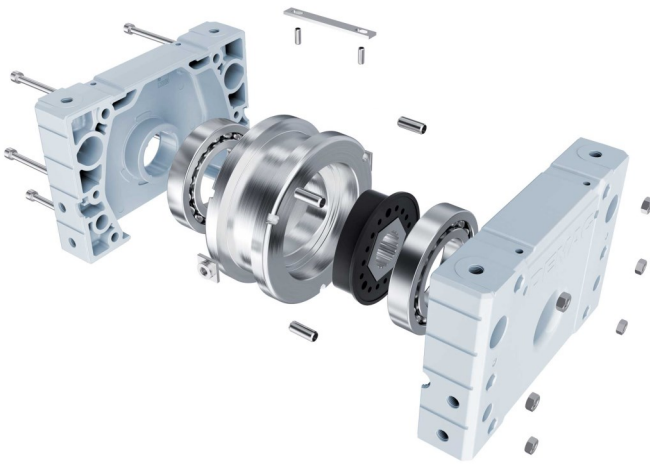


DRS Wheel Block

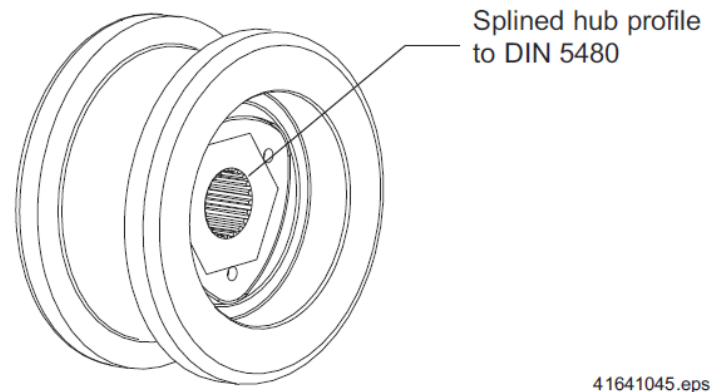
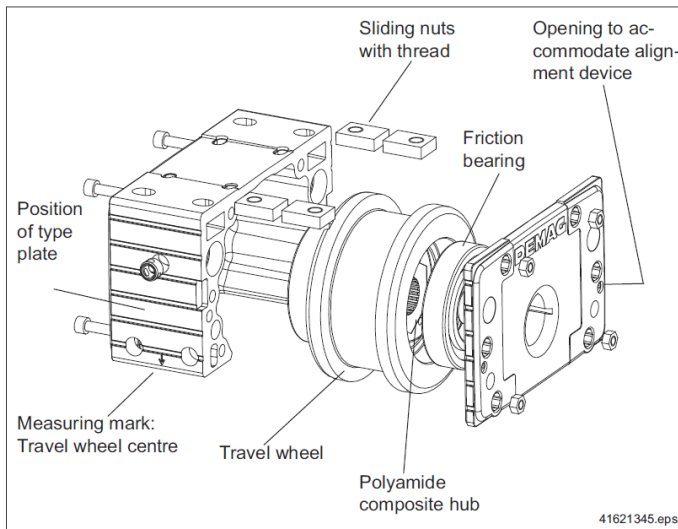
Quick Reference Guide



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DRS 250 - 500 Product Description	3
Model Code Explanation	4-5
Load Spectrum Determination	6
Wheel Block Quick Selection Table	7
Ground Clearance Tables	8-11

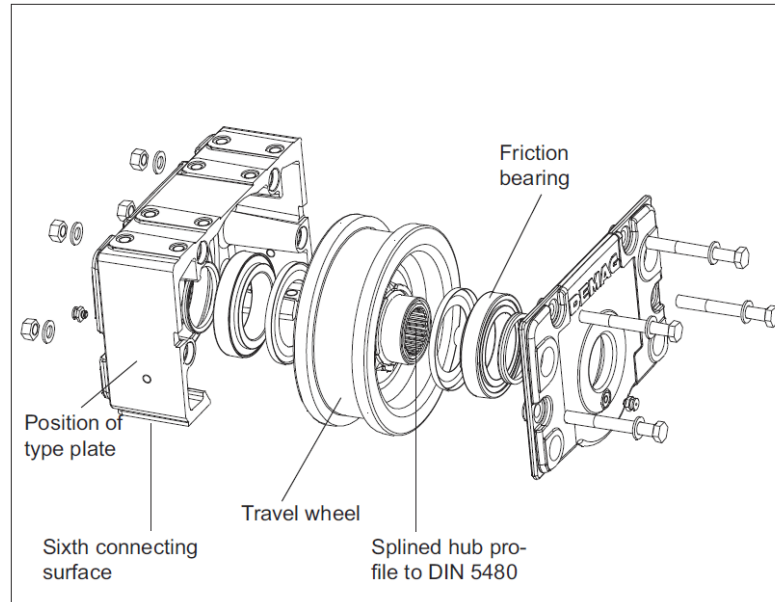
DRS 112 - 200 Product Description



The Demag DRS 112 to 200 wheel block system, suitable for loads up to 10000 kg/ 22,000 lbs, is a concept designed to meet customer wishes. The advantages of the system are:

