

# ATTACHMENTS FOR LOADER CRANES

# KINSHOFER Attachments – Quality in Action



**Brick Stack Grapple  
KM 332**



**Universal Fork  
KM 461**



**Orange Peel Grapple  
KM 650**



**Clamshell Bucket  
KM 604HPX**



**Clamshell Bucket with Open Shells  
KM 605U HPX**



**Rock Grapple  
KM 613HPX**



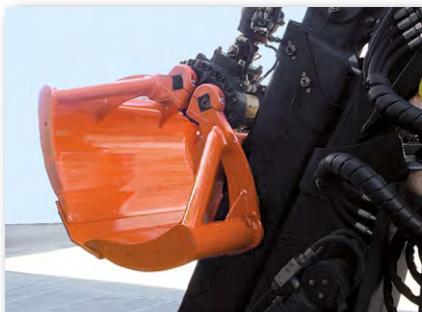
**Timber Grapple  
KM 632HPX**



**Hay and Forestry Grapple  
KM 641HPX**



**Barrier Lifter  
KM 932MB**



**Universal Grapple for Z-Cranes  
KM 605U HPX-Z**



**Pole Grapple  
KM 930-1000 Special**



**Asymmetric Orange Peel Grapple  
KM 652-5/2**

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# 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.

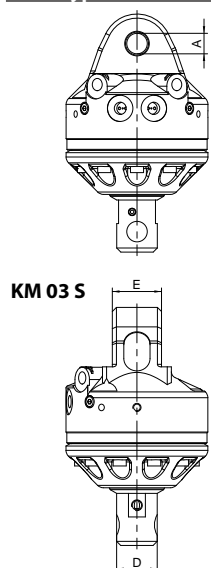


## Features of KINSHOFER Rotators





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



KM 03 S

### Type

Type	Load capacity (lbs)	Shaft Ø D (in)	Upper connection (width E x pin-Ø A) (in)	Torque (ft.lbs)	Moment of deflection max. (ft.lbs)	Self weight (lbs)
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KM 03 S*	6600	1.95	2.36 x 0,98	332	1290	53
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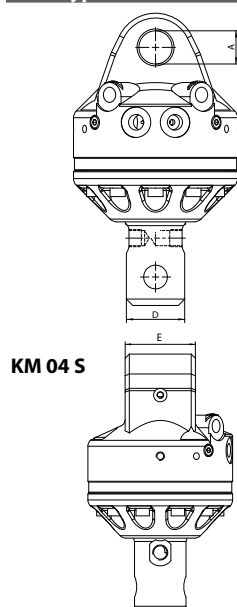
\* only for pallet forks

Operating pressure rotate:	max. 5350 psi
Oil flow rotate:	max. 10.5 GPM
Oil flow feedthrough:	20.0 GPM
Hydraulic coupling in:	G 3/8"
Hydraulic coupling out:	G 1/4"



KM 03 S

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



KM 04 S

### Type

Type	Load capacity (lbs)	Shaft Ø D (in)	Upper connection (width E 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 S68-30US*	9900	2.68	3.3 x 1.2	738	3318	59
KM 04 S69-30	9900	2.72	3.3 x 1.2	627	2213	57

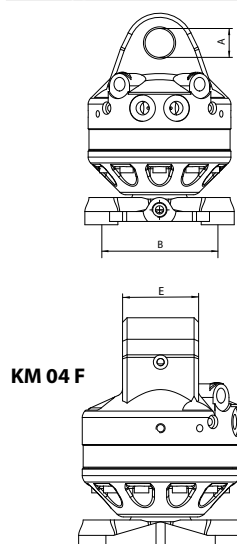
\* steel motor-head

Operating pressure rotate:	max. 5350 psi
Oil flow rotate:	max. 10.5 GPM
Oil flow feedthrough:	20.0 GPM
Hydraulic coupling:	M18 x 1.5



KM 04 S69-30

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



KM 04 F

### Type

Type	Load capacity (lbs)	Hole pattern of flange B (in)	Upper connection (width E 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 F140-30US*	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
KM 04 F140-30LM***	9900	□ 5.5	3.3 x 1.2	627	2213	57

\* steel motor-head

\*\* additional vertical connection

\*\*\* maintenance low rotator with plastic bushings and vertical connection

Operating pressure rotate:	max. 5350 psi (LM-version max. 4600 psi)
Oil flow rotate:	max. 10.5 GPM
Oil flow feedthrough:	20.0 GPM
Hydraulic coupling:	M18 x 1.5



KM 04 F



KM 04 F140-30US

## Product Range

## KINSHOFER-Rotator Line

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

Type	Load capacity (lbs)	Shaft Ø D (in)	Upper connection (width E 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	3318	71

**Operating pressure rotate:** max. 5350 psi  
**Oil flow rotate:** max. 10.5 GPM  
**Oil flow feedthrough:** max. 20.0 GPM  
**Hydraulic coupling in:** G 1/2"  
**Hydraulic coupling out:** M18 x 1.5



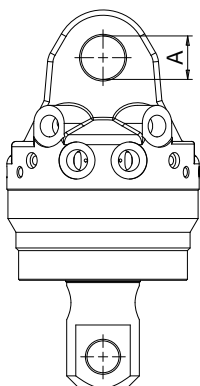
### Gear Type Rotator with Flange up to 13200 lbs Load Capacity (incl. Fittings)

Type	Load capacity (lbs)	Hole pattern of flange B (in)	Upper connection (width E 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

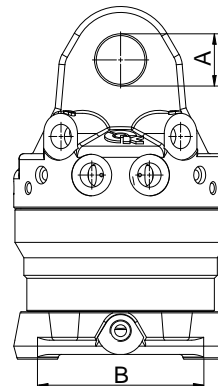
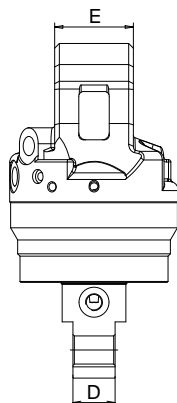
**Operating pressure rotate:** max. 5350 psi  
**Oil flow rotate:** max. 10.5 GPM  
**Oil flow feedthrough:** max. 20.0 GPM  
**Hydraulic coupling in:** G 1/2"  
**Hydraulic coupling out:** M18 x 1.5



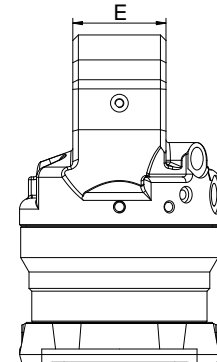
### Technical Drawings



KM 06 S68-40



KM 06 F140-40



## 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 E x pin-Ø A) (in)	Torque (ft.lbs)	Hydraulic couplings	Moment of deflection max. (ft.lbs)	Self weight (lbs)
KM 04 F140-30-4	9900	□ 5.5	3.3 x 1.2	629	M 18 x 1,5	2213	88
KM 06 F173-35-4	13200	Ø 6.8	3.2 x 1.4	738	G 1/2"	6269	99
KM 10 F173-35/2-4	22000	Ø 6.8	3.2 x 1.4	1475	G 1/2" & G 3/4"	8850	159

Operating pressure rotate:  
Oil flow rotate:  
Oil flow feedthrough:

**KM 04 F / KM 06 F**  
max. 5350 psi  
max. 10.5 GPM  
max. 20.0 GPM

**KM 10 F**  
max. 5350 psi  
max. 13.0 GPM  
max. 20.0 GPM



**KM 06 F173-35-4**

## 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 E x pin-Ø A) (in)	Torque (ft.lbs)	Moment of deflection max. (ft.lbs)	Self weight (lbs)
KM 06 F173-35	13200	Ø 6.8	3.2 x 1.4	738	6269	75
KM 10 F173-35/1	22000	Ø 6.8	3.2 x 1.4	1475	8850	136
KM 10 F173-35/2	22000	Ø 6.8	3.2 x 1.4	1475	8850	143
KM 10 F173-45	22000	Ø 6.8	3.9 x 1.8	1475	8850	150
KM 10 F173-52	22000	Ø 6.8	5.4 x 2.1	1475	8850	154

Operating pressure rotate:  
Oil flow rotate:  
Oil flow feedthrough:  
Hydraulic coupling:

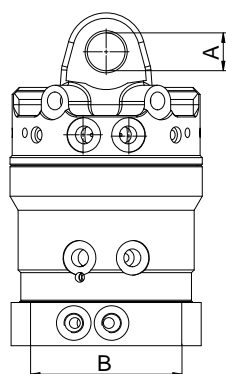
**KM 06 F**  
max. 5350 psi  
max. 10.5 GPM  
max. 20.0 GPM  
G 1/2"

**KM 10 F**  
max. 5350 psi  
max. 13.0 GPM  
max. 20.0 GPM  
G 1/2"

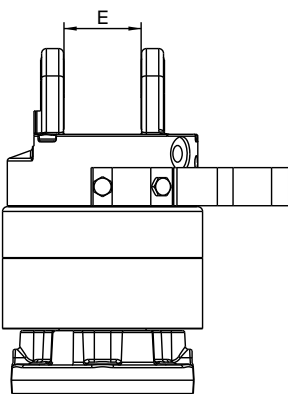
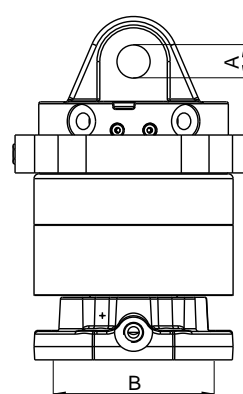
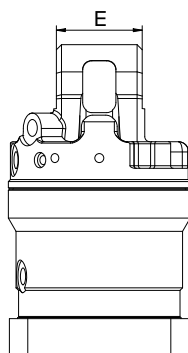


**KM 10 F173-45**

## Technical Drawings



**KM 04 F140-30-4**



**KM 10 F173-35/1**



## Accessories for Rotators

## KINSHOFER Rotator Line

### KM 501 – Upper Suspension between Rotator and Crane



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



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



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

### Accessories for Attaching Pallet Forks etc.



KM 460 03

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	<b>KINSHOFER</b> 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	<b>KINSHOFER</b> 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	<b>KINSHOFER</b> shaft rotators	KM 06	33
KM 460 10	non-rotating swinging hook for all <b>KINSHOFER</b> flange rotators	KM 10 F173 (KM 04 to KM 10)	55



KM 460 04

## KM 505 – Quick Change System for Shaft-Type Rotators up to 4000 kg Load Capacity

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 the quick couplings and disengage the locking device manually. The upper element of the quick change system is available for all KM 04 - shaft rotators. The KM 505 system allows the easy exchange between pallet fork and brick stack grapple for example - not suitable for heavy duty work.



Type	Description	Hole pattern of flange (in)	Self weight (lbs)
<b>KM 505</b>	complete, incl. hydraulic couplings (KM 204 01)	0.16 x Ø0.71 / □ 5.51	27
<b>KM 505 01</b>	upper element fitted to rotator incl. 2 mobile parts		11
<b>KM 204 01</b>	mobile part of hydraulic quick coupling (2 pieces) for KM 505 01		
<b>KM 505 02</b>	lower element mounted onto attachment	0.16 x Ø0.71 / □ 5.51	15
<b>KM 505 03</b>	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 the quick couplings and disengage the locking device manually. The upper element of the heavy duty quick change system is available for the **KINSHOFER** shaft rotators KM 04 S68-30US or KM 06 S68-40. The KM 505 system allows the easy exchange between pallet fork and clamshell bucket for example - especially developed for the heavy duty task with clamshell buckets.



Type	Description	Hole pattern of flange (in)	Self weight (lbs)
<b>KM 505 HD</b>	complete, incl. hydraulic couplings (KM 204 01)	0.16 x Ø0.71 / □ 5.51	40
<b>KM 505 01 HD</b>	upper element HD fitted to rotator incl. 2 mobile parts		15
<b>KM 204 01</b>	mobile part of hydraulic quick coupling (2 pieces) for KM 505 01 HD		
<b>KM 505 02 HD</b>	lower element HD mounted onto attachment	0.16 x Ø0.71 / □ 5.51	24
<b>KM 505 03 HD</b>	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 03

Type	Description
<b>KM 203 01</b>	short connecting hoses between rotator and attachment with standard fittings M 18 x 1,5 (2 pieces)
<b>KM 203 03</b>	long connecting hoses between rotator and crane – please specify dimensions (4 pieces)
<b>KM 204 01</b>	mobile part of hydraulic quick coupling for hose (Ø 0.4 in, 2 pieces)
<b>KM 204 02</b>	fixed part of hydraulic quick coupling for rotator (Ø 0.4 in, 2 pieces)
<b>KM 204 03</b>	hydraulic quick change kit incl. mobile and fixed parts (2 pieces each) mounted with adapters to rotator

**NO TIME-CONSUMING CONNECTING AND DISCONNECTION OF SHORT HOSES ANYMORE**

**NO RISKY CLIMBING UP AND DOWN THE TRUCK LOAD BED ANYMORE**

**NO LOSS OF TIME ANYMORE DUE TO MANUAL WORKS WHEN CHANGING ATTACHMENTS**

**SHORT HOSE CONNECTION ONLY BETWEEN QUICK CHANGE LOWER PART AND ATTACHMENT**

**FULLY HYDRAULIC CHANGE OF ATTACHMENT WITHIN ONLY A FEW SECONDS**



**SMARTFLOW**  
FASTER! EASIER! SAFER!



**DIFFERENT LOWER PARTS FOR MECHANICALLY OR HYDRAULICALLY OPERATED ATTACHMENTS AVAILABLE!**



The new fully hydraulic quick change device for loader crane attachments allows for a fast exchange of hydraulic or mechanical tools at the truck crane without any manual works at attachment or rotator.

- **Fast and easy!** No manual reconnection of the hoses necessary anymore when changing the attachment!
- **Lower part with or without hydraulics** available, depending on the use of a hydraulically or mechanically operated attachment.
- **Available for Kinshofer rotators** KM 04 S68-30US, KM 06 S68-35 and KM 06 S68-40.
- **Robust and compact construction** – short hose connection to the hydraulic attachment are connected directly to the lower part of the quick change device.
- **Weather protection cap** available to protect the quick change device lower part when not connected to the upper part.
- **Non-rotating load hook** also available.
- **Matching all crane attachments** with flange hole pattern □5.5 inches.



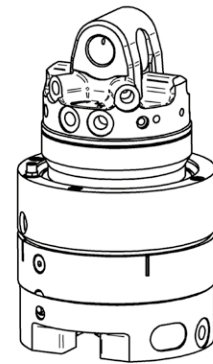
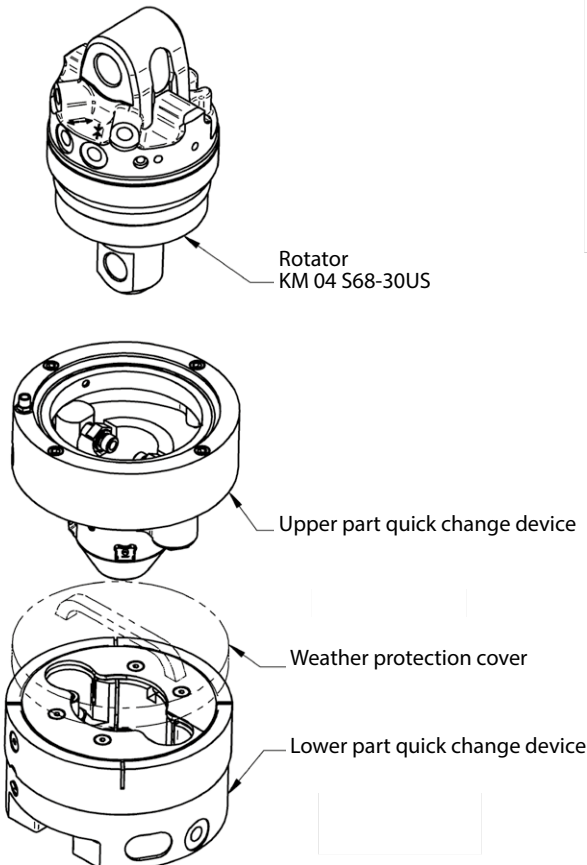
## Quick change device KM 506 HD

Type	Description	Hole pattern (in)	Weight (lbs)
<b>KM 506 HD</b>	complete incl. upper and lower part with hydraulic couplings	4x Ø0.67 / □5.5	99
<b>KM 506 01 HD</b>	upper part		42
<b>KM 506 02 HD</b>	lower part with couplings for hydraulic attachment	4x Ø0.67 / □5.5	57
<b>KM 506 04 HD</b>	lower part without couplings for mechanical attachment	4x Ø0.67 / □5.5	51
<b>KM 506 03 HD</b>	non-rotating load hook incl. mechanical lower part		
<b>KM 506 05</b>	weather protection cap		
<b>KM 506 06</b>	support stand for KM 506 03 HD to set down for exchange and storage		14

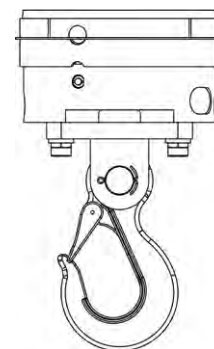
## Technical data

<b>Operating pressure open-close (attachment)</b>	37 MPa (5350 psi)
<b>Pump capacity open-close (attachment)</b>	13 GPM
<b>Operating pressure connect-disconnect</b>	15 MPa (2175 psi)
<b>Pump capacity connect-disconnect</b>	1.3 GPM

## Technical drawings

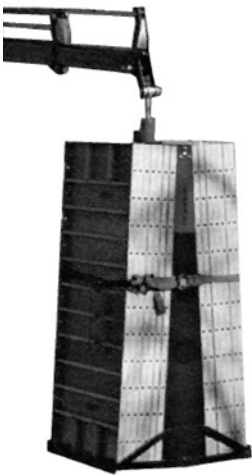


KM 506 03 HD non-rotating load hook



KM 506 06 supporting rack available

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

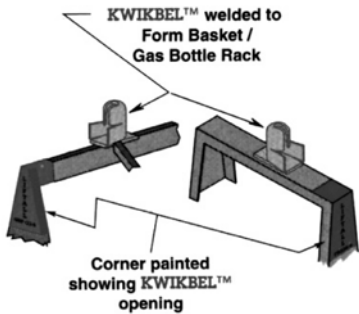
**Technical Details**



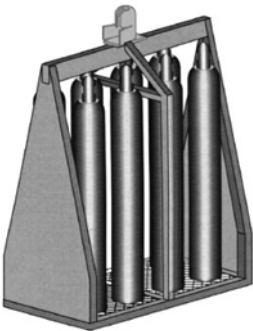
Kwikbel™



Striker



Painted corner showing Kwikbel™ opening

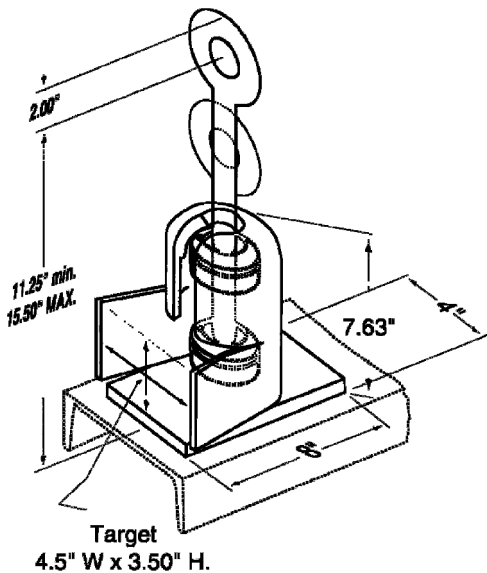


Kwikbel™ application at gas bottle rack

**Accessories**

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

**Technical Drawings**



# Brick Stack Grapple – Parallel Squeeze

KM 332/333

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 to 55in 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 large 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	Load capacity at min./max. plunge depth	Gripping A min./max.	Height	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	Load capacity at min./max. plunge depth	Gripping A 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	539
KM 332-1000	39	4400	16 – 55	48	561
KM 332-1300	51	3520	16 – 55	60	583
KM 332V-850	34 – 55	4840 / 3520	16 – 55	42 – 64	638
KM 332V-1100	43 – 65	4180 / 2970	16 – 55	52 – 73	726
KM 333-850	34	6600	16 – 55	43	880
KM 333-1000	39	5500	16 – 55	49	913
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 <b>KINSHOFER</b> rotator for KM 332/333

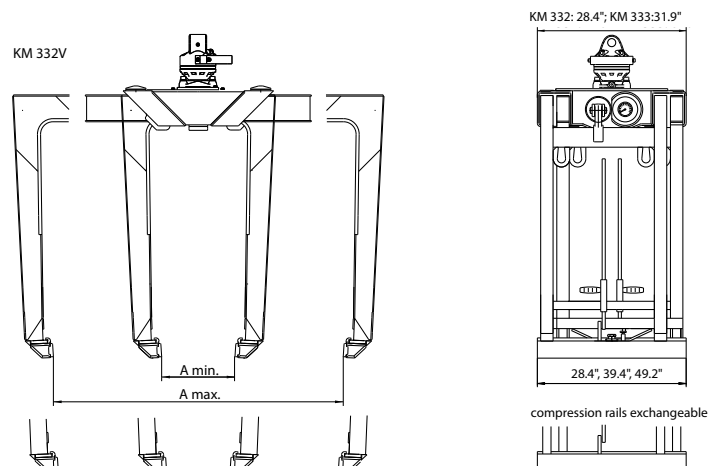
## Requirements of Truck Crane

**Operating pressure at oil flow:**

2900 - 3750 psi at max. 20 GPM





2900 - 5350 psi at max. 10.5 GPM

## Technical Drawings








## Compression Rails

	Type	Description	Length (in)	Weight (lbs)
 KM 381 29	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	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 32	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 391 09	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

	Type	Description	Weight (lbs)
<b>Non-Standard Opening Range:</b> all grapples are available with opening ranges not listed. Call for details			
<b>Non-Standard Plunge Depth:</b> all grapples are available with plunge depth not listed. Call for details			
 KM 381 08	KM 381 08	tilting Device to reduce overall height of the equipment for shaft rotators	26
		in transport for flange rotators	40
 KM 381 18	KM 381 18	height Reduction Link to reduce the overall height of the equipment in transport - for flange rotators	33
 KM 381 31	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

