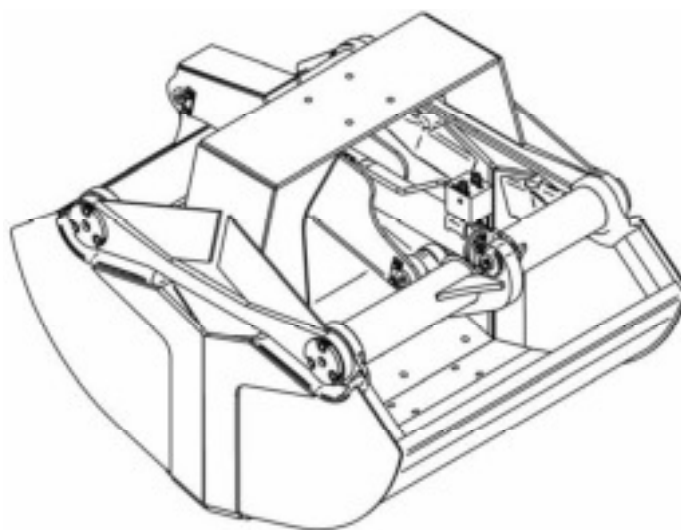


**Bedienungsanleitung / Operating instructions / Mode d'emploi
für / for / pour**

**Zweischalengreifer / Clamshell bucket /
Benne preneuse
KM 602**

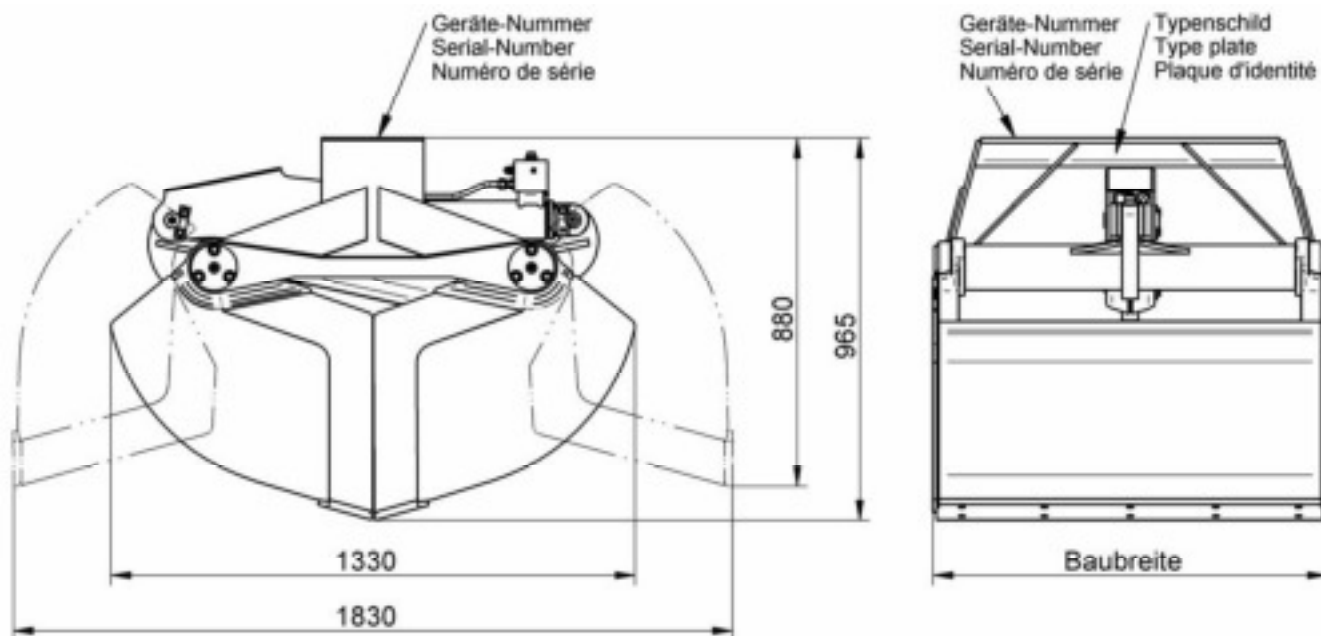
mit Rückschlagventil und Druckbegrenzungsventil /
with non-return valve and pressure control valve /
avec clapet anti-retour et limitation de pression



Hersteller / Manufacturer / Constructeur

KINSHOFER GREIFTECHNIK GMBH

Maßblatt / Dimensions / Dimensions



Artikel-Nr. / Order No. / Article N°

Typ KM 602	Ladevolumen Capacity Capacité l	Baubreite Width Largeur mm	Gewicht (o. Drehmotor) Weight (without rotator) Poids (sans rotator) kg / lb
G02I030RN0	300	500	423
G02I040RN0	400	800	453
G02I050RN0	500	1000	468
G02I065RN0	650	1200	483
G02I100RN0	1000	1200	693

Typ KM 602	Schließkraft Closing force Force de fermeture p=260bar/26MPa kN	Arbeitsdruck Operating pressure Pression de service bar / MPa	Pumpenförderleistung Pump capacity Débit à la pompe l/min
G02I030RN0	21	260 / 26	35 bis / to 75
G02I040RN0			
G02I050RN0			
G02I065RN0			
G02I100RN0			





Typenschild / Type plate / Plaque d'identité

Das Typenschild ist auf allen Kinshofer Erzeugnissen befestigt.
Der Erzeugnistyp und seine Daten sind dann auf dem Typenschild eingetragen.

The type plate is attached to all Kinshofer products.
The product type and data are entered in the type plate.

La plaque d'identité est apposée sur tous les produits Kinshofer.
Le modèle du produits et ses données sont spécifiés sur la plaque d'identité.

z. B. / for example / par exemple

 KINSHOFER GREIFTECHNIK	Hauptstraße 76 D-83666 Waakirchen	Tel. 08021 - 8899-0 Fax 08021 - 8899-37			
Baujahr Year	1998	Typ Model	652	Betriebsdruck Operatg.pressure	260
Gerät-Nr. Serial no.	9806117	Gewicht Weight	430	Traglast Inhalt Capacity	350l
Made in Germany					



Inhaltsverzeichnis

	Seite
1. Allgemeiner Text	5
Nicht erlaubte Betriebsweisen	Sicherheitsbestimmungen
Gerätemontage	Gewährleistung
2. Einsatzbedingungen	7
3. Montageanweisungen	7
Bedienung des Gerätes	Installationshinweis
Transport	
4. Wartung und Instandsetzung	12
Wartungshinweise	Verbrauchsmittel
Entsorgungshinweise für Verbrauchsmittel	
5. Fehlersuchplan	14

Content

	Page
1. General notes	5
Operations which are not permitted	Safety regulations
Fitting	Warranty
2. Operative conditions	7
3. Assembly instructions	7
Operating the device	Instructions for installation
Transport	
4. Maintenance, repair	12
General notes	Oil and grease
Disposing of used oil and grease	
5. Troubleshooting chart	14

Index

	Page
1. Généralités	5
Utilisations interdites	Règles de sécurité
Adaption des appareils	Garantie
2. Conseils d'utilisation	7
3. Instructions de montage	7
Utilisation de l'appareil pose sur conteneur	Conseils d'installation
Transport	
4. Entretien – Remise en état	12
Conseil d'entretien	Lubrifiants
Conseils pour l'élimination des lubrifiants	
5. Tableau de dépistage des défauts	14

1. General information

These instructions apply to load bearing devices in lifting areas and affects products by KINSHOFER GMBH:

The statutory safety and accident prevention regulations apply to load bearing devices.

