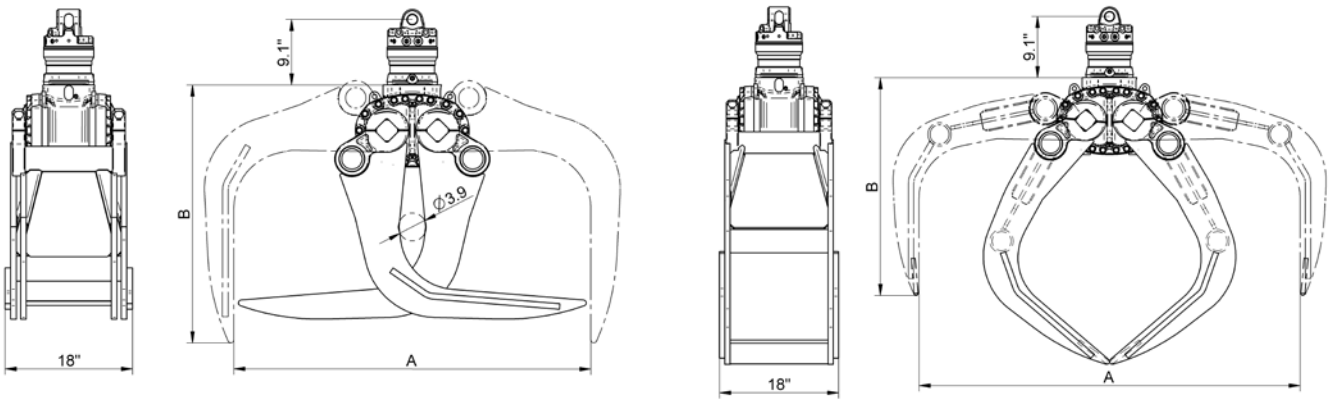
Accessories

Type	Description
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)

Requirements of Truck Crane

Operating pressure: 4640 psi
Pump capacity: 10.6 to 23.8 GPM

Technical Drawings



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Heavy Duty Hay and Forestry Grapple with *HPXdrive* KM 641HPX-HD

The hay and forestry grapple KM 641HPX-HD using the *HPXdrive Heavy Duty* is ideal for handling hay, brushwood, compost or manure – often used for municipal operations and road work. The revolutionary *HPXdrive* technology guarantees a reliable and virtually maintenance free attachment.

- **Reliability** of the *HPXdrive*! The movement of the arms of the grapple is generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. No more hydraulic cylinder.
- **Longer life cycle** up to 50%! The drive unit runs in a permanent oil bath – no lubrication service is necessary. The compact design makes the *HPXdrive* resistant to dirt and debris.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Profitability** through low maintenance costs and longer life cycle.
- **Precise handling** with the gear-type KINSHOFER rotator and shells synchronised by the single piston turning both shafts.
- **Rotator with shaft** is available as an alternative, in case a quick change to a non-rotating hook is favoured.
- **Constant closing force** (5060 lbf at 4640 psi operating pressure) for the entire opening and closing process; high efficiency provided by hydro static bearings of the axes.

Package Hay and Forestry KM 641HPX-HD with KINSHOFER Flange Rotator

Type	Capacity	Width	Height	max. Opening	Number of tines	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)		(lbs)	(lbf at 4640 psi)	(lbs)
KM 641HPX-HD-0,4 c	0.27	37	47	68	7	858	5060	4400

Package consists of: hay and forestry grapple, rotator KM 04 F140-30V, upper suspension KM 501 4500, non-return valve
Please note:
– KM 641HPX-HD is also available with a shaft rotator and quick change system KM 505
– for heavy duty tasks we recommend to use quick change KM 505 HD with rotator KM 04 S68-30US

Package Hay and Forestry KM 641HPX-HD/502 with KINSHOFER Rotator with Shaft and Reduction Link

Type	Capacity	Width	Height	max. Opening	Number of tines	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)		(lbs)	(lbf at 4640 psi)	(lbs)
KM 641HPX-HD-0,4/502 c	0.27	37	49	68	7	869	5060	4400

Package consists of: hay and forestry grapple, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, non-return valve

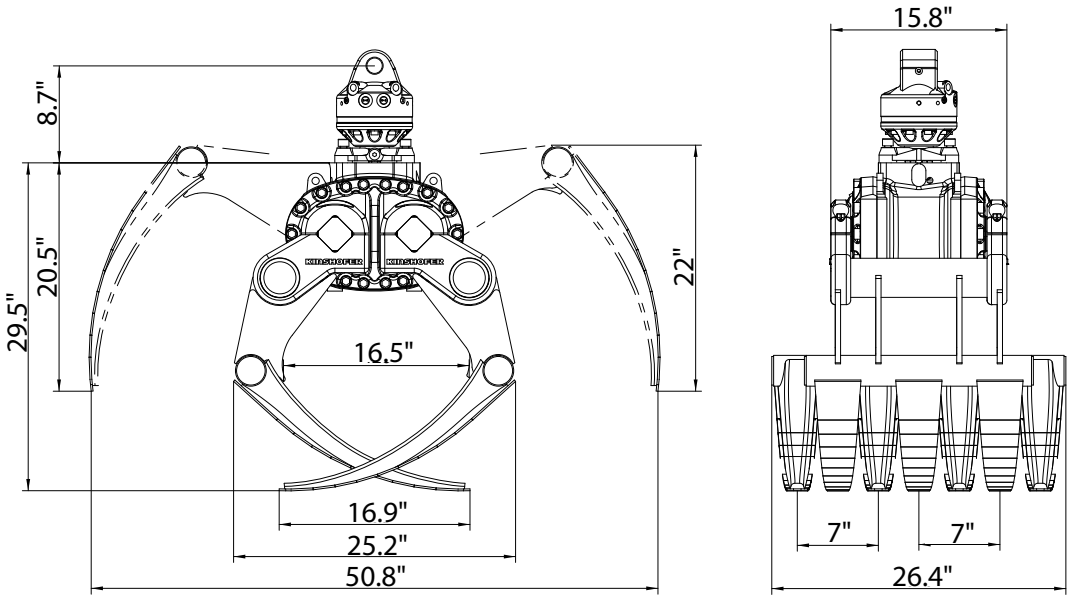
Accessories

Type	Description
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
KM 204 02	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)

Requirements of Truck Crane

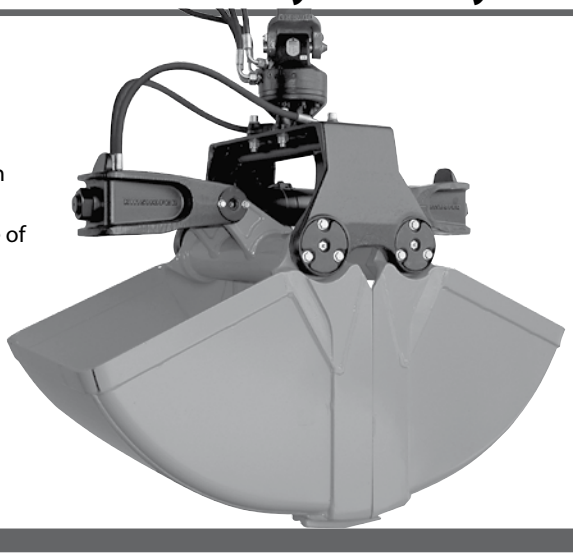
Operating pressure:	3770 to 4640 psi
Pump capacity:	10.6 to 23.8 GPM

Technical Drawings



KM 605 Heavy Duty Clamshell Bucket with Horizontal Hydraulic Cylinder

The rugged clamshell bucket KM 605 is recognized as successful synthesis of form, function and performance.



- **Maximum loading height** is achieved through the compact design with the horizontal hydraulic cylinder.
- **Long life is ensured** through the use of 500 HB steel in the manufacture of the cutting edges and a generously dimensioned bearing system.
- **Synchronized opening and closing** through sturdy compensation bar.
- **Bolt-on digging teeth** are delivered with each clamshell bucket.
- **Excellent digging characteristics** are a result of high closing forces (6600 lbf at 3770 psi operating pressure).

Package Clamshell Bucket KM 605-250 c & KM 605-350 c

Type	Volume	Width B	Max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)		(lbs)	(lbf)	(lbs)
KM 605-250 c	0.33	20	56	3	704	6600	6600
KM 605-350 c	0.46	26	56	5	759	6600	6600

Package consists of: clamshell bucket, bolt-on teeth, rotator KM 04 F, short connecting hoses KM 203 01, upper suspension KM 501 4500, non-return valve

Clamshell Bucket KM 605 incl. Teeth

Type	Volume	Width B	Max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)		(lbs)	(lbf)	(lbs)
KM 605-200	0.26	16	56	3	583	6600	6600
KM 605-250	0.33	20	56	5	627	6600	6600
KM 605-350	0.46	26	56	5	682	6600	6600
KM 605-450	0.59	32	56	9	748	6600	6600
KM 605-550	0.72	39	56	9	825	6600	6600
KM 605-650	0.85	47	56	9	902	6600	6600

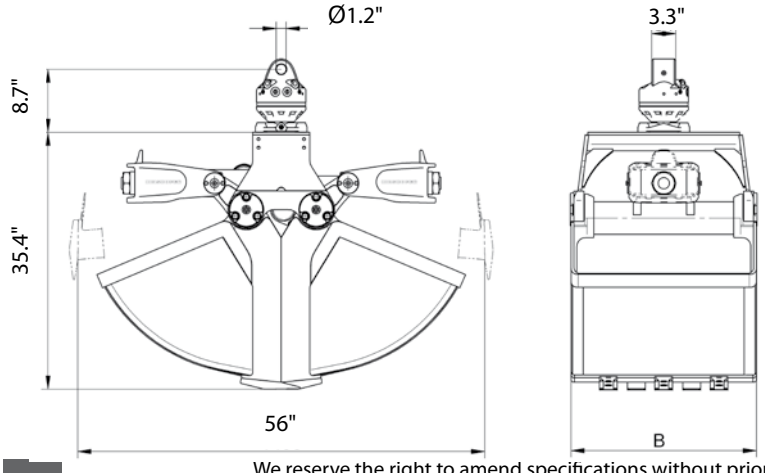
Accessories

Type	Description
KM 04 F	recommended KINSHOFER rotator for KM 605
KM 04 S	KINSHOFER shaft rotator for precise positioning of the load – up to 9900 lbs load capacity
KM 04 S68-30US	KINSHOFER shaft rotator for heavy duty tasks – up to 9900 lbs load capacity
KM 505	quick change system for shaft-type rotator KM 04 S
KM 505 HD	quick change system for shaft-type rotator KM 04 S68-30US
KM 502 4500	reduction link between rotator and grapple
KM 680 01	scraper
KM 685 06 hook set 2	welded hooks
KM 685 07 set	wear plates to protect horizontal cutting edges (2 pieces)
KM 685 05	adapters for mounting of compression rails
KM 381 09 720	compression rails – length 28 in (2 pieces)
KM 381 09 1000	compression rails – length 39 in (2 pieces)

Requirements of Truck Crane

Operating pressure: 3770 to 4640 psi
Pump capacity: 6.6 to 19.8 GPM

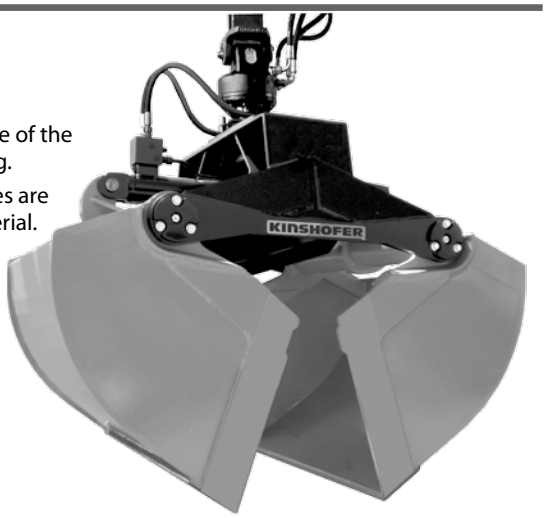
Technical Drawings



We reserve the right to amend specifications without prior notice. KINSHOFER GmbH, 83666 Waakirchen, Germany

High Volume Clamshell Bucket with Horizontal Hydraulic Cylinder KM 602

A robust clamshell bucket for handling loose material as sand, gravel, soil – perfectly matched to heavy duty work on vehicle mounted cranes.