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. D (in)	Height C (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 is only suitable up to opening range of 43 in (see technical drawings)

## Accessories

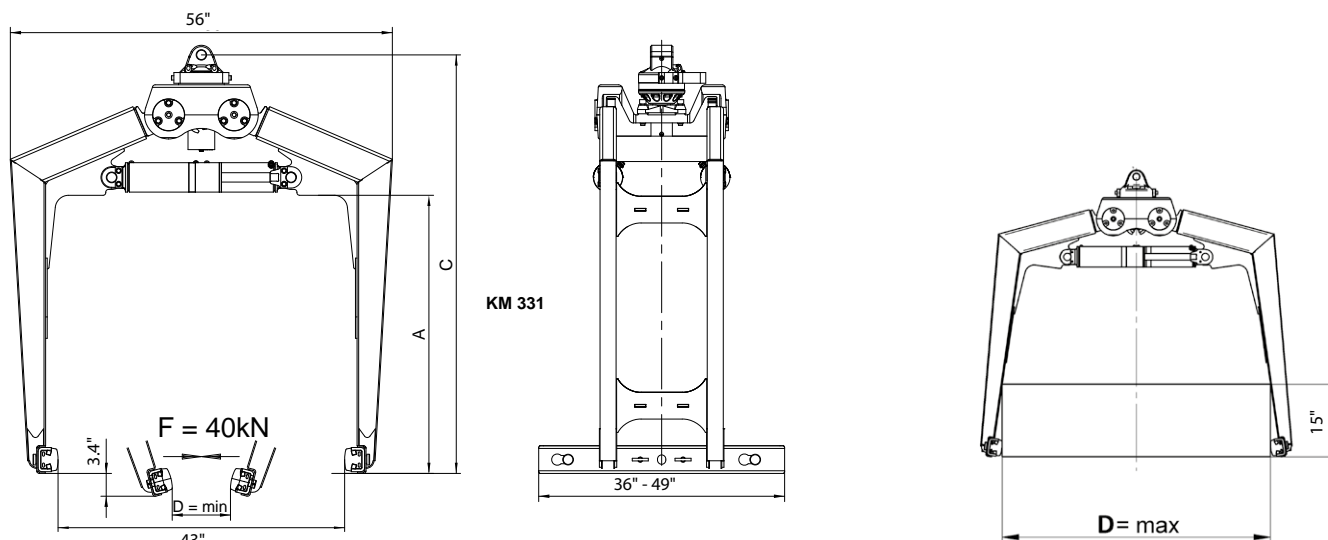
Type	Description	Self weight (lbs)
KM 511 4500	upper suspension with pendulum damper	33
KM 381 40 720	compression rails – 28 in (2 pieces)	64
KM 381 40 920	compression rails – 36 in (2 pieces)	81
KM 381 40 1000	compression rails – 39 in (2 pieces)	88
KM 381 40 1120	compression rails – 43 in (2 pieces)	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)	

## Requirements of Truck Crane

### Operating pressure at oil flow:

2900 - 3750 psi at max. 20 GPM  
 2900 - 5350 psi at max. 10.5 GPM

## Technical Drawings



## KM 401Hc

## Pallet Fork with Tines Adjustable by Spindle

An efficient pallet fork with a hydraulically compensating centre of gravity, the KM 401Hc has a maximum capacity of 6000 lbs 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 41 in to 65 in - also available as **telescopique T-version with throat height 47 in to 98 in**.
- **Versatile Width** - the tine spread can also be adjusted.
- **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	Throat height	Tine length	Tine spread	Tine dimensions (width x height)	Centre of gravity	Self weight
	(lbs)	(in)	(in)	(in)	(in)	(in)	(lbs)
<b>KM 401H-6000c</b>	6000	41 - 65	45	19 - 32	4 x 1.5	24	525

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

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

### Accessories

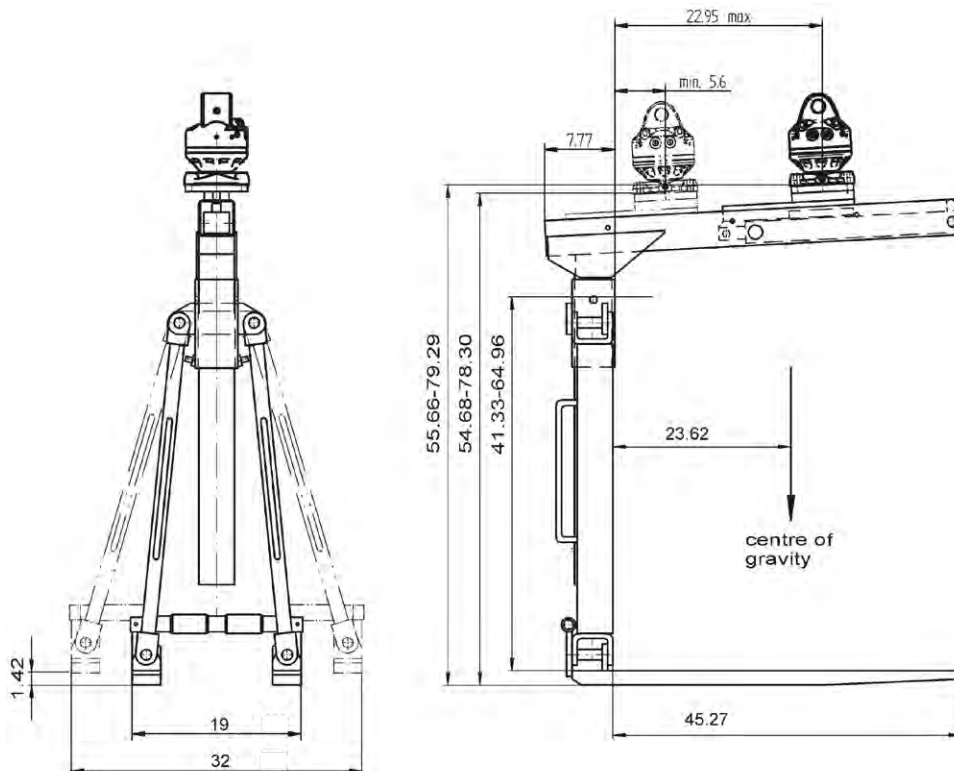
Type	Description
<b>KM 460-1100</b>	protection trellis for loads up to 4400 lbs (43 in x 43 in, height 59 in)
<b>KM 460-1300</b>	protection trellis for loads up to 4400 lbs (51 in x 51 in, height 59 in)
<b>KM 460 01</b>	protection chain for loads up to 4400 lbs for securing loads like shrink wrapped stone
<b>KM 04 S</b>	shaft rotator for controlling the rotation and placement of load
<b>KM 460 03 KM 04 S</b>	rigid suspension link with pin – for rotators up to 9900 lbs capacity

### Requirements of Loader crane

**Operating pressure at oil flow:**  
max. 2900 psi at 5 - max. 10.5 GPM

⚠ **Mind the pressure!**

### Technical Drawings





# Pallet Fork with Tines Adjustable by Spindle

**KM 401**

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

- **Efficient** - 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 centre 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 41 to 65 in by lock pin - also available as **telescopic T-version with throat height 47 in to 98 in**.
- **Adjustable Width** - tine spread can also be adapted from 19 to 32 in with the spindle
- **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 C	Tine length B	Tine spread A	Tine dimensions (width x height)	Centre of gravity	Self weight
	(lbs)	(in)	(in)	(in)	(in)	(in)	(lbs)
<b>KM 401-6000</b>	6000	41 - 65	45	19 - 32	4 x 1.5	24	480

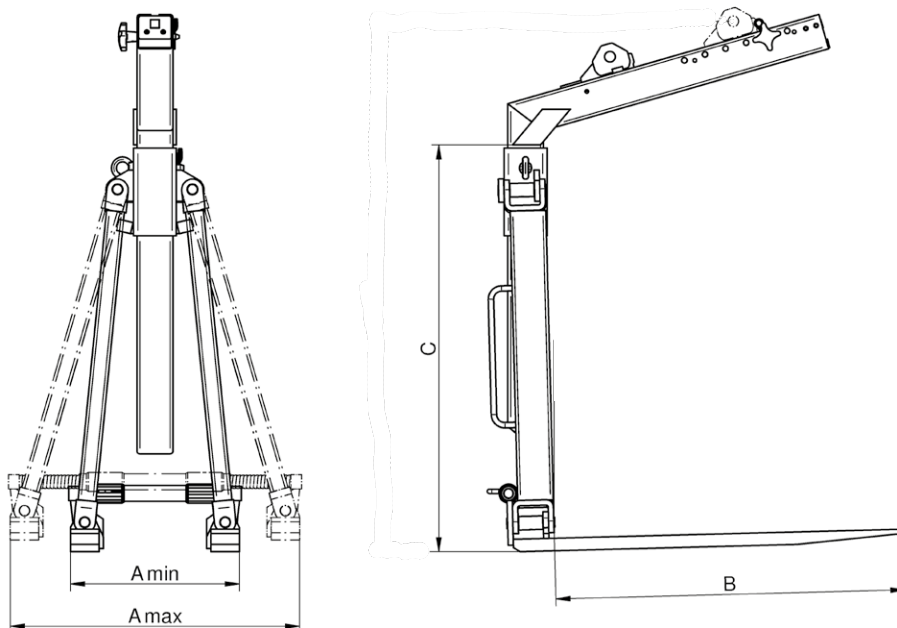
### Please note:

- 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
<b>KM 460-1100</b>	protection trellis for loads of max. 4400 lbs (43 x 43 in, height 59 in)
<b>KM 460-1300</b>	protection trellis for loads of max. 4400 lbs (51 x 51 in, height 59 in)
<b>KM 460 01</b>	protection chain for loads of max. 4400 lbs for securing loads as shrink wrapped stone stacks to be lifted high above ground
<b>KM 04 S</b>	shaft rotator for controlling the rotation and placement of load
<b>KM 460 03 KM 04 S</b>	rigid suspension link with pin - for rotators up to 9900 lbs capacity

## Technical Drawings



## KM 416

## Pallet Fork with Manual Shifting & Adjustable Height & Tines

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

- For **handling palletised and unpalletised 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 centre of the load.
- The **optional adjustable throat** (KM 416 ADJ), available 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.19 „Different Styles of Manually Adjustable Tines“
- For safer handling of loads in higher elevation a protection trellis or protection chain should be used

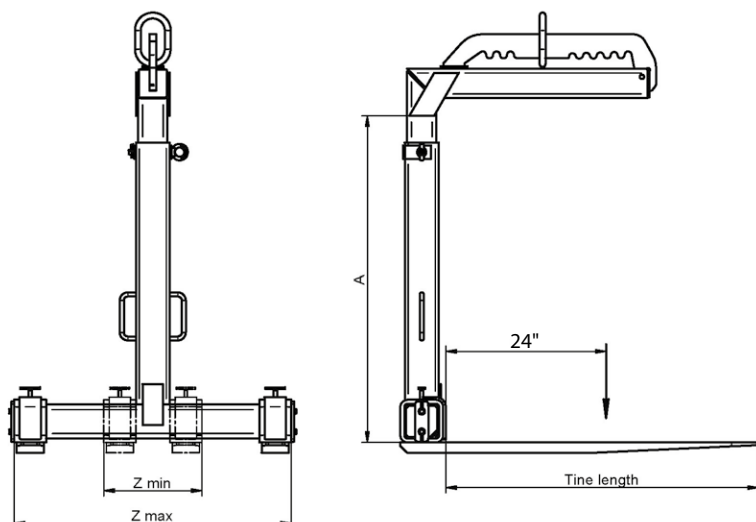
### Tine Styles

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	2	1.50	47	6000
C	Offset	2	4	1.50	46	6000
D	Roofers	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 wrapped stone stacks to be lifted high above ground
KM 460 02	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



# Pallet Fork with Self Shifting & Adjustable Height & Tines

**KM 420**

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 A (in)	Tine length (in)	Tine spread Z max (in)	Tine dimensions (width x height) (in)	Number of tines	Center 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 center 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

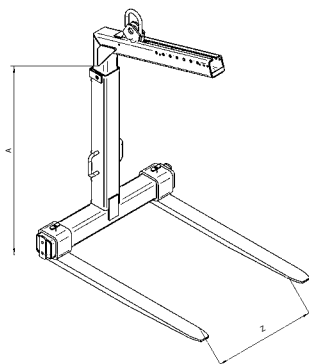
## Tine Styles

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	2	1.50	47	6000
C	Offset	2	4	1.50	46	6000
D	Roofers	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 wrapped stone stacks to be lifted high above ground
KM 460 02	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



## 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)
<b>KM 460 1100</b>	43 x 43	59	150
<b>KM 460 1300</b>	51 x 51	59	175

Other dimensions available on request.

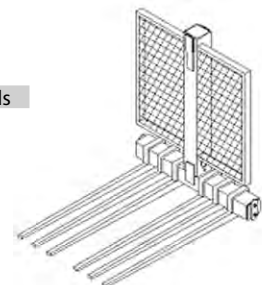
### KM 460 01 - Protection Chain

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)
<b>KM 460 01</b>	20	9

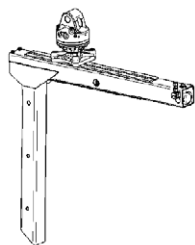
### Backstop

Type	Description
<b>KM 460 02</b>	A backstop can be welded to the throat of a pallet fork as support for unbalanced loads



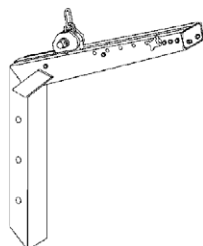
## Different Methods for Center of Gravity Compensation

### Hydraulic Shifting



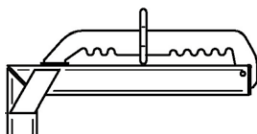
Hydraulic center of gravity compensation: the slide in the top arm is moved by a cylinder in an economic one-man-operation. In combination with a rotator, precise positioning is no problem.

### Self Shifting



Spring loaded center 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 center 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.

## Manual Adjustment



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

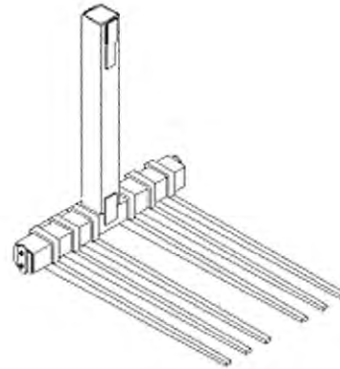
## Different Styles of Manually Adjustable Tines

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	2	1.50
C	Offset	2	4	1.50
D	Roofers	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

## 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 (lbs)	Flat lift height	Tine spread min - max (in)	Throat height	Self weight (lbs)
		A (in)		B (in)	
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	925
KM 461 -54/72/22 c	6000	54	25 - 72	22	980
KM 461 -54/84/22 c	6000	54	25 - 84	22	990

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

**Please note:** – individual wallboard fork is also available

### Accessories

Type	Description
KM 04 S68-30US	shaft rotator
KM 505 HD + KM 505 05	quick change system for shaft rotator KM 04 S68-30US with distance ring
KM 461 08	adjustable backstop

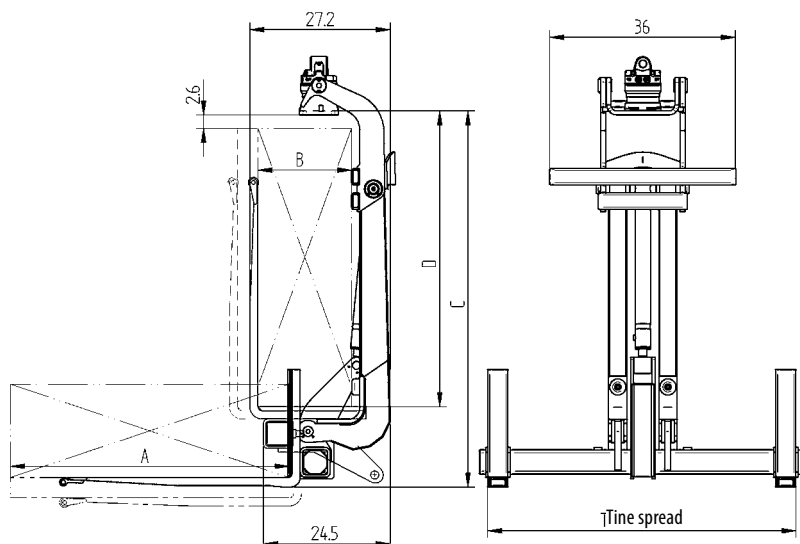
### Requirements of Loader Crane

#### Operating pressure at oil flow:

2900 - 3750 psi at max. 20 GPM

2900 - 5350 psi at max. 10.5 GPM

### Technical Drawings



A low-profile universal fork for loader cranes, the KM 461LS 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 461LS -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, counterbalance valve

**Please note:**

- individual universal fork is also available
- additional dimensions on request
- other bottom bar lengths on request

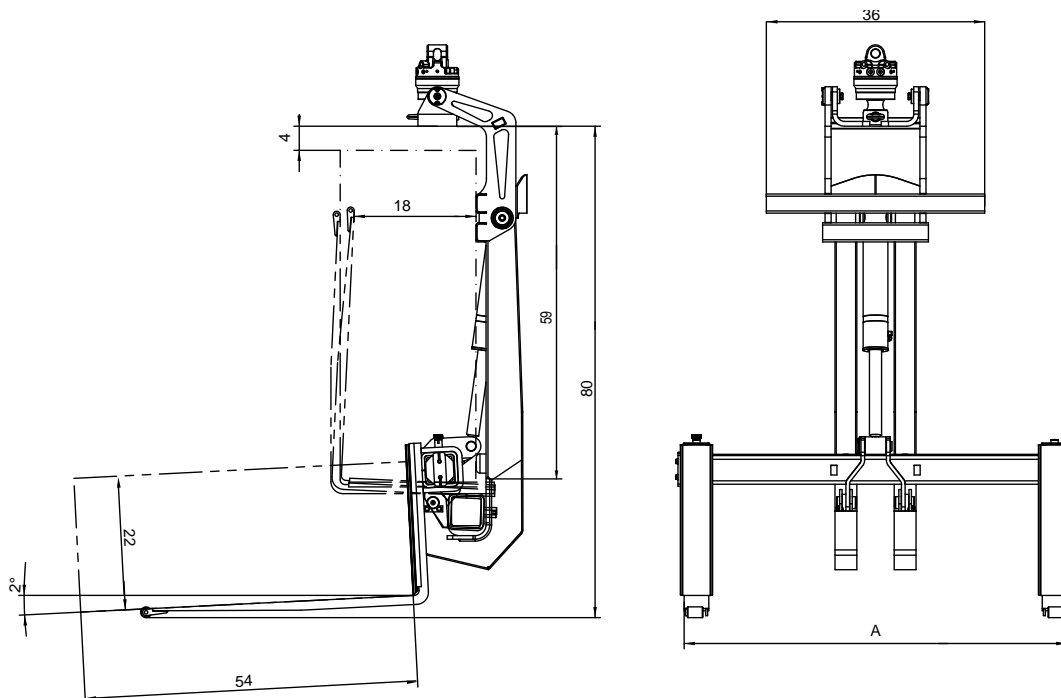
## Requirements of Truck Crane

### Operating pressure at oil flow:

2900 - 3750 psi at max. 20 GPM

2900 - 5350 psi at max. 10.5 GPM

## Technical Drawings





The hydraulic drive unit **HPXdrive Standard**, characterized by its constant closing force, is optimally suited for daily operations in general construction, civil engineering and landscaping. Thanks to its constant closing force of 34 kN, the **HPXdrive Heavy Duty** is ideal for heavier tasks.

In contrast to conventional hydraulic grabs, the **HPXdrive** generates torque through two shafts, which run opposed and have a helix thread - hydraulically driven by a single piston. The force is delivered to the shafts, on which the shells are mounted.

The advantages of **HPXdrive** technology include an extended service life and higher levels of efficiency. The compact design and lack of open greasing points allow for environmentally sensitive work and underwater operations to be undertaken, as there is no loss of oil or contaminants from the **HPXdrive**.

# HPXdrive

Setting **THE** standard for innovative grab technology for over 15 years!



