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S 2000 Plus

- Ⓓ Betriebsanleitung
- ⒼⒷ Manual
- ⒻⓂ Manuel d'utilisation et d'entretien
- ⒺⓈ Instrucciones de uso
- ⒾⓉ Istruzioni per l'uso
- ⓃⓁ Gebruiksaanwijzing

S/L—S/BG—S/M—S/E—S/V—
S/F—S/T—S/K—S/MT—S/R—S/I

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1. Safety instructions

The haacon spindle support device S 2000 Plus is designed for mounting on a trailer vehicle.

It is not a device suitable for operating on its own.

It must not be brought into circulation until it has been established that the trailer vehicle with the support device complies with the national regulations for road traffic.

The support device may only be operated in conjunction with the operating manuals of the tractor and trailer vehicles and the one supplied with the support device.

The safety regulations set out in the appropriate points in the operating manual must be observed for operating, servicing, installing and repairing the support device. The safety regulations for the tractor and trailer vehicle are also valid.

After its careful installation check the function of the support device.

If it is not used for the purpose for which it is designed, the support device may constitute considerable potential danger.

Observe the regulations for road traffic and the accident prevention regulations issued by the professional associations, in particular

- The operating manual for the tractor vehicle
- The operating manual for the trailer vehicle
- BGV D8 "Accident Prevention Regulations for Winches, Lifting and Towing Equipment"
- BGV D29 "Accident Prevention Regulations for Motor Vehicles"
- BGV D27 "Industrial Trucks"
- BG regulations "Motor Vehicles"

Ask the manufacturer about the device's suitability for other applications.

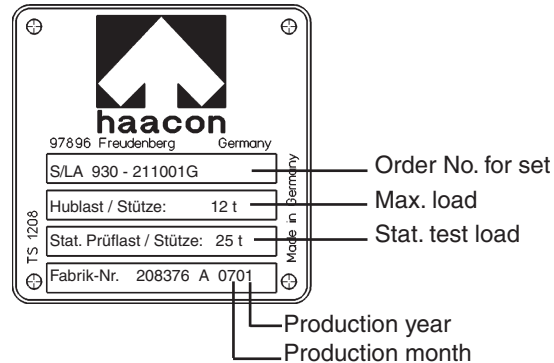


Where a failure to observe instructions would result in special danger, these instructions are marked with the warning symbol shown here.

2. Delivery

- 1 Set of spindle support device =
- 1 Support with gear
- 1 Support without gear
- 1 Crank handle
- 1 Crank handle holder
- 1 Connection shaft

Model plate S 2000 Plus



3. Installation

Read the operating manual before installing and commissioning the support device

Observe the accident prevention regulations issued by the professional association relating to vehicle maintenance and the Machine Safety Law. The spindle support device is a major safety component for uncoupled semi-trailers.

It is subject to high loads during the coupling and uncoupling processes. Great care and attention should therefore be given to its installation. It may only be installed and commissioned by specially trained personnel. The connection and bracing for the spindle support device must be of an adequate size and secured without tension.

We recommend that stops be fitted to relieve the strain on the securing screws above the screw-on plate.

- Retract both supports to the stop. This ensures that both supports will be extended in parallel.
- Align the supports vertically and parallel with one another.
- Depending on the installation size, cut the connection shaft to length.
- Refer to the maximum installation tolerances.
- Install the connection shaft. Ensure that you do not make the moving parts stiff by bending any components.

After installation conduct a function test.

If all the components have been installed correctly the spindle will turn easily.



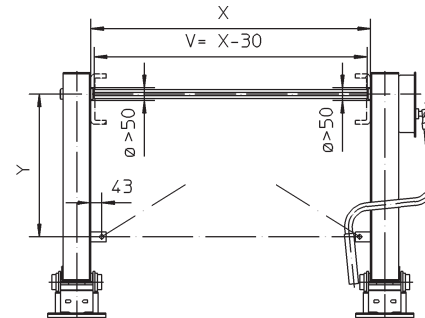
Always install and use the holder for the crank handle. It is for your own safety!

If the components are not installed correctly the manufacturer and the support of the spindle support device will not accept any claims under the warranty.

To mount the retrofit exterior frame control

- Remove the six bottom screws on the gear casing.
- Position the exterior frame control and secure it with six screws M6 x 20 with washers and nuts (supplied).
- Move the crank handle holder accordingly so that the crank handle can be placed in it properly.