Special mounting information, bearing capacities, permitted operating pressure and maintenance information along lists are provided in the operating instructions.

1.1 Use in accordance with regulations:

**Warning!**

Designates a possibly dangerous situation.

Instructions must be observed and followed.

Disregarding this information may result in serious injury.

Disregarding the operating instructions may result in accidents, downtimes and the warranty becoming void.

- All the equipment is generally designed for use near the ground (up to a lifting height of 1.8 m).
- It is not allowed to control the equipment by hand (except the crane forks).
It is not allowed to conduct the equipment above people if no additional protection has been provided. See also UVV VBG [Accident Prevention Regulations, Regulations of the Trade Associations], 9a § 31!
- Using the crane fork without securing the load is generally prohibited.
- The transport of persons is prohibited!
- **Observe the operating instructions!**

General information:

Users must refer to the operating instructions to familiarize themselves with the machine before operating it.

The operating instructions are meant for the users. Please refer to the corresponding documents for descriptions, maintenance and so on for other machine components and the base machine.

1.2 Safety provisions:

The following ordinances and regulations apply:

EG directives

EG Directive Machines 98/37/EC

EN 13155 Cranes – Non-fixed load lifting attachments

Accident prevention regulations - VBG

VBG 1 General regulations

VBG 9A Load bearing devices operated with lifting gear

ZH of publications

ZH 1/74 Safety regulations for hydraulic hose lines

ZH 1/215 Safety regulations for hydraulic fluids

ZH 1/283 Safely using cranes on trucks



Ordinances

Old oil ordinance
Highway code
Road traffic ordinance

1.3 Machine assembly

An upper suspension that permits suspension by gimbals is used to mount the corresponding hydraulic rotator or the add-on unit to the base machine's extension arm (exception: sorting grippers and manipulators may be mounted without suspension by gimbals).

- The machine may only be mounted by authorized personnel.
- Do not exceed the vehicle's total permitted weight when mounting the machine.
- The machine may only be fitted to suitable base machines.

Attaching the hydraulic rotator:

Rotators are mounted either with a reducer (motors with shaft) or directly to the bottom flange on the add-on unit.

The add-on unit may only be attached to suitable hydraulic rotators.

The hydraulic hoses should be kept as short as possible.

When assembly has been completed, check that the machine functions properly and that the hydraulic hoses don't leak.

1.4 Warranty

On exclusion of further claims and rights of the customer, irrespective of the legal reason, we will be liable for material and processing defects for only 12 months from the day the product leaves our premises.

A liability period of 12 months applies for rotary motors.

There is a warranty period of 24 months from the day the product leaves our premises for HPXdrive and HPXdrive Heavy Duty gripper drives only.

Complaints about defects must be made immediately in writing within a time limit of two weeks after the delivery was received at its destination.

The two week time limit also applies to defects that are not apparent even to careful inspection on receipt. In such events the time limit commences with the day the defect is discovered.

Warranty claims can only be made if the customer has fulfilled his duties and has followed the operating instructions.

No liability will be assumed for incorrect or negligent treatment or excessive loads.

Liability will also not be assumed when defects have been caused by preliminary or other work that has not been carried out on our premises.

If a complaint is founded and made within the specified time limit, we are entitled at our discretion to repair existing defects or to replace the original delivery free of charge or to issue a credit note to the calculated value or partial value.

Where products delivered or processed by third parties are concerned, we will only be liable to the extent that our sub-contractor fulfils warranty claims.

Once a complaint has been made, we must be given unrestricted access to the defective item so that we can both check the complaint and correct it.

If a defect can only be repaired on our premises, the defective item must be put at our disposal.

If the complaint concerns a disptachable component, then it must be sent to us on request.

If the customer demands the correction of a defect which we do not recognize as a warranty defect we are entitled to make the repair dependent on the advance payment of the foreseeable costs.

Operative conditions

The grab is intended for use on truck-mounted cranes.

It is attached to a hydraulic rotator or a manual rotating device.

The grab is used for handling bulk material, rubbish, garbage, chips and snow., and also for loading and unloading vehicles.

The usual environmental conditions for construction machinery apply.

Grabs are not suitable for use in seawater.

When the equipment is used with hot materials (e.g.tar), or fine-grain (dust-producing) loose materials, the bearings must be greased more frequently than usual.

Ambient temperature range: - 15°C to 40°C



Warning!

Using it in any other way is not suitable.

Operating authority is liable for any danger and damages resulting in the misuse of this equipment.

3. Assembly instructions

3.1 Instructions for installation

The clamshell bucket may be fitted and removed only by personnel with the appropriate knowledge and experience.

The maximum permitted laden weight of the vehicle must be observed (see vehicle log book).

The clamshell bucket may be attached only to suitable arms.

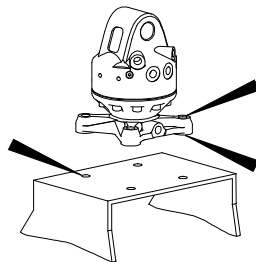
Modification to the bucket carrier are not allowed.

The clamshell bucket and rotator must be mounted on gimbals so that hang from the crane arm.

3.1.1 Attaching rotator with reducer on the grab

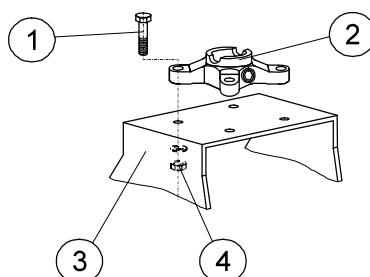


Prior to mounting rotator all contact points must be free of paint.

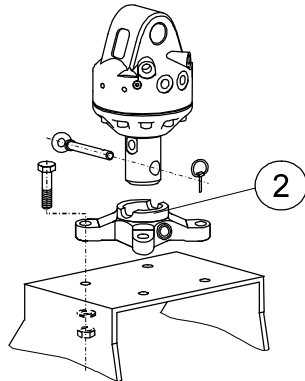


Position the adapter (2) (see Fig., Page 8 above) on the bucket carrier (3), and attached it with four screws (1) M16 (property class min. 8.8), washers and new locknuts.

Tighten to a torque of 210 Nm (155 lbf.ft.)



Insert the drive shaft on the rotator into the adapter (2) and secure it. (See the rotator manual for details).



The clamshell bucket may be installed only on suitable rotators. Changes to the bucket carrier are not permitted.

Note



Clean the hydraulic connectors thoroughly.

Attach the hoses for „opening“ and „closing“ from the rotator to connector (2).

Operate the „open grab“ and „close grab“ controls in turn, holding them briefly in each position.

No hydraulic fluid must escape; if necessary, tighten the connections.

