THE WORLD OF CRANE COMPONENTS



WHEEL SETS KG 125 SERIES

Driven and non driven Low Maintenance



GENERAL CATALOGUE

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KG 125

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KG 125 Perspective view



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RA 400/500



RAD 400/500



RA 630

RAD 630



Design key

RAD 400 x 80 - ADK70 - W75 - KG 125 RND 400 x 80 KARL GEORG Factory standard Version or diameter Drive shaft end W...Spline Ø....PF feather key DIN 6885-1 Ø....SS for shrink discs Size/type of gearbox Running surface width **b1** Size 160, 250, 400, 500, 630 RA Wheel set, driven RAD Wheel set, driven, direct installation RN Wheel set, not driven RND Wheel set, not driven, direct installation

Wheel set driven and not driven

The wheel sets are used in crane engineering, materials handling and for transport tasks in machine building.

Particular features and technical details

• Travel wheels

- Running surface diameter 160, 250, 400, 500, 630 mm
- with 2 wheel flanges, with wheel flange on one side, without wheel flanges, and special designs







Crane wheel diameter d1	Wheel width b2*	Flange width b1* (with 2 wheel flanges)	d2	Max. wheel load kg
160	87	47/60	190	4,560
250	100	65/75	282	8,500
400	125	70/80	437	16,300
500	140	75/90	535	26,500
630	170	75/110	680	50,000

* Standard version; other dimensions on request

- Crane wheel material (standard)
- Spheroidal graphite iron GJS-700-2 (GGG-70) 42CrMo4V (forged) alternatively: hardened to HRc 46-52 Hardening depth: approx. 3 mm

Crane wheel material (special)

alternatively: hardened to HRc 48-54 Hardness depth: approx. 10 mm

Antifriction bearings and lubrication

Self-aligning roller bearings/grooved ball bearings/pivot grooved ball bearings can be relubricated via lubrication nipple in flanged bearing housing (self-aligning roller bearings)

Drive shafts

suitable for slip-on gearboxes from all manufacturers at customer's choice

- with splined-shaft profile in accordance with DIN 5480
- with feather key in accordance with DIN 6885-1
- for shrink disc attachment
- extended with coupling and connecting shaft as central drive unit
- with hole for oil pressure interference fit
- material: 42CrMo4V

Wheel set driven and not driven

The wheel sets are used in crane engineering, materials handling and for transport tasks in machine building.

Particular features and technical details

Track gauge compensation

Interchangeable compensating discs between self-aligning roller bearing/grooved ball bearing and circlip or flanged bearing housing allow the track dimension to be changed.

Crane wheel diameter d1	Max. adjustment option with lubrication RA/RN	Max. adjustment option without lubrication RA/RN	Max. adjustment option without lubrication RAD/RND
160	x	6.5	7
250	x		10.5
400	6	8	8
500	7	8	12
630	5	13	12

Flanged bearing housing

- can be screwed on with locking screws and retained nuts

- additionally fixed with locking pins with flame-cut locating hole

- Compensation for up to 2° slope of the connecting assembly

- Material: spheroidal graphite iron

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Wheel set RA/RN 160, RA/RN 250

with flanged bearing housings for installation in steel structures without boring mill work



For installation specifications, see pages 10-11



Specify gearbox make and size when ordering!

with feather key in accordance with DIN 6885-1 (Designation: \emptyset ... PF)

with spline in accordance with DIN 5480 (Designation: W ...)

Suitable for shrink disc (Designation: Ø ... SS)

b1 Standard recesses. Others on request, at additional cost.

- **b3** Track gauge adjustable with compensating discs:
 - RA/RN 160: ± 6.5 mm
 - RA/RN 250: ± 10 mm
- **L7** shaft dimensions are on pages 14+15 or on request.

All necessary connection elements are included in the scope of delivery.

Wheel set d1	d2	b1	b2	b3	b5	bó	b8	b9	DEMAG	Drive shaft	b7	b4								
h9	±2.0		±1.0		+1.0				Gearbox type											
									AF 04	W30x1.25x22	133.5									
160	190	47/60	87	85	170	216	>8	12	AF 05	W35x2x16	137.5	5								
																	AF 06	W35x2x16	144.5	
									AF 05	W35x2x16	136	5								
250	282	65/75	100	110	220	280	>14	18	AF 06	W45x2x21	152	,								
									AF 08	W45x2x21	199	0								

Wheel set RA/RN 160, RA/RN 250

Installation specifications

Hole pattern in steel structure for the flanged bearing housing.



