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OPERATING AND MAINTENANCE INSTRUCTIONS No. 09 / 2011 FOR GKS-PERFEKT TRANSPORT DOLLIES TYPE F, L, RL, TL, HF and HL



TEST CERTIFICATE

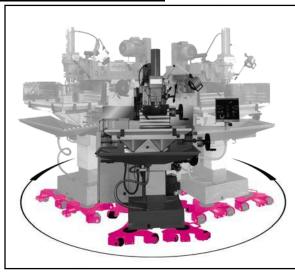


SALES AND SERVICE

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OUTLINE OF DOLLY TYPES

Dolly type /	Total no. of rollers /	Track gauge /	Load	Full load			
install. height in mm / inch	Ø in mm / inch	distance in mm / inch	cap. in t / lb.	capacity in t / lb.			
Transport dollies F and L							
F3 / 110 / 4.3	4 / 85 / 3.3	300 / 11.8 - 1000 / 39.4	3 / 6,600	0 / 10 000			
L3 / 110 / 4.3	4 / 85 / 3.3		3 / 6,600	6 / 13,200			
F6 / 110 / 4.3	8 / 85 / 3.3	620 / 24.4 - 1300 / 51.2	6 / 13,200	10 / 00 400			
L6 / 110 / 4.3	8 / 85 / 3.3		6 / 13,200	12 / 26,400			
F9 / 110 / 4.3	12 / 85 / 3.3	600 / 23.6 - 1400 / 55.1	9 / 19,800	18/39,600			
L9 / 110 / 4.3	12 / 85 / 3.3		9 / 19,800	10 / 39,000			
F12 / 110 / 4.3	16 / 85 / 3.3	740 / 29.1 - 1500 / 59.1	12 / 26,400	24 / 52,800			
L12 / 110 / 4.3	16 / 85 / 3.3		12 / 26,400	24 / 32,000			
F18 / 110 / 4.3	16 / 85 / 3.3	740 / 29.1 - 1500 / 59.1	18 / 39,600	36 / 79,200			
L18 / 110 / 4.3	16 / 85 / 3.3		18 / 39,600	00773,200			
F20 / 180 / 7.1	16 / 140 / 5.3	610 / 24.0 - 1600 / 63.0	20 / 44,000	40 / 88,000			
L20 / 180 / 7.1	16 / 140 / 5.3		20 / 44,000	10 / 00,000			
*F20 / 180 / 7.1	8 / 140 / 5.3	610 / 24.0 - 1600 / 63.0	20 / 44,000	40 / 88,000			
*L20 / 180 / 7.1	8 / 140 / 5.3		20 / 44,000	10 / 00,000			
F25 / 110 / 4.3	24 / 85 / 3.3	740 / 29.1 - 1500 / 59.1	25 / 55,000	50 / 110,000			
L25 / 110 / 4.3	24 / 85 / 3.3		25 / 55,000	007.1.0,000			
F30 / 180 / 7.1	12 / 140 / 5.3	830 / 32.7 - 1820 / 71.7	30 / 66,000	60 / 132,000			
L30 / 180 / 7.1	12 / 140 / 5.3		30 / 66,000	007.02,000			
F40 / 180 / 7.1	16 / 140 / 5.3	830 / 23.7 - 2020 / 79.5	40 / 88,000	80 / 176,000			
L40 / 180 / 7.1	16 / 140 / 5.3		40 / 88,000				
F60 / 180 / 7.1	24 / 140 / 5.3	1100 / 43.3 - 2730 / 107.5	60 / 132,000	120 / 264,000			
L60 / 180 / 7.1	24 / 140 / 5.3		60 / 132,000				
	Combination	with TANDEM dolly					
F40 / 240 / 9.4	16 / 200 / 7.9	1050 / 41.3 - 2360 / 92.9	40 88,000	80 / 176,000			
TL 40 / 240 / 9.4	16 / 200 / 7.9	1600 / 63.0	40 / 88,000	00 / 170,000			
F50 / 205 / 8.1	32 / 140 / 5.3	1300 / 51.2 2730 / 107.5	50 / 110,000	100 / 220,000			
TL50 / 205 / 8.1	32 / 200 / 7.9	1900 / 74.8 - 2200 / 86.6	50 / 110,000	100 / 220,000			
F100 / 430 / 6.9	16 / 300 / 11.8	870 / 34.3 - 2300 / 90.6	100 / 220,000	200 / 440,000			
TL100 / 430 / 6.9	16 / 300 / 11.8	2300 / 90.6	100 / 220,000	2007110,000			
TANDEM dolly for loads with four-point supports							
TL6 / 110 / 4.3	8 / 85 / 3.3	550 - 1150 / 45.3		6 / 13,200			
TL12 / 110 / 4.3	16 / 85 / 3.3	660 - 1000 / 39.4		12 / 26,400			
TL20 / 180 / 7.1	16 / 140 / 5.3	1260 - 1600 / 63.0		20 / 44,000			
Transport dollies with hydraulic roller balancing system							
HF15 / 180 / 7.1	12 / 140 / 5.3	420 / 16.5 - 1500 / 59.1	15 / 33,000	30 / 66,000			
HL15 / 180 / 7.1	12 / 140 / 5.3		15 / 33,000				
HF25 / 180 / 7.1	16 / 140 / 5.3	800 / 31. 5- 2000 / 78.7	25 / 55,000	F0 / 110 000			
HL25 / 180 / 7.1	16 / 140 / 5.3		25 / 55,000	50 / 110,000			
Rotating dollies							
RL2 / 110 / 4.3	3 / 85 / 3.3	_	2 / 4,400	2 / 4,400			
RL3H / 170 / 6.7	3 / 140 / 5.3		3 / 6,600	3 / 6,600			
RL4 / W 110 / 4.3	5 / 110 / 4.3		4 / 8,800	4 / 8,800			