3.1.2 Removing the grab

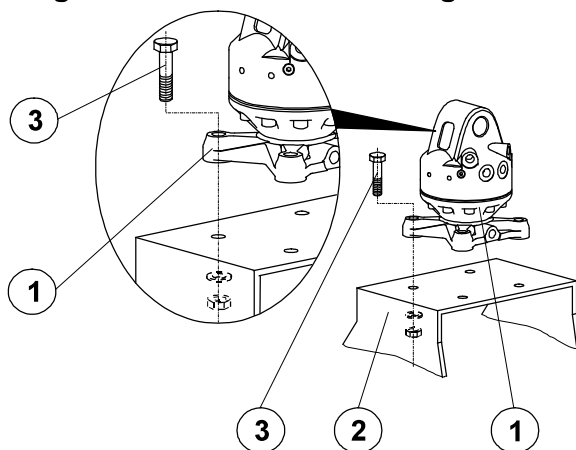
Lower the grab onto a suitable flat surface.

Switch off the hydraulic pump (engine), and move the control levers several times to and fro until the system is depressurized.

Clean hydraulic connectors on the hydraulic ram, unscrew them, and close them with caps.

Remove the rotator from the adapter (2) and disconnect the rotator. (See rotator manual for details)

3.1.3 Connecting the grab to a rotator with flange drive



Position the rotator KM04 / KM 06 (1) on the bucket carrier (2), and attach it with four screws (3) M16 (property class min. 8.8), washers and new locknuts.

Tighten to a torque of 210 Nm (155 lbf.ft.).

Connect KM 07 rotator with four screws M 20/p.c. min. 8.8, washers and new locknuts.

Tighten to a torque of 410 Nm/300 lbf.ft.

**Note**

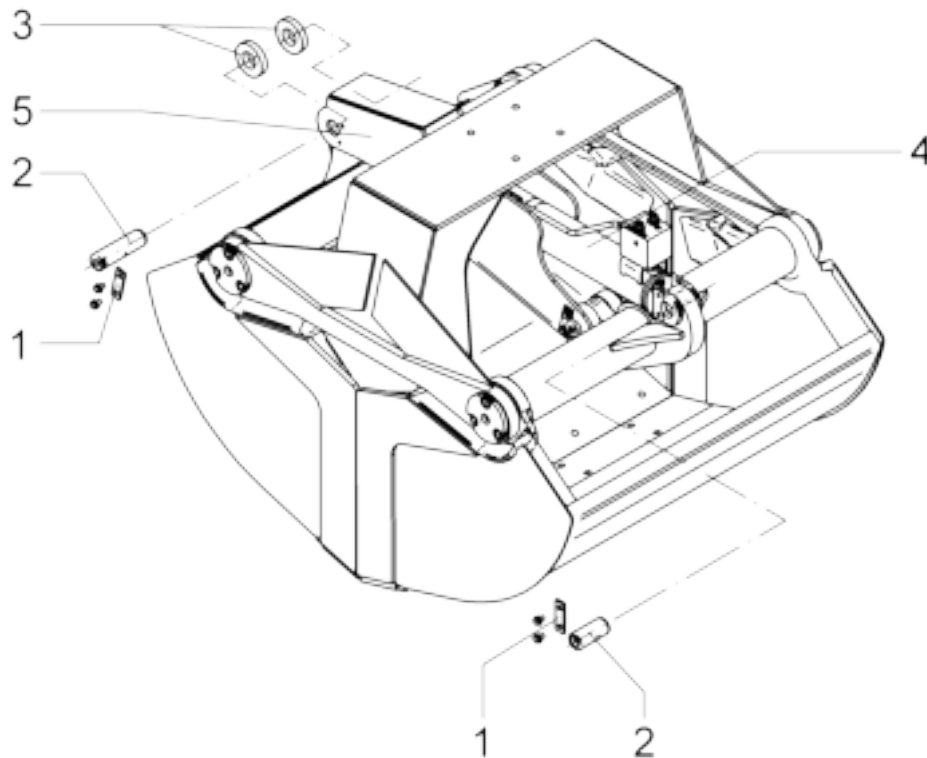
Clean the hydraulic connectors thoroughly.
Attach the hoses for „opening“ and „closing“ from the rotator to connector.
Operate the "open grab" and "close grab" controls in turn, holding them briefly in each position.
No hydraulic fluid must escape; if necessary, tighten the connections.

3.1.4 Removing a flange-drive rotator

Lower the grab onto a suitable flat surface.
Switch off the hydraulic pump (engine), and move the control levers several times to and fro until the system is depressurized.
Clean hydraulic connectors on the hydraulic ram , unscrew them, and close them with caps.
Remove screws to detach the rotator flange from the bucket carrier.

3.1.5 Removing and fitting hydraulic cylinder**Removing**

Lower the clamshell bucket on to a suitable flat surface.
Switch off the hydraulic pump and move the control levers several times to and fro until the system is depressurized.
Unscrew the hydraulic connections from the fittings.
Have ready a suitable container to catch the hydraulic oil.



Remove the axle holders (1) and drift out the pin (2) .
Remove the washers (3) .
Remove hydraulic cylinder on the other side and take out the cylinder.

Fitting (see Fig. page 9)

Replace the hydraulic cylinder together with compensator.

Insert the washers (3) .

Secure with axle holder (1) and screws.

Insert the bottom part into the force lever and secure with pin (2) and axle holder (1).

Connect the hydraulic lines.

Control the function of the grab.

There must be no fluid leaks, tighten the connections if necessary.

Grease the bearings.

3.1.6 Exchanging of the seal kit

Unscrew the rod guide (3)

Remove the piston rod (4) together with rod guide and piston (2) from the cylinder tube (1).

Completely renew sealing set (5).

Lightly oil the seals and insert them without torsion.

Slide the rod guide (3) onto the piston rod (4).

Coat the piston rod with securing adhesive (Loctite 638) and screw the piston (2) on the piston rod (4).

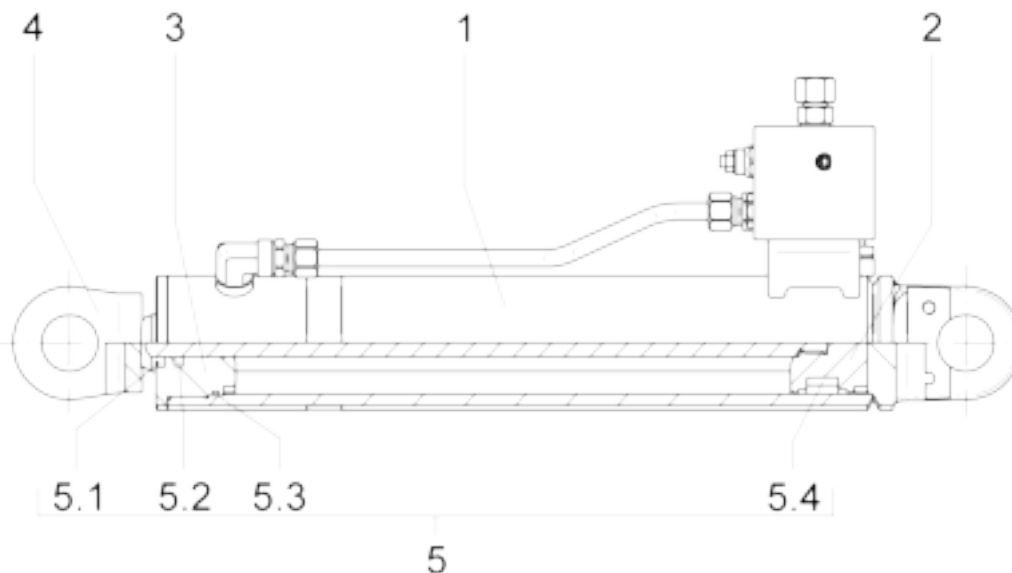


The thread securing requires approx. 8 hours to harden.