- **Excellent filling characteristics** of the rugged grapple due to the special shape of the buckets and the wide separation between their axes that enables wide opening.
- **Practically no "left overs"** of the material to be picked up as the working edges are vertical when the buckets are open and allow a deep plunge into a pile of material.
- **High stability** through reinforced buckets, torsion-free frame, generously dimensioned bearing system and the use of 500 HB steel in the manufacture of cutting edges.
- **Combination of compensator mechanism and cylinder guard** has many advantages: parallel action, longer life for piston rod and seals, significant weight savings.
- **Efficient handling** with high closing forces (6160 lbf at an operating pressure of 3770 psi).

Package High Volume Clamshell Bucket KM 602 c

Type	Volume	Width B	max. Opening	No. of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(optional)	(lbs)	(lbf)	(lbs)
KM 602-400 c	0.52	32	72	9	1023	6160	6600
KM 602-500 c	0.65	39	72	9	1122	6160	6600

Package consists of: high volume clamshell bucket, rotator KM 04 F, short connecting hoses KM 203 01, upper suspension KM 501 4500, (without teeth), non-return valve

note: UK package of KM 602 includes KM 04 F, KM 501, KM 203 01, KM 685 06 eye set 2, KM 685 07 set

High Volume Clamshell Bucket KM 602

Type	Volume	Width B	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(optional)	(lbs)	(lbf)	(lbs)
KM 602-300	0.39	20	72	5	924	6160	6600
KM 602-400	0.52	32	72	9	990	6160	6600
KM 602-500	0.65	39	72	9	1023	6160	6600
KM 602-650	0.85	47	72	9	1056	6160	6600
KM 602-1000	1.31	47	86	9	1518	5060	6600

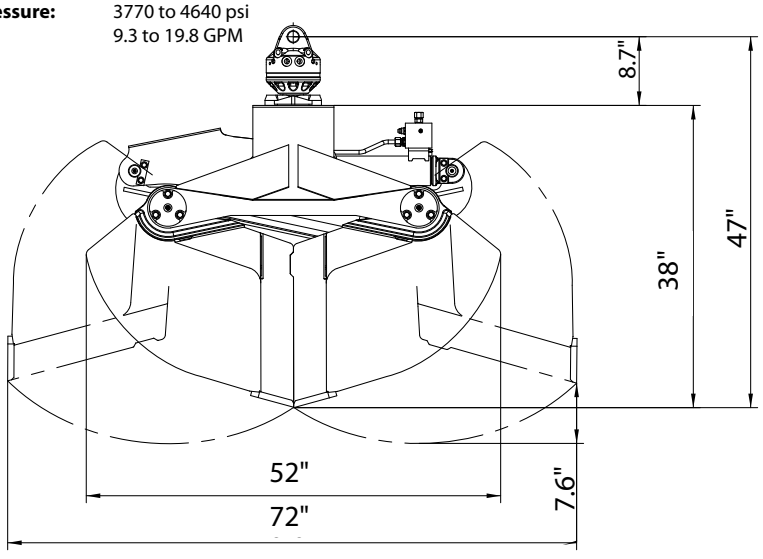
Accessories

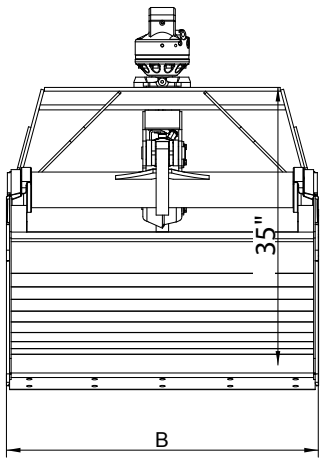
Type	Description
KM 04 F	recommended **KINSHOFER** rotator for KM 602
KM 04 S	**KINSHOFER** shaft rotator for precise positioning of the load – up to 9900 lbs load capacity
KM 04 S68-30US	**KINSHOFER** shaft rotator for heavy duty tasks – up to 9900 lbs load capacity
KM 505	quick change system for shaft-type rotator KM 04 S
KM 505 HD	quick change system for shaft-type rotator KM 04 S68-30US
KM 502 4500	reduction link between rotator and grapple
KM 685 06 eye set 2	welded eyes
KM 685 07 set	wear plates to protect horizontal cutting edges (2 pieces)

Requirements of Truck Crane

Operating pressure: 3770 to 4640 psi
Pump capacity: 9.3 to 19.8 GPM

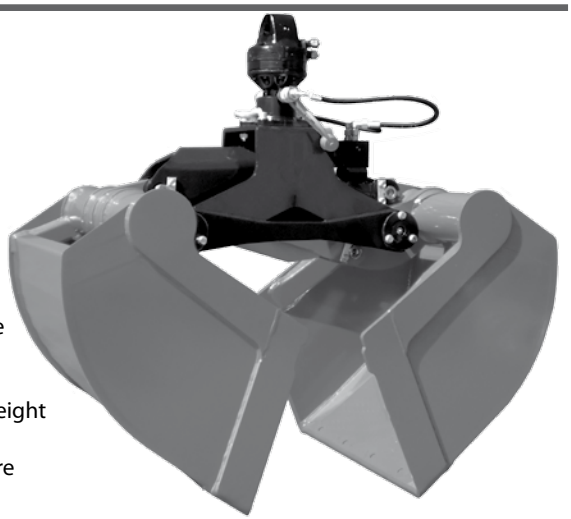
Technical Drawings





KM 622 High Volume Clamshell Bucket with Horizontal Hydraulic Cylinder and Narrow Bucket Carrier

The high volume clamshell bucket KM 622 has a significant narrow frame and can therefore fullfill small digging tasks besides the handling.



- **Suitable for digging** due to the narrow frame.
- **Compact design** due to the narrow frame enables manual filling of the bucket without obstacles.
- **Practically no „left overs"** of the material to be picked up as the working edges are vertical when the buckets are open and allow a deep plunge into a pile of material.
- **High stability** through reinforced buckets, torsion-free frame, generously dimensioned bearing system and the use of 500 HB steel in the manufacture of cutting edges.
- **Combination of compensator mechanism and cylinder guard** has many advantages: parallel action, longer life for piston rod and seals, significant weight savings.
- **Efficient handling** with high closing forces (4400 lbf at an operating pressure of 3770 psi).

Package High Volume Clamshell Bucket KM 622-400 c & KM 622-500 c

Type	Volume	Width B	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(optional)	(lbs)	(lbf)	(lbs)
KM 622-400 c	0.52	32	66	9	836	4400	6600
KM 622-500 c	0.65	39	66	9	891	4400	6600

Package consists of: high volume clamshell bucket (w/o teeth), rotator KM 04 F, short connecting hoses KM 203 01, upper suspension KM 501 4500, non-return valve

High Volume Clamshell Bucket KM 622

Type	Volume	Width B	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(optional)	(lbs)	(lbf)	(lbs)
KM 622-300	0.39	25	66	5	693	4400	6600
KM 622-400	0.52	32	66	9	759	4400	6600
KM 622-500	0.65	39	66	9	814	4400	6600

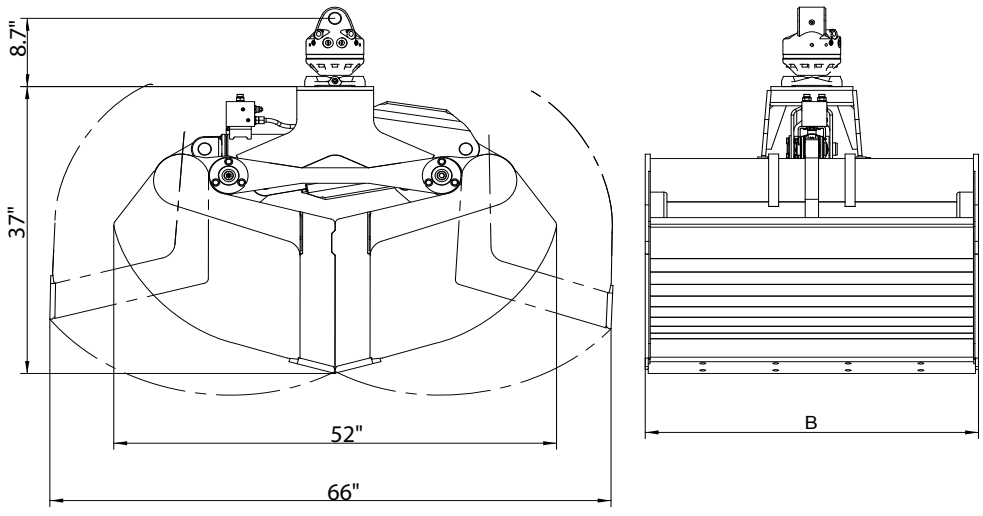
Accessories

Type	Description
KM 04 F	recommended KINSHOFER rotator for KM 622
KM 04 S	KINSHOFER shaft rotator for precise positioning of the load – up to 9900 lbs load capacity
KM 04 S68-30US	KINSHOFER shaft rotator for heavy duty tasks – up to 9900 lbs load capacity
KM 505	quick change system for shaft-type rotator KM 04 S
KM 505 HD	quick change system for shaft-type rotator KM 04 S68-30US
KM 502 4500	reduction link between rotator and grapple
KM 685 06 eye set 2	welded eyes
KM 685 07 set	wear plates to protect horizontal cutting edges (2 pieces)

Requirements of Truck Crane

Operating pressure: 2900 to 4640 psi
Pump capacity: 9.3 to 19.8 GPM

Technical Drawings



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Clamshell Bucket with Vertical Hydraulic Cylinder — KM 603

The KM 603 is a proven grapple for daily routine work – ideal for excavating foundations, trenches and other similar applications in civil engineering. The closely positioned shell pivots ensure good digging behaviour and high closing pressure.

- **Good digging behaviour** through the closely positioned shell pivots.
- **Longevity** is ensured through the use of 500 HB steel in the manufacture of cutting edges and the generously dimensioned bearing system. The enclosed hydraulic cylinder (in a hub unit) and short hydraulic connection hoses lower the risk of damage and down-time.
- **Maximum loading height** is achieved through the compact design.
- **Special model KM 603F** with special bucket shape for excavating foundations and graves.
- **Special model KM 603R** with round buckets for digging well shafts etc.
- **Bolt-on digging teeth** are delivered with each clamshell bucket.
- **Excellent digging characteristics** are the result of high closing forces (4400 lbf at an operating pressure of 3770 psi).