**VAST LIFESPAN EXTENSION COMPARED TO CONVENTIONAL CYLINDER GRABS AT EXTREMELY LOW COST OF OWNERSHIP**



**CONSTANT CLOSING FORCE DURING THE COMPLETE CLOSING CYCLE**



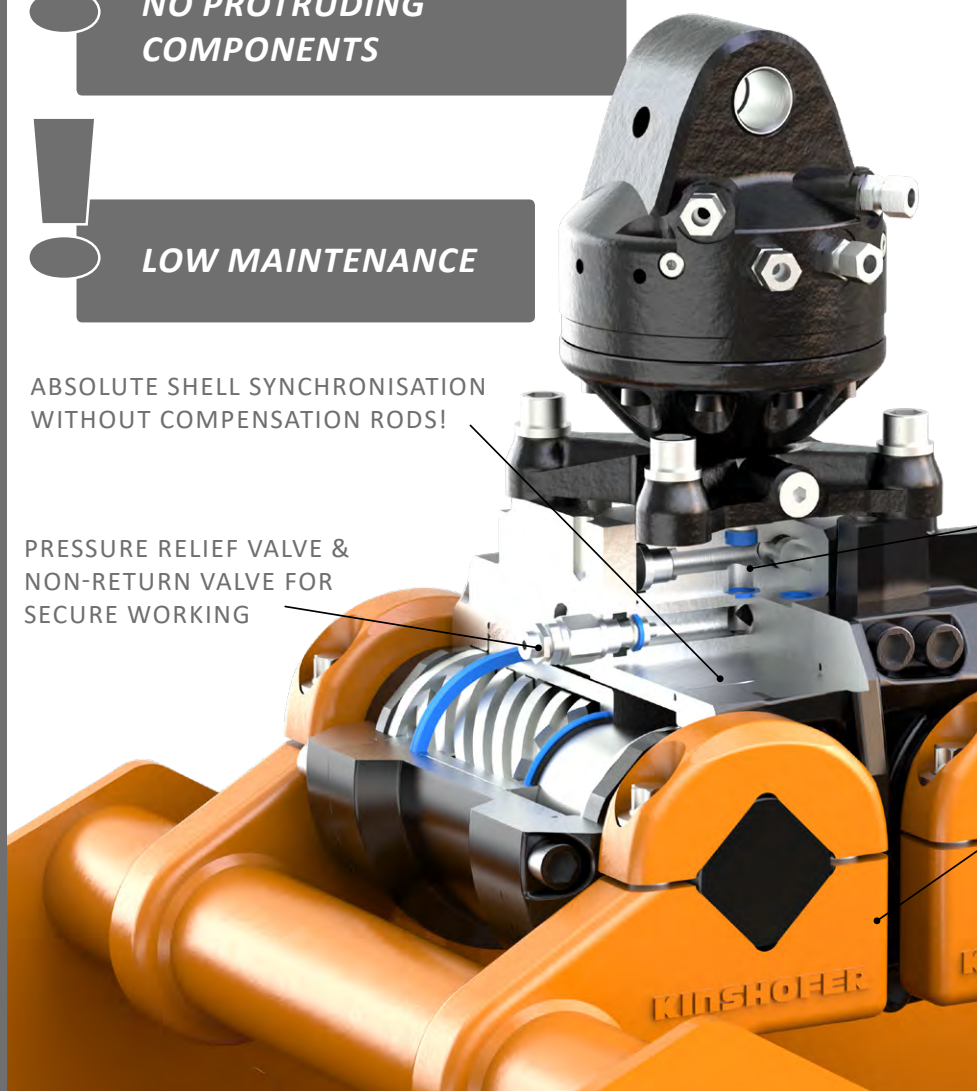
**NO PROTRUDING COMPONENTS**



**LOW MAINTENANCE**

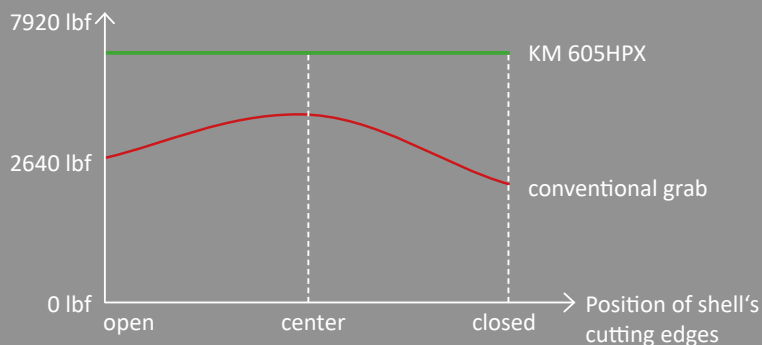
ABSOLUTE SHELL SYNCHRONISATION WITHOUT COMPENSATION RODS!

PRESSURE RELIEF VALVE & NON-RETURN VALVE FOR SECURE WORKING

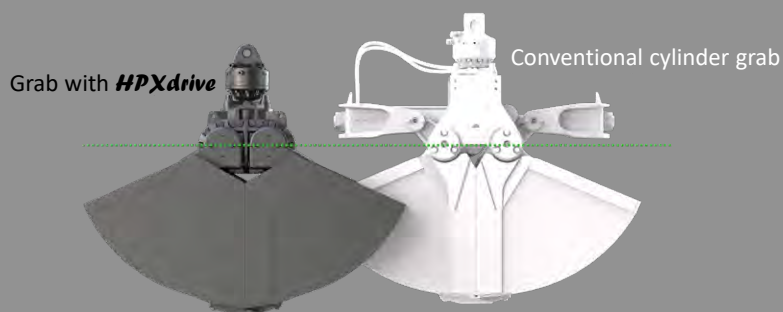




## Comparison of closing forces in kN



## Compact Design



**MADE BY KINSHOFER –  
DEVELOPED AND PRODUCED IN-HOUSE,  
FROM ROTATOR TO DRIVE UNIT AND GRAB!**

**NO GREASE POINTS! IDEAL  
FOR ENVIRONMENTALLY  
SENSITIVE AREAS AND  
UNDERWATER WORK!**

ROTATOR WITH DIRECT  
CONNECTION TO  
THE **HPXdrive**

OPTIMAL WEIGHT &  
COMPACT DESIGN

The bucket shells are bolted to the shafts, so are easy to replace with another set. Different types of shells for diverse applications can be refitted to the drive unit e.g. clamshell bucket with or without open shells, multi-purpose grab, rock grab and timber grab.

## EASY SHELL EXCHANGE IN LESS THAN 10 MINUTES!



Shells mounted



Loosen 4 bolts  
on each side



Remove connecting pieces  
one after another



**HPXdrive** loosened



Lift **HPXdrive** for  
exchange of shells

## HPXdrive Standard

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.

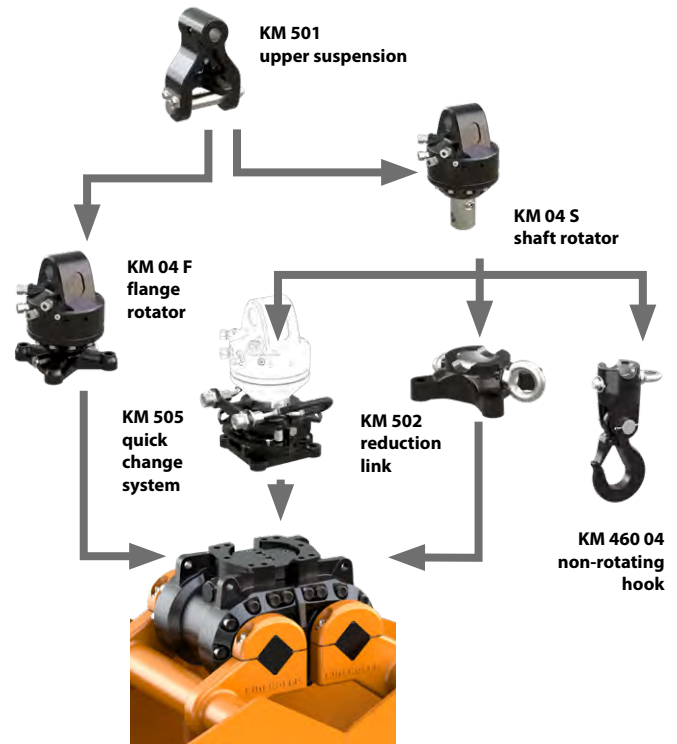
The standard rotator of the **HPXdrive Standard** is the **KINSHOFER** rotator with flange KM 04 F140-30V. In case a quick change to a non-rotating hook is necessary, the **HPXdrive** can be delivered with the **KINSHOFER** shaft rotator KM 04 S - in combination with the quick change system KM 505 or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

### Technical Information **HPXdrive Standard**:

**Torque (at 3770 psi):**  
8850 ft.lbs

**Operating pressure at oil flow:**  
3750 psi at 20 GPM  
2900 - 5350 psi at max. 10.5 GPM

## Drive Unit for Daily Routine Jobs



### **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 shells.

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 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)	Opening max. (in)	Number of teeth/tines	Self weight (lbs)
<b>Shells for Clamshell Bucket – KM 604HPX</b>					
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



<b>Shells for small Clamshell Bucket – KM 626HPX</b>					
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



<b>Shells for Clamshell Bucket with open shells – KM 604U HPX</b>					
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



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



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



<b>Shells for Hay and Forestry Grapple – KM 641HPX</b>					
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 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 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 drive 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 3750 psi operating pressure) for the entire opening and closing process.



## Package Clamshell Bucket KM 604HPX with **KINSHOFER** Flange Rotator

Type	Volume	Width A	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 A	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

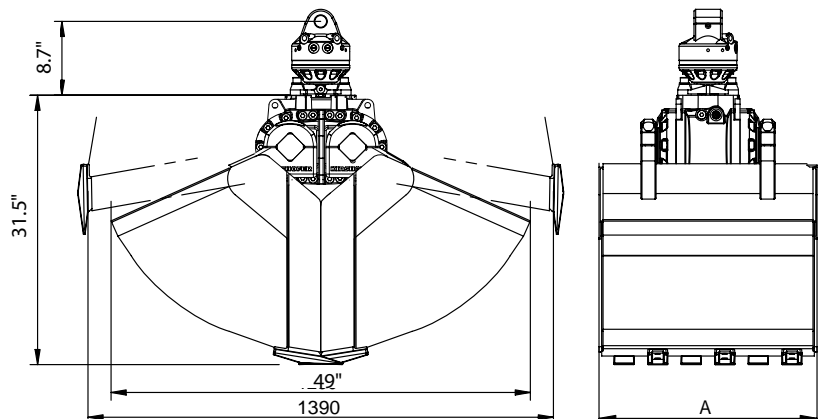
## Accessories

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 at oil flow:**  
 3750 psi at max. 20 GPM  
 2900 - 5350 psi at max. 10.5 GPM

## Technical Drawings





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 3750 psi operating pressure) for the entire opening and closing process.



Package Clamshell Bucket KM 626HPX with <b>KINSHOFER</b> Flange Rotator									
Type	Volume	Width A	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 <b>KINSHOFER</b> Rotator with Shaft and Reduction Link									
Type	Volume	Width A	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)

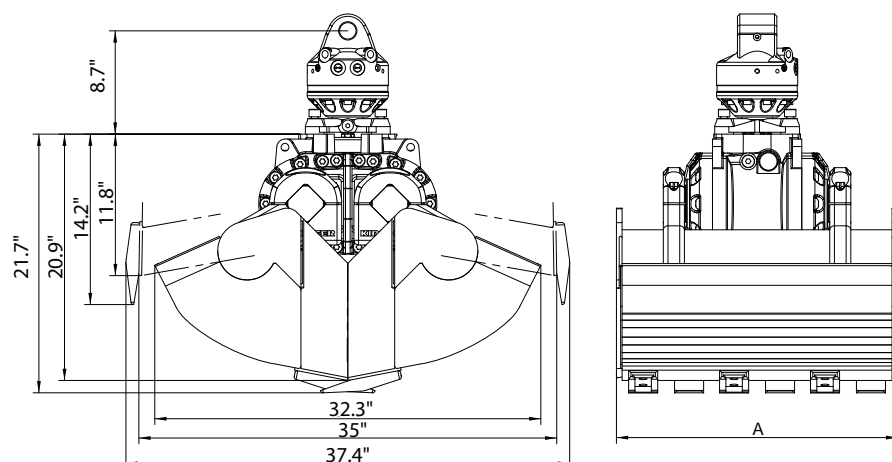
## Requirements of Truck Crane

### Operating pressure at oil flow:

3750 psi at max. 20 GPM

2900 - 5350 psi at max. 10.5 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 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 drive 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 3750 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

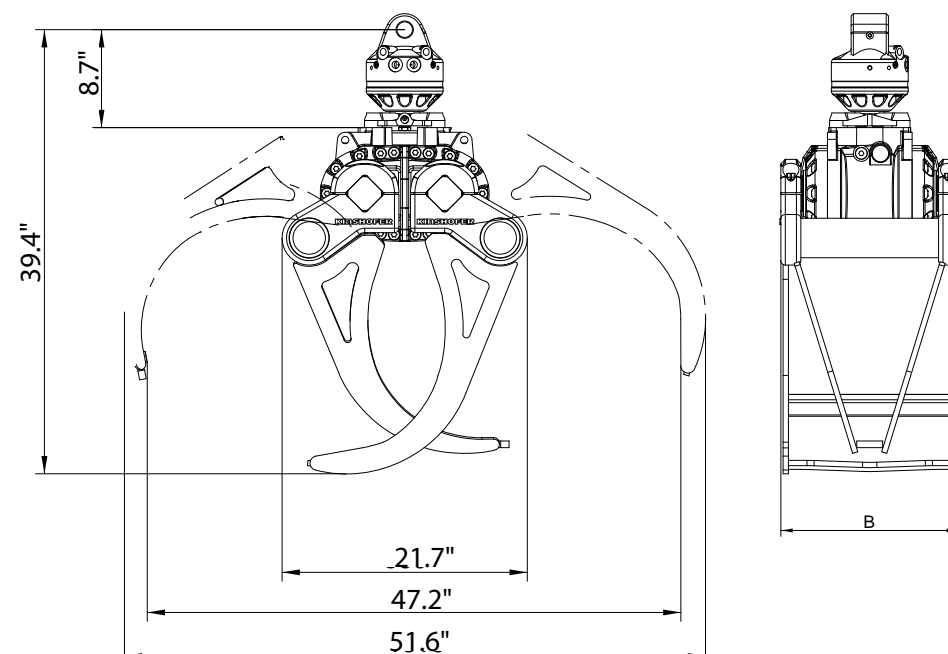
## Accessories

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 at oil flow:**  
 3750 psi at max. 20 GPM  
 2900 - 5350 psi at max. 10.5 GPM

## Technical Drawings



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 drive 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 3750 psi operating pressure) for the entire opening and closing process.



Package Timber Grapple KM 632HPX with <b>KINSHOFER</b> 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

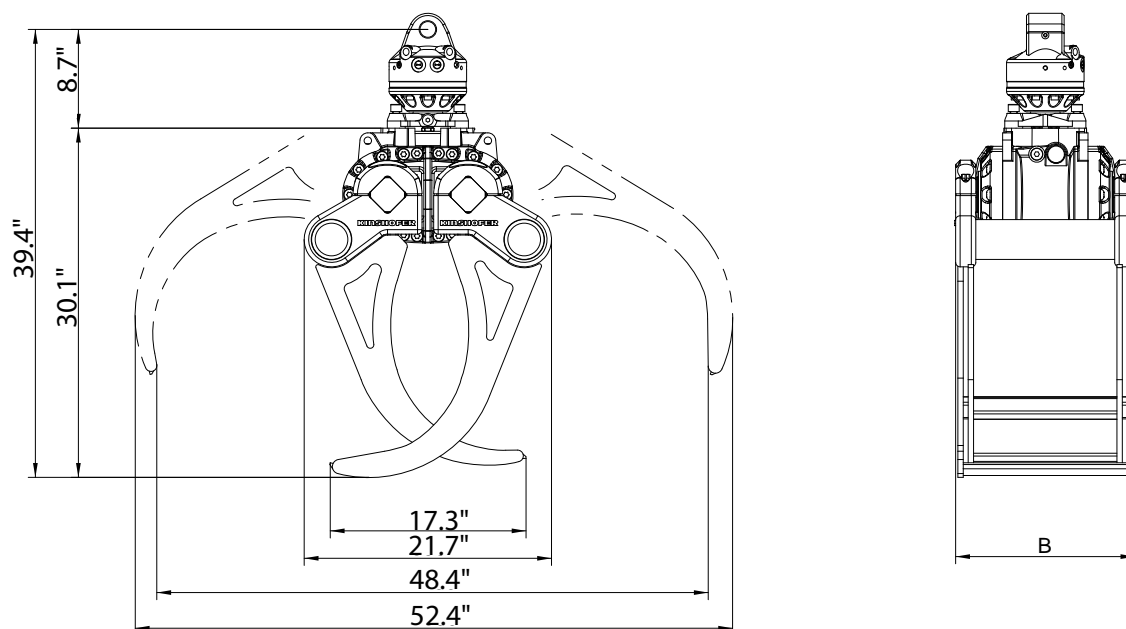
Package Timber Grapple KM 632HPX/502 with <b>KINSHOFER</b> Rotator with Shaft and Reduction Link								
Type	Capacity	Width B	Height	min. Log-Ø	max. Opening	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)	(in)	(lbs)	(lbf)	(lbs)
KM 632HPX-0,16/502 c	0.11	16	41.5	6.7	48	528	3960	2200

**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 at oil flow:**  
 3750 psi at max. 20 GPM  
 2900 - 5350 psi at max. 10.5 GPM

## Technical Drawings



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 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 / 3080 lbf at 3750 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)	(in)		(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

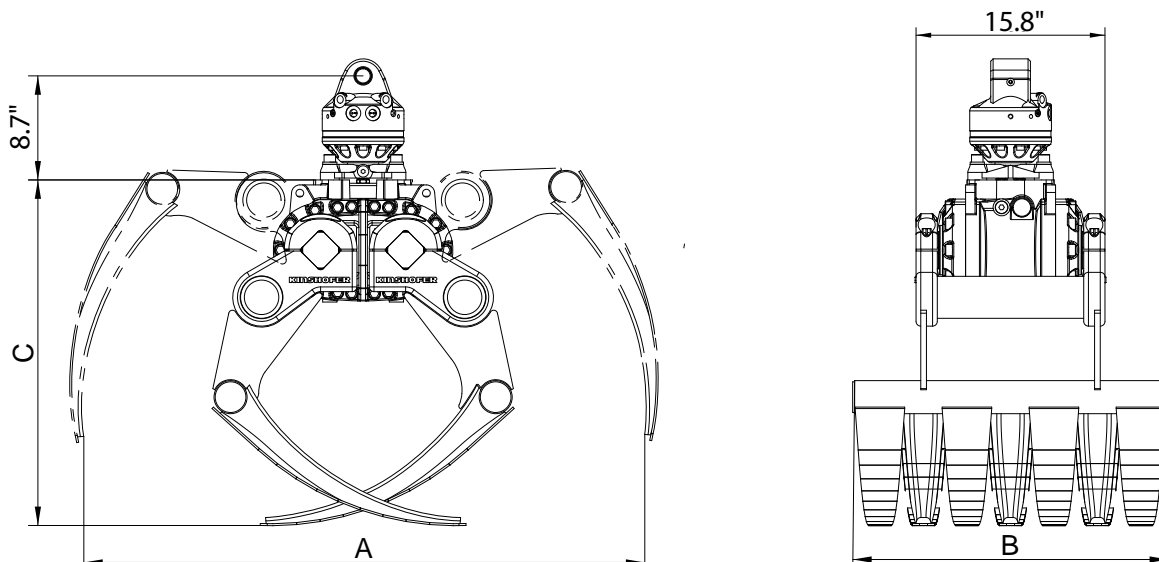
## Accessories

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 at oil flow:**  
 3750 psi at max. 20 GPM  
 2900 - 5350 psi at max. 10.5 GPM

## Technical Drawings





# Drive Unit for Heavy Duty Tasks

## HPXdrive Heavy Duty

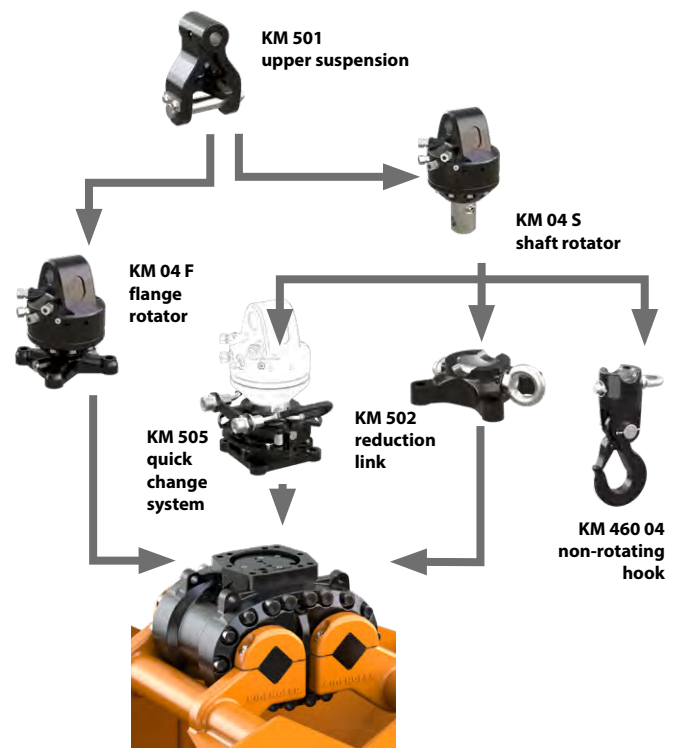
The **HPXdrive Heavy Duty** is a powerful version for difficult tasks. The advantages of the **HPXdrive**-technology – the constant high closing force and the compact design – guarantee a long life and rentability.

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 4600 psi):  
15490 ft.lbs

Operating pressure at oil flow:  
max. 4600 psi at 10.5 - max. 24.0 GPM  
⚠ Mind the pressure!