The hydraulic cylinder should not be subjected to oil pressure during this time.

Put the piston rod (4) with piston (2) and rod guide (3) into the cylinder tube (1).

Screw the rod guide (3) into the cylinder tube (1) (tightening torque 800 Nm).



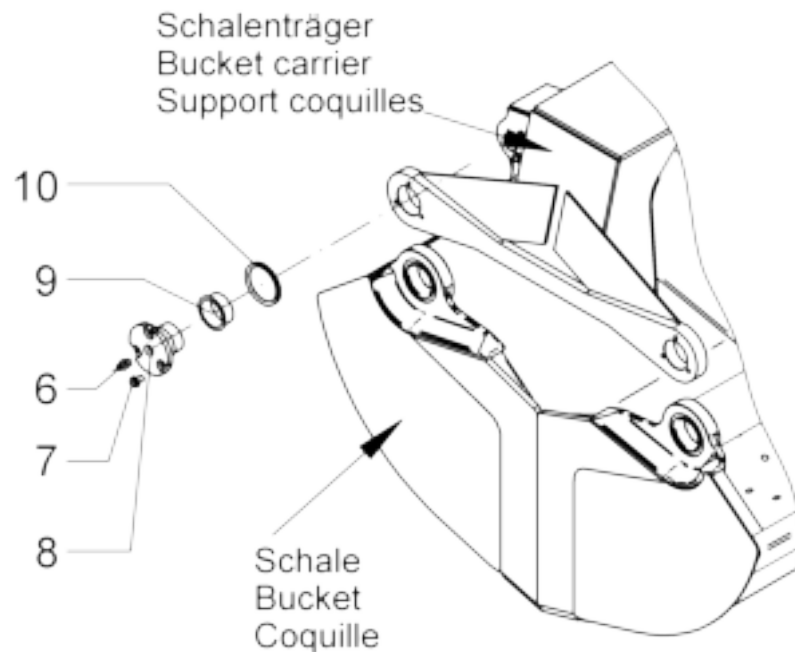
3.1.7 Removing and fitting the clamshell-pins

Removing

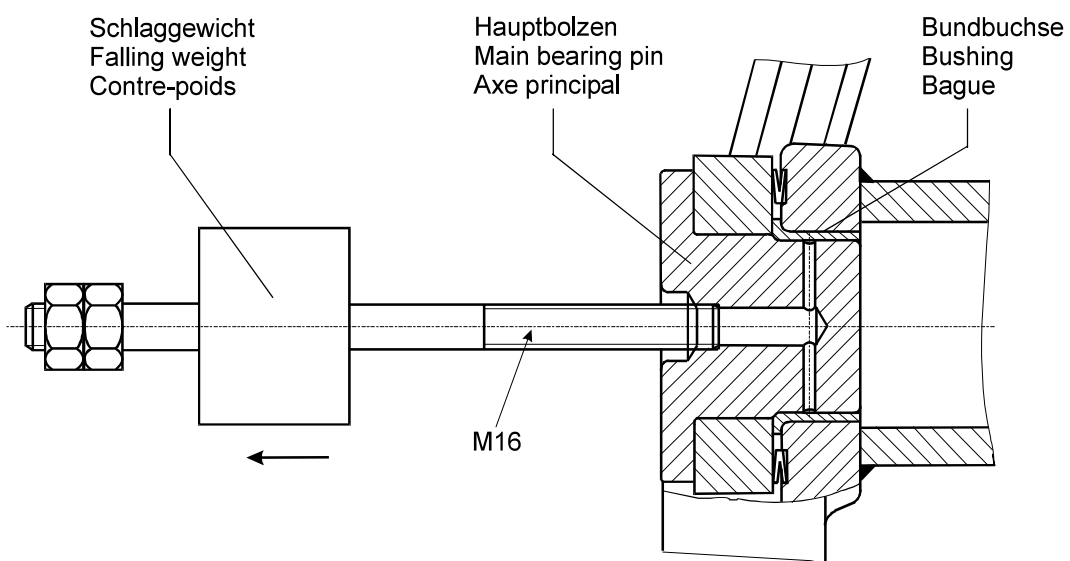
For repair it can be necessary to dismantie the grab.

Close the bucket and lower the clamshell bucket to a suitable flat surface.

Remove locking screws (2) and grease nipples (1) .



Screw the threaded rod of the falling weight device into the thread M16 of the main bearing pin.
The main bearing pins can be pulled out by powerful dashes of the falling weight in the direction of arrow.



Remove the V-ring seal (3) and bearing bush (4) .
Worn-out pins and bushes are to be replaced by new ones.

Fitting

Insert new bushings (5, lightly greased), using a suitable press or drift.
Insert the lightly greased V-ring seal (4) .
Position the bucket carrier insert the main bearing pins (3, medium fit) .
Screw in the locking screws (2) and tighten to a torque of 120 Nm.
Insert grease nipple (6) . Grease the bearing.

3.2 Safety regulations for operating

Before placing the grab into operation, the user must read this manual to familiarize himself with the equipment.

The appropriate national safety regulations also apply.



Guiding the grab by hand is not permitted owing to the risk of injury.

The safety laws in most countries require the operator to carry out checks at least annually (or frequently, depending on the operating conditions) for cracks, wear, corrosion and functional safety.

These checks must be performed by specialists.



Replace the hydraulic hoses every six years.

When loading trucks and trailers, the maximum permitted laden weight must be observed (see vehicle log book of manufacturer's ID plate).



If the grapple is not in use for a longer period of time, it should be parked with slightly opened shells.

Otherwise, the increased cylinder pressure, caused by the oil's heat expansion with an increase in temperature, could cause damage.

3.3 Transport the clamshell bucket

While the vehicle is moving, the grab must be rested on the loading platform or the vehicle in such a way that it cannot swing about.

The grab should be in opened position.

4. Maintenance, repair

4.1 General notes

Thorough regular maintenance is essential if the „down“ time of the grab is to be kept as low as possible, and to prolong its life.

Strict cleanliness must be observed in all maintenance operations.

Before undoing hydraulic connectors, the surrounding area must be cleaned.

Clean grease nipples before greasing.

The maintenance intervals must be reduced if the equipment operates under severe conditions (e.g. on a building site with excessive dust).



Operations to be carried out by specialists:

- Removal and dismantling of the hydraulic cylinder, pressure relief valve, or non-return.

4.2 Oil and grease

Hydraulic fluid

Esso NUTO 32.

Any hydraulic oil in accordance with ISO V632 or DIN 51519.

Grease

Esso Cazar K2

Any multi-purpose high-melting-point lithium-based grease of consistency category 2 in accordance with DIN 51818.

4.3 Disposing of used oil and grease

Most countries have strict regulations for disposing of used oils without harming the environment.

Hydraulic fluid

Disposal in approved containers.
Do not mix with used engine oil.
The approved fluids are free of PCB (polychlorinated biphenylene) and halogens.