If you coat the spindle support device, always switch the gear to low speed so that none of the coating can get into the grooves in the gear shaft.

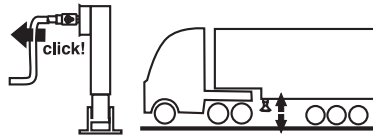


4. Operation

To extend the spindle support device

- Park the trailer vehicle on firm, even ground (see the operating manual for the trailer vehicle).
- Check the support device for signs of damage, repair it before use if necessary.
- Before activating the spindle support device swing the crank handle out of its holder and engage it on the crankshaft.

Switch to high gear:

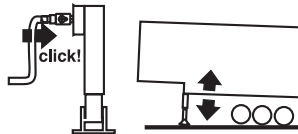


 **Only extend and retract the support device in high gear when it is not loaded to lower it down to the ground.**

- Pull out the crankshaft with the crank handle until the catch engages.
 - A slight turning movement will make it easier to engage.
- Extend the spindle support device by turning the crank handle anti-clockwise.

 **Switch from high gear to low gear before the foot reaches the ground.**

Switch to low gear:



to raise and lower the loaded or unloaded trailer vehicle

- Push the crankshaft in with the crank handle until the catch engages.
 - A slight turning movement will make it easier to engage.
- In low gear raise the semi-trailer to the required height and leave the crank handle in low gear.

Watch for the lifting limit (the force required to turn the crank handle rises).
- At the end of the turning movement slowly relieve the strain on the crank handle. There is a danger that the crank handle will jump backwards.

 **After every operation switch the gear to low gear. Always place the crank handle in the holder provided for it.**

After uncoupling the foot must be in its neutral position.

to retract the spindle support device

- Follow the above instructions in reverse.
- After coupling the trailer, fully retract the spindle support device.

Watch for the lifting limit (the force required to turn the crank handle rises).

 **After every operation switch the gear to low gear. Always place the crank handle in the holder provided for it.**

To load the supported trailer vehicle

If the appropriate safety regulations are observed, the supported trailer vehicle may be

- loaded using a crane and
- driven on with a forklift truck

 **Do not exceed the centre of gravity, otherwise the trailer vehicle will tip over.**

5. Service

Only allow the device to be serviced and repaired by trained personnel.

Only use genuine spare parts for repair work.

Do not make any modifications or additions to parts with a safety function.

Additional mountings must not adversely affect safety.

The relevant regulations apply.

Cleaning

Clean the support device as part of your normal vehicle care.



Do not spray high pressure cleaner jets direct at the support device.



Servicing instructions

The spindle support device must be checked by an expert at least during the normal vehicle inspection routine, particularly for stiffness. If necessary wear parts are to be replaced. The spindle support device is filled with durable grease. It must not be connected to the central lubrication system.

There is a grease nipple on the external tube to grease the spindle. Depending on the frequency of use and the requirements placed on the device, the spindle must be greased at regular intervals, at least every three months.

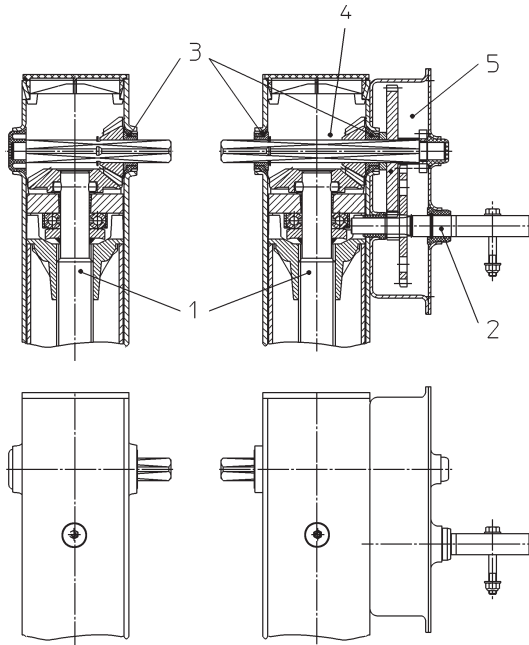
To do this extend the spindle support device as far as possible and retract it again as you lubricate it.

If you replace gear parts, spindles or nuts, you must grease the device.