⇨ **The KM 604HPX can be used with an extension for excavating as alternative to the KM 603**

Package Clamshell Bucket KM 603-250 c & KM 603-350 c

Type	Volume (c.y.)	Width B (in)	max. Opening (in)	Number of teeth	Self weight (lbs)	Closing force (lbf)	Load capacity (lbs)
KM 603-250 c	0.33	20	55	5	726	4400	6600
KM 603-350 c	0.46	26	55	5	781	4400	6600
Package consists of:	clamshell bucket, bolt-on teeth, rotator KM 04 F, short connecting hoses KM 203 01, upper suspension KM 501 4500, non-return valve						

Clamshell Bucket KM 603 incl. Teeth

Type	Volume (c.y.)	Width B (in)	max. Opening (in)	Number of teeth	Self weight (lbs)	Closing force (lbf)	Load capacity (lbs)
KM 603-150	0.20	13	55	3	572	4400	6600
KM 603-200	0.26	16	55	3	605	4400	6600
KM 603-250	0.33	20	55	5	649	4400	6600
KM 603-325	0.43	24	55	5	693	4400	6600
KM 603-350	0.46	26	55	5	704	4400	6600
KM 603-450	0.59	32	55	9	781	4400	6600

Special Grapples KM 603F(incl. Scraper) and KM 603R (Round Shells)

Type	Volume (c.y.)	Width B (in)	max. Opening A (in)	Number of teeth	Self weight (lbs)	Closing force (lbf)	Load capacity (lbs)
KM 603F-100	0.13	24	32	5	616	6600	6600
KM 603F-125	0.16	30	32	7	693	6600	6600
KM 603F-150	0.20	24	39	5	605	6600	6600
KM 603F-190	0.25	30	39	7	671	6600	6600
KM 603F-200	0.26	24	39	5	649	6600	6600
KM 603R-30	0.04	-	Ø 18	4	462	6600	6600
KM 603R-50	0.07	-	Ø 24	5	495	6600	6600
KM 603R-150	0.20	-	Ø 35	5	528	6600	6600
KM 603R-200	0.26	-	Ø 39	7	649	6600	6600

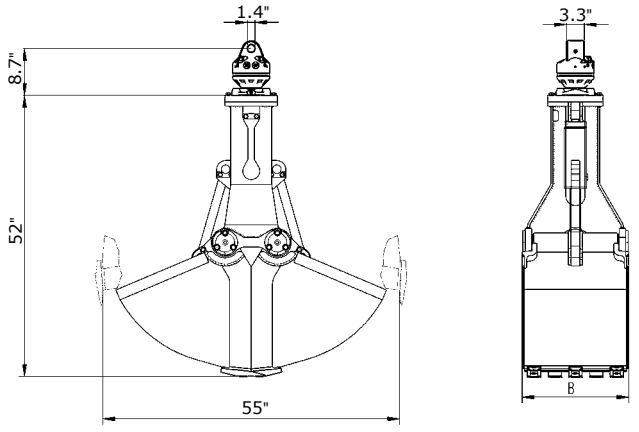
Accessories

Type	Description
KM 04 F	recommended **KINSHOFER** rotator for KM 603
KM 04 S	**KINSHOFER** shaft rotator for precise positioning of the load – up to 9900 lbs load capacity
KM 04 S68-30US	**KINSHOFER** shaft rotator for heavy duty tasks – up to 9900 lbs load capacity
KM 04 F140-30US	recommended **KINSHOFER** rotator for KM 603F and KM 603R
KM 505	quick change system for shaft-type rotator KM 04 S
KM 505 HD	quick change system for shaft-type rotator KM 04 S68-30US
KM 502 4500	reduction link between rotator and grapple
KM 680 01	scraper
KM 685 06 eye / hook set 2	welded eyes / welded hooks
KM 685 07	wear plates to protect horizontal cutting edges (2 pieces)
KM 685 05	adapters for mounting of compression rails

Requirements of Truck Crane

Operating pressure: max. 3770 psi
Pump capacity: 6.6 to 19.8 GPM

Technical Drawings



KM 607 Heavy Duty Clamshell Bucket with Vertical Hydraulic Cylinders

The powerful clamshell bucket KM 607 with two vertical hydraulic cylinders is ideal for heavy digging work in grown soil.

- **Good digging behaviour** due to good plunge behaviour and proven shell geometry.
- **Long life** is ensured through the use of 500 HB steel in the manufacture of cutting edges and the generously dimensioned bearing system. Piston rod protection for the vertical hydraulic cylinders are standard.
- **Synchronised bucket movements** due to sturdy compensation rods.
- **Bolt-on digging teeth** are delivered with each clamshell bucket.
- **Excellent digging characteristics** are the result of high closing forces (7040 lbf at an operating pressure of 3770 psi).

⇨ **The KM 605HPX can be used with an extension for excavating as alternative to the KM 607**

Package Clamshell Bucket KM 607-250 c & KM 607-350 c

Type	Volume (c.y.)	Width B (in)	max. Opening (in)	Number of teeth	Self weight (lbs)	Closing force (lbf)	Load capacity (lbs)
KM 607-215 c	0.28	20	51	5	704	7040	6600
KM 607-255 c	0.33	24	51	5	737	7040	6600

Package consists of: clamshell bucket, bolt-on teeth, rotator KM 04 F, short connecting hoses KM 203 01, upper suspension KM 501 4500, non-return valve

Clamshell Bucket KM 607 incl. Teeth

Type	Volume (c.y.)	Width B (in)	max. Opening (in)	Number of teeth	Self weight (lbs)	Closing force (lbf)	Load capacity (lbs)
KM 607-135	0.18	13	51	3	572	7040	6600
KM 607-170	0.22	16	51	3	594	7040	6600
KM 607-215	0.28	20	51	5	627	7040	6600
KM 607-255	0.33	24	51	5	660	7040	6600
KM 607-340	0.44	32	51	9	847	7040	6600

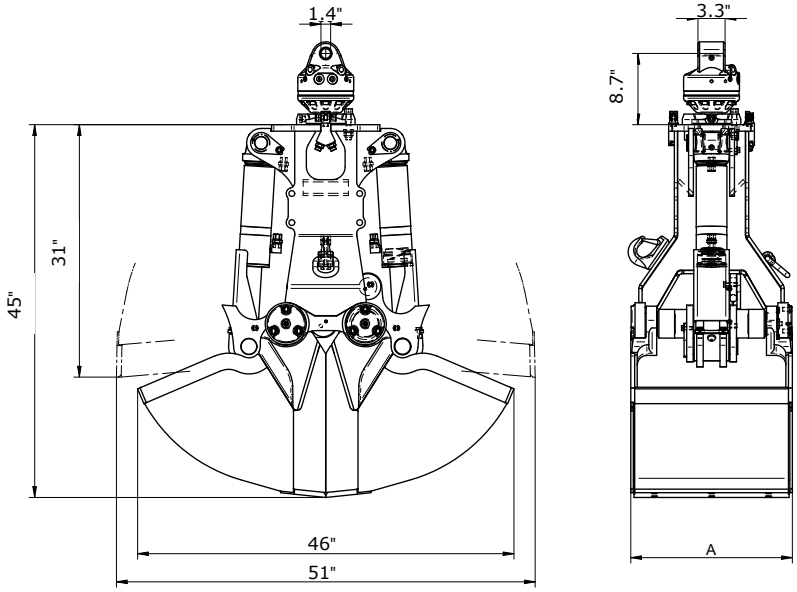
Accessories

Type	Description
KM 04 F	recommended **KINSHOFER** rotator for KM 607.1
KM 04 S	**KINSHOFER** shaft rotator for precise positioning of the load – up to 9900 lbs load capacity
KM 04 S68-30US	**KINSHOFER** shaft rotator for heavy duty tasks – up to 9900 lbs load capacity
KM 505	quick change system for shaft-type rotator KM 04 S
KM 505 HD	quick change system for shaft-type rotator KM 04 S68-30US
KM 502 4500	reduction link between rotator and grapple
KM 680 01	scraper
KM 685 06 hook set 2	welded hooks
KM 685 07 set	wear plates to protect horizontal cutting edges (2 pieces)

Requirements of Truck Crane

Operating pressure: max. 3770 psi
Pump capacity: 7.9 to 19.8 GPM

Technical Drawings



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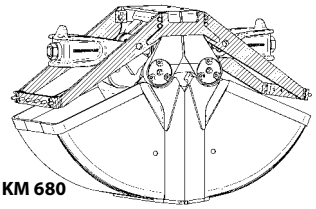
KM 680 – Scraper

Scrapers for clamshell buckets with narrow widths clear the inside of the shells of sticky materials such as clay, during each opening. The design varies depending on the grapple.



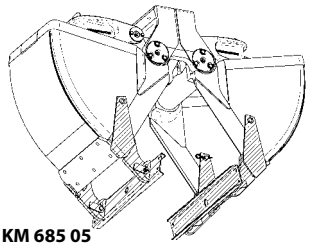
KM 680

Type	for Clamshell bucket
KM 680 01	KM 603/ 604/ 604HPX/ 605/ 605HPX/ 606/ 607
KM 680 02	KM 626HPX
KM 505 04	link-set for KM 604HPX/605HPX/626HPX in combination with KM 505 / KM 505 HD and scraper KM 680

link for the combination
KM 505 (HD) + ***HPXdrive*** + scraper

KM 685 05 – Adapters for Compression Rails

Adapters enable mounting of compression rails or support for concrete rings, for handling paving slabs, curbstones, concrete rings etc.
The adapters can only be used with a **non-return valve**. They are not suitable for the use with a scraper.



KM 685 05

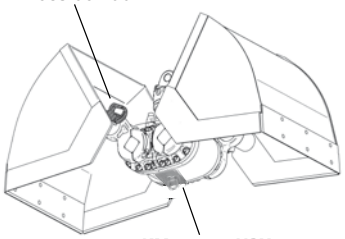
Type	Description
KM 685 05	adapters for compression rails
KM 381 09 720	compression rails – length 28 in long (2 pieces)
KM 381 09 1000	compression rails – length 39 in long (2 pieces)

The adapters for compression rails are available for the following clamshell buckets:
KM 603 / 604HPX / 605 / 605HPX / 605U HPX

KM 685 06 - Central Lifting Device for HPX, Welded Hook or Welded Eye

The central lifting device for ***HPXdrive***, welded eyes or welded hooks suit lifting chains or slings. The max. capacity per eye or hook is 2200 lbs.

KM 685 06 hook



KM 685 06 HPX

KM 685 06 HPX SD	to suit lifting chain or sling, 1 piece
KM 685 06 HPX HD	to suit lifting chain or sling, 1 piece
KM 685 06 hook	to suit lifting chain or sling, 1 piece
KM 685 06 hook set 2	to suit lifting chain or sling, 2 pieces
KM 685 06 hook set 4	to suit lifting chain or sling, 4 pieces
KM 685 06 eye	to suit lifting chain or sling, 1 piece
KM 685 06 eye set 2	to suit lifting chain or sling, 2 pieces

central lifting device ***HPXdrive***

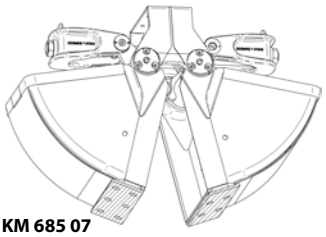
KM 685 06 hook

welded hook

KM 685 06 eye
(not with ***HPXdrive***)

welded eye

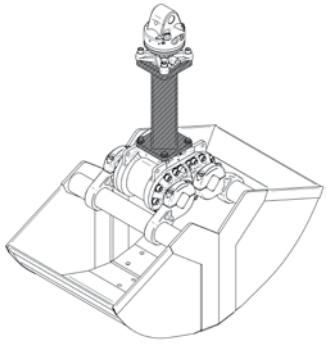
KM 685 07 – Wear Plates (2 pieces)



KM 685 07

KM 685 07 set	wear plates, 2 pieces, available in widths (in)						
	12.8	15.8	17.7	19.7	22.4	23.6	25.6
	26.4	31.5	32.3	36.2	39.4	40.2	47.2
reversible, to protect horizontal cutting edges							

KM 685 08 – Extension for Excavating with the *HPXdrive Standard* or the *HPXdrive Heavy Duty*



Type	Description
extension *HPXdrive*	extension for excavating e.g. trenches (for canal and civil engineering) – 18 in (66 lbs)

KM 650 small — Orange Peel Grapple with 0.16 c.y. - 0.31 c.y.

Small orange peel grapple for the handling of bulky scrap, the KM 650 small for various applications is available with different tine shapes, different volumes (0.16 c.y., 0.24 c.y., 0.31 c.y.), with 4 or 5 tines.

- **Different tine shapes** of the KM 650 series to accomodate handling a variety of materials:
  - **KM 651:** fully closing tines for handling swarf, loose waste, soil, gravel etc.
  - **KM 652:** half closing tines for handling swarf, scrap, rubbish, waste paper etc.
  - **KM 653:** pointed tines for bulky scrap, car bodies, bundled waste paper etc.
- **Number of tines** can be chosen with 4 or 5 tines.
- **Long life** due to a solid design: the hydraulic cylinder pistons are protected by the gripping arms and the hydraulic hoses, connections and oil distributor are positioned in the robust centre section. Special wear resistant materials used in the production of the gripping arms and oversized bearings ensure a long service life for these sturdy grapples.
- **A lifting-eye** on the centre section acts as an additional stop.
- **Powerful operation** with high closing force (2420 lbf to 3718 lbf at an operating pressure of 3770 psi).