GKS NA-ORI Dollies 2011





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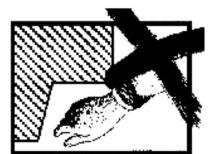
KEEP OPERATING INSTRUCTIONS ALWAYS CLOSE WITH YOU!

Dear Customer,

please read these instructions carefully before using your new transport dolly for the first time!

GENERAL SAFETY INSTRUCTIONS

Safety zone: this includes the load, the direct area around the load and an adequate additional

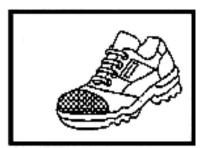


distance so that any tilting of the load does not result in personal injury or damage to property. The operating personnel must ensure that no unauthorized people are within the safety zone!

WARNING

Never place hands, arms, feet, head below the load!





Warning

Be careful of projecting parts or attached parts to avoid head injuries, for example!

Caution

Operating personnel must wear safety shoes with steel toe caps!





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SPECIAL SAFETY INSTRUCTIONS

Before using the GKS – Perfekt transport dollies, always check the weight of the load to be lifted and the condition of the ground. The relevant guidelines and accident prevention regulations must also be observed.

- Always check the dolly for visible damage before use.
- Do not overload transport dollies and steering dollies. Even if the load is off-center, the permissible maximum load may not be exceeded.
- Only use the stationary (type F) and steering (type L) dollies on level ground.
- On uneven ground the dollies and the load must be fastened firmly together.
- The dollies do not have an integrated brake.
- When transporting heavy goods, the speed must not exceed 2 km/h (1.25 mph).
- When using suitable towing vehicles, avoid jerky starts and do not exceed the unbraked towing load.
- Do not use on upwards or downward slopes.
- Dollies must always be parallel to each other and to the load.
- Never use Type F dollies without a connection rod. If you use the device without a connection rod the rollers can be damaged!