Servicing work	Servicing interval
Grease spindle and spindle nut	Every year
Check for wear on the spindle and spindle nut (dismantling the support device)	Every year
Conduct a visual inspection of the support device for signs of cracks and deformation	Each time you use the support device. Repair the support device immediately if it is damaged.

Lubrication schedule

Item	Lubricant	Activity
1,2,3	ESSO EP durable grease or r.grea LZK2	Fill the thread flanks item 1 Grease the bearings
4+5		Fill with grease, 250 - 300 g each



Dismantling instructions for servicing work and wear test

Before removing it from the vehicle check the spindle support for stiffness and signs of external damage.

Fit and remove the support device on the vehicle as set out in the operating and installation instructions supplied by the vehicle manufacturer.

To remove a support with a gear

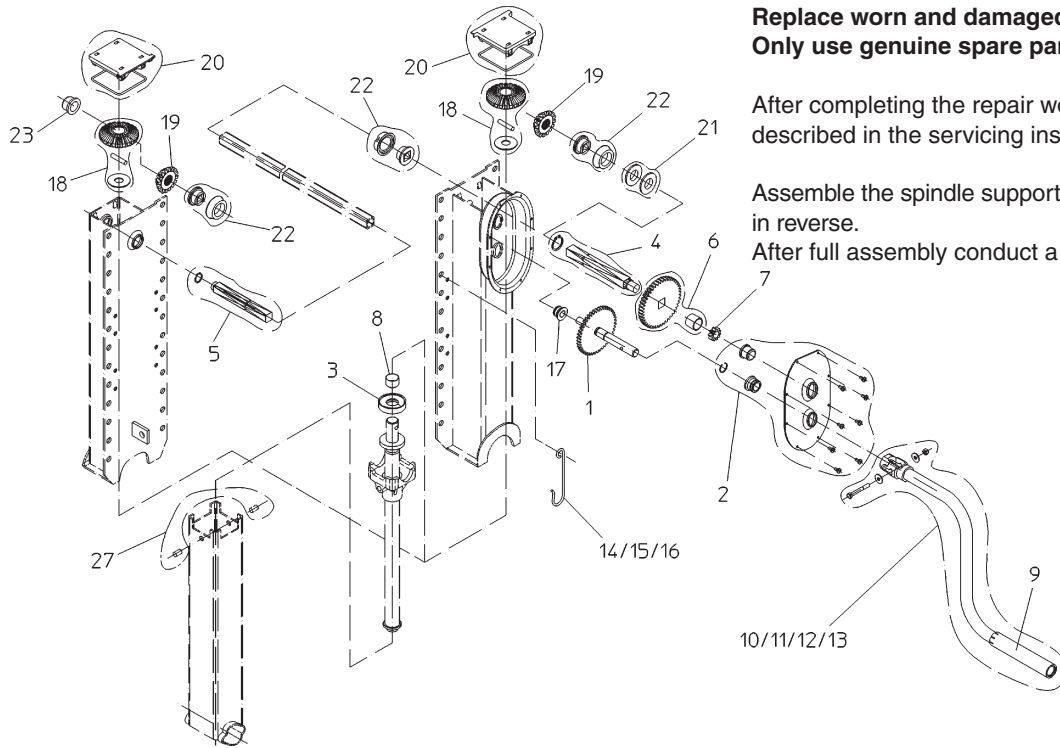
1. Remove the crank handle module with parts No. 9, 10, 11, 12 and 13.
2. Remove the screws on the gear cover (kit No. 2).
3. Remove the gearbox cover and bearing.
4. Remove the gearbox parts of the reduction gearbox
 - Crank drive, part No. 1
 - Small cog wheel, part No. 7
 - Large cog wheel with bush, part No. 6 degrease them and check them for signs of wear.
5. Remove the protection hood and O ring, module No. 20.
6. Pull the locking ring off the drive shaft, part No. 4 resp. 5, remove the parts, degrease them and check them for signs of wear.
7. Remove the gearbox parts from the bevel gearbox
 - Spacer and bearing, module No. 21 and 22
 - Small bevel gear, part No. 19
 - Big bevel gear with pin and adjusting washer, kit No. 18 degrease them and check them for signs of wear.
8. Pull out the external tube over the internal tube
9. Check the bearing, part No. 8, for signs of wear and replace it if necessary.
10. Pull the pins, kit No. 27, out of the internal tube.