Grease

Disposal in approved containers.
Do not mix with used engine oil.
The approved fluids are free of PCB (polychlorinated biphenylene) and halogens.

4.4 Maintenance intervals

Maintenance operation	50 operating hours	yearly
Lubricate grease nipple	X	
Check screw connections, tighten if necessary	X	
Check hydraulic lines and hoses of damage, renewed if necessary. ATTENTION! Renew the hydraulic hoses all 6 years.	X	all 6 years
Check hydraulic components and connectors for leaks. Tighten leaky connectors. Have leaky components repaired.	X	
Check for cracks, wear, corrosion and functional safety (to be carried out by approved specialist)		X

4.5 Welding

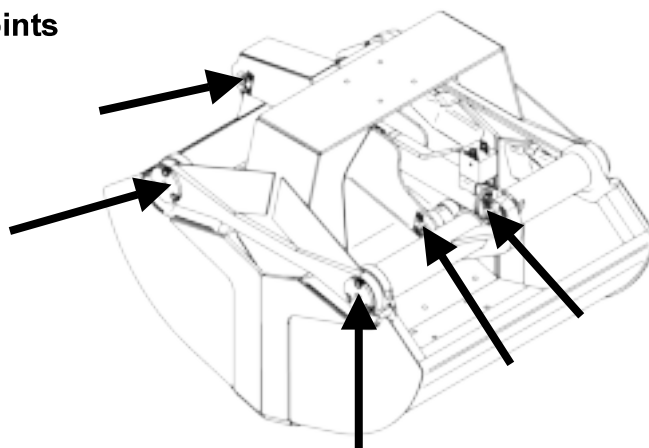
Before carrying out welding operations on the Clamshell Bucket, consult with the manufacturer who will advise on the choice of materials.

4.6 Repairs

If the equipment is found to be faulty, it must be repaired without delay, or suitable measures must be taken to comply with the safety regulations.

Hydraulic hoses must be replaced every six years, taking the operating conditions into account.

4.7 Greasing points



**5. Troubleshooting chart**

Malfunction	Cause	Remedy
The grabber's closing pressure declines.	The hydraulic system is leaking.	Tighten hydraulic connections or repair other leaks.
	Hydraulic cylinders are losing pressure.	Change seals in hydraulic cylinders.
	Malfunction in return-line filter from crane.	Clean hydraulic filter in return-line from crane, change if necessary.
The grabber closes / opens too slowly	Litre capacity of the crane hydraulic system is insufficient / reduced	Check the crane's hydraulic system / clean the dirty filter.
	Hydraulic quick-change systems between the crane and grabber are not completely closed	Tighten the hydraulic quick-change systems or rectify other leaks.

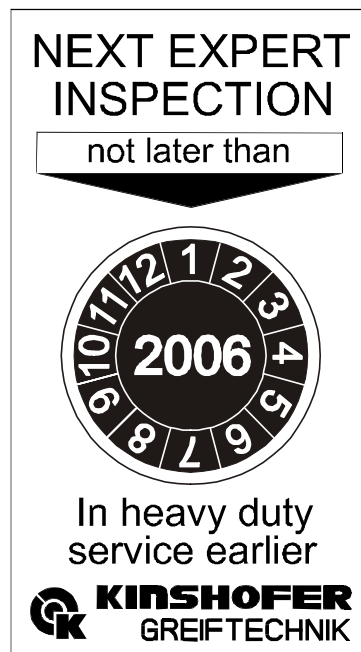


CERTIFICATE OF EXAMINATION

We advise you after examination carried out on goods to place the badge

„ NEXT EXPERT INSPECTION “ so that it can easily be seen.

(Badges can be purchased from us.)



Evidence for EXAMINATION CARRIED OUT				
Equipment	Year	Date	Expert	Company
	2006			
	2007			
	2008			
	2009			
	2010			
	2011			
	2012			



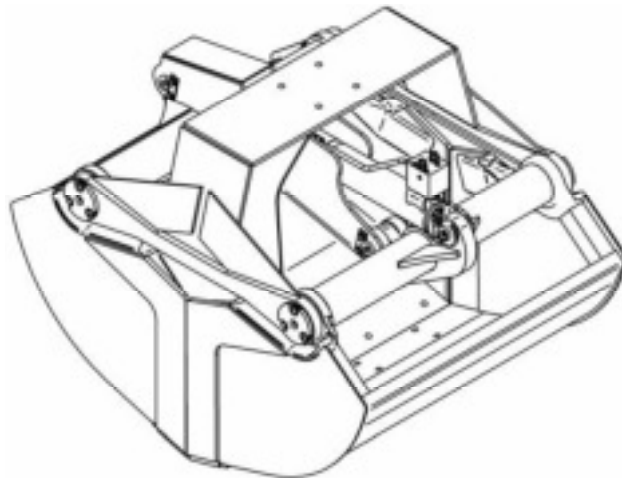
KINSHOFER

**Ersatzteil-Katalog
Spare parts list
Liste des pièces de rechange**

für / for / pour

**Zweischalengreifer / Clamshell bucket /
Benne preneuse
KM 602**

mit Rückschlagventil und Druckbegrenzungsventil /
with non-return valve and pressure control valve /
avec clapet anti-retour et limitation de pression



Hersteller / Manufacturer / Constructeur

KINSHOFER GREIFTECHNIK GMBH

05 / 06

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Burlington; ON; L7L 7G5;
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**TEL. +1 (905) 335 2856
FAX +1 (905) 335 4529**



Inhaltsverzeichnis / Content / Index

Bezeichnung	Description	Désignation	Seite / Page
Allgemein	General	Généralités	3
Bestellhinweis	Order-conditions	Commande	3
Zweischalengreifer KM 602	Clamshell bucket KM 602	Benne preneuse KM 602	6
Hydraulikzylinder 201052383	Hydraulic ram with 201052383	Vérin hydraulique 201052383	10
Zubehör	Accessories	Accessoires	

6. Ersatzteil-Stücklisten und Zeichnungen

Allgemeines

Der Ersatzteilkatalog wurde nach dem neuesten Stand unserer Erzeugnisse erstellt. Er beinhaltet die von der Firma Kinshofer angebotenen und auf Lager gelegten Ersatzteile. Die Listenseiten enthalten zu den Bildtafeln alle Angaben, die zur Bestellung, Bezeichnung und Lagerung notwendig sind.

Aufbau



Pos. Item Repère	Stück Qty. Nbre.	Bezeichnung	Description	Désignation		Bestell-Nr. Order-no. Pièce N°
1	2	3	4	5	6	7

- In Spalte 1 erscheint die Positionsnummer der aufgelisteten Ersatzteile
- In Spalte 2 sind die Mengen der Ersatzteile eingetragen
- In Spalte 3 steht die Bezeichnung der Ersatzteile
- In Spalte 4 steht die Bezeichnung der Ersatzteile in englisch
- In Spalte 5 steht die Bezeichnung der Ersatzteile in französisch
- In Spalte 6 steht die Abmessung der Ersatzteile
- In Spalte 7 steht die Bestellnummer der Ersatzteile

Bestellung

Für die Bestellung von Ersatzteilen muß die Bestellnummer, die Stückzahl und die Seriennummer des Gerätes (siehe Typenschild) angegeben werden. Jedes Kinshofer-Gerät ist mit Einschlagzahlen als Gerätenummer gekennzeichnet. Angaben zur Position der Gerätenummer sind auf der Seite 2 im Maßblatt ersichtlich (siehe Bedienungsanleitung).