### 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, reduction 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

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

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

<b>Shells for Heavy Duty Clamshell Bucket – KM 605HPX-Z</b>					
<b>KM 605HPX-Z-240S</b>	0.31	20	56	-	396
<b>KM 605HPX-Z-300S</b>	0.39	25	56	-	462
<b>KM 605HPX-Z-370S</b>	0.48	31	56	-	517
<b>KM 605HPX-Z-460S</b>	0.60	39	56	-	605

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

\* optional available with bolt-on teeth (weight w/o teeth)

<b>Shells for Heavy Duty Clamshell Bucket with Open Shells – KM 605U HPX-Z</b>					
<b>KM 605U HPX-Z-400S</b>	400	32	61	-	605
<b>KM 605U HPX-Z-450S</b>	450	36	61	-	627
<b>KM 605U HPX-Z-500S</b>	500	40	61	-	660
<b>KM 605U HPX-Z-600S</b>	600	48	61	-	737

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

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

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

**Please note:** The **HPXdrive** shells can only be used in combination with the drive unit **HPXdrive** and **KINSHOFER** rotator

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

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 4600 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 <b>KINSHOFER</b> Flange Rotator								
Type	Volume	Width A	Height	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)		(lbs)	(lbf at 4600 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 <b>KINSHOFER</b> Rotator with Shaft and Reduction Link								
Type	Volume	Width A	Height	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)		(lbs)	(lbf at 4600 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

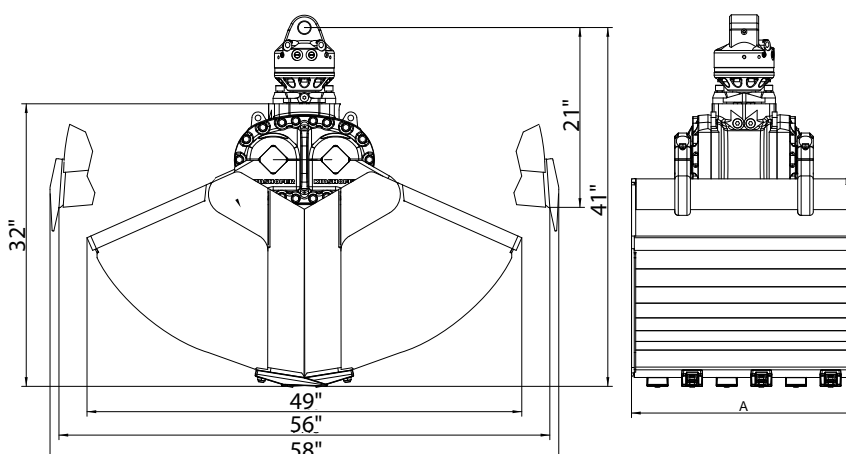
**Package consists of:** clamshell bucket, bolt-on teeth, rotator KM 04 S, reduction link KM 502 4500, short connecting hoses KM 203 01, upper suspension KM 501 4500, pressure relief valve, non-return valve

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 at oil flow:**  
max. 4600 psi at 10.5 - max. 24 GPM  
⚠ **Mind the pressure!**

### Technical Drawings

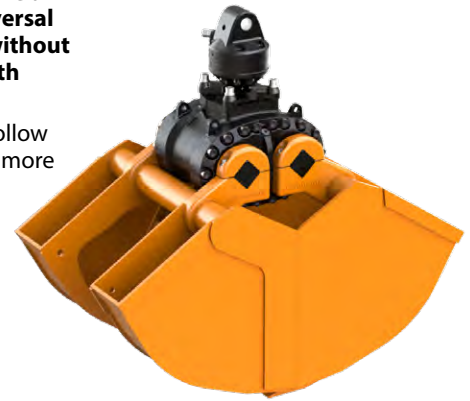


## KM 605HPX-Z

## Heavy Duty Clamshell Bucket with *HPXdrive*

The KM 605 HPX-Z universal grapple with integrated flap rests flat and safe against the crane arm in its transport position. The special flap at the shell carrier allows to transport a large universal grapple, whereat the grapple does not protrude the carrier machine's width (100.4 in)\* – without any loss in loading volume. The flap is secured automatically by a robust pressure piece with rubber bump.

- **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%!
- **Self-lubrication**: The drive unit runs in a permanent oil bath. The compact design makes the *HPXdrive* resistant to dirt and debris.
- **Profitability** through low maintenance costs and longer life cycle.
- **Versatility** with different types of shells that can easily be refitted onto the driving unit.
- **Precise handling** with the gear-type **KINSHOFER** rotator and shells synchronised by the single piston turning both shafts of the *HPXdrive*.
- **Constant closing force** (7480 lbf at 4600 psi operating pressure) over the entire opening and closing process; high efficiency provided by hydro static bearings of the axes.



\* depending on crane kinematics and mounting

### Package Clamshell Bucket KM 605HPX-Z with **KINSHOFER** Flange Rotator

Type	Volume (c.y.)	Width E (in)	Height (in)	Opening A max. (in)	Self weight (lbs)	Closing force (lbf at 4600 psi)	Load capacity (lbs)
KM 605HPX-Z-240 c	0.31	19.70	39.75	55.90	814	7480	6600
KM 605HPX-Z-300 c	0.39	25.60	39.75	55.90	880	7480	6600
KM 605HPX-Z-370 c	0.48	31.50	39.75	55.90	946	7480	6600
KM 605HPX-Z-460 c	0.60	39.35	39.75	55.90	1023	7480	6600

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

#### Please note:

- the KM 605HPX-Z is also available with a shaft rotator and quick change system KM 505
- for heavy duty tasks we recommend the quick change system KM 505 HD in combination with the **KINSHOFER** rotator KM 04 S68-30US

### Package Clamshell Bucket KM 605HPX-Z/502 with **KINSHOFER** Rotator with Shaft and Reduction Link

Type	Volume (c.y.)	Width E (in)	Height (in)	Opening A max. (in)	Self weight (lbs)	Closing force (lbf at 4600 psi)	Load capacity (lbs)
KM 605HPX-Z-240/502 c	0.31	19.70	41.95	60.80	825	7480	6600
KM 605HPX-Z-300/502 c	0.39	25.60	41.95	60.80	891	7480	6600
KM 605HPX-Z-370/502 c	0.48	31.50	41.95	60.80	957	7480	6600
KM 605HPX-Z-460/502 c	0.60	39.35	41.95	60.80	1023	7480	6600

**Package consists of:** clamshell bucket with flap, 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 685 05	adapters for compression rails (Load capacity max. 550 lbs, without compression rails)
KM 685 06 hook set 2	welded hooks (2 pieces)
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 10 mm, 2 pieces)
KM 204 03	hydraulic quick change kit incl. mobile and fixed parts (2 pieces each) mounted with adapters to rotator

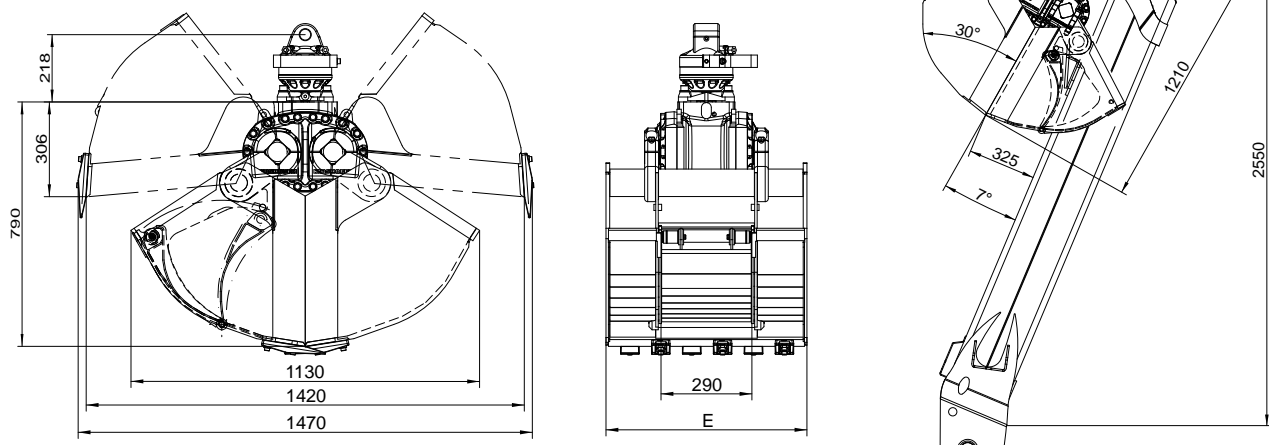
#### Requirements of Truck Crane

##### Operating pressure at oil flow:

max. 4600 psi at 10.5 - max. 24 GPM

⚠ Mind the pressure!

#### Technical Drawings





The KM 605U HPX Refuse 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 4600 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 Refuse 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 4600 psi)	(lbs)
KM 605U HPX Refuse-420 c	0.55	39.40	42	60	915	4800	6600
KM 605U HPX Refuse-510 c	0.67	48.00	42	60	970	4800	6600
KM 605U HPX Refuse-660 c	0.86	39.40	51	78	1015	3700	6600

**Package consists of:** refuse grapple with open shells, **KINSHOFER** rotator KM 04 F140-30V, upper suspension KM 501 4500, non-return valve

**Please note:**

- KM 605U HPX Refuse 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 Refuse/502 with **KINSHOFER** Shaft Rotator 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 4600 psi)	(lbs)
KM 605U HPX-420/502 c	0.55	39.40	45	60	930	4800	6600
KM 605U HPX-510/502 c	0.67	48.00	45	60	985	4800	6600
KM 605U HPX-660/502 c	0.86	39.40	54	78	1030	3700	6600

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

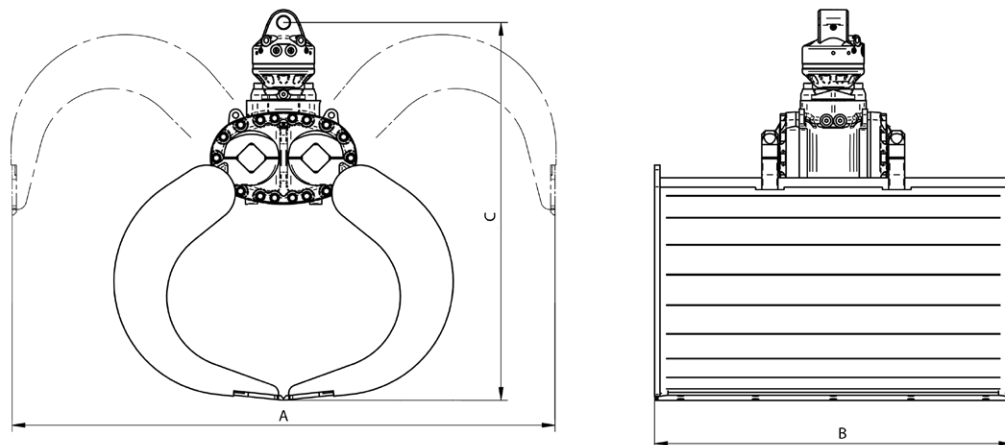
## Accessories

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:** max. 4600 psi  
**Oil flow:** 10.5 - max. 24 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 4600 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 4600 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 (optional)	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(in)		(lbs)	(lbf at 4600 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

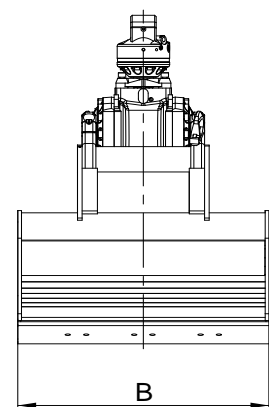
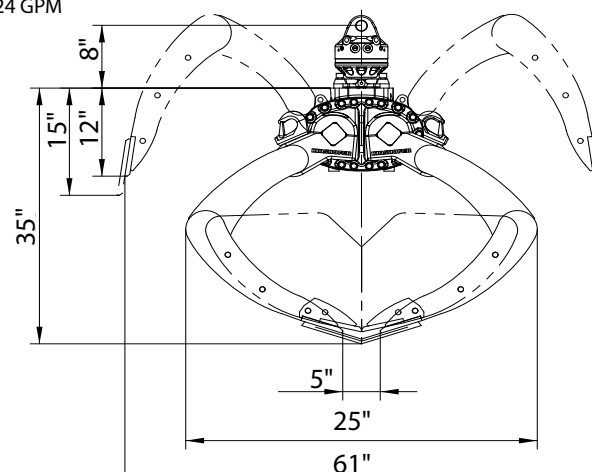
## Accessories

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 at oil flow:**  
max. 32 MPa (4600 psi) at 10.5 - max. 24 GPM

## Technical Drawings



# Heavy Duty Clamshell Bucket with Open Shells for Z-Cranes KM 605U HPX-Z

The KM 605U HPX-Z universal grapple with integrated flap rests flat and safe against the crane arm in its transport position. The special flap at the shell carrier allows to transport a large universal grapple, whereas the grapple does not protrude the carrier machine's width (100.39 in)\* – without any loss in loading volume. The flap is secured automatically by a robust pressure piece with rubber bump.

- **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%! **Self-lubrication**: The drive unit runs in a permanent oil bath. The compact design makes the **HPXdrive** resistant to dirt and debris.
- **Profitability** through low maintenance costs and longer life cycle.
- Versatility with different types of shells that can easily be refitted onto the driving unit.
- **Constant closing force** (6160 lbf at 4600 psi operating pressure) over the entire opening and closing process; high efficiency provided by hydro static bearings of the axes.
- **Precise handling** with the gear-type **KINSHOFER** rotator and shells synchronised by the single piston turning both shafts of the **HPXdrive**.



\* depending on crane kinematics and mounting

## Package Clamshell Bucket KM 605U HPX-Z with **KINSHOFER** Flange Rotator

Type	Volume (c.y.)	Width E (in)	Height (in)	max. Opening A (in)	Self weight (lbs)	Closing force (lbf at 4600 psi)	Load capacity (lbs)
KM 605U HPX-Z-400 c	0.52	32.28	45.07	60.82	1023	6160	6600
KM 605U HPX-Z-450 c	0.58	36.22	45.07	60.82	1056	6160	6600
KM 605U HPX-Z-500 c	0.65	40.15	45.07	60.82	1089	6160	6600
KM 605U HPX-Z-600 c	0.78	48.03	45.07	60.82	1155	6160	6600

**Package consists of:** clamshell bucket with flap, rotator KM 06 F140-40, upper suspension KM 501 6000, wear plates KM 685 07 set, non-return valve

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

Type	Volume (c.y.)	Width E (in)	Height (in)	max. Opening A (in)	Self weight (lbs)	Closing force (lbf at 4600 psi)	Load capacity (lbs)
KM 605U HPX-Z-400/502 c	0.52	32.28	47.83	60.82	1034	6160	6600
KM 605U HPX-Z-450/502 c	0.58	36.22	47.83	60.82	1067	6160	6600
KM 605U HPX-Z-500/502 c	0.65	40.15	47.83	60.82	1100	6160	6600
KM 605U HPX-Z-600/502 c	0.78	48.03	47.83	60.82	1166	6160	6600

**Package consists of:** clamshell bucket with flap, rotator KM 06 S, upper suspension KM 501 6000, reduction link KM 502 6000, short hoses KM 203 01, wear plates KM 685 07, non-return valve

## Accessories

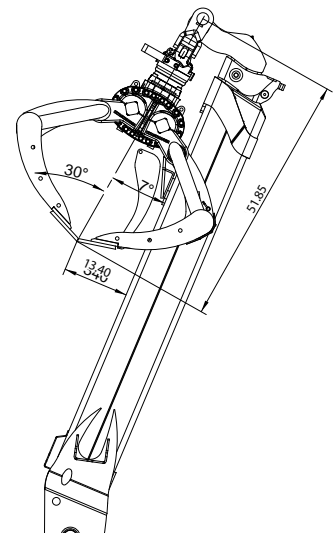
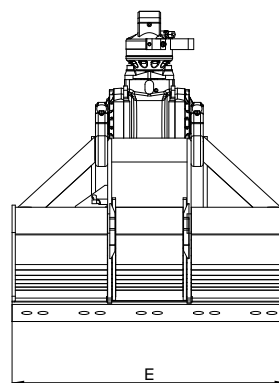
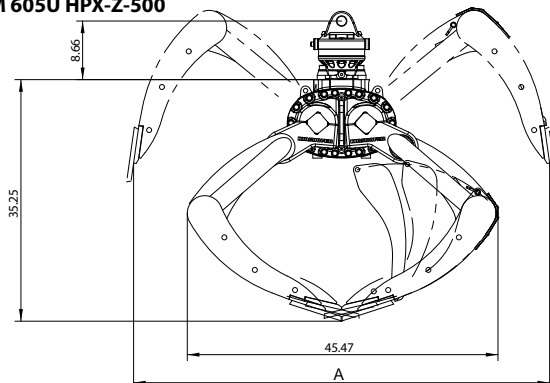
Typ	Description
KM 685 06 eye / hook set 2	welded eyes / welded hooks (2 pieces)
KM 685 09 C	side plates to screw onto the grapple for easy digging tasks (4 pieces)
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.39 in, 2 pieces)
KM 204 03	hydraulic quick change kit incl. mobile and fixed parts (2 pieces each) mounted with adapters to rotator

## Requirements of Truck Crane

**Operating pressure:** max. 4600 psi  
**Recommended oil flow:** 10.5 - max. 24 GPM

## Technical Drawings

KM 605U HPX-Z-500



## 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 4600 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 <b>KINSHOFER</b> Flange Rotator							
Type	Capacity	Width B	Height H	max. Opening	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)	(lbs)	(lbf at 4600 psi)	(lbs)
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 using quick change KM 505 HD with rotator KM 04 S68-30US

Package Rock Grapple KM 613HPX-HD/502 with <b>KINSHOFER</b> Rotator with Shaft and Reduction Link							
Type	Capacity	Width B	Height	max. Opening	Self weight	Closing force	Load capacity
	(cords)	(in)	(in)	(in)	(lbs)	(lbf at 4600 psi)	(lbs)
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

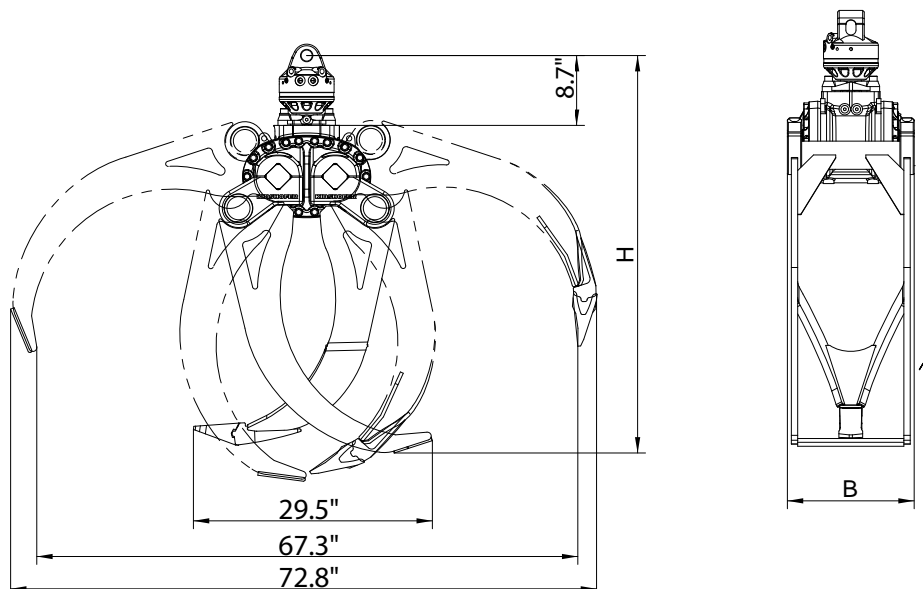
### Accessories

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:** 3750 - 5350 psi  
**Recommended oil flow:** 10.5 - max. 24 GPM

### Technical Drawings



# 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 4600 psi operating pressure) for the entire opening and closing process; high efficiency provided by hydro static bearings of the axes.



Package Timber Grapple KM 632HPX-HD with <b>KINSHOFER</b> 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 at 4600 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 using quick change KM 505 HD with rotator KM 04 S68-30US

Package Timber Grapple KM 632HPX-HD/502 with <b>KINSHOFER</b> 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 at 4600 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

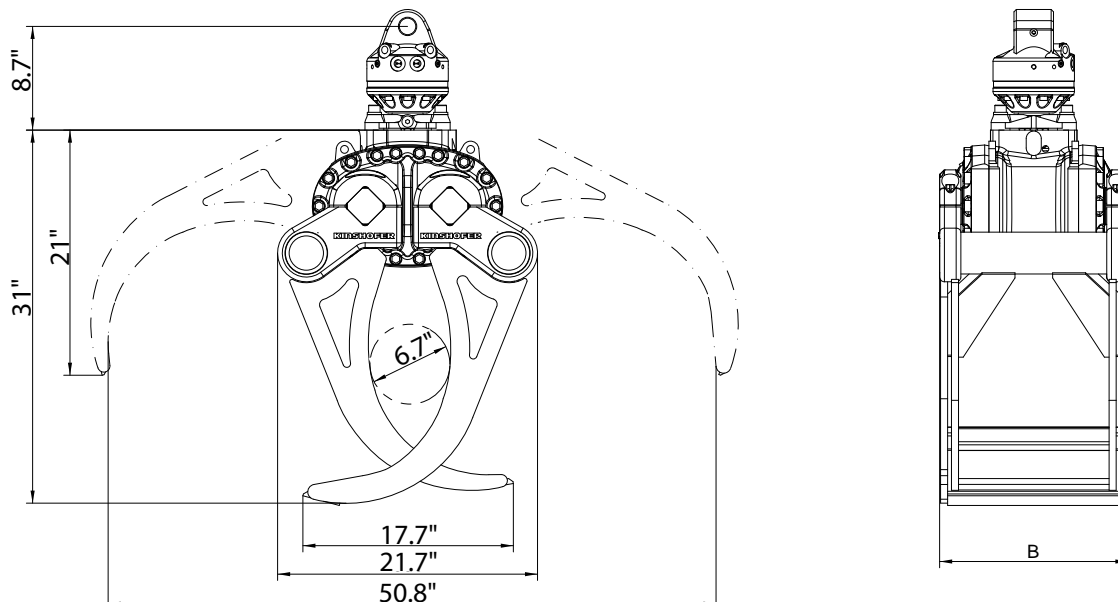
## Accessories

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:** max. 4600 psi  
**Oil flow:** 10.5 - max. 24 GPM

## Technical Drawings



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 drive 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 4600 psi operating pressure) for the entire opening and closing process; high efficiency provided by hydro static bearings of the axes.