**Replace worn and damaged parts.
Only use genuine spare parts**

After completing the repair work lubricate the support device as described in the servicing instructions.

Assemble the spindle support by following the above instructions in reverse.

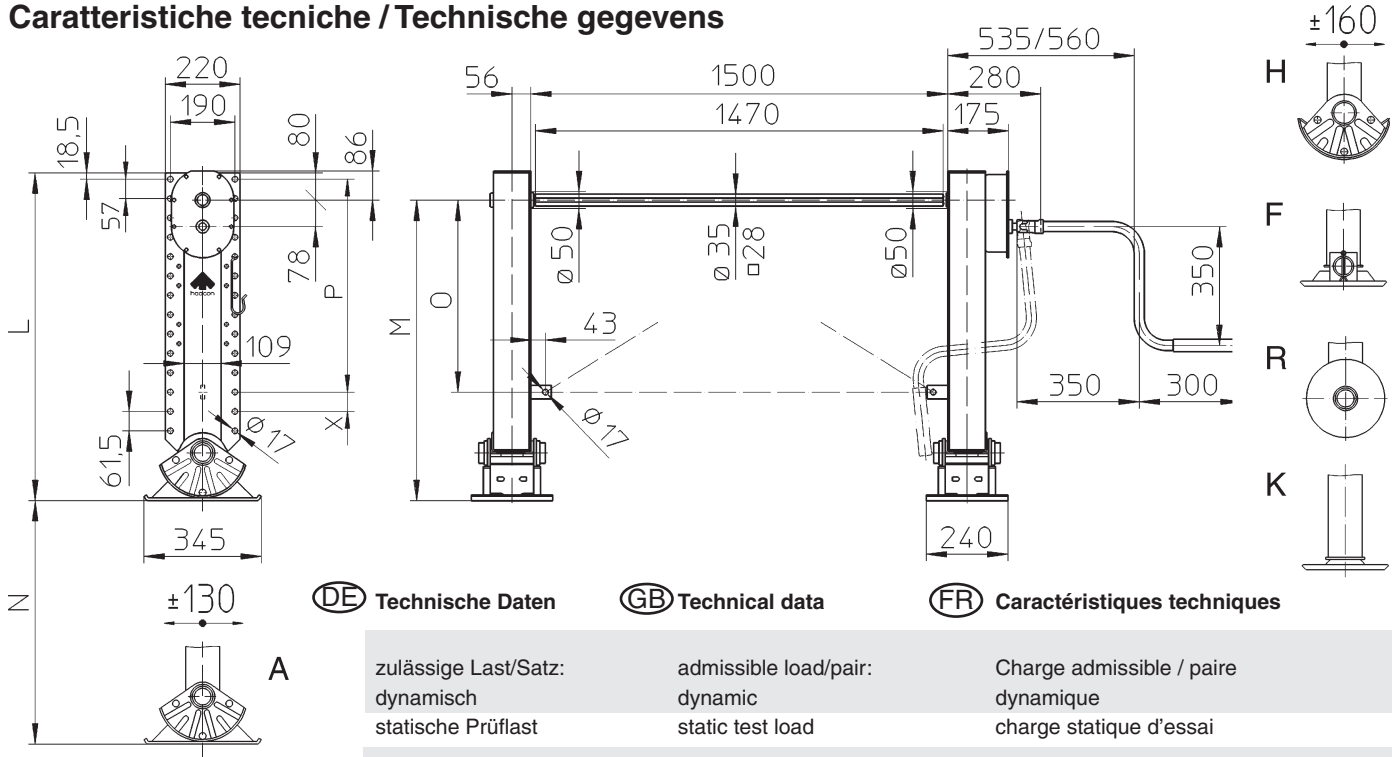
After full assembly conduct a function test.



11. Remove the completely assembled spindle with the nut and thrust bearing, part No. 3, degrease the parts and check them for signs of wear. The spindle is OK if the nut can be turned over the complete lifting distance by hand using the same force. There must be no damage on the thread of either the spindle or the nut.

Point 1-4 is not applicable for dismantling and assembling a spindle support without a gear.