Orange Peel Grapple KM 650 small

Type	Number of tines	Volume (c.y.)	max. Opening A (in)	Width D (closed) (in)	Height B (closed, incl. rotator) (in)	Self weight (w/o rotator) (lbs)	Load capacity (lbs)	Closing force (lbf)
		0.16	54	41.9	32	726	4400	2860
KM 651-4	4	0.24	57	42.1	33	759	4400	2640
		0.31	68	44.3	39	836	4400	2420
		0.16	54	41.9	32	770	4400	2860
KM 651-5	5	0.24	57	42.1	33	803	4400	2640
		0.31	68	44.3	39	913	4400	2420
		0.16	54	41.9	32	572	4400	2860
KM 652-4	4	0.24	57	42.1	33	594	4400	2640
		0.31	68	44.3	39	660	4400	2420
		0.16	54	41.9	32	660	4400	2860
KM 652-5	5	0.24	57	42.1	33	671	4400	2640
		0.31	68	44.3	39	748	4400	2420
		0.16	54	41.9	32	506	4400	2860
KM 653-4	4	0.24	57	42.1	33	517	4400	2640
		0.31	68	44.3	39	550	4400	2420
		0.16	54	41.9	32	605	4400	2860
KM 653-5	5	0.24	57	42.1	33	627	4400	2640
		0.31	68	44.3	39	660	4400	2420

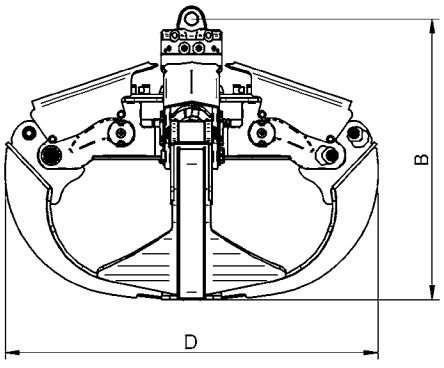
Accessories

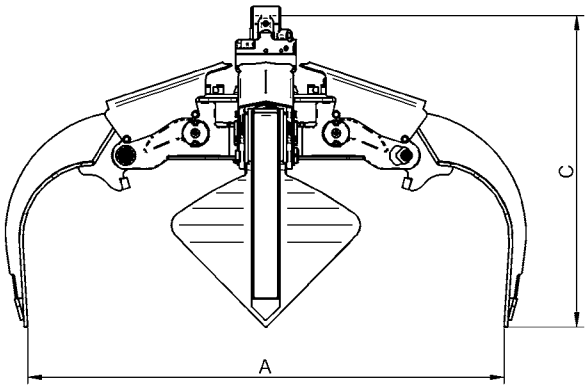
Type	Description
KM 04 F	recommended KINSHOFER rotator for KM 650 small

Requirements of Truck Crane

Operating pressure: max. 3770 psi
Pump capacity: 7.9 to 19.8 GPM

Technical Drawings





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Orange Peel Grapple with 0.33 c.y - 0.65 c.y. KM 650 large

Large orange peel grapple for the handling of bulky scrap, the KM 650 large for various applications is available with different tine shapes, different volumes (0.33 c.y., 0.46 c.y. , 0.65 c.y.), with 4 or 5 tines.

- **Different tine shapes** of the KM 650 series to accomodate handling a variety of materials:
  - **KM 651:** fully closing tines for handling swarf, loose waste, soil, gravel etc.
  - **KM 652:** half closing tines for handling swarf, scrap, rubbish, waste paper etc.
  - **KM 653:** pointed tines for bulky scrap, car bodies, bundled waste paper etc.
- **Number of tines** can be chosen with 4 or 5 tines.
- **Long life** due to a solid design: the hydraulic cylinder pistons are protected by the gripping arms and the hydraulic hoses, connections and oil distributor are positioned in the robust centre section. Special wear resistant materials used in the production of the gripping arms and oversized bearings ensure a long service life for these sturdy grapples.
- **A lifting-eye** on the centre section acts as an additional stop.
- **Powerful operation** with high closing force (2860 lbf to 3960 lbf at an operating pressure of 3770 psi).

Orange Peel Grapple KM 650 large

Type	Number of tines	Volume	max. Opening A	Width D (closed)	Height B (closed, incl. rotator)	Self weight (w/o rotator)	Load capacity	Closing force
		(c.y.)	(in)	(in)	(in)	(lbs)	(lbs)	(lbf)
		0.33	61	51	40	979	5500	3960
KM 651-4	4	0.46	68	50	43	1034	6600	3520
		0.65	85	52	53	1221	6600	2860
		0.33	61	51	40	1144	5500	3960
KM 651-5	5	0.46	68	50	43	1199	6600	3520
		0.65	85	52	53	1397	6600	2860
		0.33	61	51	40	935	5500	3960
KM 652-4	4	0.46	68	50	43	968	6600	3520
		0.65	85	52	53	1111	6600	2860
		0.33	61	51	40	1111	5500	3960
KM 652-5	5	0.46	68	50	43	1144	6600	3520
		0.65	85	52	53	1309	6600	2860
		0.33	61	51	40	858	5500	3960
KM 653-4	4	0.46	68	50	43	869	6600	3520
		0.65	85	52	53	957	6600	2860
		0.33	61	51	40	1034	5500	3960
KM 653-5	5	0.46	68	50	43	1056	6600	3520
		0.65	85	52	53	1155	6600	2860

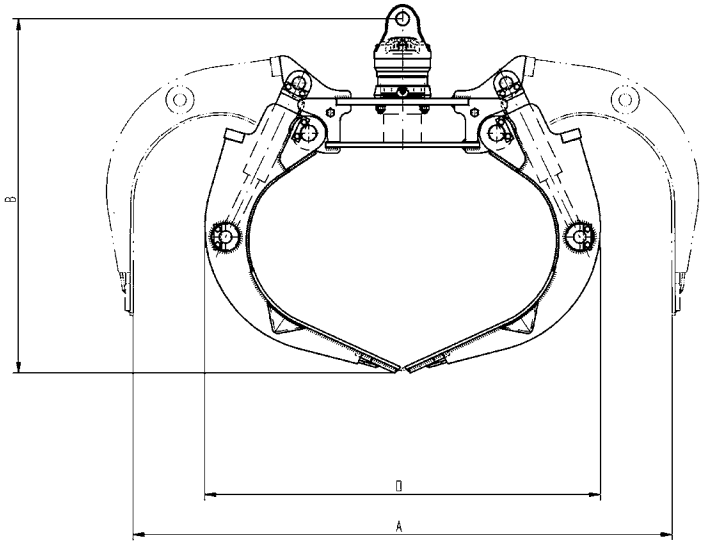
Accessories

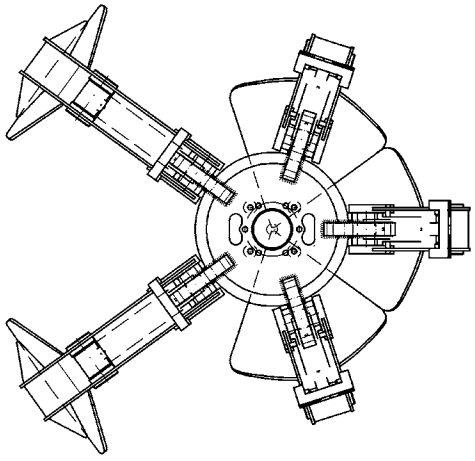
Type	Description
KM 04 F	recommended KINSHOFER rotator for KM 650 large
KM 06 F140-40	recommended KINSHOFER rotator for KM 650 large – for heavy duty application

Requirements of Truck Crane

Operating pressure:	max. 3770 psi
Pump capacity:	7.9 to 21.1 GPM

Technical Drawings





KM 605Uc Refuse Grapple with Horizontal Hydraulic Cylinder

The KM 605Uc is a robust grapple for handling all kinds of refuse material, for use on loader cranes.

- The use of **500 HB steel** in the manufacture of the cutting edges ensures the longevity of the KM605U.
- With **linkage arms made of forged steel** and a **generously dimensioned bearing system**, overall wear is reduced.
- Your **safety is assured** in the event of an unexpected pressure drop due to the integrated non-return valve and a constant operating pressure is guaranteed through the automatic overload protection provided by the pressure relief valve.
- The **compact design** achieves a maximum loading height.
- Running at an operating pressure of 3750 psi, the KM 605Uc has a **6200 lbf closing force**.

⇨ **Alternatively to the KM 605Uc the KM 605U HPX can be used**

Refuse Grapple KM 605Uc

Type	Volume (c.y.)	Width B (in)	max. Opening (in)	Self weight (lbs)	Load capacity (lbs)
KM 605U-420 c	0.55	39.40	60	790	4400
KM 605U-470 c	0.61	47.20	60	810	4400
KM 605U-660 c	0.86	39.40	78	955	4400
KM 605U-730 c	0.96	47.20	78	980	4400

Package consists of: refuse grapple, KINSHOFER rotator KM 04 F, short connecting hoses (between rotator and grab), upper suspension KM 501 4500, cylinder rod protection, pressure relief valve, non-return valve

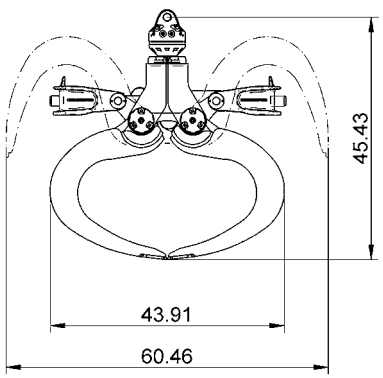
Accessories

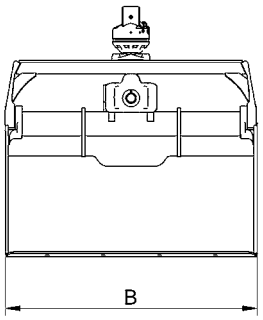
Type	Description
KM 685 07	wear plates

Requirements of Truck Crane

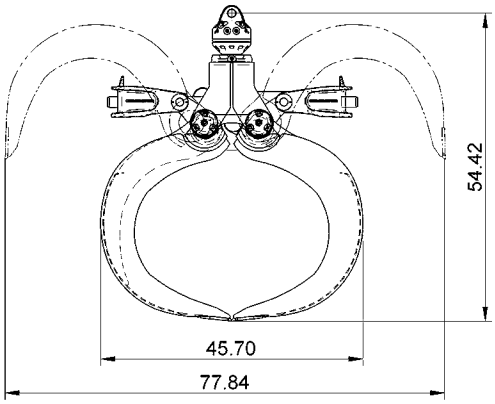
Operating pressure: 3750 psi
Pump capacity: 6 to 20.0 GPM

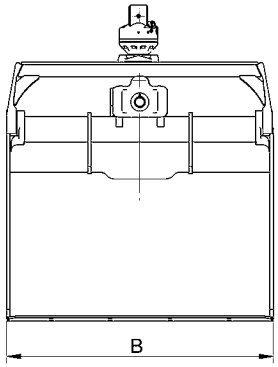
Technical Drawings





KM 605U -420 c / KM 605U -470 c





KM 605U -660 c / KM 605U -730 c

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Railroad Grapple KM 632Rc

Designed to handle the various demands of the rail, the KM 632Rc can be used for rail, bundled or individual ties. This robust and versatile tool is for use on loader cranes.

- The railroad grapple is **ideal for handling railroad ties and rails and for clearing brush**.
- **Long service life** is ensured by the sturdy construction and high quality components.
- **Reduced wear** resulting from generously dimensioned bearing system.
- **Tine tips are vertical when the grapple is fully opened**, allowing easy loading and unloading of bundled ties - directly from gondola cars.
- **Exchangeable gears are standard** and ensure synchronized movement of tines.
- **Each arm is equipped with a heavy duty hydraulic cylinder**, providing an extremely high clamping force.
- The **gear-type continuous rotator** allows precise positioning of the grapple.
- **Guaranteed safety** in case of pressure drop due to non-return valve.