## Package Logging Grapple KM 632L HPX-HD with **KINSHOFER** Flange Rotator

Type	Capacity (cord / sq ft)	Width (in)	max. Opening A		Height B		Self weight		Load capacity (lbs)
			bypass type (in)	butt type (in)	bypass type (in)	butt type (in)	bypass type (lbs)	butt type (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 Grapple KM 632L HPX-HD/502 with **KINSHOFER** Rotator with Shaft and Reduction Link

Type	Capacity (cord / sq ft)	Width (in)	max. Opening A		Height B		Self weight		Load capacity (lbs)
			bypass type (in)	butt type (in)	bypass type (in)	butt type (in)	bypass type (lbs)	butt type (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

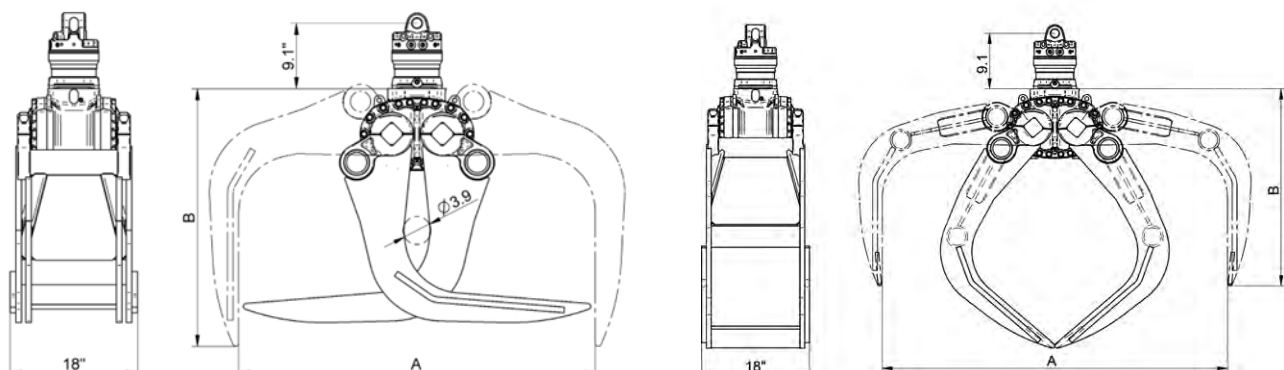
## Accessories

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:** max. 4600 psi  
**Recommended oil flow:** 10.5 - max. 24 GPM

## Technical Drawings



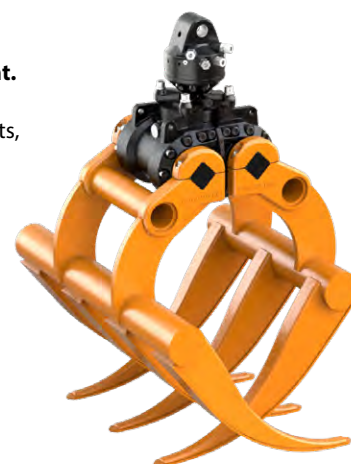


# Heavy Duty Hay and Forestry Grapple with *HPXdrive*

**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 4600 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 4600 psi)	(lbs)
<b>KM 641HPX-HD-0,4 c</b>	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 4600 psi)	(lbs)
<b>KM 641HPX-HD-0,4/502 c</b>	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

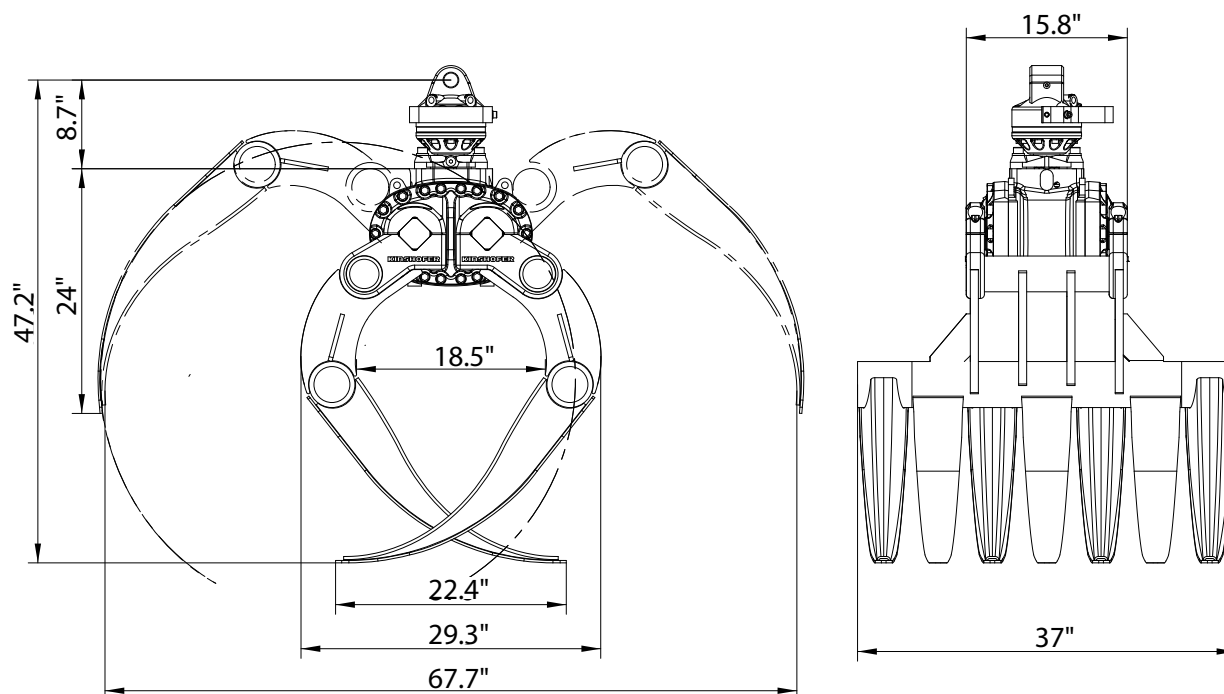
## Accessories

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

## Requirements of Truck Crane

**Operating pressure:** max. 4600 psi  
**Oil flow:** 10.5 - max. 24 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 3750 psi operating pressure).



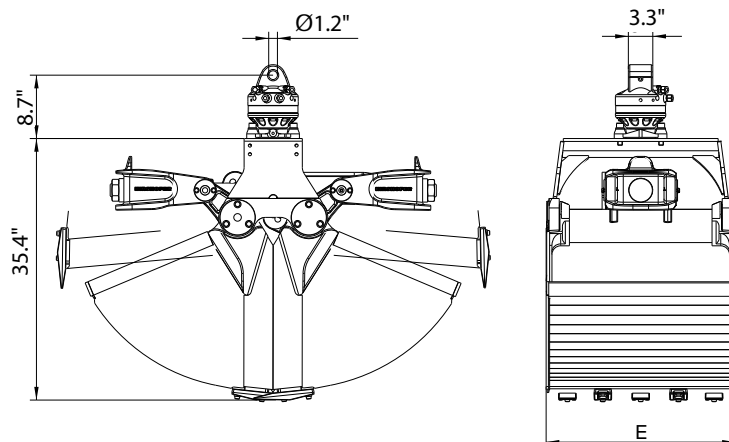
Package Clamshell Bucket KM 605-250 c & KM 605-350 c							
Type	Volume	Width E	Max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)		(lbs)	(lbf)	(lbs)
KM 605-250 c	0.33	20	56	5	704	6600	6600
KM 605-350 c	0.46	26	56	5	759	6600	6600
Package consists of: clamshell bucket, 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 E	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 <b>KINSHOFER</b> rotator for KM 605
KM 04 S	<b>KINSHOFER</b> shaft rotator for precise positioning of the load – up to 9900 lbs load capacity
KM 04 S68-30US	<b>KINSHOFER</b> 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:	3750 - 4600 psi
Recommended oil flow:	6.5 - max. 20 GPM

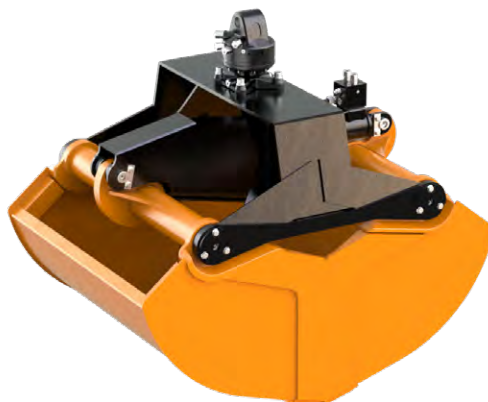
## Technical Drawings



# High Volume Clamshell Bucket with Horizontal Hydraulic Cylinder KM 602

A robust clamshell bucket for handling loose material such 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 3750 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

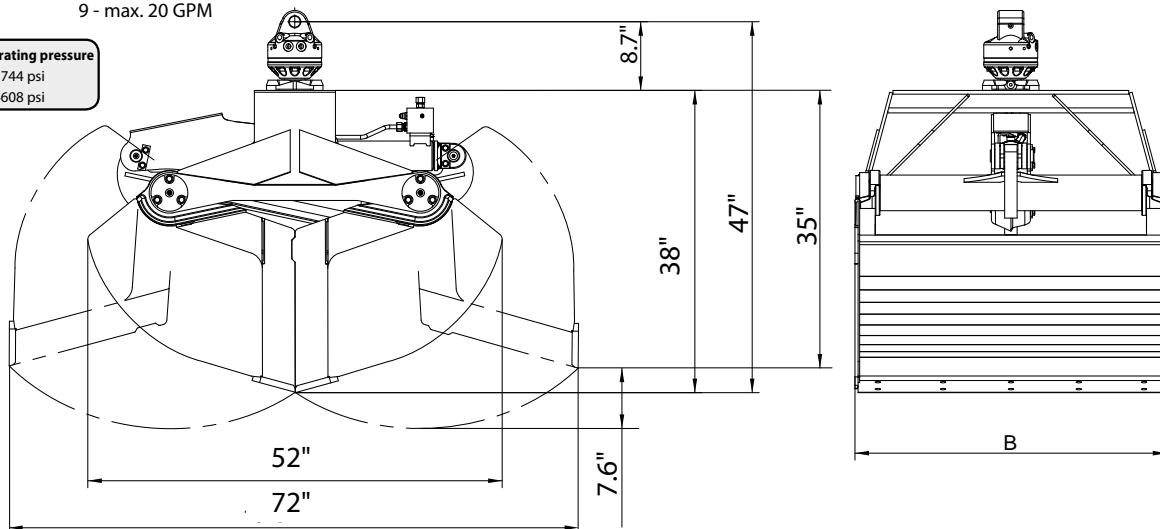
High Volume Clamshell Bucket KM 602							
Type	Volume	Width B	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(optional)	(lbs)	(lbf)	(lbs)
KM 602-300	0.39	20	72	5	924	6160	6600
KM 602-400	0.52	32	72	9	990	6160	6600
KM 602-500	0.65	39	72	9	1023	6160	6600
KM 602-650	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	<b>KINSHOFER</b> rotator for KM 602
KM 04 S	<b>KINSHOFER</b> shaft rotator for precise positioning of the load – up to 9900 lbs load capacity
KM 04 S68-30US	<b>KINSHOFER</b> 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 Technical Drawings

**Operating pressure:** 3750 - 5350 psi  
**Oil flow:** 9 - max. 20 GPM

**Pump capacity/Operating pressure**  
 > 10.56 GPM / 3744 psi  
 ≤ 10.56 GPM / 4608 psi



The high volume clamshell bucket KM 622 has a significant narrow frame and can therefore fulfill 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 3750 psi).



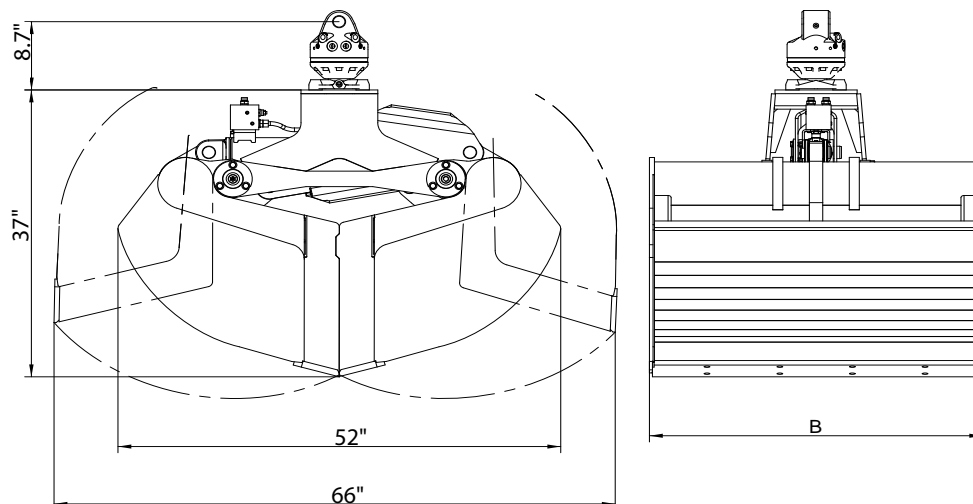
Package High Volume Clamshell Bucket KM 622-400 c & KM 622-500 c							
Type	Volume	Width B	max. Opening	Number of teeth	Self weight	Closing force	Load capacity
	(c.y.)	(in)	(in)	(optional)	(lbs)	(lbf)	(lbs)
KM 622-400 c	0.52	32	66	9	836	4400	6600
KM 622-500 c	0.65	39	66	9	891	4400	6600
Package consists 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 <b>KINSHOFER</b> rotator for KM 622
KM 04 S	<b>KINSHOFER</b> shaft rotator for precise positioning of the load – up to 9900 lbs load capacity
KM 04 S68-30US	<b>KINSHOFER</b> 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:	3750 - 5350 psi	<div> <div>!</div> <div> <b>Pump capacity/Operating pressure</b>                      &gt; 10.56 GPM / 3744 psi                      ≤ 10.56 GPM / 4608 psi                 </div> </div>
Recommended oil flow:	9 - max. 20 GPM	

## Technical Drawings



# 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.
- **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 3750 psi).

⇒ Alternatively to the KM 603, the KM 604HPX can be used with an extension for excavating



## Package Clamshell Bucket KM 603 c

Type	Volume (c.y.)	Width E (in)	Opening A max. (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 E (in)	Opening A max. (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

## Accessories

Type	Description
KM 04 F	recommended <b>KINSHOFER</b> rotator for KM 603
KM 04 S	<b>KINSHOFER</b> shaft rotator for precise positioning of the load – up to 9900 lbs load capacity
KM 04 S68-30US	recommended <b>KINSHOFER</b> 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 HD 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 (2 pieces)
KM 685 06 eye set 2	welded eyes (2 pieces)
KM 685 07 set	wear plates to protect horizontal cutting edges (2 pieces)

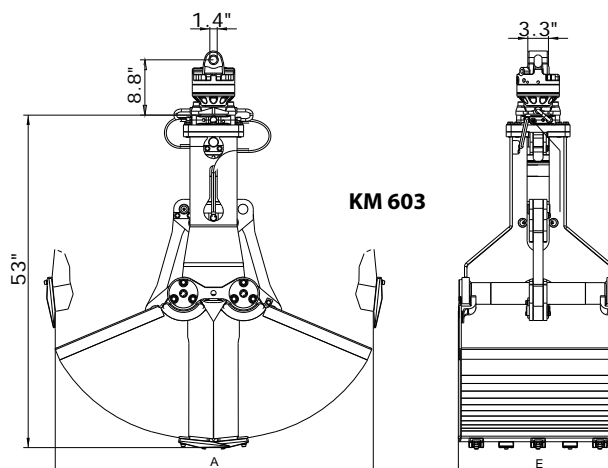
## Requirements of Truck Crane

**Operating pressure at oil flow:**

max. 3750 psi at 6.5 - max. 20 GPM

⚠ **Mind the pressure!**

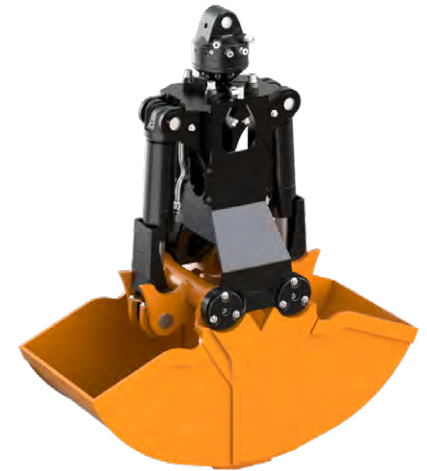
## Technical Drawings





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 3750 psi).



⇒ Alternatively to the KM 607, the KM 605HPX can be used with an extension for excavating

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

Type	Volume (c.y.)	Width E (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 E (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

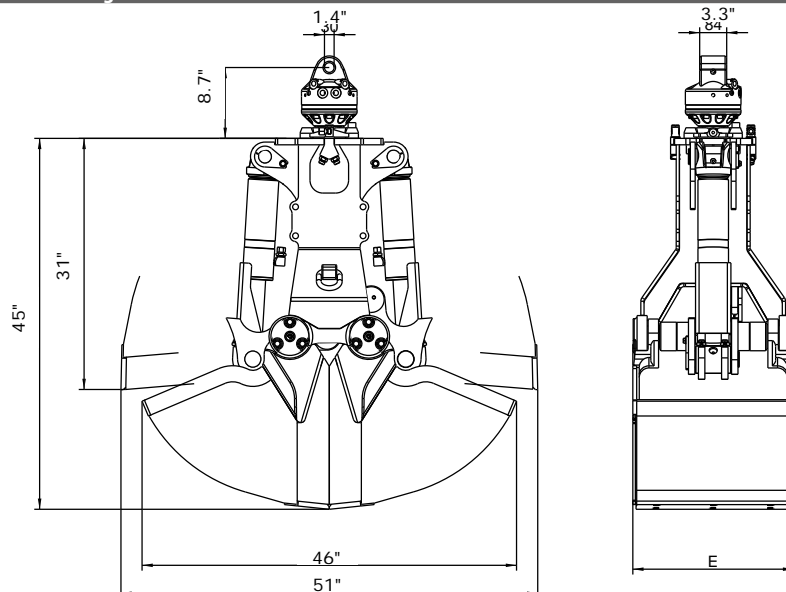
## Accessories

Type	Description
KM 04 F	recommended <b>KINSHOFER</b> rotator for KM 607.1
KM 04 S	<b>KINSHOFER</b> shaft rotator for precise positioning of the load – up to 9900 lbs load capacity
KM 04 S68-30US	<b>KINSHOFER</b> 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

<b>Operating pressure:</b>	max. 3750 psi
<b>Recommended oil flow:</b>	8 - max. 20 GPM

## Technical Drawings



The KM 605U Refuse 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 605U Refuse, the KM 605U HPX Refuse can be used

## Refuse Grapple KM 605U Refuse

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

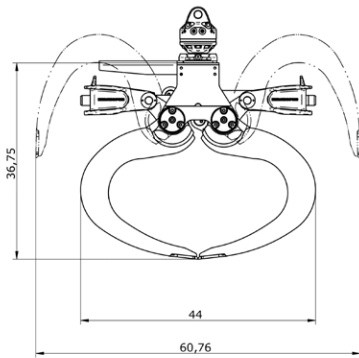
## Accessories

Type	Description
KM 685 07	wear plates

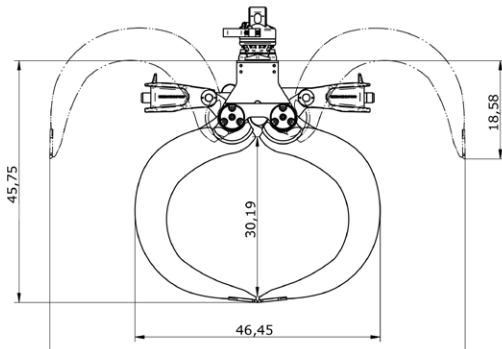
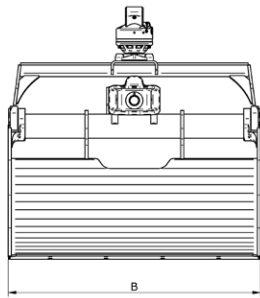
## Requirements of Truck Crane

**Operating pressure:** 3750 - 4600 psi  
**Recommended oil flow:** 6 - max. 20 GPM

## Technical Drawings



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



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

## 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 accommodate 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 3750 psi).



### Orange Peel Grapple KM 650 small

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

### Accessories

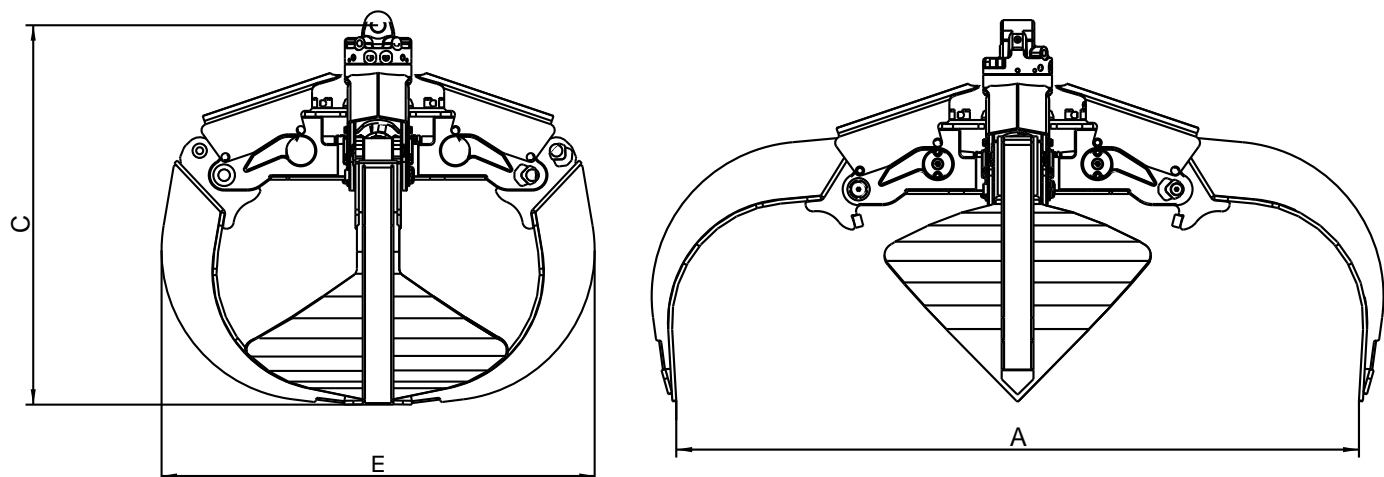
Type Description

KM 04 F recommended **KINSHOFER** rotator for KM 650 small

### Requirements of Truck Crane

Operating pressure: max. 3750 psi  
Recommended oil flow: 8 - max. 20 GPM

### Technical Drawings



# 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 accommodate 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 3750 psi).