6. Technische Daten / Specifications / Caractéristiques techniques / Datos técnicos / Caratteristiche tecniche / Technische gegevens



Bezeichnung: A = Ausgleichsfuß, H = Halbrolle, F = Stützfuß, K = Kugelteller, R = Rollen.
 Designation: A = Compensating foot, H = Rocking foot, F = Pivoting foot, K = Ball joint foot, R = Wheels
 Désignation : A = pied compensateur, H = patin demi-lune, F = patin pivotant, K = plateau articulé, R = roue.

S/L	Maße / Dimensions / Dimensions / Dimensiones / Dimensioni / Maten													Best.-Nr. / O/N° / N° Code / Referencia / No. di ordinazione / Bestellnummer				
	L				M				N		O	P	X	Fuß / Foot / Pied / Pie / Piede / Voet				
	A/H	F	R	K	A/H	F	R	K	A/H/F/R	K	A/H/F/R/K	A/H/F/R/K		A	H	F	R	K
	—	910	—	900	—	830	—	820	510	550	580	570	71,5	—	—	211215	—	211495
	930	850	900	850	850	770	820	770	510	550	580	570	71,5	211001	211101	211201	211301	211401
	880	800	850	800	800	720	770	720	460		530	513	78,5	211002	211102	211202	211302	211402
	830	750	800	750	750	670	720	670	410		480	513	85,5	211003	211103	211203	211303	211403
	780	700	750	700	700	620	670	620	360		430	456	35,5	211004	211104	211204	211304	211404
	—	—	—	650	—	—	—	570	340		380	399	42,5	—	—	—	—	211405
S/M	830				750				430		480	513	28,5	211025	211125			
	780				700				400		430	456	35,5	211026	211126			
	730				650				350		380	399	42,5	211027	211127			

(ES) Datos técnicos

(IT) Caratteristiche tecniche

(NL) Technische gegevens

S 2000 Plus

Carga dinámica admisible / par:

Carico dinamico ammissibile / coppia

toegestane last / set

24 t

Carga de prueba estática

Carico statico di prova

statisch proeflast

50 t / 35 t (R)

Carrera / vueltas de la manivela

Corsa/giro della manovella:

slag / slingeromdraaiing:

Velocidad con carga

Marcia ridotta

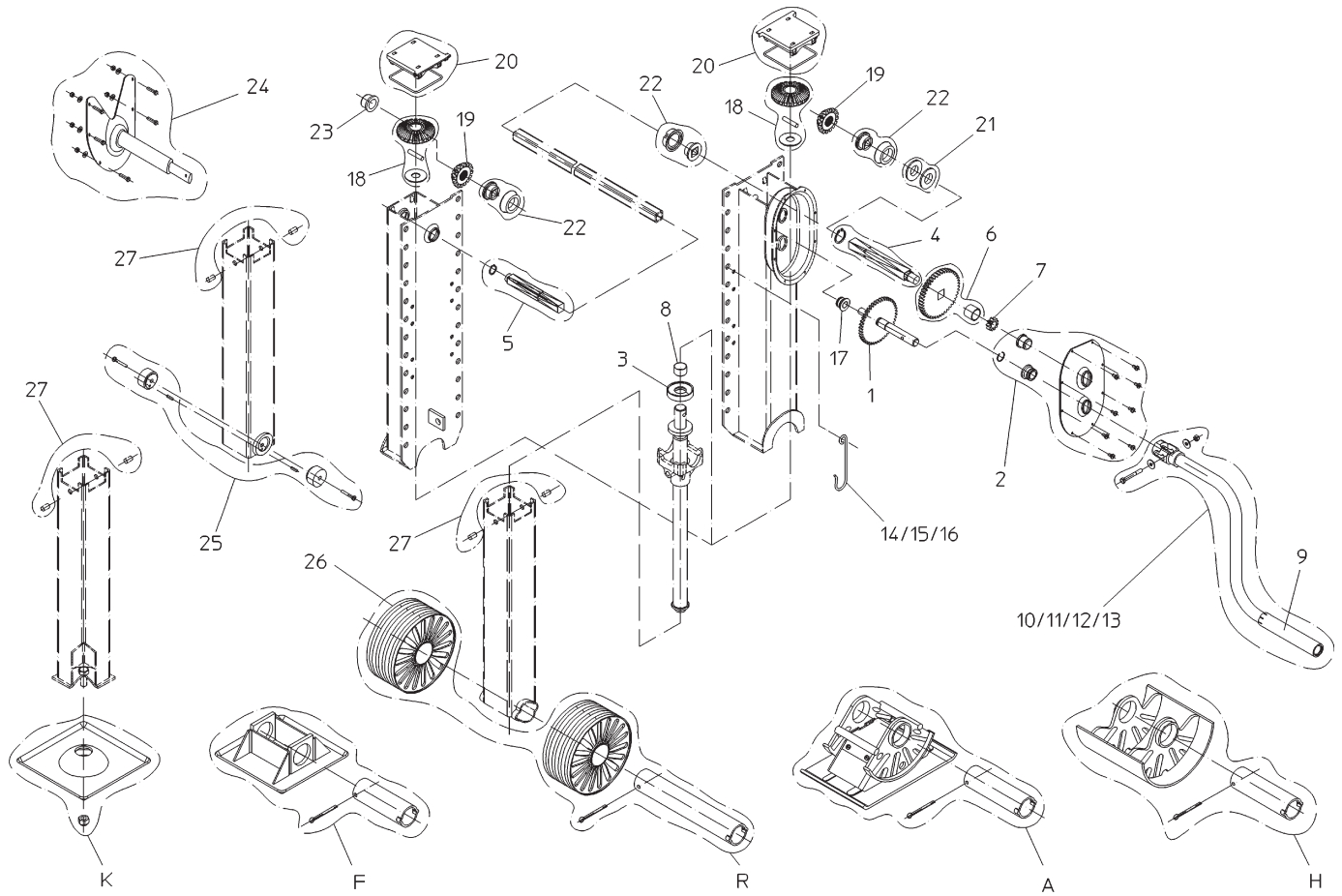
laststand

1 mm

Designación: A = Suspensión neumática, H = Media luna, F = Oscilante, K = Fijo, R = Rueda

Denominazione: A = Piede compensatore, H = Piede mezzaluna, F = Pattino articolato, K = Piatto con sede sferica, R = Ruote

Benaming: A = Kompensatie voet, H = Helfrol, F = Schommel voet, K = Kogel plaat, R = Rol



7. Ersatzteile / Spare parts / Pièces détachées / S 2000 Plus

Pos.	EDV-Nr.	Artikel	Description	Désignation
1	124454	Kurbeltrieb v.	Crank shaft	Arbre d'entraînement avec pignon
2	209601	Gehäusedeckel komplett	Gearbox cover, complete	Couvercle de carter complémentaire
3	102634	Drucklager v.	Thrust bearing	Palier de butée complet
4	209602	Antriebswelle (m. Getriebe)	Drive shaft for geared side	Arbre d'entraînement pour côté commande
5	209603	Antriebswelle (o. Getriebe)	Drive shaft for ungeared side	Arbre d'entraînement pour côté opposé
6	209604	Zahnrad groß mit Distanzhülse	Large bevel gear incl. spacer sleeve	Grande roue dentée avec douille entretoise
7	124455	Zahnrad klein	Small bevel gear	Petite roue dentée
8	100335	Lager	Bearing	Coussinet
9	126433	Kurbelhülse	Plastic sleeve	Manchon plastique
10	209605	Kurbel komplett (285)	Crank, pack (285)	Manivelle, lot (285)
11	209606	Kurbel komplett (350)	Crank, pack (350)	Manivelle, lot (350)
12	209607	Kurbel komplett (445)	Crank, pack (445)	Manivelle, lot (445)
13	209608	Kurbel komplett (535)	Crank, pack (535)	Manivelle, lot (535)
14	201003	Kurbelhalter (150) f. Pos.10	Crank holder (150) f. Pos.10	Crochet (150) f. Pos.10
15	118207	Kurbelhalter (255) f. Pos.11	Crank holder (255) f. Pos.11	Crochet (255) f. Pos.11
16	201193	Kurbelhalter (350) f. Pos.12+13	Crank holder (350) f. Pos.12+13	Crochet (350) f. Pos.12+13
17	100320	Lager	Bearing	Coussinet
18	209609	Kegelrad gross, komplett	Bevel gear big, set	Renvoi d'angle large, lot
19	122904	Kegelrad klein	Bevel gear small	Renvoi d'angle petit
20	209610	Schutzkappe, komplett	Protection hood, pack	Lot de capuchons
21	209611	Distanzscheibe, komplett	Spacer set	Lot d'entretoises
22	209612	Lager, komplett	Bearing pack	Lot de coussinet
23	100324	Lager	Bearing	Coussinet
24	205393	Aussenrahmenbedienung, vollst.	Crank extension, pack	Extension de manivelle, lot
25	209615	Halter, komplett	Holder, pack	Lot butées d'appui
26	102509	Laufrolle	Wheel	Roue
27	209616	Bolzen, komplett	Pin, pack	Goupille cylindrique, lot
K	209613	Kugelfuß, komplett	Ball-joint foot, pack	Patin oscillant, lot
F	209614	Stützfuß mit Achse und Splint	Pivoting foot with axle and pin	Patin pivotant complet avec axe et goupille fendue
R	202195	Laufrollenpaar mit Achse u. Splint	Wheels complete with axle and pin	Roues complètes avec axe et goupille fendue
A	202783	Ausgleichsfuß mit Achse u. Splint	Compensating foot with axle and pin	Pied compensateur complet avec axe et goupille fendue
H	113420	Halbrolle mit Achse u. Splint	Rocking foot with axle and pin	Patin demi-lune complet avec axe et goupille fendue