Railroad Grapple KM 632Rc

Type	Capacity	Width	max. Opening A	Height B (closed incl. rotatator)	Height C (open incl. rotatator)	Self weight	Load capacity	Closing force
	(cord / sq ft)	(in)	(in)	(in)	(in)	(lbs)	(lbs)	(lbf)
KM 632R-0.25 c	1/4 / 3 3/4	23	69	42	54	970	6600	4950
KM 632R-0.33 c	1/3 / 5 1/2	23	78	47	59	1025	6600	4270
KM 632R-0.50 c	1/2 / 8	23	96	50	67	1315	6600	3370

Package consists of: railroad grapple, KINSHOFER rotator KM 04 F140-30US, short connecting hoses (between rotator and grab), upper suspension KM 501 4500, removable synchronizing gears, non-return valve

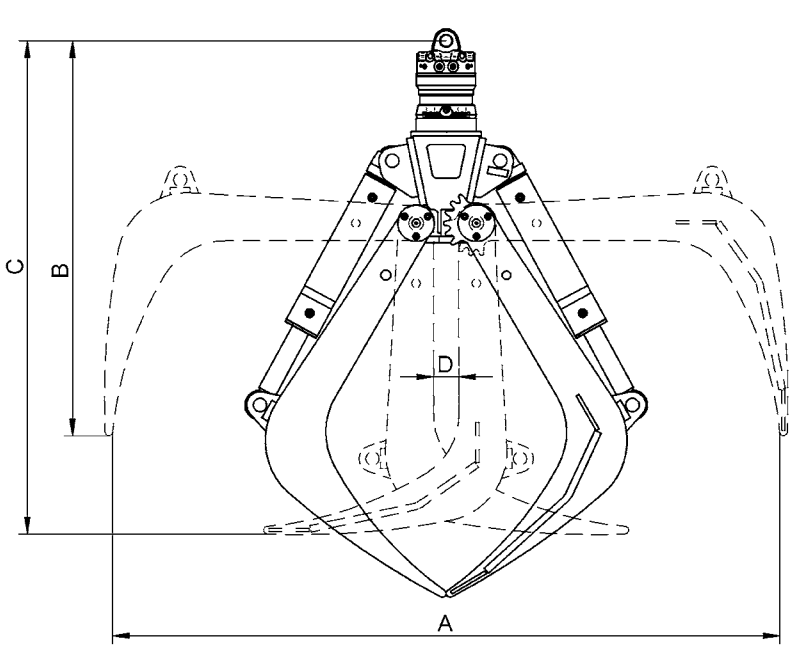
Accessories

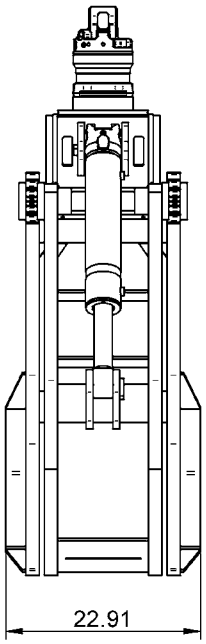
Type	Description
KM 685 06 eye / hook set 2	welded eyes / welded hooks (2 pieces)

Requirements of Truck Crane

Operating pressure: 3770 psi
Pump capacity: 6.5 to 20.0 GPM

Technical Drawings





KM 632-2-R Railroad Grapple

Designed to handle the various demands of the rail, the KM 632-2-R can be used for rails or ties. This robust and versatile tool is for use on loader cranes.

- The railroad grapple is **ideal for handling railroad ties and rails and for clearing brush**.
- **Long service life** is ensured by the sturdy construction and high quality components.
- **Reduced wear** resulting from generously dimensioned bearing system.
- **Tine tips are vertical when the grapple is fully opened**, allowing easy loading and unloading of bundled ties - directly from gondola cars.
- **The tool is equipped with two horizontal hydraulic cylinders**, providing an extremely high clamping force.
- The **gear-type continuous rotator** allows precise positioning of the grapple.
- **Guaranteed safety** in case of pressure drop due to non-return valve.

Railroad Grapple KM 632-2-R

Type	Capacity	Width	max. Opening A	Height B (closed w/o rotator)	Height C (open w/o rotator)	Self weight	Load capacity	Closing force
	(cord / sq ft)	(in)	(in)	(in)	(in)	(lbs)	(lbs)	(lbf)
KM 632-2-R	1/3 / 5 1/2	24	78	47	54	780	6685	3080

Package consists of: railroad grapple, KINSHOFER rotator KM 04 F140-30US, short connecting hoses (between rotator and grab), upper suspension KM 501 4500, removable synchronizing gears, non-return valve

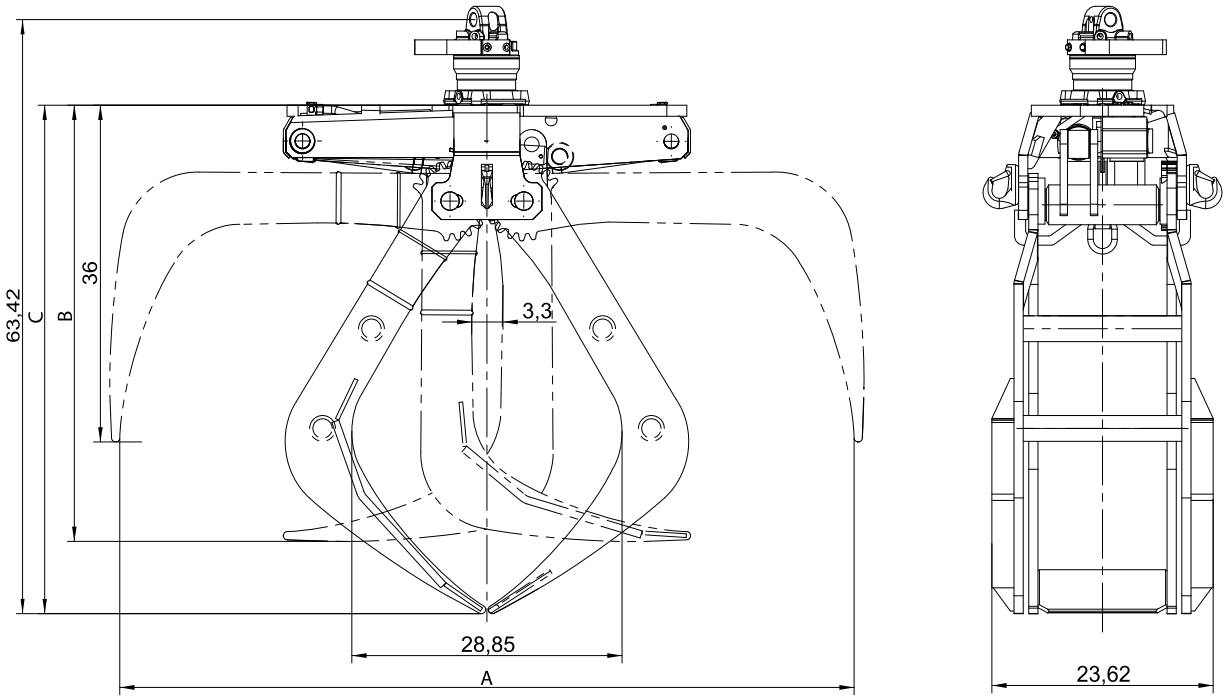
Accessories

Type	Description
KM 685 05	adapters for & with compression rails
KM 685 06 eye / hook set 2	welded eyes / welded hooks (2 pieces)
KM 685 central eye	welded eye (1 piece)

Requirements of Truck Crane

Operating pressure: 2900 psi
Pump capacity: 6.6 to 19.8 GPM

Technical Drawings



We reserve the right to amend specifications without prior notice. KINSHOFER GmbH, 83666 Waakirchen, Germany

Logging Grapple KM 634

The KM 634 is a robust and powerful tool for logs – especially for heavy duty operation. Well suited for handling single trunks.

- **Low height** with one horizontal hydraulic cylinder – especially when closed due to the interlocking arms.
- **Long service life** is ensured by the sturdy construction, high quality components and generously dimensioned bearing system. All bearing bolts are case hardened and housed in steel bearing bushes.
- **Optimised design** allows extremely small grapple diameter – ideal for handling thin timber securely. The arms open almost vertically. That enables an easy penetration into the timber stack.
- **Synchronisation** of arms due to sturdy compensation rods.
- **Protection of the hoses** for the hydraulic connections by a hose guard on the KINSHOFER rotator.
- **Precise positioning** of the loads is no problem in combination with the KINSHOFER rotator – continuous rotation, precise start and stop ability.
- **Safety** is assured in the event of an unexpected pressure drop due to the integrated non-return valve.
- **The reinforced logging grapple KM 634S** has an even more sturdy construction and is equipped with a stronger rotator.
- **Efficient handling** with high closing forces (2860 lbf to 3520 lbf kN at an operating pressure of 3480 psi).

Package Logging Grapple KM 634-0,25 c & KM 634-0,35 c

Type	Capacity (cords)	Width B (in)	min. Log-Ø D2 (in)	max. Opening A (in)	Self weight (lbs)	Closing force (lbf)	Load capacity (lbs)
KM 634-0,25 c	0.17	17	3.5	58	473	2860	8800
KM 634-0,35 c	0.23	20	5.3	77	660	3520	11000

Package consists of: logging grapple, rotator with hose guard (for KM 634-0,25: KM 06 F173-35, for KM 634-0,35: KM 10 F173-35), short connecting hoses KM 203 01, upper suspension KM 501 (for KM 634-0,25: KM 501 6000, for KM 634-0,35: KM 501 10000), non-return valve

Logging Grapple KM 634

Type	Capacity (cords)	Width B (in)	min. Log-Ø D2 (in)	max. Opening A (in)	Self weight (lbs)	Closing force (lbf)	Load capacity (lbs)
KM 634-0,25	0.17	17	3.5	58	374	2860	8800
KM 634-0,35	0.23	20	5.3	77	495	3520	11000
KM 634-0,50	0.33	20	6.7	78	550	3300	11000

Logging Grapple KM 634S – Reinforced Version of KM 634

Type	Capacity (cords)	Width B (in)	min. Log-Ø D2 (in)	max. Opening A (in)	Self weight (lbs)	Closing force (lbf)	Load capacity (lbs)
KM 634S-0,40	0.27	20	5.3	77	594	3520	13200
KM 634S-0,50	0.33	20	6.7	78	605	3520	15400
KM 634S-0,70	0.47	23	4.3	101	1166	3300	17600

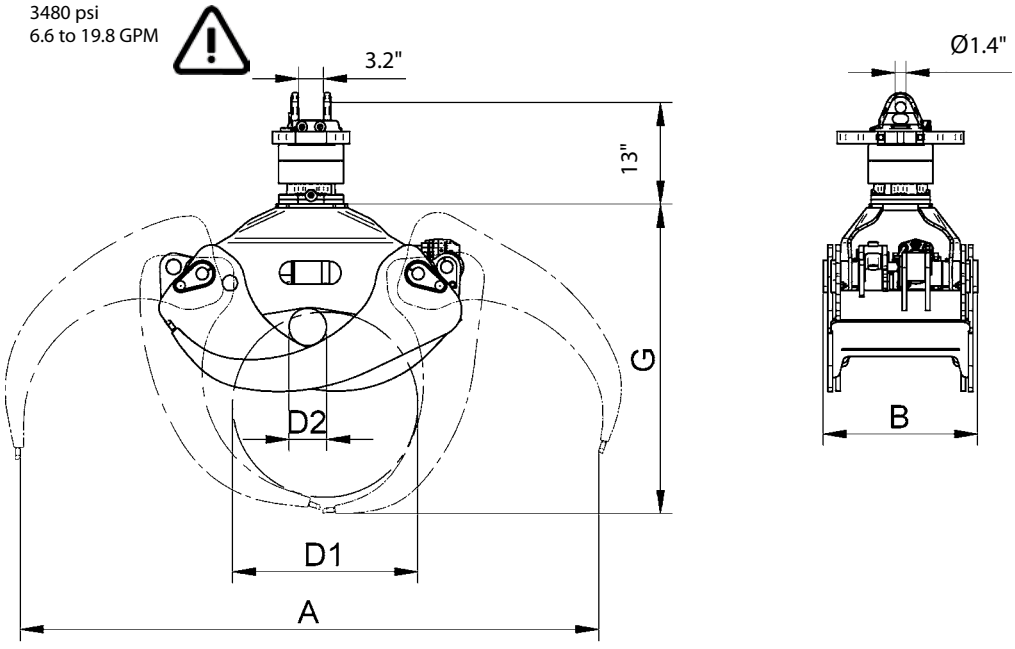
Accessories

Type	Description
KM 06 F173-35	recommended KINSHOFER rotator for KM 634-0,25
KM 10 F173-35/1	recommended KINSHOFER rotator for KM 634-0,35

Requirements of Truck Crane

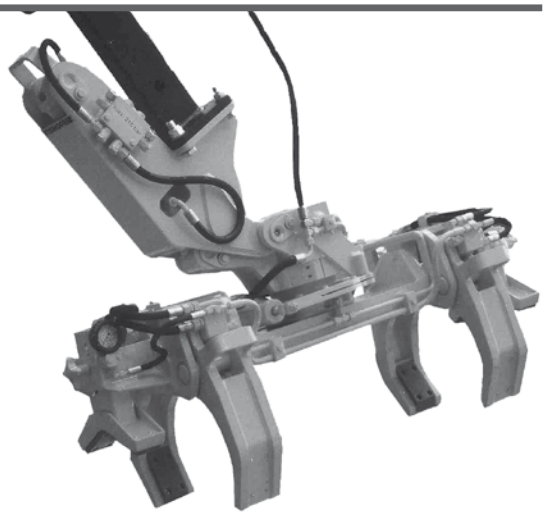
Operating pressure: 3480 psi
Pump capacity: 6.6 to 19.8 GPM

Technical Drawings



KM 930 Manipulator

A hydraulically operated attachment used for positioning tubes or poles, the KM 930 is for use on loader cranes with three functions. Flange mounting on the mechanical extension of the crane.