- Most favorable ground clearance conditions with Demag offset geared motors.
- Robust aluminum housing with very good shape and position tolerances.
- Variable basic design by fitting various travel wheel materials and shapes.
- Weather-resistant due to surface powder coating (RAL 7001, silver grey). Special paint finish available on request.
- Compensation of track gauge deviations of up to 3 mm per side possible.
- Protected internal bearing arrangement.
- Minimum maintenance due to bearings lubricated for life.
- Travel wheel and bearings can be replaced thanks to bolted housing.
- High installation availability since the housing with top connection does not necessarily need to be removed to replace the travel wheel. Not having to realign the housing saves time.
- The damping element in the travel wheel reduces the load on the gearbox.
- The gearbox output torque is transmitted to the wheel block virtually without any radial force by means of the special Demag torque bracket.
- High-tensile bolted connections are zinc-coated and therefore provided with long-term corrosion protection.

DRS 250 - 500 Product Description



The Demag DRS 250 to 500 wheel block system, suitable for loads up to 40000 kg/ 88,000 lbs, is designed as a heavy-duty travel unit based on the same principle as the smaller DRS 112 to 200 series. The advantages of the system are:

- Most favorable ground clearance conditions with Demag offset geared motors.
- A robust spheroidal graphite cast iron housing with precisely machined connecting surfaces.
- Variable basic design by fitting various travel wheel materials and shapes.
- Possible compensation of track gauge deviations up to 4 mm or skewing up to 14 ‰.
- Protected internal bearing arrangement featuring tapered-roller bearings.
- Minimum maintenance due to bearings lubricated for life with standard ambient conditions.
- The friction bearing arrangement is prepared for re-lubrication in the case of special ambient conditions and re-lubrication sets can be simply added later on.
- Travel wheel and bearings can be replaced thanks to bolted housing.
- High installation availability since the housing with top connection does not necessarily need to be removed to replace the travel wheel. Not having to realign the housing saves time.
- The torque bracket, designed to match the wheel block, reduces peak loads and enables the drive torque to be transmitted virtually without any radial force.
- High-tensile bolted connections are zinc-coated and therefore provided with long-term corrosion protection.

Model Code Explanation

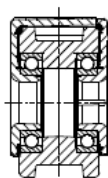
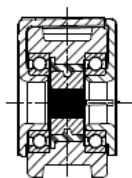
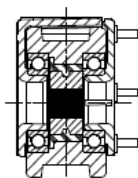
DRS	112	A30	A	47	K	H	A10
							Prepared for drive connection: A Offset gearboxes 10 ... 90 W Angular gearboxes 10 ... 100 F Universal shaft F X No gearbox considered
							Wheel block ¹⁾, prepared for: H Fitting of accessories such as, for example, horizontal guide rollers X Not prepared for fitting accessories.
							Connection variants, prepared for: K Top connection B Pin connection W Side connection For design with drive W1: Drive torque bracket on wheel block W2: Torque bracket on steel structure on the side-plate side
							Travel wheel tread: for types A and D : b1 for types B, C, E, F : 0
							Travel wheel variants A GJS (GGG) with flange on both sides B GJS (GGG) without flange C Polyamide without flange, with larger diameter D GJS (GGG) with flange on one side E GJS (GGG) without flange, with larger diameter F Hydropur without flange, with larger diameter S Special travel wheel
							Basic type A . . Driven wheel block, for torque bracket fitting and indication of hub profiles MA . . Wheel block also driven and indication of hub profiles NA . . Non-driven wheel block
							Size 112, 125, 160, 200, 250, 315, 400, 500
							Demag wheel block system

DRS 112 – 200 basic types

A

MA

NA



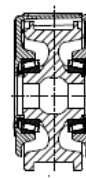
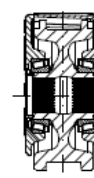
Contact Demag for an overview of splined hub profiles and diameters

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DRS 250 – 500 basic types

A/MA

NA



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DRS 112 – 200 travel wheel variants

A

B

D

E

F

C



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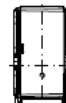
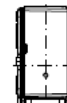
DRS 250 – 500 travel wheel variants