Typenschild

 KINSHOFER GREIFTECHNIK		Hauptstraße 76 D-83666 Waakirchen		Tel. 08021 - 8899-0 Fax 08021 - 8899-37			
Baujahr Year	<input type="text"/>	Typ Model	<input type="text"/>	Betriebsdruck Operatg.pressure	<input type="text"/>	<input type="text"/>	
Gerät-Nr. Serial no.	<input type="text"/>	Gewicht Weight	<input type="text"/>	Traglast Inhalt Capacity	<input type="text"/>	<input type="text"/>	
Made in Germany							

Hinweis

Erläuterungen und Montagehinweise entnehmen Sie bitte der Bedienungsanleitung, die jedem Gerät beigelegt ist.



6. Spare parts list and drawing

General

This spare part list has been prepared as a guide for exact ordering of spare parts for Kinshofer loaders

The Kinshofer parts manual includes all „on-stock“ - available spare parts.

The list pages (corresponding to the picture charts) include all information necessary for ordering description and storing.

Structure

Pos. Item Repère	Stück Qty. Nbre.	Bezeichnung	Description	Désignation		Bestell-Nr. Order-no. Pièce N°
1	2	3	4	5	6	7

- In column 1 appears the position number of the listed parts
- In column 2 quantity of the listed parts
- In column 3 description of the parts (German)
- In column 4 description of the parts (English)
- In column 5 description of the parts (French)
- In column 6 dimensions of the parts
- In column 7 order number of the parts

Order-conditions

When ordering spare parts please quote order number, quantity and serial number (see type plate)of the attachment.

Kinshofer attachments can be indentified by stamped serial number in body.

Information about position of serial number please find on page 2 (see dimensions, operating instructions).

Type plate

	KINSHOFER GREIFTECHNIK	Hauptstraße 76 D-83666 Waakirchen	Tel. 08021 - 8899-0 Fax 08021 - 8899-37			
Baujahr Year	<input type="text"/>	Typ Model	<input type="text"/>	Betriebsdruck Operatg.pressure	<input type="text"/>	<input type="text"/>
Gerät-Nr. Serial no.	<input type="text"/>	Gewicht Weight	<input type="text"/>	Traglast Inhalt Capacity	<input type="text"/>	<input type="text"/>
Made in Germany						

Note

For further information and assembly notes please refer to the operating manual supplied with each unit.

6. Liste des pièces détachées et dessins

Généralités

Le present catalogue à ete mis a jour d'apres les dernieres realisations.
 Le catalogue des pièces détachées référence les pièces préconisées par la société Kinshofer et tenues en stock.
 Les listes comprennent, en plus des croquis, toutes les données nécessaires à la commande, à la désignation, et au stockage.

Organisation



Pos. Item Repère	Stück Qty. Nbre.	Bezeichnung	Description	Désignation		Bestell-Nr. Order-no. Pièce N°
1	2	3	4	5	6	7

- La colonne 1 indique le numéro du repère de la pièce détachée listée
- La colonne 2 indique la quantité de pièces par ensemble
- La colonne 3 indique la désignation des pièces en allemand
- La colonne 4 indique la désignation des pièces en anglais
- La colonne 5 indique la désignation des pièces en français
- La colonne 6 donne les dimensions des pièces
- La colonne 7 indique le numéro de commande des pièces

Commande

Pour toute commandede pièce détachée, ily a lieu d'indiquer le numéro de la pièce, la quantité désirée, ainsi que le numéro de construction de l'appareil concerné (voir plaque d'identité) .
 Le numéro de construction est frappé sur chaque appareil Kinshofer.
 Les indications concernant ce marquage sont données en 2 relative aux caractéristiques dimensionnelles (voir mode d'emploi).

Plaque d'identité

 KINSHOFER GREIFTECHNIK		Hauptstraße 76 D-83666 Waakirchen		Tel. 08021 - 8899-0 Fax 08021 - 8899-37	
Baujahr Year	<input type="text"/>	Typ Model	<input type="text"/>	Betriebsdruck Operatg.pressure	<input type="text"/>
Gerät-Nr. Serial no.	<input type="text"/>	Gewicht Weight	<input type="text"/>	Traglast Inhalt Capacity	<input type="text"/>
Made in Germany					

Nota

Veuillez vous reporter au mode d'emploi adjoint à chaque appareil, pour les explications et les indications de montage.

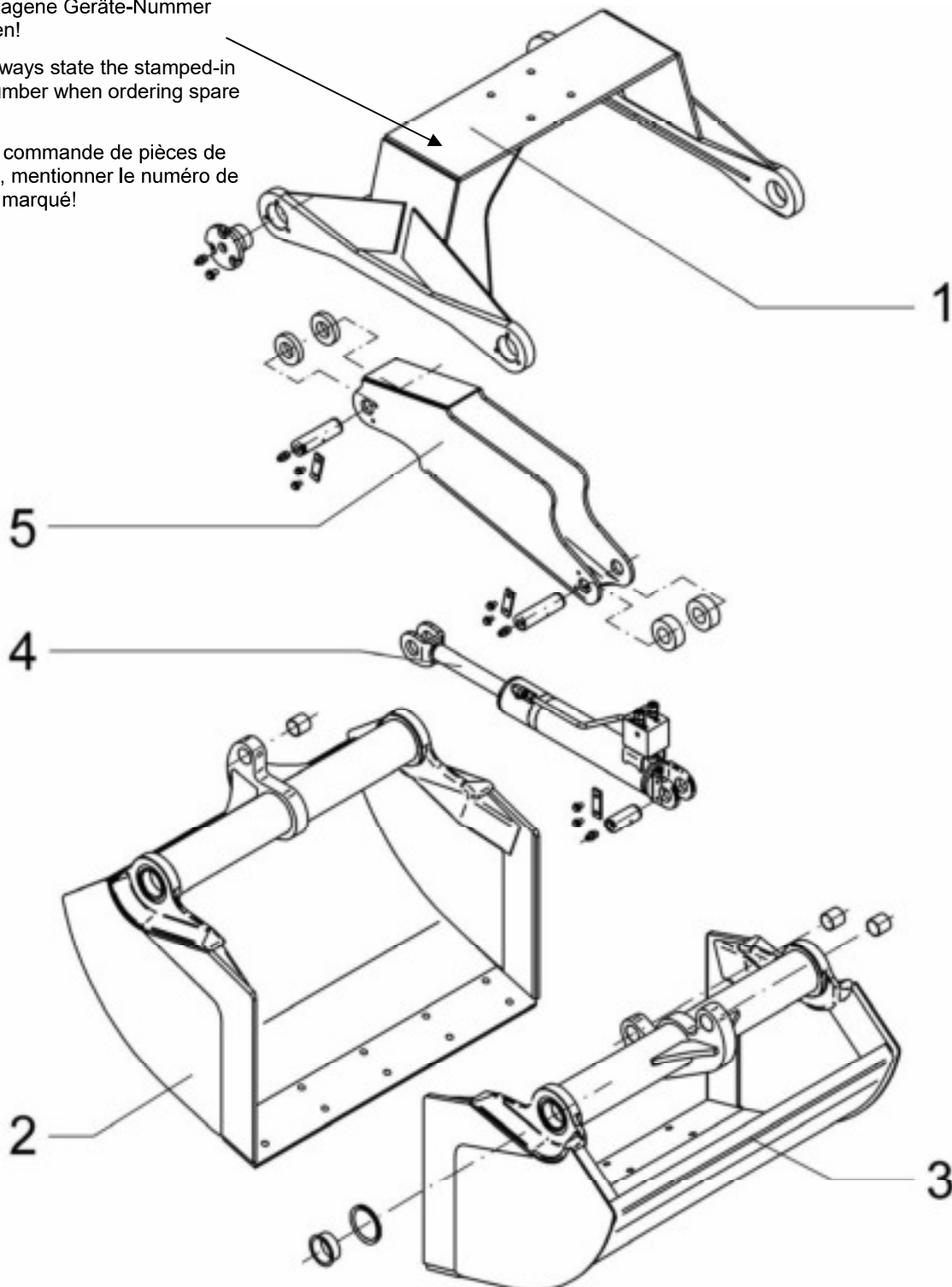
Zweischalengreifer
Clamshell bucket
Benne preneuse