- **Manoeuvrability** through three hydraulic functions gripping, lifting and turning (rotation and tilting) of straight round poles (three hydraulic circuits are necessary). Unlimited angle of rotation.
- **Heavy loads** of 1100 lbs up to 6600 lbs can be handled by the **KINSHOFER** manipulators.
- **Precision operation** assured through continuous rotation, equipped with mechanically operating, hydraulic pilot controlled brake to prevent unintentional rotation.

Manipulator KM 930

Type	Load capacity	Gripping Ø (min./max.)	Width B	Number of tines	Self weight	Closing force
	(lbs)	(in)	(in)		(lbs)	(lbf)
KM 930-500	1100	3.9 / 11.8	31	1	517	2420
KM 930-1000	2200	3.9 / 11.8	50	2	682	5060
KM 930-2000	4400	9.8 / 23.6	54	4	1903	5500
KM 930-3000	6600	9.8 / 23.6	64	6	2387	8580

Package consists of: manipulator, **KINSHOFER** rotator, hydraulic pilot controlled brake, non-return valve

Please note: tubes or poles have to be grabbed always in the centre of gravity

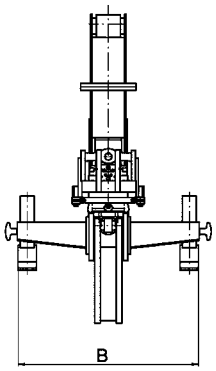
Accessories

Type	Description
KM 980-2	solenoid valve for additional oil circuit to change over to 3 circuits (for gripping, lifting, turning) when only 2 circuits are available, ready for mounting – 12 V or 24 V, working pressure max. 3625 psi, oil flow 15.9 GPM
KM 980-2 c	solenoid valve KM 980-2 complete attachment kit including assembly components, hose guard, hoses and mounting on the KM 930 manipulator – 12 V or 24 V, working pressure max. 3625 psi, oil flow 15.9 GPM

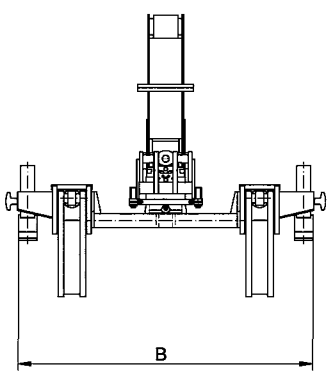
Requirements of Truck Crane

Operating pressure: max. 2880 psi
Pump capacity: 5.3 to 10.6 GPM

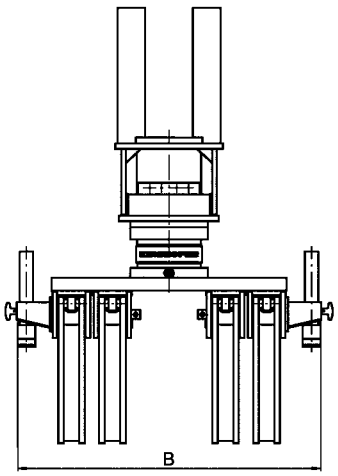
Technical Drawings



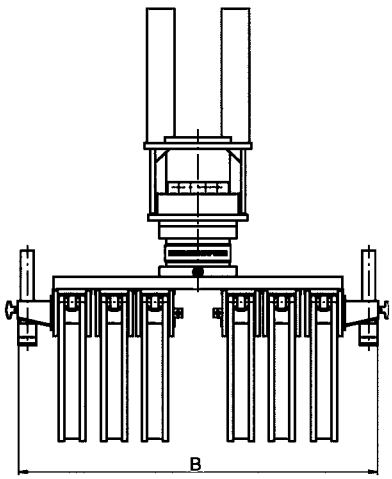
KM 930-500



KM 930-1000



KM 930-2000



KM 930-3000

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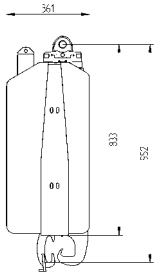
Hook & Container Discharge Units for Ring System KM 920-1/KM 920-4/KM 920-11

KINSHOFER container discharge attachments with ring system are characterised by short cycle times and an attractive acquisition price. Containers can be emptied even faster and more cost effectively with a one-man operation.

Bottle-Bank Discharge Unit KM 920-1 for Container with Ring System / Low Overall Height

- low overall height due to compact design
- rugged engineering with rope operation
- hooks on automatically when container is lifted
- precise positioning with KINSHOFER rotator
- protection against damage of container by automatic lift stop

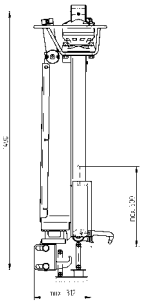


Type	max. Lift of the hook	Load capacity	Height (incl. rotator)	Self weight	max. Operating pressure	max. Pump capacity
	(in)	(lbs)	(in)	(lbs)	(psi)	(GPM)
KM 920-1	20	4840	37.5	374	⚠ 3024	15.9

Package consists of: bottle-bank discharge unit, rotator, short connecting hoses KM 203 01, upper suspension with pendulum damper KM 511 4500, non-return valve

Bottle-Bank Discharge Unit KM 920-11 for Container with Ring System

- robust mechanics with few moving parts and guided lifting hook
- precise positioning with KINSHOFER rotator, due to the use of a rotator with vertical oil ducts no externally installed hydraulic hoses are necessary
- pressure relief valve ensures independence of crane operating pressure
- protection against damage of container by automatic lift stop

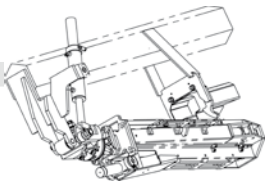


Type	max. Lift of the hook	Load capacity	Height (incl. rotator)	Self weight	max. Operating pressure	max. Pump capacity
	(in)	(lbs)	(in)	(lbs)	(psi)	(GPM)
KM 920-11	20	5500	55	385	4610	15.9

Package consists of: bottle-bank discharge unit, rotator KM 04 F140-30V, short connecting hoses KM 203 01, non-return valve, upper suspension with pendulum damper KM 511 4500, pressure relief valve

Accessories

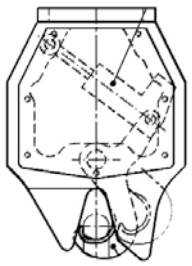
Type	Description	Tilting angle (deg.)	Self weight (lbs)
KM 924	Docking device for bottle-bank discharge units: it allows the discharge unit to be hydraulically docked and locked onto the crane jib. When unlocked, acts as a hydraulic pendulum damper. A solenoid valve for switch-over between the hydraulic circuits is included. Please state crane model when ordering. Operating pressure 4060 psi	90	154



Hydraulic Hook KM 920-4 for Containers and Loads with Ring System

The hydraulic hook facilitates the fast and precise lifting and loosening of containers and loads with ring system.

- precise positioning in combination with KINSHOFER rotator
- low overall height due to compact design
- robust mechanics with hydraulic cylinder (open/close)
- V-shaped cutout facilitates ring suspension
- vertical oil duct to recommended rotator without hydraulic hoses



Type	Width	Height (incl. rotator)	max. Ring - Ø	Self weight (w/o rotator)	max. Operating pressure	max. Load
	(in)	(in)	(in)	(lbs)	(psi)	(lbs)
KM 920-4	10	23	1.5	44	⚠ 2880	5500

Package consists of: hydraulic hook, non-return valve

Accessories

Type	Description
KM 04 F140-30V	recommended KINSHOFER-rotator with vertical oil ducts - load capacity 9900 lbs
KM 501 4500	upper suspension - load capacity 9900 lbs
KM 206	hose guard

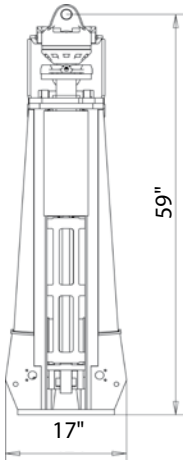
KM 920-12 / KM 921 Container Discharge Units for KINSHOFER Mushroom System

KINSHOFER container discharge attachments with the fast KINSHOFER mushroom system are characterised by short cycle times and an attractive acquisition price. Containers can be emptied even faster and more cost effectively with a one-man operation.

Bottle-Bank Discharge Unit KM 920-12 for Container with KINSHOFER Mushroom System

- robust mechanics with self centring hydraulic interlocking
- precise positioning with KINSHOFER rotator, direct hose routing
- independence of crane operating pressure due to the pressure relief valve
- protection against damage of container by automatic lift stop and an additional height control system

The secure service of the bottle-bank discharge unit **KM 920-12** can only be guaranteed by KINSHOFER GmbH in case the ***ORIGINAL* KINSHOFER *FIXED and HOIST DISCS*** are used on the container in the specified distance dimensions!



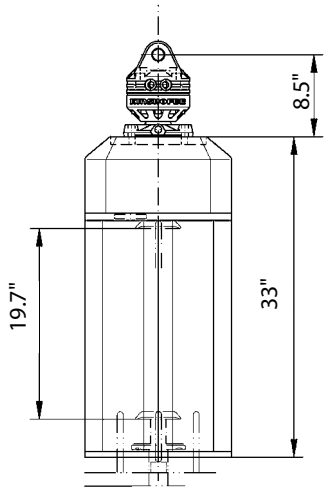
Type	max. Lift of the hook	Volume	Height (incl. rotator)	Self weight	max. Operating pressure	max. Pump capacity
	(in)	(lbs)	(in)	(lbs)	(psi)	(GPM)
KM 920-12	20	5500	59	385	4608	15.9

Package consists of: bottle-bank discharge unit, rotator KM 04 F, short connecting hoses KM 203 01, upper suspension with pendulum damper KM 511 4500, pressure relief valve and non-return valve

Bottle-Bank Discharge Unit KM 921 for Container with KINSHOFER Mushroom System or Ring System

- combination model: without any adjustments both types of containers can be handled – with KINSHOFER mushroom system or ring system
- low overall hight due to compact design
- robust mechanics with self locking spindle
- precise positioning with KINSHOFER rotator
- pressure relief valve ensures independence of crane operating pressure
- protection against damage of container by automatic lift stop and an additional height control system

The secure service of the bottle-bank discharge unit **KM 921** can only be guaranteed by KINSHOFER GmbH in case the ***ORIGINAL* KINSHOFER *FIXED and HOIST DISCS*** are used on the container in the specified distance dimensions!