Orange Peel Grapple KM 650 large								
Type	Number of tines	Volume (c.y.)	max. Opening A (in)	Width E (closed) (in)	Height C (closed, incl. rotator) (in)	Self weight (w/o rotator) (lbs)	Load capacity (lbs)	Closing force (lbf)
KM 651-4	4	0.33	61	51	40	979	5500	3960
		0.46	68	50	43	1034	6600	3520
		0.65	85	52	53	1221	6600	2860
KM 651-5	5	0.33	61	51	40	1144	5500	3960
		0.46	68	50	43	1199	6600	3520
		0.65	85	52	53	1397	6600	2860
KM 652-4	4	0.33	61	51	40	935	5500	3960
		0.46	68	50	43	968	6600	3520
		0.65	85	52	53	1111	6600	2860
KM 652-5	5	0.33	61	51	40	1111	5500	3960
		0.46	68	50	43	1144	6600	3520
		0.65	85	52	53	1309	6600	2860
KM 653-4	4	0.33	61	51	40	858	5500	3960
		0.46	68	50	43	869	6600	3520
		0.65	85	52	53	957	6600	2860
KM 653-5	5	0.33	61	51	40	1034	5500	3960
		0.46	68	50	43	1056	6600	3520
		0.65	85	52	53	1155	6600	2860

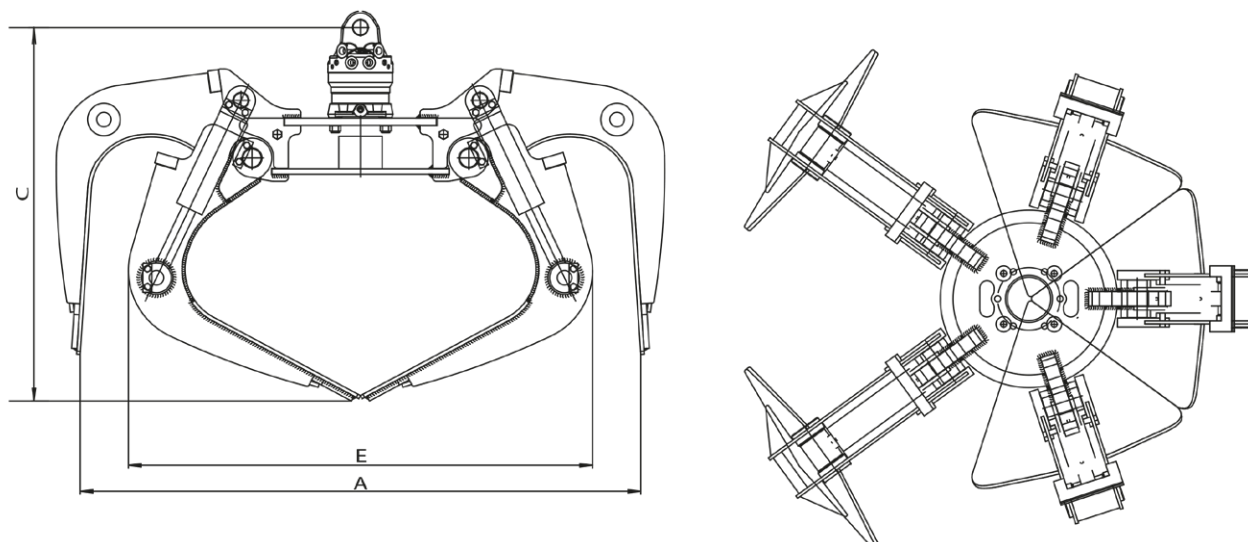
## Accessories

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

## Requirements of Truck Crane

Operating pressure:	max. 3750 psi
Recommended oil flow:	8 - max. 20 GPM

## Technical Drawings



The reliable, asymmetric orange peel grapple KM 652/2 with half closing tines provides for easy transport, resting flat against the crane arm, with no protruding parts wider than the carrier machine. It is mainly used for handling scrap, waste and construction materials, and is available with 5 (KM 652-5/2) or 6 arms (KM 652-6/2) – depending on the task.

- **Asymmetric construction:** the grapple rests flat against the crane arm in its transport position (see below drawing).
- **Special slot on the main carrier** allows the transportation of a large orange peel grapple, that does not protrude the width of the carrier (98.40 in).
- **Half closing tines** by default, completely closing at the points, for handling waste, scrap, loose materials, etc.
- **Non-return valve** guarantees a secure retention of loads even when pressure drops.
- **Long service life** due to robust design – oil distributor and hydraulic hoses are protected in the center part, with large bearings, wear-resistant shells made of 400 HB steel, cylinder with piston rod protection, stops for both end positions of tines.
- **Strong operation** due to high closing forces (2860 lbf at 3750 psi operating pressure).



## Asymmetric Orange Peel Grapples KM 652-5/2 and KM 652-6/2

Type	Number of tines	Volume (c.y.)	Opening Ø A (in)	Width E (closed) (in)	Height C (closed, incl. rotator) (in)	Weight (w/o rotator) (lbs)	Capacity (lbs)	Closing force (lbf)
KM 652-5/2	5	0.31	70.47	41.92	43.70	770	5500	2860
KM 652-6/2	6	0.31	70.47	41.92	43.70	902	5500	2860

**Package consists of:** orange peel grapple, non-return valve

## Accessories

**Type**      **Description**

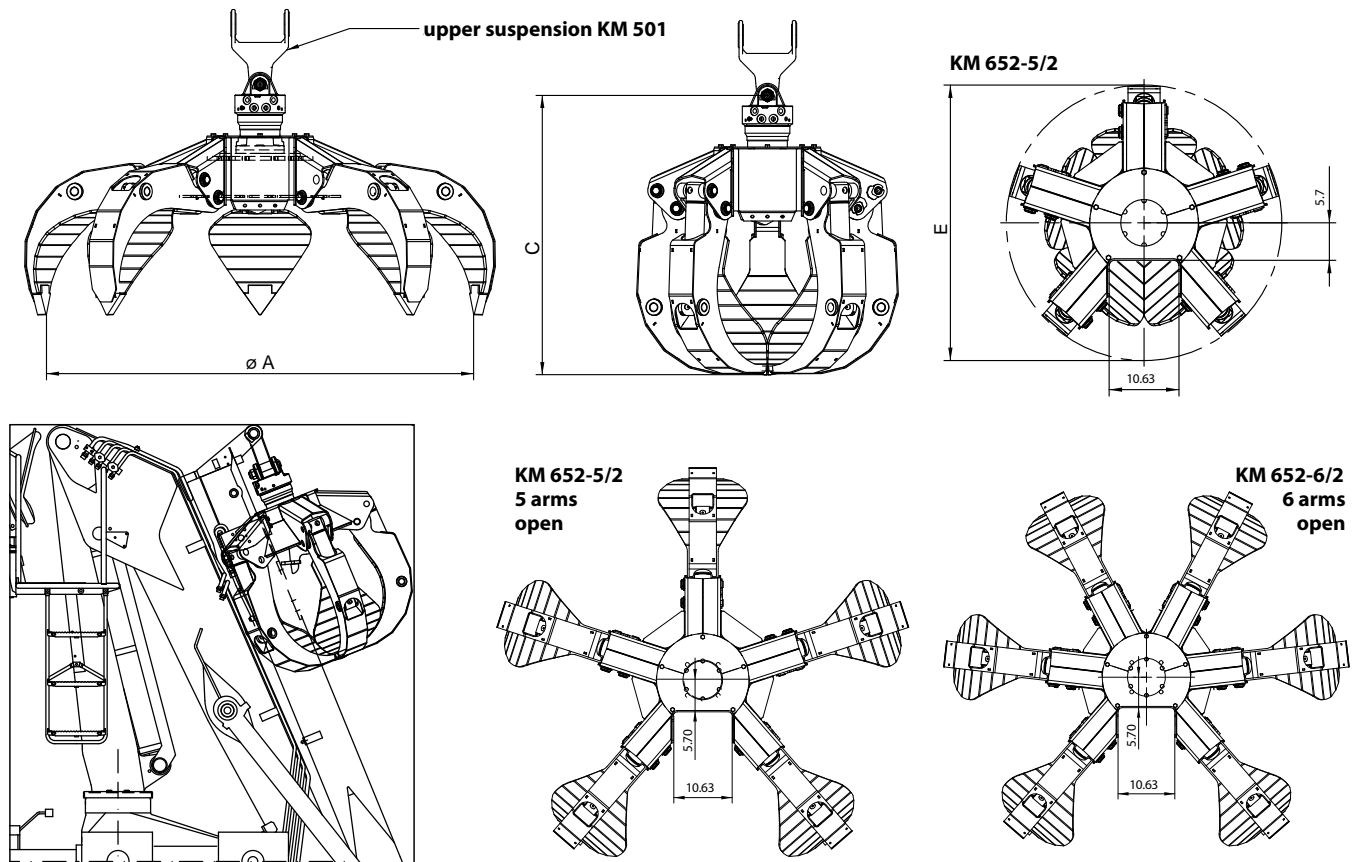
**KM 06 F173-35 KINSHOFER** rotator for KM 652/2

## Requirements of Truck Crane

**Operating pressure:** max. 3750 psi  
**Oil flow:** 6.5 - max. 20 GPM



## Technical Drawings





# Universal Railroad Grapple with Vertical Cylinders

KM 632R

Designed to handle the various demands of the rail, the Universal Railroad Grapple with vertical cylinders KM 632R can be used for rails and railroad ties / sleepers – and even for clearing brush. This robust and versatile tool is optimal for use on loader cranes.

- The Universal Railroad Grapple is **ideal for handling used sleepers or rails – single or bundled.**
- **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.
- **Safety:** a special holding valve provides a safe grip – even if pressure drops.
- **Central lifting eye** included with 3000 kg / 6600 lbs load capacity.



## Universal Railroad Grapple KM 632R

Type	Capacity (cord / sq ft)	Width E (in)	Opening A max. (in)	Height C max. (in)	Height C min. (in)	Gripping range D (in)	Self weight (lbs)	Load capacity (lbs)	Closing force (lbf)
KM 632R-0.25 c	1/4 / 3 3/4	24	69	54	42	3	968	6600	4950
KM 632R-0.33 c	1/3 / 5 1/2	24	78	59	47	3	1023	6600	4270
KM 632R-0.50 c	1/2 / 8	24	96	67	50	3	1320	6600	3370

**Package consists of:** universal railroad grapple, **KINSHOFER** rotator KM 06 F140-40, short connecting hoses, upper suspension KM 501 6000, non-return valve, central lifting eye.

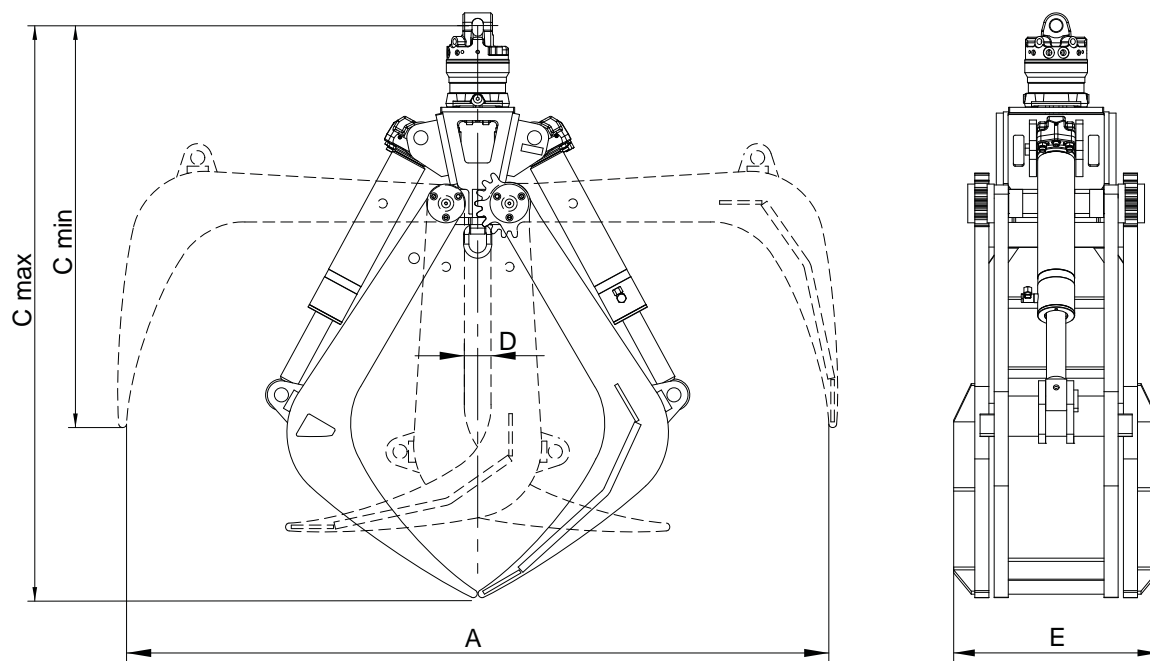
## Accessories

Type	Description
KM 505 HD	heavy duty quick change system set for <b>KINSHOFER</b> shaft rotators, incl. hydraulic couplings
KM 685 06 eye / hook set 2	welded eyes / welded hooks (2 pieces)

## Requirements of Truck Crane

Operating pressure (open/close):	max. 3750 psi
Recommended oil flow (open/close):	6.5- max. 20 GPM
Operating pressure (rotation):	max. 4600 psi
Recommended oil flow (rotation):	4 - max. 13 GPM

## Technical Drawings



## KM 632-2-R

## Universal Railroad Grapple with Horizontal Cylinders

Designed to handle the various demands of the rail, the Universal Railroad Grapple with horizontal cylinders KM 632-2-R can be used for rail or ties. This robust and versatile tool is optimal for use on loader cranes.

- The Universal Railroad Grapple is **ideal for handling used sleepers and rails – and even 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.
- **Gears are standard** and ensure synchronized movement of tines.
- **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.
- **Safety:** a special holding valve provides a safe grip – even if pressure drops.
- **Central lifting eye** included with 3000 kg / 6600 lbs load capacity.



### Universal Railroad Grapple KM 632-2-R

Type	Capacity	Width E	max. Opening A	Height C max. (w/ rotator) (in)	Height C min. (w/ rotator) (in)	Self weight (lbs)	Load capacity (lbs)	Closing force (lbf)
KM 632-2-R	(cord / sq ft) 1/3 / 5 1/2	(in) 24	(in) 78	(in) 56	(in) 45	(lbs) 780	(lbs) 6600	(lbf) 3080

**Package consists of:** universal Railroad Grapple, **KINSHOFER** rotator KM 06 F140-40, short connecting hoses, upper suspension KM 501 6000, non-return valve, central lifting eye.

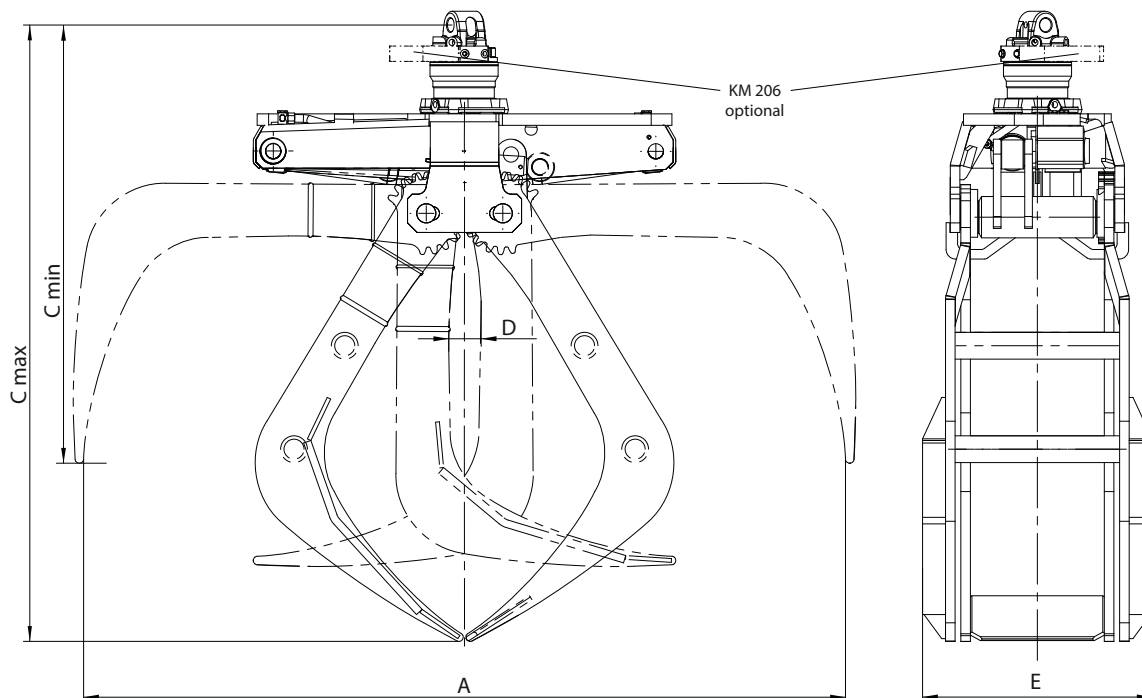
### Accessories

Type	Description
KM 505 HD	quick change system set for <b>KINSHOFER</b> shaft rotators, incl. hydraulic couplings
KM 685 05	adapter for compression rails (load capacity max. 250 kg)
KM 685 06 eye / hook set 2	welded eyes / welded hooks (2 pieces)

### Requirements of Truck Crane

Operating pressure (open/close):	<b>max. 3750 psi</b>
Recommended oil flow (open/close):	6.5 - max. 20 GPM
Operating pressure (rotation):	<b>max. 4600 psi</b>
Recommended oil flow (rotation):	4 - max. 13 GPM

### Technical Drawings



The Rail Grapple KM 632HPX Rail with its *HPXdrive* is used for the loading and unloading of rails, but also, with care, handle single sleepers. A non-return valve secures constant pressure even in case of unexpected pressure drop. The revolutionary *HPXdrive* technology guarantees a reliable and low maintenance attachment. The gripper is ideal for mobile loader cranes as well as for rigidly mounted loader cranes on maintenance trailers.

- **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%! **Self-lubrication**: The drive unit runs in a permanent oil bath. 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.
- **Rotator with shaft** KM 04 S is available as an alternative, in case a quick change KM 505 (or a reduction link KM 502 or e.g. for a non-rotating hook) is required.
- **Constant closing force** (7480 lbf at 3750 psi operating pressure) during the entire opening and closing process.



Package Rail Grapple KM 632HPX Rail c with <b>KINSHOFER</b> Flange Rotator						
Type	Length	Width	Height	Weight	Closing force	Load capacity
	(in)	(in)	(in)	(lbs)	(lbf) at 26 MPa	(lbs)
KM 632HPX Rail c	39.4	22.1	29.1	583	7480	4400
KM 632HPX Rail + KM 505c	39.4	22.1	32.3	605	7480	4400

**Package KM 632HPX Rail:** rail grapple, **KINSHOFER** rotator KM 04 F140-30V, upper suspension KM 501 4500, non-return valve

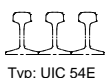
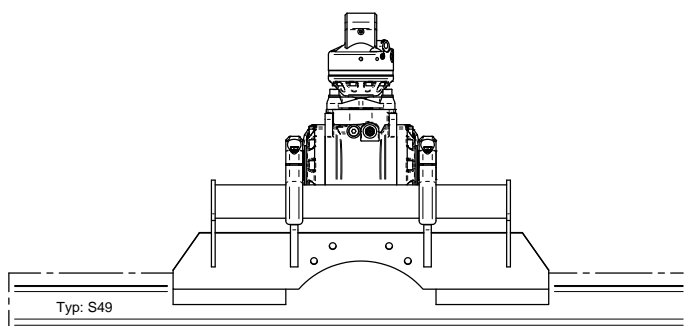
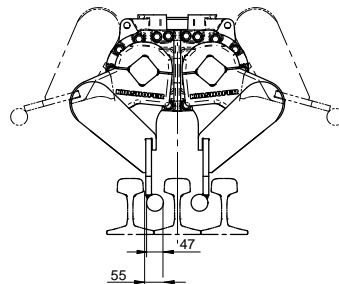
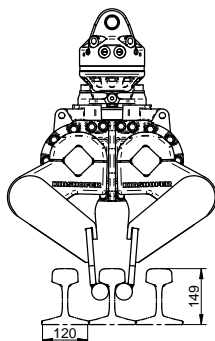
**Package KM 632HPX Rail + KM 505 consists of:** rail grapple, **KINSHOFER** rotator KM 04 S, upper suspension KM 501 4500, KM 505 quick change system, KM 203 01 short hoses, non-return valve

Accessoires	
Type	Description
KM 04 S	<b>KINSHOFER</b> shaft rotator for precise positioning of the load – up to 9900 lbs load capacity
KM 04 S68-30US	recommended <b>KINSHOFER</b> 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 HD for shaft-type rotator KM 04 S68-30US
KM 502 4500	reduction link between rotator and grapple
KM 204 01	mobile part of hydraulic quick coupling for hose (Ø 0.39 in, 2 pieces)
KM 204 03	hydraulic quick change kit incl. mobile and fixed parts (2 pieces each) mounted with adapters to rotator
KM 632HPX Rail-S	exchangeable tines for rail grapple, incl. exchange aid – weight tines 275 lbs

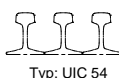
## Requirements of Truck Crane

**Operating pressure:** 3750 psi  
**Recommended oil flow:** 6.5 - max. 20 GPM

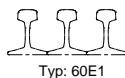
## Technical Drawings



Typ: UIC 54E



Typ: UIC 54



Typ: 60E1



The Harvester KM 634-3Z has been developed especially for telescopic forklifts. During the sawing process, the three robust tines of the integrated grab hold the log firmly and securely. Available in two sizes.