Wheel set	d3	d6 cauterized	d6 finish- bored	d8
RA/RN 160	Ø 150	Ø 124 +1.0	Ø 120 H7	Ø 14.5 H11
RA/RN 250	Ø 200	Ø 164 +1.0	Ø 160 H7	Ø 18.5 H11

For required plate thickness (b8), see table on page 9

The steel structure of the chassis support is finished. The locating holes d6 for the flanged bearing housing (see table) are flame-cut or finish-bored according to the specified wheel bases. The fixing holes d8 for the retained nuts must be marked and drilled in their position relative the centre point d6.

If the locating holes for the flanged bearing housing are flame-cut, the flanged bearing housings must be aligned in the chassis support. The flanges are aligned by levelling and opto-mechanical measuring methods.

The exact position of the flanges is fixed by clamping sleeves after alignment.

Installation specifications



Locating holes for flanged housing, flame-cut to Ø 124 $^{\scriptscriptstyle +1}$



Bore diameter 10 ^{H12} for clamping sleeve 10 x 24l; radial force is absorbed via clamping sleeve. Install slot in direction of force. Measuring and alignment required.

Design of the flanged bearing housing RA/RN 250



Locating holes for flanged housing, flame-cut to Ø 164 $^{\scriptscriptstyle +1}$



Bore diameter 12 ^{H12} for clamping sleeve 12 x 30l; radial force is absorbed via clamping sleeve. Install slot in direction of force. Measuring and alignment required.

h8

Ø160

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Wheel set RAD/RND 160, RAD/RND 250

Without flanged bearing housing for direct installation in mechanically machined steel structures

RAD/RND 160/250 also available with DIN 635 self-aligning roller bearings.



Specify gearbox make and size when ordering!

with feather key in accordance with DIN 6885-1 (Designation: Ø ... PF)

with spline in accordance with DIN 5480 (Designation: W ...)

Suitable for shrink disc (Designation: Ø ... SS)

- **b1** Standard recesses. Others on request, at additional cost.
- **b3** Track gauge adjustable with compensating discs: - RAD/RND 160: ± 7 mm - RAD/RND 250: ± 10.5 mm
- **L7** shaft dimensions are on pages 14+15 or on request.

Wheel set	d2	d3	ь1	b2	b3	b5	b6	b8	b9	ь10	b11	DEMAG /	Drive shaft	b7	b4		
d1 h9	±2.0	H7		±1.0				+0.2	+0.2			Gearbox type					
												AF 04	W30x1.25x22	133.5			
160	190	90	47/60	87	85	170	194	3.15	166	94	186	AF 05	W35x2x16	137.5	5		
														AF 06	W35x2x16	144.5	
												AF 05	W35x2x16	136	5		
250	282	120	65/75	100	110	220	250	4.15	204	110	240	AF 06	W45x2x21	152	L		
												AF 08	W45x2x21	199	0		



Drive shafts for RA/RAD 160



DEMAG gearboxes	

Gearbox type	Hollow shaft	L7	L2	L ₄	Protection Drive side
AMK 10	N25x1.25x18	109.5	90.5	204.5	Bellows
AF 04 AFM 04 AUK 20	N30x1.25x22	112.5 122.5 122.5	106 96 96	223.5	Bellows
AF 05	N35x2x16	117.5	105	227.5	Bellows
AF 06 AUK 30	N35x2x16	108.5 113.5	121 116	234.5	Bellows
AUH 20	Ø 24	122.5	96	223.5	Bellows
AUH 30	Ø 35	113.5	116	235.5	Bellows
WUK 20	N30x1.25x22	135	155	295	Cover
WUK 30	N35x2x16	135	175	315	Cover

Gearboxes from other manufacturers

The standard clearance $\rm L_7$ for gearboxes from other manufacturers is 130 mm. Protection on the drive side is provided by a cover.