KM 602

Bei Ersatzteilbestellung ist die eingeschlagene Geräte-Nummer anzugeben!

Please always state the stamped-in device number when ordering spare parts!

Pour une commande de pièces de rechange, mentionner le numéro de l'appareil marqué!





Zweischalengreifer

Clamshell bucket

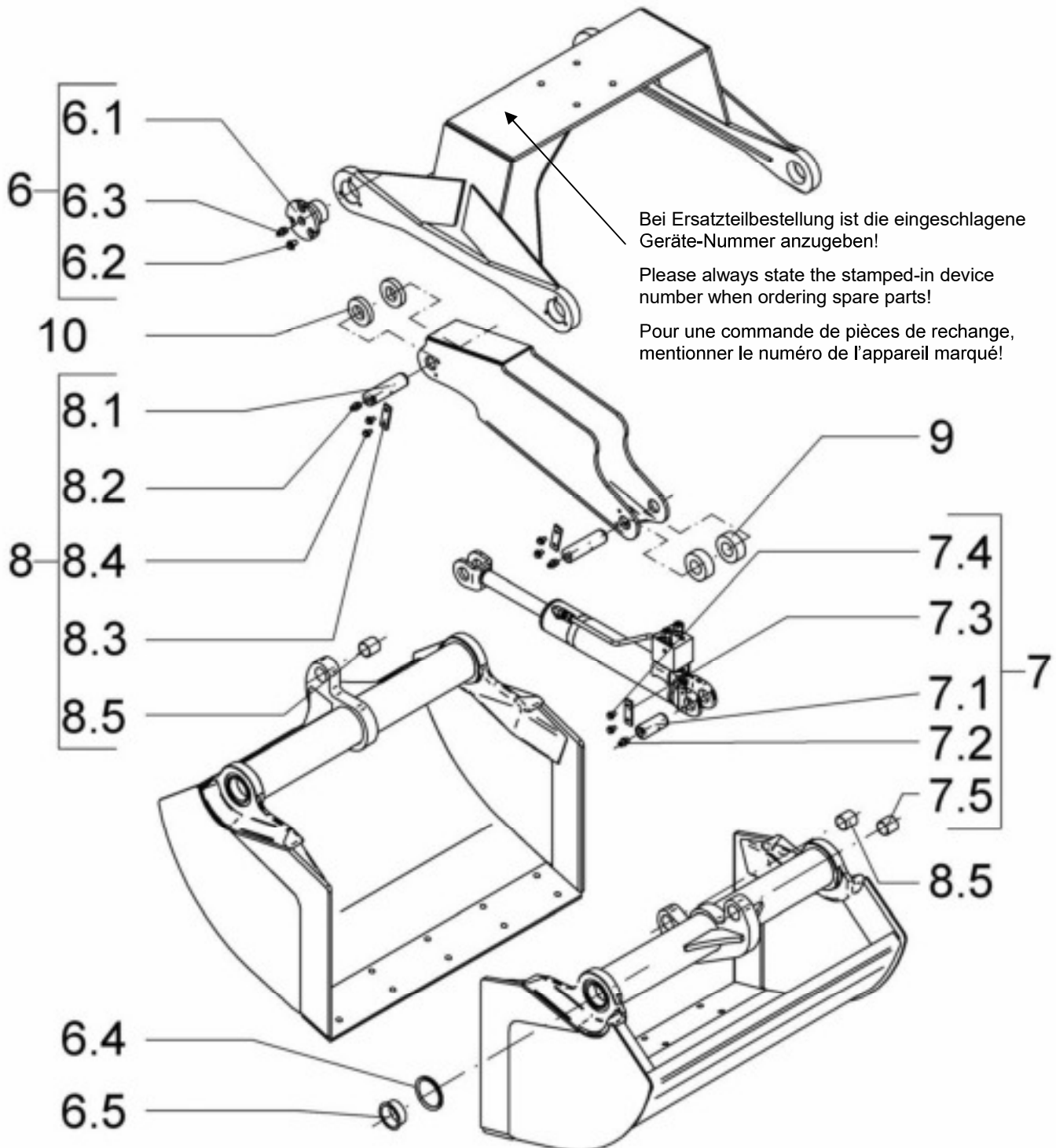
Benne preneuse

KM 602

Pos. Item Rep	Stück Qty. Nbre..	Bezeichnung	Description	Désignation		Bestell-Nr. Order-no. Pièce N°
1	1	Schalenträger	bucket carrier	support de coquilles	300 l	620014412
					400 l	620014413
					500 l	620014414
					650 l	620014415
					1000 l	620014415
2	1	Schale 1	bucket 1	coquille 1	300 l	623014383
					400 l	623014384
					500 l	623014385
					650 l	623014386
					1000 l	623015146
3	1	Schale 2	bucket 2	coquille 2	300 l	623014387
					400 l	623014388
					500 l	623014389
					650 l	623014390
					1000 l	623015145
4	1	Hydraulikzylinder	hydraulic ram	vérin hydraulique	ø 40 / 80	201052383
5	1	Ausgleichstange	compensator	mécanisme de synchronisation		635014382