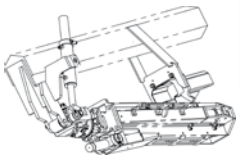


Type	max. Lift of the hook	Volume	Height (incl. rotator)	Self weight	max. Operating pressure	max. Pump capacity
	(in)	(lbs)	(in)	(lbs)	(psi)	(GPM)
KM 921	20	5500	42	374	4608	15.9

Package consists of: bottle-bank discharge unit, rotator KM 04 F, short connecting hoses KM 203 01, upper suspension with pendulum damper KM 511 4500, pressure relief valve

Accessories

Type	Description	Tilting angle (°)	Self weight (lbs)
KM 924	Docking device for bottle-bank discharge units: it allows the discharge unit to be hydraulically docked and locked onto the crane jib. When unlocked, acts as a hydraulic pendulum damper. A solenoid valve for switch-over between the hydraulic circuits is included. Please state crane model when ordering. Operating pressure 4060 psi.	90	154



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Barrier Lifter KM 932MB

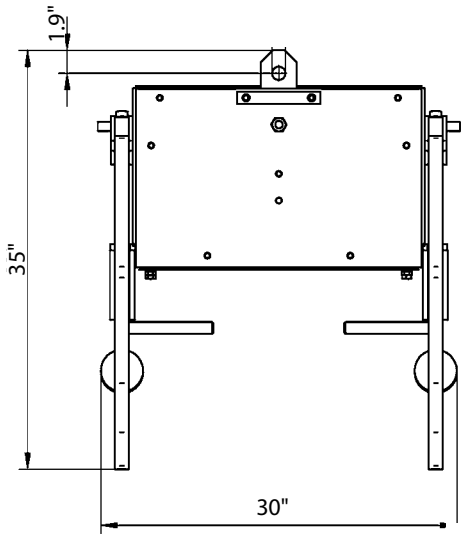
The KM 932MB barrier lifter is a mechanical grapple for fast and convenient handling of concrete barriers and blocks.

- **Safe:** Carbide gripping pads ensure safe operation, even on wet or coated surfaces.
- **Efficient:** The fully integrated, mechanically operated "latch & release" system allows the unit to function independently, without assistance from a ground man.
- **Versatile:** Multi-position arms are a standard feature. This means one unit can achieve different gripping ranges by simply changing a pin position.
- **Cost-effective:** The elimination of slings and chains means more cycles can be achieved per hour.
- **Fast:** The "latch & release" system functions automatically each time the load line is slackened.

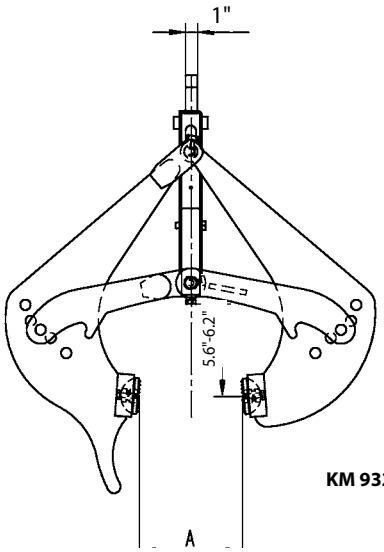
Barrier Lifter KM 932MB

Type	Gripping A (min./max.)	Self weight	Load capacity
	(in)	(lbs)	(lbs)
KM 932MB-6/10	3.9 – 12.2	330	14476
KM 932MB-12/14	11.2 – 15.8	253	14476

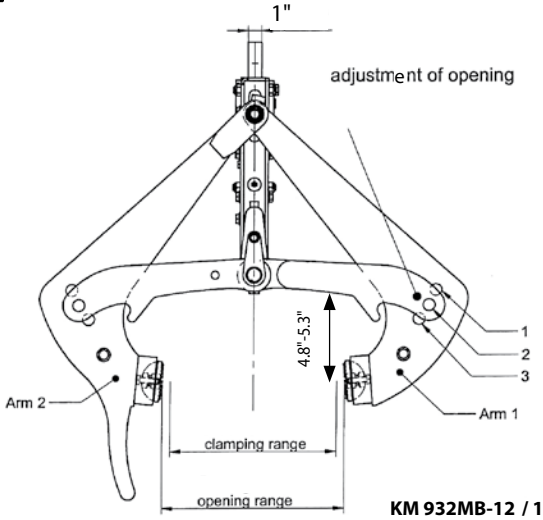
Technical Drawings



KM 932MB

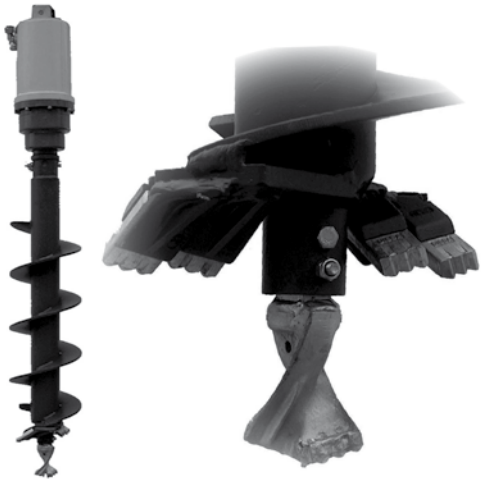


KM 932MB-6 / 10



KM 932MB-12 / 14

For use on truck mounted cranes, KM 250 auger drives are an economical, robust solution for drilling holes for fence posts, poles, foundations and landscaping. Application specific wear parts and augers mean our auger packages are tailor-made to suit your needs.



- **Profitable –** with better speed and precision than alternative drilling methods, the KM 250 drive units and augers save you time, labour and filling materials.
- **Adaptable –** A range of drive units with different auger diameters and digging teeth means a KM 250 is available for all types of truck cranes, and suitable for a wide variety of applications.
- **Durable –** Designed and built to last, KM 250 series drive units can handle hundreds of consecutive cycles.

FEATURES:

- **Drive units:**
  - steel housing can withstand high shock loading
  - output shaft and gear carrier are a robust, one-piece construction
  - components run in a maintenance free, constant oil bath
  - gears can easily be shifted from forward to reverse to quickly free the unit from being jammed
- **Augers:**
  - teeth are set on a continuous spiral to provide maximum penetration and uniform performance
- **Wear parts:**
  - rubber locking system makes teeth easy to exchange
  - using a hammer and punch, tooth exchange is done on-site
  - Two teeth options:

    Allround Teeth – BS-A: made of tempered material, bolt-on teeth are suitable for earth and clay

    Strong Tungtsen Teeth – BS-S: tungsten tipped, suitable for medium-rich soil, stony or frozen ground, heavy clay or asphalt

Drive Unit KM 250-1952 / KM 250-3750 / KM 250-5500 / KM 250-7400

Drive Unit KM 250-1952:	**Torque (at 2900 psi):**		1440 ft.lbs.
	Operating pressure:	⚠	2880 psi
	Recommended oil flow:		6.6 to 15.9 GPM
	Output shaft:		2.2 in square
	Self weight:		99 lbs
	Recommended type of truck crane:		7 MT
	Upper connection (width x pin-Ø):		3.3 x 1.2 in

Drive Unit KM 250-3750:	**Torque (at 2900 psi):**		2766 ft.lbs.
	Operating pressure:	⚠	2880 psi
	Recommended oil flow:		10.6 to 19.8 GPM
	Output shaft:		2.2 in square
	Self weight:		143 lbs
	Recommended type of truck crane:		7 MT
	Upper connection (width x pin-Ø):		3.3 x 1.2 in

Drive Unit KM 250-5500:	**Torque (at 2900 psi):**		4056 ft.lbs.
	Operating pressure:	⚠	2880 psi
	Recommended oil flow:		13.2 to 30.4 GPM
	Output shaft:		2.2 in square
	Self weight:		176 lbs
	Recommended type of truck crane:		7 MT
	Upper connection (width x pin-Ø):		3.3 x 1.2 in

Drive Unit KM 250-7400:	**Torque (at 3480 psi):**		5458 ft.lbs.
	Operating pressure:	⚠	3456 psi
	Recommended oil flow:		18.5 to 37 GPM
	Output shaft:		2.2 in square
	Self weight:		209 lbs
	Recommended type of truck crane:		15 MT
	Upper connection (width x pin-Ø):		3.3 x 1.2 in

We reserve the right to amend specifications without prior notice. KINSHOFER GmbH, 83666 Waakirchen, Germany

Augers for Drive Unit KM 250

Type	Application	Diameter of auger (in)	Length of auger (without extension) (in)	Wear parts type / teeth qty.	Self weight (lbs)
BS-150-57A	standard duty	6	47	A / 2	62
BS-200-57A	standard duty	8	47	A / 2	68
BS-225-57A	standard duty	9	47	A / 2	79
BS-250-57A	standard duty	10	47	A / 2	86
BS-300-57A	standard duty	12	47	A / 4	101
BS-350-57A	standard duty	14	47	A / 4	110
BS-400-57A	standard duty	16	47	A / 6	114
BS-450-57A	standard duty	18	47	A / 6	119
BS-500-57A	standard duty	20	47	A / 8	158
BS-600-57A	standard duty	24	47	A / 8	178
BS-100-57S	heavy duty	4	47	S / 0	51
BS-150-57S	heavy duty	6	47	S / 2	62
BS-200-57S	heavy duty	8	47	S / 2	68
BS-225-57S	heavy duty	9	47	S / 2	79
BS-250-57S	heavy duty	10	47	S / 2	86
BS-300-57S	heavy duty	12	47	S / 4	101
BS-350-57S	heavy duty	14	47	S / 4	110
BS-400-57S	heavy duty	16	47	S / 6	114
BS-450-57S	heavy duty	18	47	S / 6	119
BS-500-57S	heavy duty	20	47	S / 8	158
BS-600-57S	heavy duty	24	47	S / 8	178

Package consists of: auger, wear parts (teeth and tip)

Allround auger BS-A

Available spare parts (Prices on request)

BS-A tooth, external

BS-A tooth, internal

BS-A guiding tooth

Heavy duty auger BS-S

BS-S 350

BS-S tooth, external

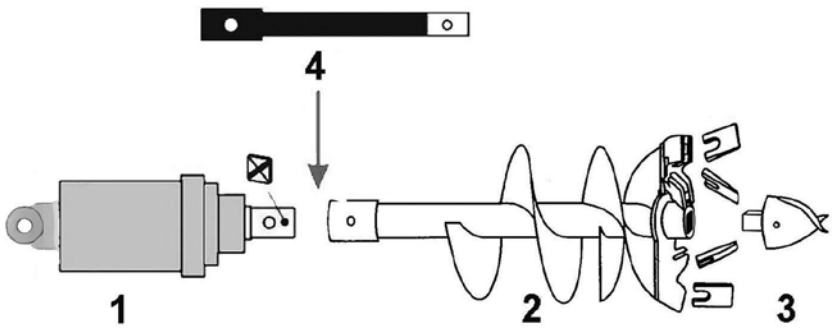
BS-S tooth, internal

BS-S guiding tooth

Accessories

Type	Description
KM 501 4500	upper suspension between rotator and crane – load capacity 9900 lbs
KM 511 4500	upper suspension with pendulum damper – load capacity 9900 lbs
BV-1000-57	rigid extension for augers – length 39 in (55 lbs)
BV-1500-57	rigid extension for augers – length 59 in (75 lbs)

Technical Drawings for KM 250-1952 / KM 250-3750 / KM 250-5500 / KM 250-7400



1 drive unit
2 auger
3 wear parts (teeth and tip)
4 extension

KM 604*HPXdrive*

The KM 604 *HPXdrive* as an allround unit is perfect for the daily routine jobs with a constant closing force of 19 kN (2.14 tonf US).

Technical specifications:	
Closing force (of 3770 psi):	19 kN (2.14 tonf US) for the KM 604HPX
Torque (at 3770 psi):	8850 ft.lbs (12000 Nm)
Operating pressure:	3770 to 4640 psi (approx. 26 to 32 MPa)
Recommended oil flow:	6.6 to 19.8 GPM

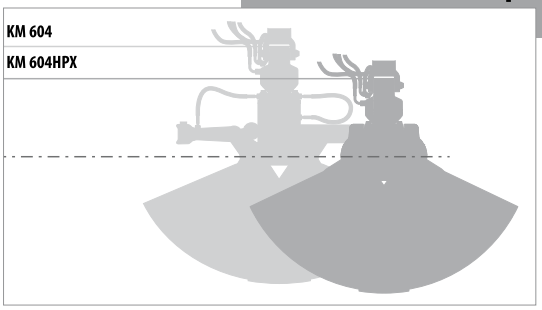
Historically the open and close functions of the attachments were achieved by using hydraulic cylinders, now they are generated by two hollow shafts, which run opposed and have a helix thread, hydraulically driven by a single piston. Through the advantages of the ***HPXdrive*** – technology time is saved and the service life is extended.