Drive shafts for RA/RAD 250



DEM	AG	gear	boxes
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Gearbox type	Hollow shaft	L7	L2	L_4	Protection Drive side
AUK 20	N30x1.25x22	155	96	256	Cover
AF 05 AF 06 AUK 30	N35x2x16	141 140 145	105 121 116	266	Bellows
AF 06 AUK 40	N45x2x21	141 142	121 133	281	Bellows
AF 08	N45x2x21	154	155	315	Bellows
AUK 50	N50x2x24	147	157	310.5	Bellows
AUH 30	Ø 35	145	116	267	Bellows
AUH 40	Ø 40	142	133	281	Bellows
WUK 30	N35x2x16	165	175	345	Cover
WUK 40	N45x2x21	165	204	375	Cover

Gearboxes from other manufacturers

The standard clearance $\rm L_7$ for gearboxes from other manufacturers is 160 mm. Protection on the drive side is provided by a cover.

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Wheel set RA/RN 400, RA/RN 500

With flanged bearing housing for installation in steel structures without boring mill work



Specify gearbox make and size when ordering!

with feather key in accordance with DIN 6885-1 (Designation: Ø ... PF)

with spline in accordance with DIN 5480 (Designation: W ...)

Suitable for shrink disc (Designation: Ø ... SS)

For installation specifications, see pages 18+19



- **b1** Standard recesses. Others on request, at additional cost.
- **b3** Track gauge adjustable with compensating discs:
 - RA/RN 400: ± 8 mm, with relubrication: max. ± 6
 - RA/RN 500: ± 8 mm, with relubrication: max. ± 7 mm

L7 shaft dimensions are on pages 22+23 or on request.

All necessary connection elements are included in the scope of delivery.

Wheel set d1	d2	b1	b2	b3	b5	bó	b8	b9	DEMAG /	Drive shaft	b7	b4
h9	±2.0		±1.0		+1.0		+0.2	+0.2	Gearbox type			
400	407	70/00	105	140	200	2/0	10	20	AF 08	W50x2x24	196.5	7
400	437	70/80	125	140	280	360	>18	28	AF 10	W65x2x31	250	7.5
500	535	75/90	140	160	320	400	>25	28	AF 12	W85x3x27	299	8

Wheel set RA/RN 400, RA/RN 500

Installation specifications

Hole pattern in steel structure for the flanged bearing housing.



Wheel set	d6 cauterized	d6 finish-bored	d8
RA/RN 400	Ø 214 +1.0	Ø 210 H7	Ø 18.5 H11
RA/RN 500	Ø 214 +1.0	Ø 210 H7	Ø 23 H11

For required plate thickness (b8), see table on page 17

The steel structure of the chassis support is finished. The locating holes d6 for the flanged bearing housing (see table) are flame-cut or finish-bored according to the specified wheel bases. The fixing holes d8 for the retained nuts must be marked and drilled in their position relative the centre point d6.

If the locating holes for the flanged bearing housing are flame-cut, the flanged bearing housings must be aligned in the chassis support. The flanges are aligned by levelling and opto-mechanical measuring methods.

The exact position of the flanges is fixed by clamping sleeves after alignment.



With the RA/RN 400/500 wheel set, corner installation is possible thanks to the flanged bearing housings being flattened on the sides. For a slotted chassis support (see figure), the completely mounted wheel set can be installed and removed after a 90° turn of the flanged bearing housing.

Design of the flanged bearing housing RA/RN 400



Locating holes for flanged housing, flame-cut to Ø 214 $^{\scriptscriptstyle +1}$



Bore diameter 14 ^{H12} for clamping sleeve 14 x 60l; radial force is absorbed via clamping sleeve. Install slot in direction of force.

Measuring and alignment required.

Design of the flanged bearing housing RA/RN 500



Locating holes for flanged housing, flame-cut to Ø 214 $^{\scriptscriptstyle +1}$



Bore diameter 18 ^{H12} for clamping sleeve 18 x 60l; radial force is absorbed via clamping sleeve.

Install slot in direction of force. Measuring and alignment required. ß

Wheel set RAD/RND 400, RAD/RND 500

Without flanged bearing housing for direct installation in mechanically machined steel structures

RAD/RND 400 is also available with DIN 625 grooved ball bearings.



Specify gearbox make and size when ordering!

with feather key in accordance with DIN 6885-1 (Designation: Ø ... PF)

with spline in accordance with DIN 5480 (Designation: W ...)