Zweischalengreifer
Clamshell bucket
Benne preneuse

KM 602





Zweischalengreifer

Clamshell bucket

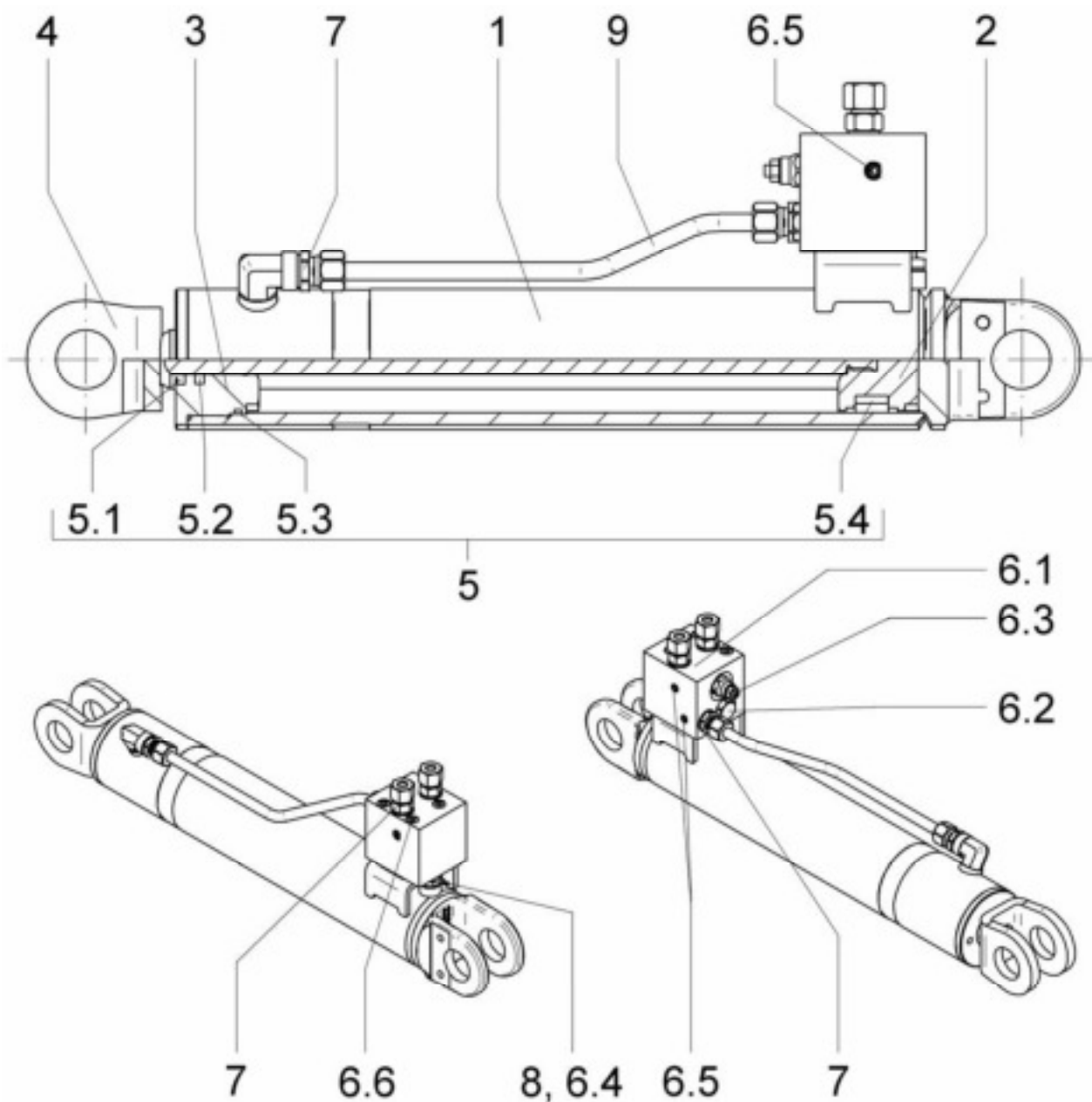
Benne preneuse

KM 602

Pos. Item Rep	Stück Qty. Nbre..	Bezeichnung	Description	Désignation		Bestell-Nr. Order-no. Pièce N°
		Servicepaket	service package	kit entretien	Pos. 6 - 8	513017373
6	1	Lagersatz für Schale	bearing set for buckets	garniture cpl. pour		513017411
6.1	4	Hauptbolzen	main bearing pin	axe principal		512017436
6.2	12	Sicherungsschraube	locking screw	vis de blocage	M12x20	120013834
6.3	4	Schmiernippel	grease nipple	graisseur	AM16x1,5	132013835
6.4	4	V-Ring-Dichtung	V-ring seal	joint en Vé	82x98x9x1,5	256011485
6.5	4	Bundbuchse	bushing	bague	65x70/80x30	135013830
7	1	Lagersatz für Hydraulikzylinder	bearing set for hydraulic ram	garniture cpl. pour vérin hydraulique		513050509
7.1	1	Bolzen	main bearing pin	axe principal	ø 40x90	502017365
7.2	1	Schmiernippel	grease nipple	graisseur	AM 8x1	132000137
7.3	1	Achshalter	axle holder	clavette d'axe		515012056
7.4	2	Sicherungsschraube	locking screw	vis de blocage	M10x16	120014920
7.5	1	Bronzebuchse	bronze bush	bague bronze	40x44x40	135015136
8	1	Lagersatz für Ausgleich	bearing set for compensator	garniture cpl. pour mécanisme de synchronisation		513050510
8.1	2	Bolzen	main bearing pin	axe principal	ø 40	502017164
8.2	2	Schmiernippel	grease nipple	graisseur	AM 8x1	132000137
8.3	2	Achshalter	axle holder	clavette d'axe		515012056
8.4	4	Sicherungsschraube	locking screw	vis de blocage	M10x16	120014920
8.5	2	Bronzebuchse	bronze bush	bague bronze	40x44x40	135015136
9	2	Scheibe	washer	rondelle	82,5x42,5x31	687015304
10	2	Scheibe	washer	rondelle	82,5x42,5x16	687051158

Hydraulikzylinder
Hydraulic ram
Vérin hydraulique

201052383



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Pour une commande de pièces de rechange, mentionner le numéro de l'appareil marqué!

**Hydraulikzylinder**

Hydraulic ram

Vérin hydraulique

201052383

Pos. Item Rep	Stück Qty. Nbre..	Bezeichnung	Description	Désignation		Bestell-Nr. Order-no. Pièce N°
1	1	Zylinderrohr	cylinder tube	fût de vérin		229052181
2	1	Kolben	piston	piston	ø 80	225050629
3	1	Stangenführung	piston rod guide	guide de tige		228050190
4	1	Kolbenstange kpl.	piston rod	tige de piston	ø 40	226052184
5	1	Dichtungssatz	seal kit cpl.	jou de joints		255050194
5.1	1	Schmutzabstreifer	wiping ring	joint râdeur	PW 40	263003540
5.2	1	Stangendichtung	piston rod seal	joint de piston	40x48x6,3	264003294
5.3	1	O-Ring	O-ring	joint torique	75,79x3,53	257050193
5.4	1	Kompaktdichtung	compact seal	joint compact		258011532
6	1	Ventilblock kpl.	valve block cpl.	bloc de commande cpl.		270052393
6.1	1	Ventilgehäuse	valve box	chapelle à clapet		272052376
6.2	1	Rückschlagventil	non return valve	clapet anti-retour	CKCB XCN	271012736
6.3	1	Druckbegrenzungs- ventil	pressure control valve	limiteur de pression	CP40	271051034
6.4	1	Vierkantring	square ring	joint carrée	12,37x2,51	257050994
6.5	3	Verschlusschraube	screw plug	bouchon fileté	M10x1	120012464
6.6	3	Zylinderschraube	cylinder screw	vis à tête cylindrique	M 8x80	120012122
7	4	Verschraubung	screw fitting	raccord	XGE 12-SR	291050148
8	1	Anschlussstutzen	connecting sleeve	raccord	EVGE 12-ED	291052172
9	1	Hydraulikrohr	hydraulic tube	tube hydraulique		295052182



KINSHOFER