No guarantee or liability can be assumed for personal injury or damage to property resulting from one or more of the following causes:

- Failure to observe the operating instructions.
- Unauthorized constructional alterations
- Failure to maintain parts which are subject to wear
- Incorrect repairs
- Use of the stationary and steering dollies for any use other than that for which they are intended.

For machines with frame structures or feet which do not permit three-point support we recommend our tandem steering dollies with four-point support.

For difficult surfaces we recommend our dollies with hydraulic roller balancing system to compensate for ground unevenness of approx. \pm 20 mm (0.8 inches) thereby avoiding excess loads on individual rollers.

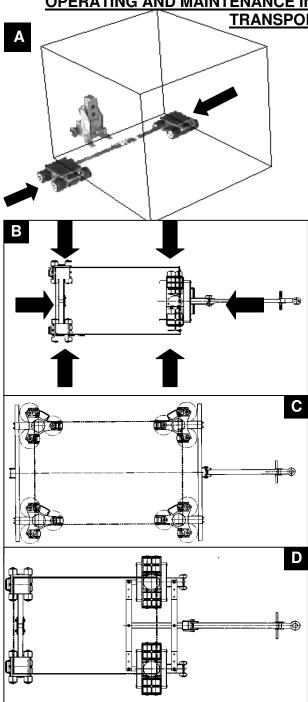
For confined spaces we recommend our rotating dollies. Heavy loads can be rotated by 360° around their own axis.

For any questions arising before or during operation, where you are unsure how to do it, contact us for further advice.





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WORK STEPS LOADING (Fig. A)

- Check the weight of the load
- Select a suitable transport dolly
- Select a suitable lifting device

We recommend our GKS-PERFEKT hydraulic lifters

- Lift the load at the rear
- First set the dollies for the required distance
- Roll the transport dolly under the load

Keep clear of the suspended load! The support plates of the dollies must always project beyond the edge of the load.

- Lower the load slowly and gently
- Secure the dolly from rolling away before the next lift operation
- Lift the load at the front
- Roll the steering dolly under the load

Keep clear of the suspended load!
The rotation plate of the steering dolly must be centred under the load.

The steering rod must be able to move freely.

LIFTING AND SUPPORTING

See fig. B for lifting and supporting options

TRANSPORT

- Convey the load to the desired location, making sure to observe the safety instructions on page 3 and 4
- Do not exceed the permissible rolling speed of 1.25 mph (2 km/h)!

UNLOADING

- Secure dollies from rolling away
- Apply lifting device
- Remove the steering dolly first Keep clear of the suspended load!
- Remove the transport dolly

EXAMPLES OF FOUR-POINT SUPPORTS

Example RL2 (fig. C) Example F12/TL12 (fig.D)

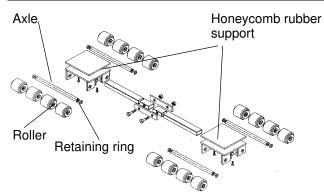
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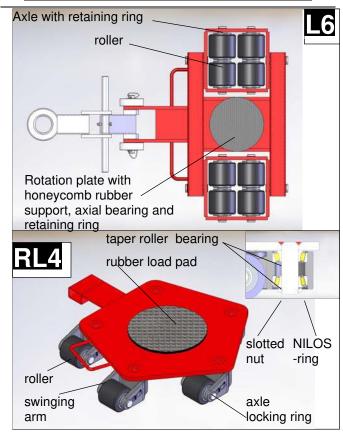


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REPAIR INSTRUCTIONS



Ex: Transport stationary dolly type F12



CHANGING THE ROLLERS

Remove the retaining ring at the axle

- Remove the axle
- Change the rollers
- Fit the axle
- Fasten the retaining ring

REPLACING THE RUBBER SUPPORTS

- Remove the rubber support and any adhesive residues (the surface must be free of grease and rust)
- Remove the foil on the back of the new rubber support
- Apply contact adhesive to the support surface and the r10ubber support
- Allow to dry briefly and proceed as described in the instructions for the adhesive