- **Three interlocking, robust tines** made of Hardox 400 steel.
- **Automatic re-stress** of the grab during the sawing process. The re-stress can be stopped by a lever to cut e.g. single branches separately.
- **Optimum grab design** allows to clamp even very thin logs.
- Saw equipped with **automatic chain pretension and greasing**.
- Precise positioning thanks to the **KINSHOFER-rotation with 4 motors and 2 holding breaks (KM 634-0,35-3Z)** or the **worm drive (KM 634-0,25-3Z)**. High torque.
- **Highly safe hydraulics** due to an integrated non-return valve, so the load is held safely even in the case of pressure drops.
- **8/3 solenoid valve** included to operate the grab with only one control circuit.



## Harvester KM 634-3Z

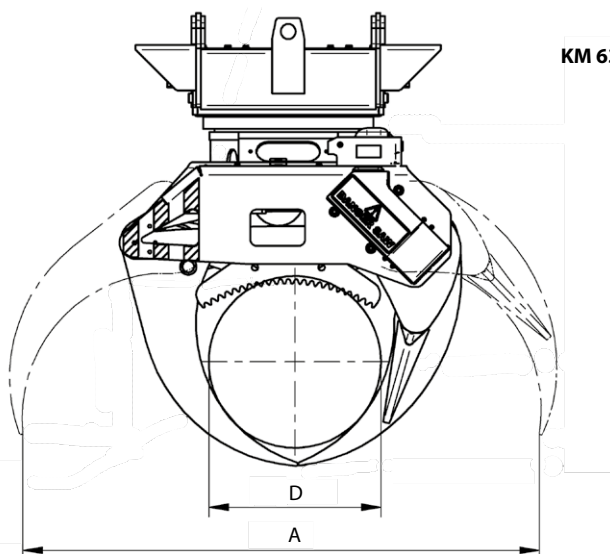
Type	Capacity (cords)	Widths E1 / E2 / (E3) (in)	max. Log-Ø D max. (in)	Stamm-Ø min. (in)	Opening A max. (in)	Weight (lbs)	Closing force (lbs)	Torque (ft.lbs.)	Load capacity (lbs)
KM 634-0,25-3Z	0.17	13.8 / 39.4	20.5	1.9	57.9	1389	2923	8851	2756
KM 634-0,35-3Z	0.24	16.9 / 52.2 / (60.6)	24.6	2	67.3	2094	4046	10621	4409

**Package consists of:** harvester, rotation with 4 motors and 2 holding breaks (KM 634-0,35-3Z) or worm drive (KM 634-0,25-3Z), quick change adapter for telescopic fork lift, 8/3 solenoid valve, non-return valve

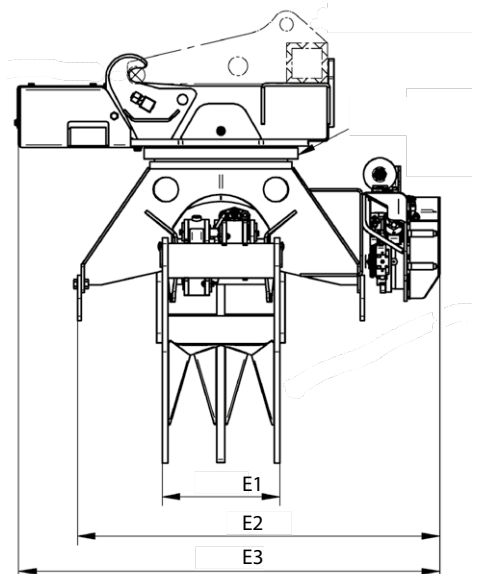
## Requirements of Truck Crane

<b>Operating pressure (open/close):</b>	<b>KM 634-0,25-3Z</b> max. 3500 psi	<b>KM 634-0,35-3Z</b> max. 4060 psi	⚠ <b>Mind the pressures!</b>
<b>Operating pressure (rotate):</b>	2450 psi	2900 psi	
<b>Recommended oil flow (open/close):</b>	16 to 26.5 GPM	20 to 32 GPM	
<b>Recommended oil flow (rotate):</b>	5 to 13 GPM	5 to 13 GPM	

## Technical drawings - example of use



KM 634-0,35-3Z



KM 634-0,25-3Z

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 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 3500 psi).



KM 634 here w/rotator  
KM 10 F173-35/2

## Packages Logging Grapple KM 634-0,25c / KM 634-0,35c / KM 634-0,50c

Type	Capacity (cords)	Width B (in)	min. Log-Ø D2 (in)	max. Log-Ø D2 (in)	max. Opening A (in)	Self weight (lbs)	Closing force (lbs)	Load capacity (lbs)
KM 634-0,25c	0.17	17	3.5	18.11	58	473	2860	8800
KM 634-0,35c	0.23	20	5.3	23.23	77	660	3520	11000
KM 634-0,50c	0.33	20	6.7	25.59	78	722	3300	11000

**Package consists of:** logging grapple, rotator with hose protection (for KM 634-0,25: KM 04 F140-30US, for KM 634-0,35: KM 06 F173-35, for KM 634-0,50: KM 10 F173-45), short hoses KM 203 01, suitable upper suspension KM 501, non-return valve

## Logging Grapple KM 634

Type	Capacity (cords)	Width B (in)	min. Log-Ø D2 (in)	max. Log-Ø D2 (in)	max. Opening A (in)	Self weight (lbs)	Closing force (lbs)	Load capacity (lbs)
KM 634-0,25	0.17	17	3.5	18.11	58	374	2860	8800
KM 634-0,35	0.23	20	5.3	23.23	77	495	3520	11000
KM 634-0,50	0.33	20	6.7	25.59	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. Log-Ø D2 (in)	max. Opening A (in)	Self weight (lbs)	Closing force (lbs)	Load capacity (lbs)
KM 634S-0,40	0.27	20	5.3	23.23	77	594	3520	13200
KM 634S-0,50	0.33	20	6.7	25.59	78	605	3520	15400
KM 634S-0,70	0.47	23	4.3	34.25	101	1166	3300	17600

## Accessories

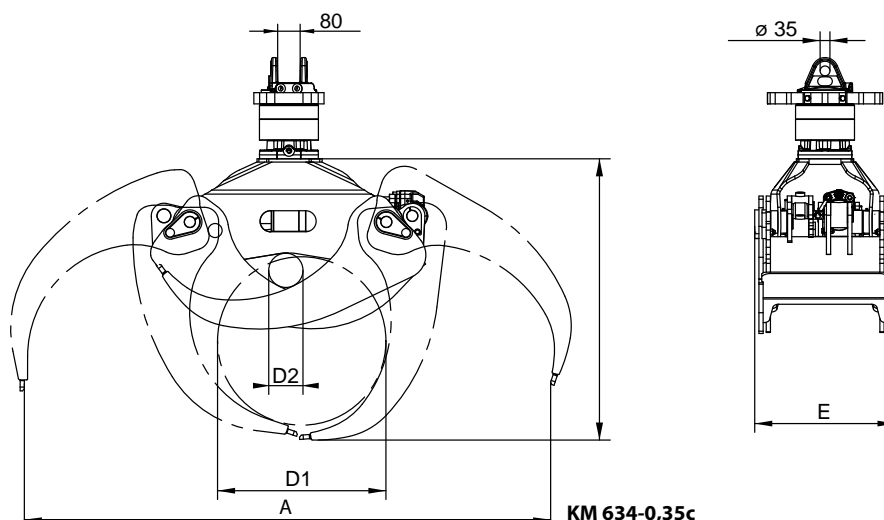
Type	Description
KM 04 F140-30US	recommended <b>KINSHOFER</b> rotator for KM 634-0,25
KM 06 F173-35	recommended <b>KINSHOFER</b> rotator for KM 634-0,35
KM 10 F173-45	recommended <b>KINSHOFER</b> rotator for KM 634-0,50
KM 10 F173-45 or -52	recommended <b>KINSHOFER</b> rotator for KM 634S

## Requirements of Truck Crane

Operating pressure: max. 3500 psi  
Recommended oil flow: 6.5 - max. 20 GPM



## Technical Drawings



KM 634-0,35c



## 930-1000 Special / 931-1000

## Pole Grapple / 3-Axes-Manipulator

The pole grapple KM 930-1000 Special is a perfectly matched attachment for drilling sites. Poles can be gripped easily and positioned precisely.

The 3-Axes-Manipulator KM 931 features maximum manoeuvrability for your attachments at the loader crane's tip – and provides flexibility of the loader crane's use in any arc position.

- **3-axes-manipulator: maneuverability** by three hydraulic functions: gripping, rotating and tilting (3<sup>rd</sup> hydraulic circuit needed).
- **Endless rotation.**
- **High loads** up to 2200 lbs.
- **Precise positioning** guaranteed by self-locking worm drive (KM 931-1000).
- **5-line feedthrough.**
- **KM 930-1000 Special** provides an **exchangeable jaw system**.



KM 930-1000 Special

Pole Grapple KM 930-1000 Special						
Type	Load capacity	Gripping range	Width	Number of	Self weight	Closing force
	(lbs)	(min./max.)	E (in)	tines	(lbs)	(lbf)
KM 930-1000 Special	2200	4 / 7.3	62.99	2	847	2 x 3520
Exchangeable jaws	-	6.6 / 8.6	-	-	-	-

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

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

3-Axes-Manipulator KM 931-1000					
Type	Load capacity	Slewing angle	Tilting angle	Rotation	Self weight
	(lbs)				(lbf)
KM 931-1000	2200	130°	± 80°	360° endless	638

**Package consists of:** manipulator, hydraulic pilot controlled brake, worm drive, non-return valve

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

Accessories	
Type	Description
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. 3650 psi, oil flow 16 GPM

### Requirements of Truck Crane

Three hydraulic circuits needed

**Operating pressure:**

**Oil flow:**



**KM 930-1000 Special**

**2900 psi**

5 - max. 8 GPM

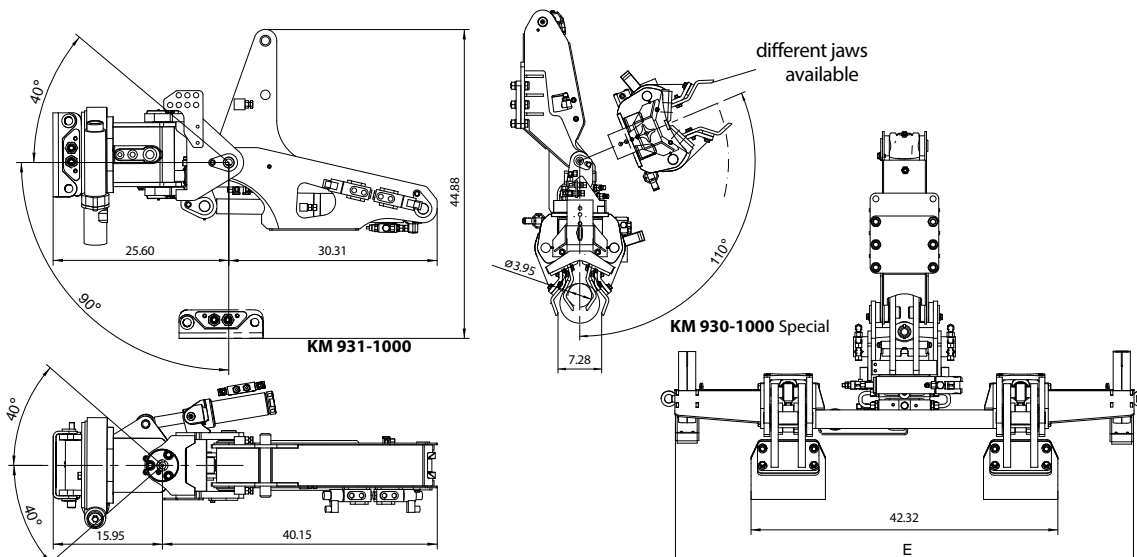


**KM 931-1000**

**2900 - 3500 psi**

5 - max. 10.5 GPM

### Technical Drawings



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	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 (KM 930-500 / KM 930-1000) / **KINSHOFER** rotary drive (KM 930-2000 / KM 930-3000), hydraulic pilot controlled brake, non-return valve

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

Accessories

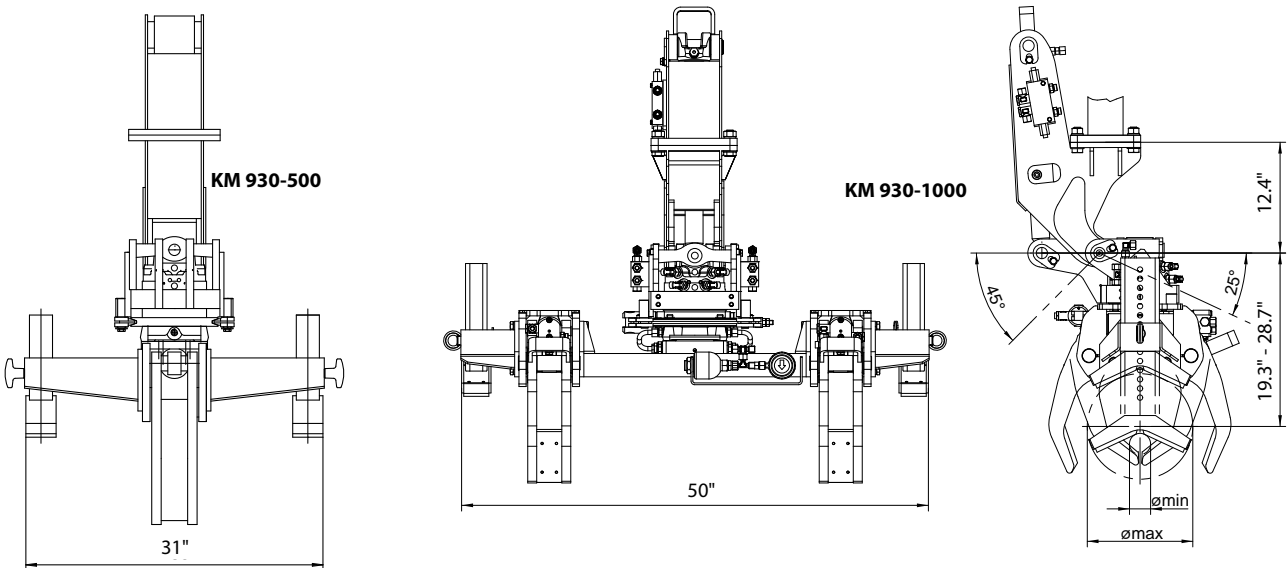
Type	Description
KM 980-2 c	solenoid valve KM 980-2 complete attachment kit including assembly components, hose guard, hoses and mounting on the KM 930 manipulator – 12 V or 24 V, working pressure max. 3650 psi, oil flow 16 GPM

Requirements of Truck Crane

**Operating pressure:** max. 2900 psi  
**Recommended oil flow:** 5 - max. 10.5 GPM



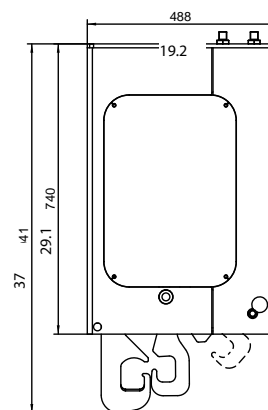
Technical Drawings



**KINSHOFER** container discharge attachments with ring system or 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.

## Container discharge unit KM 920-1 with ring system / low overall height

- Low overall height due to compact design.
- Extremely low maintenance and ecofriendly, because no bearing has to be lubricated.
- Hooks on automatically when container is lifted.
- Precise positioning with **KINSHOFER** rotator. LM low maintenance version of rotator with plastic bushings.
- Protection against damage of container by automatic lift stop.
- Available with two load capacities (version A and B).



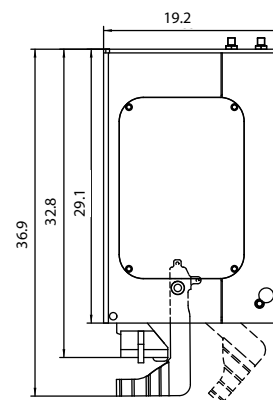
Type	max. Lift of the hook (in)	Load capacity (lbs)	Height (incl. rotator) (in)	Self weight* (lbs)	Operating pressure at oil flow
KM 920-1-Ac	19.7	9900	45.7	383	5050 psi at 10.5 GPM
KM 920-1-Bc	19.7	5500	45.7	383	5050 psi at 10.5 GPM

\* incl. motor / excl. upper suspension & pendulum damper

**Package consists of:** container discharge unit, **KINSHOFER**-rotator KM 04 F140-30LM, connecting tubes, upper suspension with pendulum damper KM 511 4500, non-return valve

## Container discharge unit KM 920-22 for containers with KINSHOFER mushroom system

- Low overall height due to compact design.
- Extremely low maintenance and ecofriendly, because no bearing has to be lubricated.
- Hooks on automatically when container is lifted.
- Precise positioning with **KINSHOFER** rotator. LM low maintenance version of rotator with plastic bushings.
- Protection against damage of container by automatic lift stop.



Type	max. Lift of the hook (in)	Load capacity (lbs)	Height (incl. rotator) (in)	Self weight* (lbs)	Operating pressure at oil flow
KM 920-22c	19.7	5500	45.6	392	5050 psi at 10.5 GPM

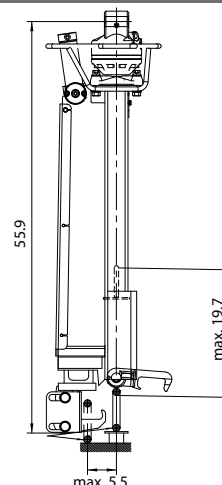
\* incl. motor / excl. upper suspension & pendulum damper

**Package consists of:** container discharge unit, **KINSHOFER**-rotator KM 04 F140-30LM, connecting tubes, upper suspension with pendulum damper KM 511 4500, non-return valve

**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.

## Container discharge unit KM 920-11 for containers 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 (in)	Load capacity (lbs)	Height (incl. rotator) (in)	Self weight* (lbs)	Operating pressure at oil flow
KM 920-11 c	19.7	5500	55.1	297	2900 - 3750 psi at max. 20 GPM 2900 - 5350 psi at max. 10.5 GPM

\* incl. rotator & hoses / excl. upper suspension & pendulum damper

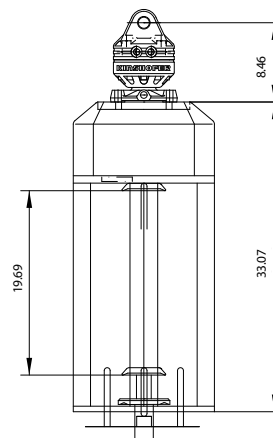
**Package consists of:** container discharge unit, rotator KM 04 F140-30V, short connecting hoses KM 203 01, non-return valve, upper suspension with pendulum damper KM 511 4500, pressure relief valve

## Container Discharge Unit KM 921 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 height 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 container 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!  
**Not for use of fixed discs with locking ribs!**



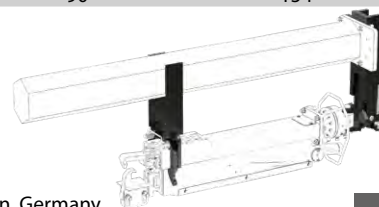
Type	max. Lift of the hook (in)	Load capacity (lbs)	Height (incl. rotator) (in)	Self weight* (lbs)	Operating pressure at oil flow
KM 921	20	5500	42	396	2900 - 3750 psi at max. 20 GPM 2900 - 5350 psi at max. 10.5 GPM

\* incl. rotator & hoses / excl. upper suspension & pendulum damper

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

## Accessories for Container Discharge Units

Type	Description	Tilting angle (deg.)	Self weight (lbs)
KM 924	Docking device for container 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 <b>max. 4060 psi</b> .	90°	154



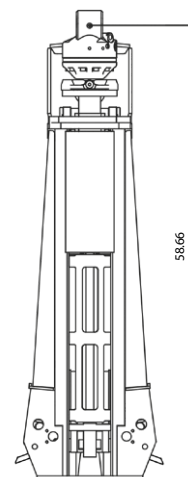
**KINSHOFER** container discharge attachments with the fast **KINSHOFER** mushroom system are characterised by short cycle times and an attractive acquisition price. Containers can be emptied even faster and more cost effectively with a one-man operation.

## Container Discharge Unit KM 920-12 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.
- Pressure control for user controlled unlocking.
- Including integrated locking indicator.



The secure service of the container 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!