7. Piezas de recambio de la / Parti di ricambio / Onderdelen - S 2000 Plus

Pos.	EDV-Nr.	Descripción	Descrizione	Benaming
1	124454	Eje manivela	Albero comando con pignone	Slingeras
2	209601	Tapa de caja de velocidades	Coperchio della scatola cambio completo	Tandwielkastdeksel, compleet
3	102634	Cojinete del tope	Cuscinetto reggispinta	Drukklager
4	209602	Eje motriz de mando	Albero di comando lato comando	Aandrijf-as, aangedreven zijde
5	209603	Eje motriz (lado opuesto)	Albero di comando lato opposto	Aandrijf-as, niet aangedreven zijde
6	209604	Rueda grande con distanciador	Ingranaggio grande con boccola distanziale	Groot tandwiel met Huls
7	124455	Rueda pequeña	Ingranaggio piccolo	Tandwiel klein
8	100335	Casquillo	Cuscinetto	Lager
9	126433	Mango de manivela	Manopola in plastica	Handgreep
10	209605	Manivela completa (285)	Manovella completa (285)	Slinger, compleet (285)
11	209606	Manivela completa (350)	Manovella completa (350)	Slinger, compleet (350)
12	209607	Manivela completa (445)	Manovella completa (445)	Slinger, compleet (445)
13	209608	Manivela completa (535)	Manovella completa (535)	Slinger, compleet (535)
14	201003	Gancho para manivela (150) para Pos. 10	Fermo (150) per manovella pos.10	Houder (150) voor slinger pos.10
15	118207	Gancho para manivela (255) para Pos.11	Fermo (255) per manovella pos.11	Houder (255) voor slinger pos.11
16	201193	Gancho para manivela (350) para Pos.12+13	Fermo (350) per manovella pos.12+13	Houder (350) voor slinger ps.12+13
17	100320	Casquillo	Cuscinetto	Lager
18	209609	Rueda cónica completa	Set rinvio d'angolo grande	Conisch tandwiel groot compleet
19	122904	Rueda cónica pequeña	Rinvio d'angolo piccolo	Conisch tandwiel klein
20	209610	Tapa de protección completa	Set cappucci di protezione	Afdekkap compleet
21	209611	Arandelas distanciadoras	Set di rosette distanziali	Vulring
22	209612	Casquillos, lote	Set di cuscinetti	Lager, compleet
23	100324	Casquillo	Cuscinetto	Lager
24	205393	Kit de prolongador manivela	Set prolunga manovella	Buitenraam bediening
25	209615	Topes, lote	Set boccole per perno piede	Houder compleet voor Megatrailer
26	102509	Ruedas	Ruota	Rol
27	209616	Esparragos, lote	Set copiglie cilindriche	Paspen set
K	209613	Patín fijo	Set piede oscillante	K-voet
F	209614	Patín oscilante con eje y pasador	Pattino articolato con perno e copiglia	F-voet compleet
R	202195	Patín tipo rueda con eje y pasador	Ruote con perno e copiglia	Rol-voet compleet
A	202783	Patín suspensión neumática con eje y pasador	Piede compensatore con perno copiglia	A-voet compleet
H	113420	Patín tipo media luna con eje y pasador	Piede mezzaluna con perno e copiglia	H-voet compleet