REPLACING THE BALL THRUST BEARING

- Turn over the transport dolly so that it is resting on the rotation plate
- Remove the retaining ring from the rotation plate
- Lift the dolly
- Remove the ball thrust bearing
- Fit the new bearing (for dolly L3 insert the centring ring)
- Replace the dolly
- Fit the retaining ring (must engage correctly)

REPLACING THE TAPERED ROLLER BEARING

- Turn over the rotation dolly so that it is resting on the support plate
- Release the slotted nut using a hook spanner (DIN1810A size 45/50) and unscrew
- Remove the bearing seal ring
- Pull the rocker upwards and out (only possible if the bolt is not bent)
- Remove the complete tapered roller bearing
- Insert the tapered rollers symmetrically into the rocker
- Grease the bolt
- Replace the rocker
- Cover with bearing seal ring
- Tighten the slotted nut, then loosen by ½ a turn
- The rocker must not have any axial play











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OTHER INSTRUCTIONS

SERVICE, REPAIR AND ORDERING SPARE PARTS

■ Service / spare parts lists and ordering spare parts:

For rapid information and spare parts orders please dial our

SERVICE NUMBER (EE.UU.): +1 (937) 324 8867

Or contact your Distributor

Fax: +1 (937) 324 8171 E-mail: service@gksweb.com

Repair

Any maintenance and repair work necessary after years of use will be carried out rapidly and correctly by us following a cost quotation. Send the device to us.

INSPECTION

Always carry out a visual inspection before using the stationary and steering dollies.

- Check the welded seams
- Check for any bending of the dolly cartridge and the connection rod
- Check the roller for dirt and wear
- If the rollers are wearing unevenly, they must be replaced cartridge by cartridge

GUARANTEE

There is a 5 years guarantee on material and construction subject to correct use. Unauthorised intervention within this period shall cause the guarantee to lapse unless we have granted prior written permission. The guarantee does not apply to wearing parts

SPECIAL MODELS

Our design department will be happy to realise customised lifting and transport devices and offer solutions for the transport of all heavy goods. Feel free to contact us.

EC CONFORMITY DECLARATION

We hereby declare that the GKS-PERFEKT transport dollies types:

F1, F2,5, F3, F6, F9, F10, F12, F18, F20, F25, F30, F40, F50, F60, F100	HF15, HF25
L1, L2.5, L3, L6, L9, L10, L12, L18, L20, L25, L30, L40, L60	HL15, HL25
TL6, TL12, TL20, TL40, TL50, TL100,	RL1, RL2, RL3H, RL4

from date of manufacture 3/1994 for the internal transport of machines and heavy loads correspond to the following regulations:

■ Guideline 2006/42/EC of the European Parliament and the Council dated 17nd May 2006, appendix II A Applicable international technical standards, in particular

■ DIN EN ISO 12100 : Safety of machines

Applicable national technical standards and specifications, in particular

- BGV D27
- German technical Plant and Equipment Act

Georg Kramp

GKS PERFEKT lifting and moving equipment

Max-Planck-Str. 32

D 70736 Fellbach/Germany Fellbach, 14.09.2011

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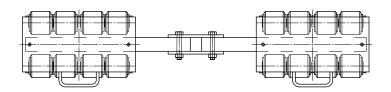
Managing Director



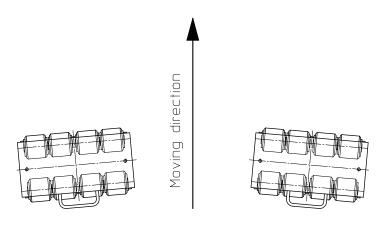


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NEVER USE REAR DOLLIES (F MODEL) WITHOUT CONNECTING BAR



CORRECT WITH CONNECTING BAR



NOT CORRECT WITHOUT CONNECTING BAR

Note: The lifetime of your F dolly rollers will be shortened using them without connecting bar as lining material will get lots of side pressure.

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