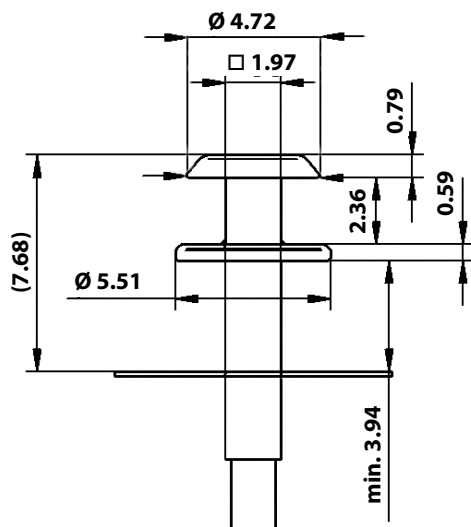
Type	max. Lift of the hook (in)	Load capacity (lbs)	Height (incl. rotator) (in)	Self weight* (lbs)	Operating pressure at oil flow
KM 920-12	20	5500	59	462	2900 - 3750 psi at max. 20 GPM 2900 - 5350 psi at max. 10.5 GPM

\* incl. rotator & hoses / excl. upper suspension & pendulum damper

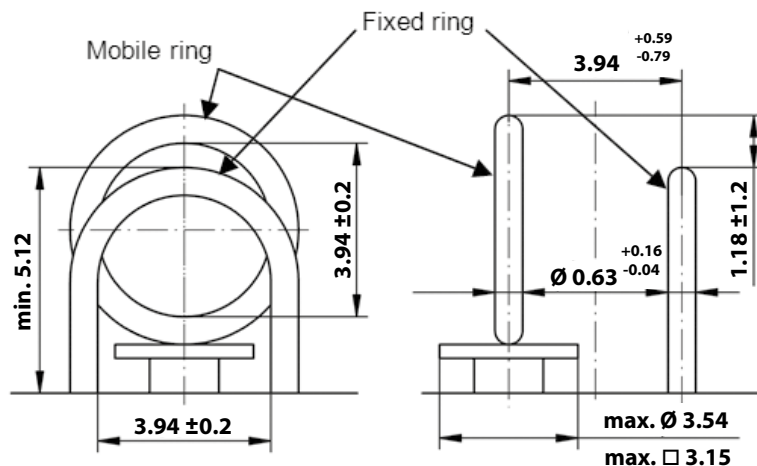
**Package consists of:** Container discharge unit, rotator KM 04 F, short connecting hoses KM 203 01, upper suspension with pendulum damper KM 511 4500, pressure relief valve and non-return valve

## Dimensions for containers with KINSHOFER mushroom or ring system

mushroom system for containers



ring system for containers



mushroom and ring system: leverage hoisting max. 19.7 inches

### Mushroom system at container

Usage only for containers with mushroom system with dimensions as shown above that are equipped with „**ORIGINAL KINSHOFER FIXED and HOIST DISCS**“.  
(according to DIN EN 13071-3)



### Ring system at container

Usage only for containers with ring system with dimensions as shown above .  
**Hoist ring** at container with **max. lifting height 19.7 in.**



## Hydraulic Hook KM 920-5 for Tools and Loads with Ring System

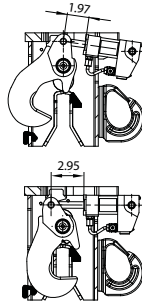
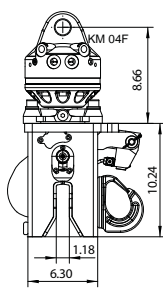
- Low overall height due to compact design.
- Precise positioning in combination with **KINSHOFER** rotator.
- The safety load hook is equipped with a hydraulic cylinder for opening/closing without opening unintentionally in a loaded condition.
- Suitable for the hydraulic suspension of pallet forks with vertical crane hook suspension or with additional hook (version B) for the fast and precise load suspension with e.g. tightropes, lashing straps, etc. and the following release of the loads (version C w/o additional hook).



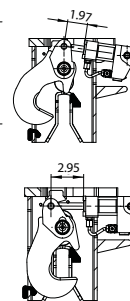
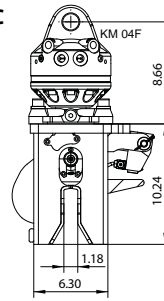
KM 920-5B

Type	Width (in)	Load capacity (lbs)	max. Ring - Ø (in)	Height (incl. rotator) (in)	Self weight (lbs)	Operating pressure at oil flow
KM 920-5B c	12.2	9900	1.2	18.9	1056	5350 psi at 1.3 - max. 2.5 GPM
KM 920-5C c	12	9900	1.2	18.9	1037	5350 psi at 1.3 - max. 2.5 GPM
Package consists of: hydraulic hook, rotator KM 04 F, short connection hoses KM 203 01, upper suspension KM 501 4500, non-return valve						

KM 920-5B



KM 920-5C



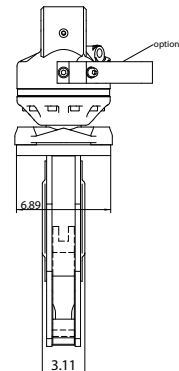
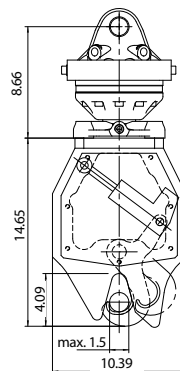
## Hydraulic hook KM 920-4 for containers and loads with ring system

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 open hydraulic hoses.

Type	Width (in)	Height (incl. rotator) (in)	max. Ring - Ø (in)	Self weight (incl. rotator) (lbs)	max. Load capacity (lbs)	Operating pressure at oil flow
KM 920-4c	10.4	23.3	1.5	101.2	5500	2900 psi at 1.3 - max. 2.5 GPM
Package consists of: hydraulic hook, rotator KM 04 F140-30V, upper suspension KM 501, non-return valve						

## Technical drawings & Picture



## Accessories

Type	Description
KM 501 4500	upper suspension - load capacity 4500 kg
KM 206	hose guard
KM 980-5	switch valve kit (for the combination KM 920-5 with KM 461)

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

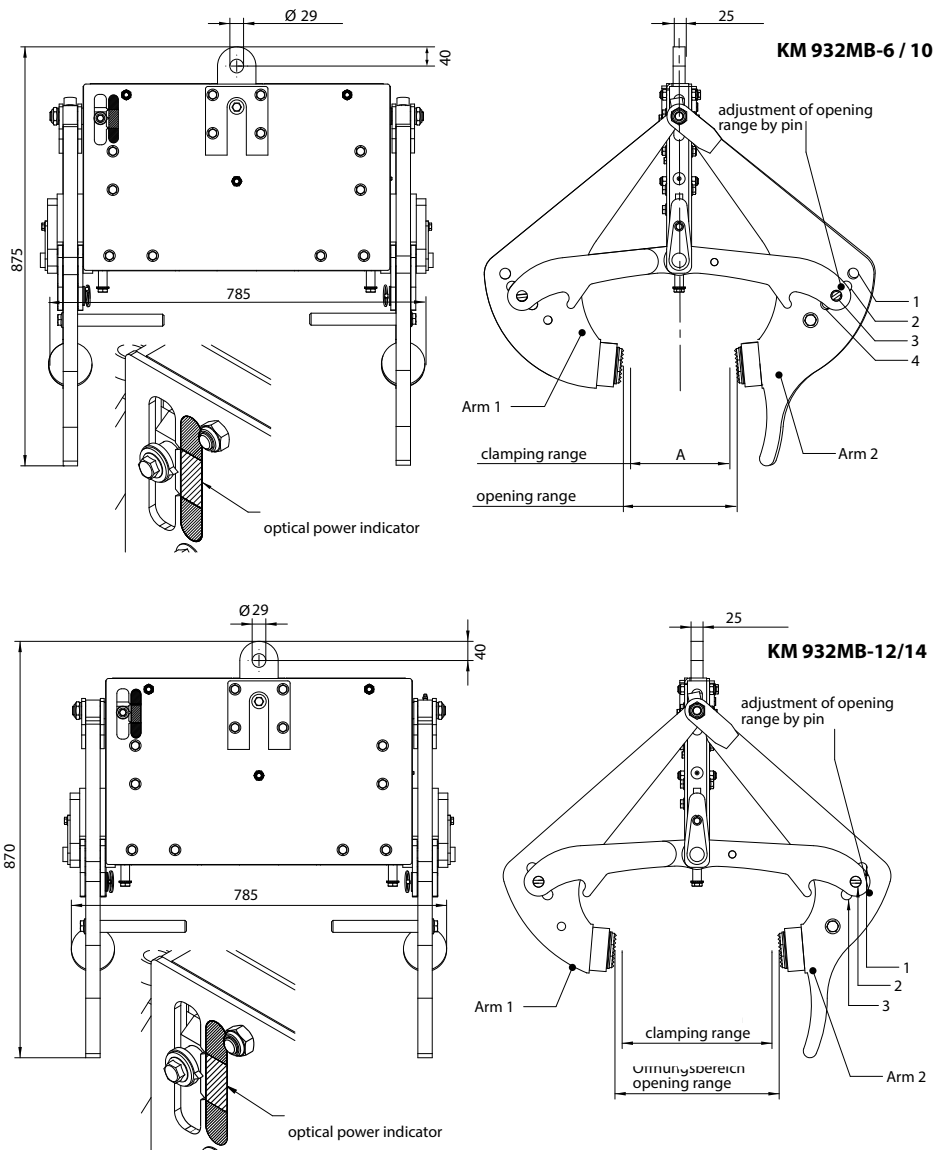
- **Safe:** Carbide gripping pads ensure safe operation, even on wet or coated surfaces. An optical power indicator illustrates the range for optimum grip.
- **Efficient:** The fully integrated, mechanically operated "latch & release" system allows the unit to function independently, without assistance 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.) (in)	Self weight (lbs)	Load capacity max. (in)
KM 932MB-6/10	4.7 – 12	396	14476
KM 932MB-12/14	11.6 – 15.5	363	14476

## Technical Drawings



The robust earth drills for truck cranes up to 18,0 t/m are an economical and customized solution for earth drills e.g. for fencing, road signage, landscaping and tree planting. Well borings, screw pile installations and sound barrier installations are also no problem for the earth drills.

- Non Dislodgement Shaft (NDS) for more safety and lower down times, as this unique construction prevents the output shaft from dislodgement.
- Pre-filled with a colored gear oil. Not only is the use of a colored oil a good indicator of correct service, but it also aids identifying possible hydraulic oil leaks.
- The heavy duty fabricated hoods feature forged steel ears; these high strength ears easily transmit the high torsional loads, experienced whilst drilling, without becoming fatigued.
- Easy access oil service points.



Earth Drills for Truck Cranes 2300-10 / 4000-14 / 5000-14								
Type	For cranes up to (t/m)	Shaft standard (in)	Shaft options (in)	Speed range (RPM)	Height (in)	Diameter (in)	Weight (lbs)	Suitable augers
2300-10	9	2.56 round	2" hex; 2.24 square	7 - 46	26.18	9.61	161	S4 100 - 600
4000-14	15	2.95 square	2.5" hex	11 - 38	30.71	10.59	238	S5 150 - 800
5000-14	9 - 18	2.95 square	2.5" hex	9 - 30	30.71	10.59	243	S5 150 - 1000

**Standard package consists of:** earth drill, connecting link for suspension

## Accessories

Type	Description
<b>S4 Extension 500</b>	extension suitable for earth drill 2300-10 and S4 augers – 19.68 in length
<b>S4 Extension 800</b>	extension suitable for earth drill 2300-10 and S4 augers – 31.49 in length
<b>S4 Extension 1000</b>	extension suitable for earth drill 2300-10 and S4 augers – 39.37 in length
<b>S5 Extension 1000</b>	extension suitable for earth drills 4000-14 / 5000-14 and S5 augers – 39.37 in length
<b>S5 Extension 1500</b>	extension suitable for earth drills 4000-14 / 5000-14 and S5 augers – 59.05 in length
<b>S5 Extension 2000</b>	extension suitable for earth drills 4000-14 / 5000-14 and S5 augers – 78.74 in length
<b>S6 Telescopic Extension 1500</b>	telescopic extension suitable for earth drills 5500TC / 7000TC and S5/S6 augers starting from diameter 11.81 in length 59.05 in
<b>S6 Telescopic Extension 2000</b>	telescopic extension suitable for earth drills 5500TC / 7000TC and S5/S6 augers starting from diameter 11.81 in length 78.74 in
<b>Rope wind hitch</b>	rope wind hitch for safe position on the truck crane during transport

## Technical Details

Type:	2300-10	4000-14	5000-14
<b>Oil pressure range:</b>	1450 - 3750 psi	1450 - 3750 psi	1450 - 3750 psi
<b>Oil flow range:</b>	1.3 - 10.5 GPM	4 - 14.5 GPM	4 - 14.5 GPM
<b>Torque range:</b>	707 - 2295 ft.lbs.	1242 - 4039 ft.lbs.	1547 - 5029 ft.lbs.

## Pictures



Rope wind hitch

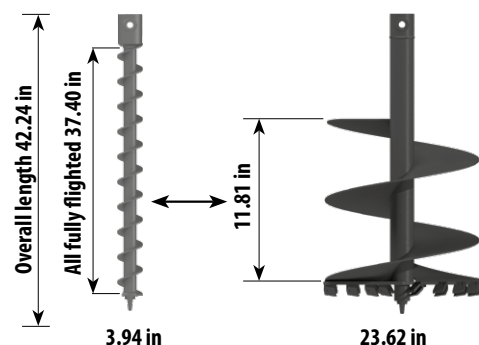
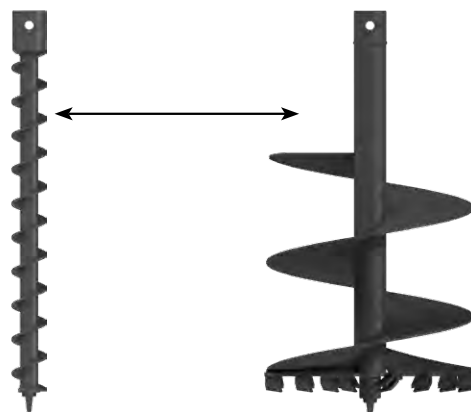


Extensions / telescopic extension



The S4 auger is perfectly matched to the 2300-10 earth drill and every task. A constant spiral configuration and a shallow pitch flight guarantee extreme efficiency and productivity. Suitable for truck cranes up to 9 t/m.

- Higher productivity by constant spiral configuration and the perfectly angled tooth holder.
- Interchangeable pilots and teeth allow for differing ground conditions.
- Easy fitting of teeth and pilots.
- Patented Shock Lock-System: incorporating a shock absorbing rubber element to protect the tungsten carbide on the tooth assembly coupled with a solid locking pin prevent tooth loss.
- High flexibility thanks to different auger extensions.



**Note:** all augers are fitted with shock lock tooth holder. Overall length stated includes fitted wear parts.

#### Hub & Tooth Options

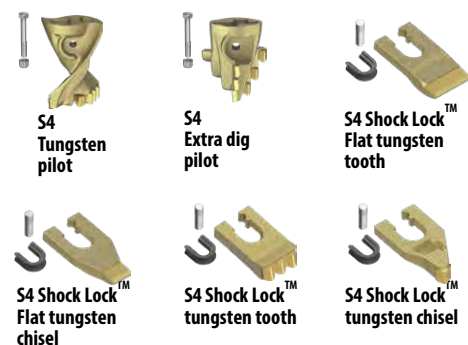
##### Hub options



##### Earth wear parts



##### Tungsten wear parts



**S4 Augers** (please specify pilot and tooth option when ordering)

Type	Diameter (in)	Spiral length (in)	Overall length (in)	Tooth type
<b>S4 100</b>	3.93	37.40	47.24	Earth Tungsten Extra-dig
<b>S4 150</b>	5.90	30.70	47.24	Earth Tungsten Extra-dig
<b>S4 200</b>	7.87	29.52	47.24	Earth Tungsten Extra-dig
<b>S4 225</b>	8.85	29.52	47.24	Earth Tungsten Extra-dig
<b>S4 250</b>	9.84	27.55	47.24	Earth Tungsten Extra-dig
<b>S4 300</b>	11.81	27.55	47.24	Earth Tungsten Extra-dig
<b>S4 350</b>	13.77	26.57	47.24	Earth Tungsten Extra-dig
<b>S4 400</b>	15.74	24.60	47.24	Earth Tungsten Extra-dig
<b>S4 450</b>	17.71	24.60	47.24	Earth Tungsten Extra-dig
<b>S4 500</b>	19.68	24.60	47.24	Earth Tungsten Extra-dig
<b>S4 600</b>	23.62	23.62	47.24	Earth Tungsten Extra-dig

##### S4 Extensions

19.68 in



31.50 in



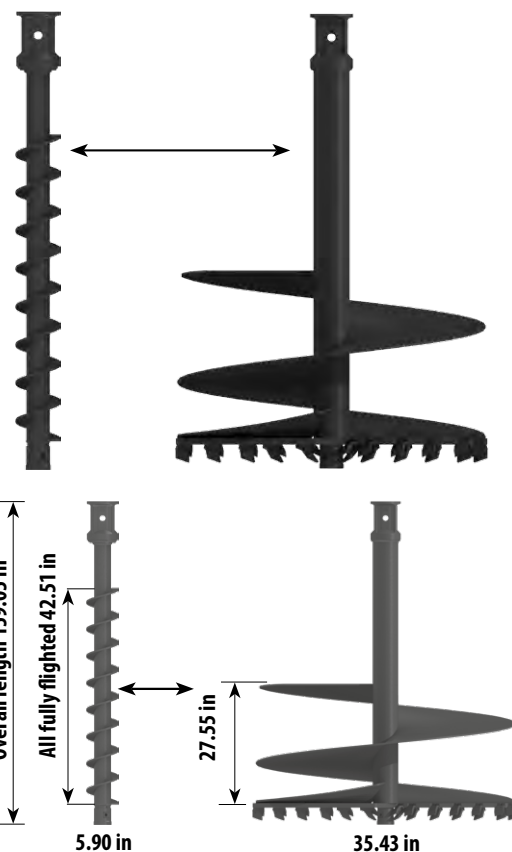
39.37 in



The S5 auger is perfectly matched to the corresponding earth drills and every task. A constant spiral configuration and a shallow pitch flight guarantee extreme efficiency and productivity. Suitable for truck cranes from 9 t/m up to 18 t/m.

- Higher productivity by constant spiral configuration and the perfectly angled tooth holder.
- Interchangeable pilots and teeth allow for differing ground conditions.
- Easy fitting of teeth and pilots.
- Patented Shock Lock-System: incorporating a shock absorbing rubber element to protect the tungsten carbide on the tooth assembly coupled with a solid locking pin prevent tooth loss.
- High flexibility thanks to different auger extensions and telescopic extensions.
- For earth drills 4000-14 and 5000-14.

S5 Augers (please specify pilot and tooth option when ordering)				
Type	Diameter (in)	Spiral length (in)	Overall length (in)	Tooth type
S5 150	5.90	42.51	59.05	Earth Tungsten Rock
S5 200	7.87	38.46	59.05	Earth Tungsten Rock
S5 225	8.85	38.38	59.05	Earth Tungsten Rock
S5 250	9.84	37.99	59.05	Earth Tungsten Rock
S5 300	11.81	35.43	59.05	Earth Tungsten Rock
S5 350	13.77	35.43	59.05	Earth Tungsten Rock
S5 400	15.74	34.44	59.05	Earth Tungsten Rock
S5 450	17.71	29.52	59.05	Earth Tungsten Rock
S5 500	19.68	29.52	59.05	Earth Tungsten Rock
S5 600	23.62	29.52	59.05	Earth Tungsten Rock
S5 700	27.55	27.55	59.05	Earth Tungsten Rock
S5 750	29.52	27.55	59.05	Earth Tungsten Rock
S5 800	31.49	27.55	59.05	Earth Tungsten Rock
S5 900	35.43	27.55	59.05	Earth Tungsten Rock
S5 1000	39.37	20.66	59.05	Earth Tungsten Rock



**Note:** all augers are fitted with shock lock tooth holder. The use of rock teeth depends on the rock tooth type of the auger. Overall length stated includes fitted wear parts.

## Hub & Tooth Options

### Hub options



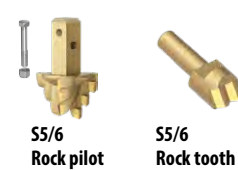
### Earth wear parts



### Tungsten wear parts

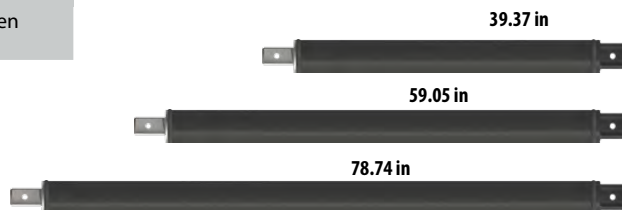
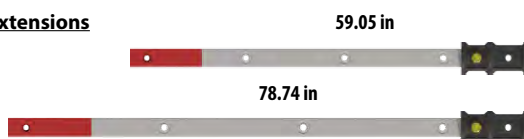


### Rock wear parts



## S5 Extensions

### S6 Telescopic extensions

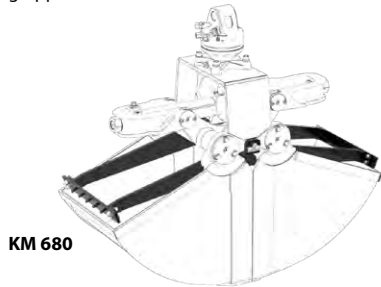




# Accessories for Clamshell Buckets

## 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

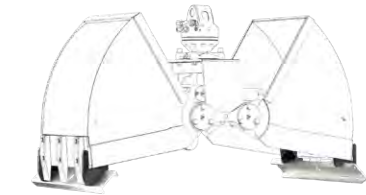
<b>KM 680 01</b>	KM 603/ 604/ 604HPX/ 605/ 605HPX/ 606/ 607
<b>KM 680 02</b>	KM 626HPX
<b>KM 505 04</b>	link-set for KM 604HPX/605HPX/626HPX in combination with KM 505 / KM 505 HD and scraper KM 680

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

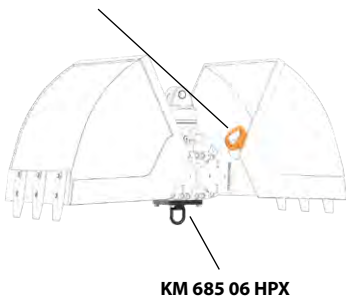
<b>KM 685 05</b>	adapters for compression rails
<b>KM 381 09 720</b>	compression rails – length 28 in long (2 pieces)
<b>KM 381 09 1000</b>	compression rails – length 39 in long (2 pieces)

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

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



central lifting device **HPXdrive**



KM 685 06 hook

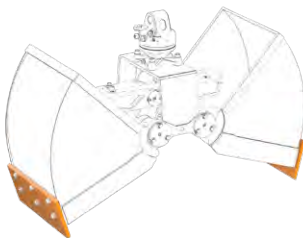
welded hook

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



welded eye

## KM 685 07 – Wear Plates (2 pieces)



### Type

### Description

<b>KM 685 07 set</b>	wear plates, 2 pieces, reversible, to protect horizontal cutting edges
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## KM 685 08 – Extension for Excavating with HPXdrive



### Type

### Description

<b>KM 685 08-450 mm</b>	<b>HPXdrive</b> extension for excavating e.g. trenches (for canal and civil engineering) – 17.7 in (66 lbs)
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## Two Year Warranty

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### **KINSHOFER North America – Warranty Policy**

KINSHOFER warrants its products against defects in material and workmanship for a period of two years 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 25% 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.

KINSHOFER products are sold on the strict understanding that all product selection is the full responsibility of the purchaser.

KINSHOFER accepts no liability for the use, misuse or incorrect application of its products.



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