Suitable for shrink disc (Designation: Ø ... SS)



b1 Standard recesses. Others on request, at additional cost.

b3 Track gauge adjustable with compensating discs: - RAD/RND 400: ± 8 mm - RAD/RND 500: ± 12 mm

L7 shaft dimensions are on pages 22+23 or on request.

۷	Vheel set d1	d2	d3	b1	b2	b3	b5	bó	b8	b9	b10	b11	DEMAG /	Drive shaft	b7	b4
_	h9	±2.0	H7		±1.0				+0.2	+0.2			Gearbox type			
	100	437 160 70/80 125 140 280 336 4.15 270 146 326	070	070 14/	224	AF 08	W50x2x24	196.5	7							
	400		320	AF 10	W65x2x31	250	7.5									
	500	535	160	75/90	140	160	320	360	4.15	316	170	350	AF 12	W85x3x27	299	8

Drive shafts for RA/RAD 400



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DEMAG gearboxes

Gearbox type	Hollow shaft	L7	L2	L ₄	Protection Drive side
AUK 40	N45x2x21	190	133	329	Cover
AF 08 AUK 50	N50x2x24	181.5 188	155 157	351.5	Bellows
AF 10 AUK 60	N65x2x31	182.5 185	207.5 187	397.5	Bellows
AUK 70	N75x3x24	192	240	440	Bellows
AUH 40	Ø 40	190	133	329	Bellows
AUH 50	Ø 50	188	157	351.5	Bellows
AUH 60	Ø 60	185	187	379.5	Bellows
AUH 70	Ø 70	192	240	440	Bellows
WUK 50	N50x2x24	210	229	445.5	Cover
WUK 60	N50x2x24	210	254	470.5	Cover
WUK 70	N65x2x31	210	295	512.5	Cover
WUH 60	Ø 50	210	229	470.5	Cover

Gearboxes from other manufacturers

The standard clearance $\rm L_7$ for gearboxes from other manufacturers is $\bf 210~\rm mm.$ Protection on the drive side is provided by a cover.

Drive shafts for RA/RAD 500



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DEMAG gearboxes

Gearbox type	Hollow shaft	L7	L2	L ₄	Protection Drive side
AUK 50	N50x2x24	208	157	371.5	Bellows
AF 10 AUK 60	N65x2x31	209.5 205	207.5 187	424.5	Bellows
AUK 70	N75x3x24	212	240	460	Bellows
AF 12	N85x3x27	204	255	467	Bellows
AUK 80	N90x3x28	220	274	502	Cover
AUH 50	Ø 50	208	157	371.5	Bellows
AUH 60	Ø 60	205	187	399.5	Bellows
AUH 70	Ø 70	212	240	460	Bellows
AUH 80	Ø 90	220	274	503	Cover
WUK 70	N65x2x31	250	295	552.5	Cover
WUK 80	N75x3x24	250	299	557	Cover
WUK 90	N90x3x28	255	336	599	Cover

Gearboxes from other manufacturers

The standard clearance $\rm L_7$ for gearboxes from other manufacturers is $\bf 230~\rm mm.$ Protection on the drive side is provided by a cover.

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Wheel set RA/RN 630

With flanged bearing housings for installation in steel structures without boring mill work



For installation specifications, see pages 26-27



Specify gearbox make and size when ordering!

with feather key in accordance with DIN 6885-1 (Designation: Ø ... PF)

with spline in accordance with DIN 5480 (Designation: W ...)

Suitable for shrink disc (Designation: Ø ... SS)

- **b1** Standard recesses. Others on request, at additional cost.
- **b3** Track gauge adjustable with compensating discs: with relubrication: **±** 5 mm without relubrication: **±** 13 mm
- **L7** shaft dimensions are on page 29 or on request.

All necessary connection elements are included in the scope of delivery.

Wheel set d1	d2	b1	I b2 b3 b5 b6 b8 b9 DEMAG		DEMAG /	Drive shaft	b7	b4				
h9	±2.0		±1.0		±1.0				Gearbox type			
			AF12		W85x3x27	295	9					
(20	(00	75 /110	170	175	250	457	24	24	AF I2	Ø 75 h6	342	
630	680	75/110	170	1/5	350	456	>24	30	4 5 10	W110x3x35	397.35	9.15
									AF 18	Ø 100 h6	457.35	

Wheel set RA/RN 630

Installation specifications

Hole pattern in steel structure for the flanged bearing housing.