Constant Closing Force

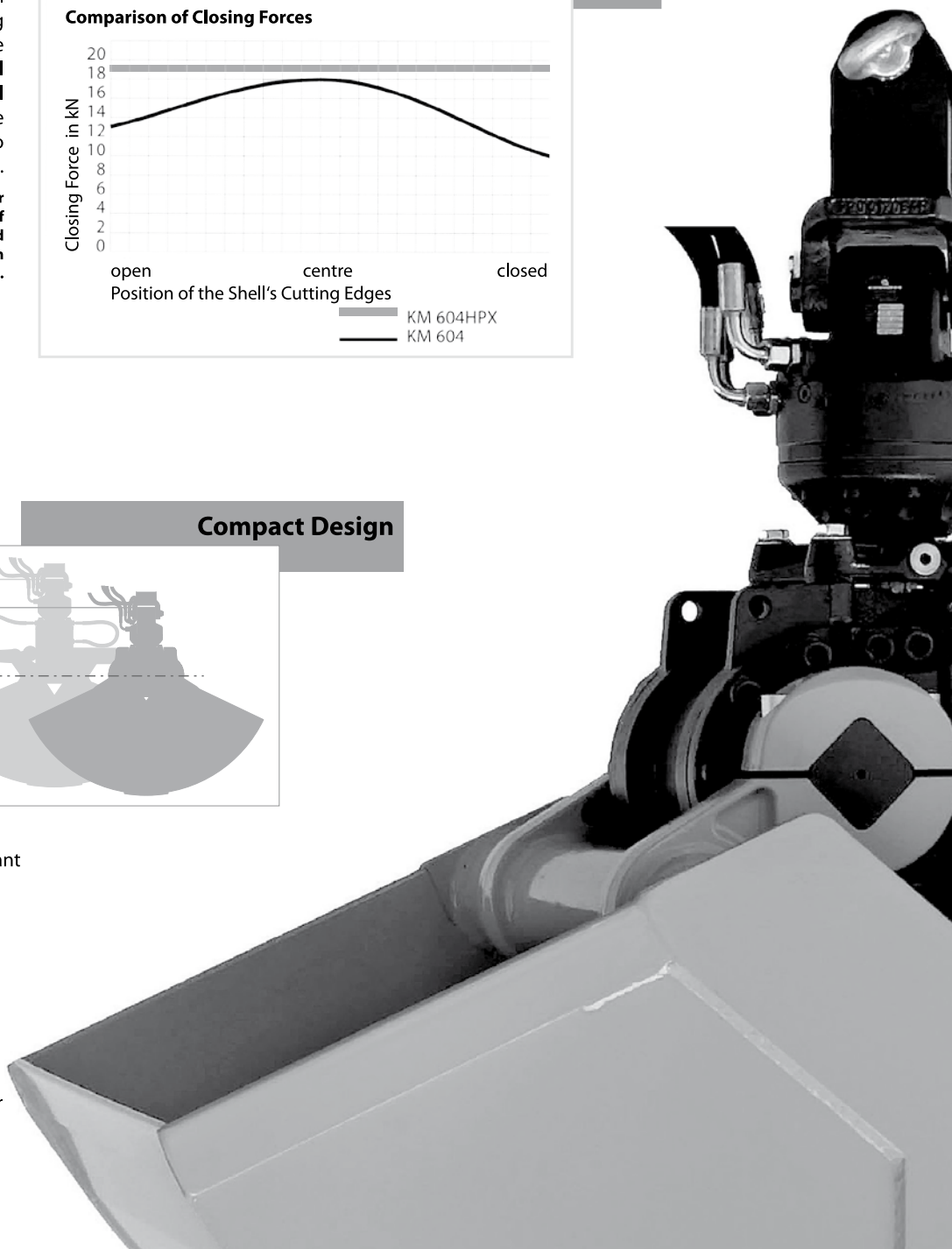
Full closing force is delivered from the beginning of the digging process, when the shells are in the opened position, ensuring powerfull penetration even in grown soil. Full closing force is also provided at the end when the shells are closed, to optimally compact the material.

Please note: Closing forces refer to an internal working pressure of 3770 psi (26 MPa). The recommended oil flow of 13.2 GPM provides an opening and closing time of 1,9 sec.

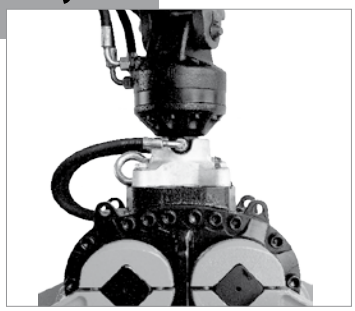
Compact Design



HPXdrive - the compact unit is resistant against dirt, blows and uprising material. Low overall height due to the compact design. No protruding parts. Shells are easily accessible from the top. No hoses are required in combination with a **KINSHOFER**-rotator with flange: **KINSHOFER**-rotator and ***HPXdrive*** are integrated in a single unit (internal oil passage).



Combination with Shaft-Style Rotator



The standard rotator for the KM 604 ***HPXdrive*** is the **KINSHOFER** rotator with flange KM 04F140-30V. In case a quick change to a non- rotating hook is necessary, the ***HPXdrive*** can be delivered with the **KINSHOFER** rotator with shaft KM 04 S – in combination with the quick change system KM 505 or reduction link KM 502.

KM 501
Upper suspension

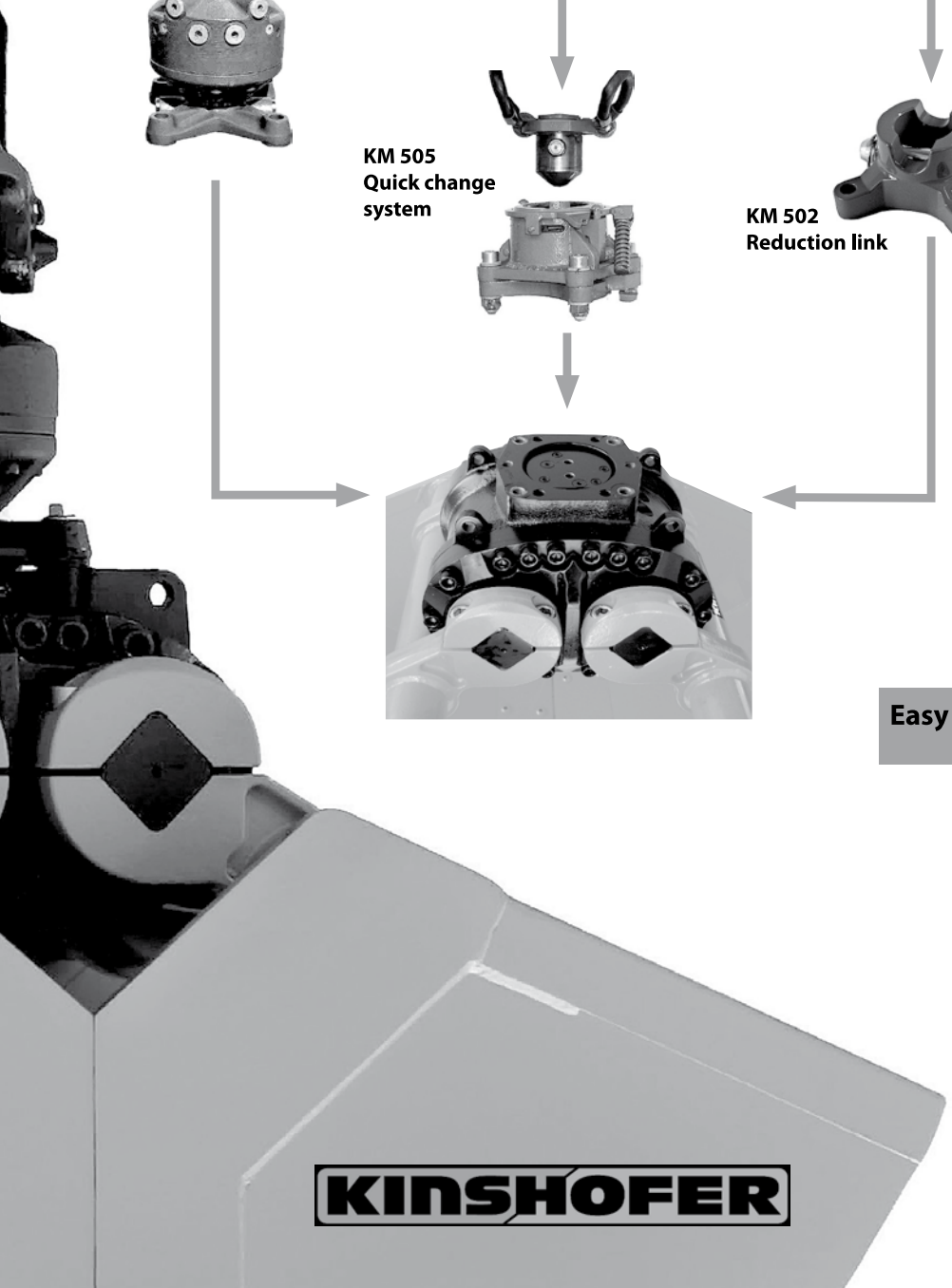
KM 04 S
Rotator with shaft

KM 04 F
Rotator with flange

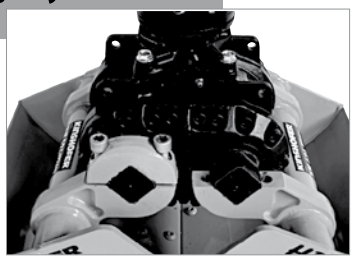
KM 505
Quick change system

KM 502
Reduction link

KM 460 04
Non-rotating hook



Easy Exchange System



The bucket shells are bolted to the shafts, and therefore it is very easy to replace them with another set of shells. Different types of shells for different applications can be refitted onto the driving unit, e.g. clamshell bucket, rock grapple, timber grapple, hay and forestry grapple and multi-purpose clamshell.

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Notes

We reserve the right to amend specifications without prior notice. KINSHOFER GmbH, 83666 Waakirchen, Germany

KINSHOFER North America – Warranty Policy

KINSHOFER warrants its products against defects in material and workmanship for a period of one year from the date its products are available for shipment to the original purchaser. No responsibility will be assumed by KINSHOFER for repairs or parts other than those provided or supplied by KINSHOFER. This warranty is limited to the replacement of parts or repair of parts, if repairs are authorized by KINSHOFER. It does not cover damages or defects due to normal wear and tear, misuse, alteration or neglect. KINSHOFER warrants that the products shall be delivered free of any claims of any third person by way of infringement, unless specifications are provided by the purchaser in which event the purchaser, holds KINSHOFER harmless against any claims which arise out of compliance with purchaser's specifications. No other warranty is expressed or implied and KINSHOFER assumes no responsibility for consequential damages arising from the failure of the products for any reason whatsoever, nor does it extend any warranty for any damages, whatsoever, for improper storage or handling by purchaser prior to placing into service. The purchaser shall determine the suitability for the product, for its use, and purchaser assumes all risks and liabilities in connection therewith.

KINSHOFER North America - Returned Goods Policy

Upon written authorization, KINSHOFER products can be returned for credit, provided merchandise is unused and complete. The customer pays freight back and a credit will be issued to the customer account upon satisfactory receipt and inspection of the returned products. No return can be processed without the issuance of an RMA number by KINSHOFER.
A 15% restocking fee will apply to all non-warranty related returns.

KINSHOFER North America – Warnings and Cautions

Ensure the correct equipment is obtained and installed for the application.
Ratings shown in KINSHOFER literature are applicable only to new products.
Working load limits (load capacity) shown are the maximum load the product is authorized to support under normal environmental conditions. Shock loading and abnormal conditions must be taken into account when selecting products.
Working load limits or safety factors for each KINSHOFER product may be affected by wear, misuse or environmental conditions. Regular inspections must be conducted to ensure the equipment continues to meet the most current revision of the published standard. Welding to any KINSHOFER products can be hazardous and should only be implemented after written permission from KINSHOFER.
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crane and excavator attachments

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