Wheel set	d6 cauterized	d6 finish-bored
RA/RN 630	Ø 272 +2.0	Ø 268 H7
For required plate	thickness (b8), see	table on page 25

The steel structure of the chassis support is finished. The locating holes d6 for the flanged bearing housing (see table) are flame-cut or finish-bored according to the specified wheel bases. The Ø23 H11 locating holes for the M20 retained nuts must be marked and drilled in their position relative to the centre point d6.

If the locating holes for the flanged bearing housing are flame-cut, the flanged bearing housings must be aligned in the chassis support. The flanges are aligned by levelling and opto-mechanical measuring methods.

The exact position of the flanges is fixed by clamping sleeves after alignment.



With the RA/RN 630 wheel set, corner installation is possible thanks to the flanged bearing housings being flattened on the sides. For a slotted chassis support (see figure), the completely mounted wheel set can be installed and removed after a 90° turn of the flanged bearing housing.





Locating holes for flanged bearing housing, finish-bored to Ø 268 $^{\rm H7}$



Bore diameter 10 $^{\rm H12}$ for clamping sleeve 10 x 80; radial force is absorbed by interference fit. No subsequent alignment required if the outer sides of the chassis supports are mechanically machined in the

area of the flanged bearing housings.

Locating holes for flanged housing, flame-cut to Ø 272 $^{\scriptscriptstyle +2}$





Bore diameter 21 ^{H12} for clamping sleeve 21 x 80l; radial force is absorbed via clamping sleeve. Install slot in direction of force. Measuring and alignment required.

Wheel set RAD/RND 630

Without flanged bearing housing for direct installation in mechanically machined steel structures



Specify gearbox make and size when ordering!

with feather key in accordance with DIN 6885-1 (Designation: Ø ... PF)

with spline in accordance with DIN 5480 (Designation: W ...)

Suitable for shrink disc (Designation: Ø ... SS)

- **b1** Standard recesses. Others on request, at additional cost.
- **b3** Track gauge adjustable with compensating discs:± 12 mm
- **L7** shaft dimensions are on page 29 or on request.

	-	- D11				-																	
Wheel set d1	d2	d3	b1	b2	b3	b5	b6	b8	b9	ь10	Ь11	DEMAG / Gearbox	Drive shaft	b7	ь4								
h9	±2.0	H7		±1.0		±1.0		+0.2				Gbc											
			200 75/110																	4 5 10	W85x3x27	295	9
(20	(00			170	175				390	010	4.40	AF IZ	Ø 75 h6 W110x3x35	342									
630	680	200		170	1/5	350	464	4.15		210	440	4 5 10		397.35	9.15								
												AF 18	Ø 100 h6	457.35									



 b_6

Drive shafts for RA/RAD 630



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EMAG gearboxes	Gearbox type	Hollow shaft	L7	L2	L ₄	Protection Drive side
	AF 10 AUK 60	N65x2x31	217.5 238	207.5 187	432	Cover
	AUK 70	N75x3x24	245	240	493	Cover
	AF 12	N85x3x27	215	255	479	Cover
	AUK 80	N90x3x28	250	274	532	Cover
	AF 18	N110x3x35	247.5	325	581.5	Cover
	AUK 90	N110x3x35	250	332	591	Cover
	AUH 80	Ø 90	250	274	533	Cover
	WUK 90	N90x3x28	267	336	611	Cover

Gearboxes from other manufacturers

The standard clearance $\rm L_7$ for gearboxes from other manufacturers is $\bf 250~\rm mm.$ Protection on the drive side is provided by a cover.

Central drive unit installation version

for wheel sets RA/RAD 160, 250, 400, 500



The following information is required:

- Crane wheel diameter **d1**
- Crane wheel width **b1** •
- Track gauge **L** •
- Gearbox make, size and type (with design of the shaft end) • The couplings and the connecting shafts are always designed with splines according to DIN 5480

 $^{1\!j}$ For dimension L7, see the dimension sheets of the applicable wheel set size

Couplings



Bore with splined-shaft profile in accordance with DIN 5480



Splined-shaft profile (ZWP) DIN 5480 (9H)	d3	L4	L5	L6
N 30 x 1.25 x 22	40	80	40	27.5
N 30 x 2 x 14	40	80	40	27.5
N 35 x 1.25 x 26	50	100	50	44
N 35 x 2 x 16	50	100	50	35
N 40 x 2 x 18	55	100	50	32
N 45 x 2 x 21	60	120	60	50
N 50 x 2 x 24	65	120	60	40
N 60 x 2 x 28	75	125	62.5	47.5
N 65 x 2 x 31	80	125	62.5	50
N 70 x 2 x 34	90	135	67.5	50
N 75 x 3 x 24*	95	145	72.5	52.5
N 80 x 3 x 25*	100	150	75	55
N 85 x 3 x 27*	110	160	80	57.5
N 90 x 3 x 28*	115	170	85	60

* available on request

Permissible wheel loads

Wheel set 160/250 Permissible wheel loads in kg

Calculation of the permissible wheel loads Rper for KG 125 maintenance-free wheel sets

R_{max} = largest occurring load at full load in kg

= smallest occurring load at full load in kg Rmin

= Usable railhead width in mm k₁

 $(k_1 = k - 2r_1 \text{ or, for flat steel rail, } k_1 = k)$

R_{max} and R_{min} for the crane must be determined from the different trolley operating positions.

 $R = \frac{Rmin + 2 Rmax_{\leq}}{3}$ Rper

For trolleys with a fixed hoist, the maximum occurring wheel load is the relevant parameter for calculating the permissible wheel load.

 $R_{max} \leq R_{per}$

Drive	Usable	(Crane whee	l 160 mm Ø	i	Crane wheel 250 mm Ø					
group	railhead width		Speed of tr	ravel m/mir	1	Speed of travel m/min					
FEM/DIN 15020	k _i mm	20	40	63	100	20	40	63	100		
1 DM	35	3955	3545	3140	2690	6560	5795	5250	4900		
1 CM	40	4520	4050	3585	3070	7495	6625	6330	5600		
1 BM	45	45401)	4205	2700	2170	8435	7695	7125	6170		
	<u>> 50</u>	450U I [/]	4305	3700	3170	8500 1 ⁾	8380	7200	8170		
	35	3955				6560	5985	5540			
1AM	40	1205	3415	2935	2515	7495	6450	5745	4900		
	<u>></u> 45	4305				8380	0000	5715			
0	35	2.415	0715	2220	1005	5855	F 07F	4525	2000		
2 m	<u>≥</u> 40	3415	2/15	2330	1995	6650	5275	4535	3890		
3 m	<u>></u> 35	2710	2150	1850	1585	5270	4190	3600	3085		
4 m	<u>></u> 35	2160	1715	1475	1265	4210	3340	2870	2460		
5 m	<u>></u> 35	1720	1365	1175	1005	3350	2660	2285	1960		

¹⁾ These wheel loads are maximum values for Rmax for the applicable crane wheel diameter

Permissible wheel loads

Wheel set 400/500

Permissible wheel loads in kg

Calculation of the permissible wheel loads Rper for KG 125 maintenance-free wheel sets

R_{max} = largest occurring load at full load in kg

R_{min} = smallest occurring load at full load in kg

k₁ = Usable railhead width in mm

 $(k_1 = k - 2r_1 \text{ or, for flat steel rail, } k_1 = k)$

R_{max} and R_{min} for the crane must be determined from the different trolley operating positions.

 $R = \frac{Rmin + 2Rmax_{\leq}}{3} \qquad R_{per}$

For trolleys with a fixed hoist, the maximum occurring wheel load is the relevant parameter for calculating the permissible wheel load.

 $R_{max} \leq R_{per}$

Drive	Usable	C	rane wheel	400 mm Ø	2)	Crane wheel 500 mm Ø Speed of travel m/min					
mechanism group	railhead width	:	Speed of tra	avel m/min							
Drive mechanism group FEM/DIN 15020 1 BM 1 BM 1 AM 2 m 2 m 3 m 4 m	k _i mm	20	40	63	100	20	40	63	100		
	45	14280	13100	12315	11400	18180	16870	15885	14905		
	50	15870	14560	13685	12665	20200	18745	17650	16560		
1 BM	55		16015	15640		22200	20620	19420	18215		
	60	16300 ¹⁾	16300 ¹⁾		13615	24240	22495	21180	10400		
	<u>></u> 65					26500 ¹⁾	24370	22515	19600		
	45	14280	13100	12315		18180	16870	15885			
1	50	15870	14560		11055	20200	18745		14005		
IAM	55			12700	11055	22220	20/20	17650	14905		
	<u>≥</u> 60	16300 "				24240	20620				
	45	12750	11700			16230	15060				
2 m	50	14170	110.05	10315	8980	18035	14725	14185	12930		
	<u>></u> 55	14560	11620			19840	10735				
	45	11475	0/05	0200	7005	14610	10555	10070	10505		
3 m	<u>></u> 50	11825	9605	8380	7295	16230	13555	12070	10505		
4 m	<u>≥</u> 45	9650	7835	6840	5950	12985	11285	9850	8575		
5 m	<u>≥</u> 45	7855	6380	5565	4845	11310	9190	8015	6980		

¹⁾ These wheel loads are maximum values for Rmax for the applicable crane wheel diameter

²⁾ With deep groove ball bearings, approx. 20% lower wheel loads

Permissible wheel loads

Wheel set 630

Permissible wheel loads in kg

Calculation of the permissible wheel loads R_{per} for KG 125 maintenance-free wheel sets

R_{max} = largest occurring load at full load in kg

- R_{min} = smallest occurring load at full load in kg
- k₁ = Usable railhead width in mm

 $(k_1 = k - 2r_1 \text{ or, for flat steel rail, } k_1 = k)$

 R_{max} and R_{min} for the crane must be determined from the different trolley operating positions.

 $R = \frac{Rmin + 2Rmax_{\leq}}{3} \qquad R_{per}$

For trolleys with a fixed hoist, the maximum occurring wheel load is the relevant parameter for calculating the permissible wheel load.

 $R_{max} \leq R_{per}$

Drive mecha-	Usable		Crane wheel 630 mm Ø										
FEM/DIN 15020	railhead width k ¹ mm	RA/RI	N self-align Speed c m/ı	ing roller b of travel min	earing	RAD/RND self-aligning roller bearing Speed of travel m/min							
		20	40	63	100	20	40	63	100				
	<u>></u> 60	31000	29165	27510	25865	31000	29165	27510	25865				
4.514	<u>≥</u> 80	41460	38885	36680	34485	41460	38885	36680	34485				
IBM	<u>></u> 90	46640	43750	41270	38800	46640	43750	41270	38800				
	100	50000 ¹⁾	48600	44810	39010	50000 ¹⁾	48600	44810	39010				
	<u>></u> 60	31000	29165	27510	25865	31000	29165	27510	25865				
1 4 14	<u>≥</u> 80	41460	38885			41460	38885						
IAM	<u>></u> 90	46640	41720	36405	31695	46640	41720	36405	31695				
	100	50000 ¹⁾	41720			50000 ¹⁾	41720						
	<u>></u> 60	27760	26040	24565	23090	27760	26040	24565	23090				
2 m	<u>≥</u> 80	37000	2200E	00570	25740	37000	22005	20570	25740				
	<u>≥</u> 90	41640	33000	29570	25740	41640	33000	29570	25740				
	<u>≥</u> 60	24980	23430	22105	20785	24980	23430	22105	20785				
3 m	<u>≥</u> 80	33310	275.25	24020	20010	33310	275.25	24020	20010				
	<u>≥</u> 90	33880	27525	24020	20910	33880	27525	24020	20910				
4	<u>≥</u> 60	22200	20830	10400	17045	22200	20830	10400	17045				
4 m	<u>></u> 80	27650	22460	19000	17065	27650	22460	19800	17065				
E m	<u>≥</u> 60	22200	18200	15040	12000	22200	19200	15040	12800				
σm	≥80	22510	18290	12400	13090	22510	10290	12400	13070				

¹⁾ These wheel loads are maximum values for Rmax for the applicable crane wheel diameter

THE WORLD OF CRANE COMPONENTS



MORE INFORMATION



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= ALWAYS RELIABLE. ALWAYS THE NUMBER ONE CHOICE.