A

B

D

E

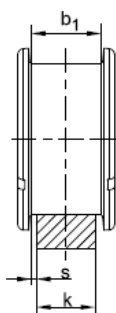


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Travel wheel variant

A

D



41617944.eps

Distance s on each side min. 1 mm /
max. 5 mm, tolerance class 2 to VDI 3576

Wheel block	Travel wheel width	Travel wheel tread b1 [mm]				Rail width
				Standard travel wheel type		
	[mm]	to 1)	to 2)	A	D	k
DRS 112	80	60	62	47, 55, 60	47	40...60
DRS 125	80	60	62	47, 55, 60	47, 60	40...60
DRS 160	89	65	67	47, 55, 60, 65	47, 65	40...65
DRS 200	101	67	75	55, 60, 65, (75 2)	65	50...70
DRS 250	110	77	80	52, 60, 65, 70, 75	65, 75	50...75
DRS 315	130	90	96	65, 75, 80, 90	80, 90	60...90
DRS 400	155	110	-	75, 80, 90, 110	80, 110	65...100
DRS 500	170	110	-	90, 110	90, 110	70...100

DRS 112 – 200 connection variants

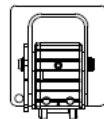
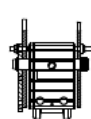
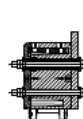
K

W

B

Box-section girder

End connection



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DRS 250 – 500 connection variants

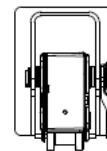
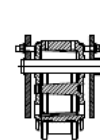
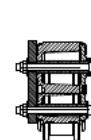
K

W

B

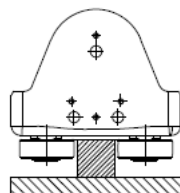
Box-section girder

DRS 250 end connection



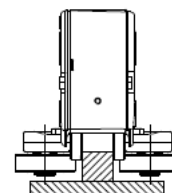
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DRS 112 – 200 roller guide arrangements



42099144.eps

DRS 250 – 500 roller guide arrangements

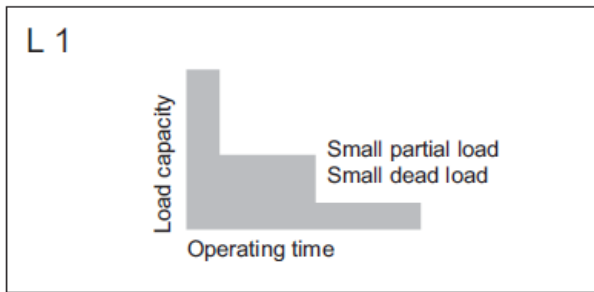


42099244.eps

1) For travel wheel treads smaller than the smallest standard tread, there is no wear indicator.

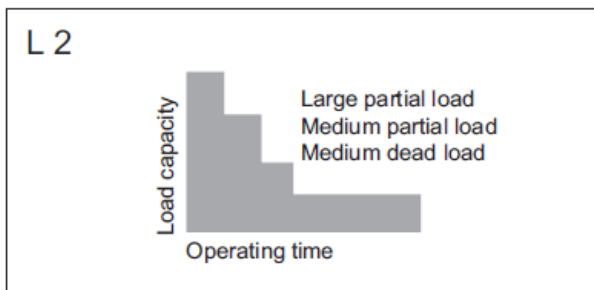
2) Hardened travel wheels (treads and flanges), for DRS 112 – 200, flanges without wear indicator

Load Spectrum Determination



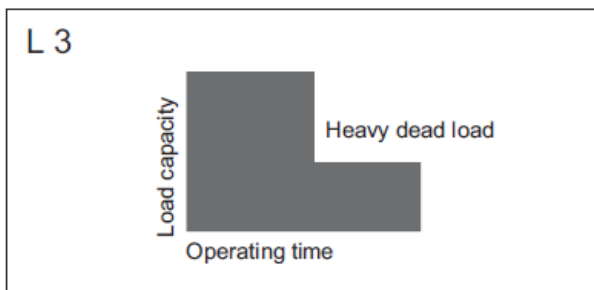
Light ($k \leq 0.5$):

Mechanisms, or parts thereof, usually subject to light loads and occasional maximum loads.



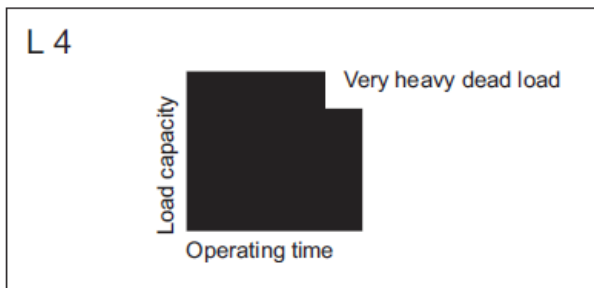
Medium ($0.5 < k \leq 0.63$):

Mechanisms, or parts thereof, usually subject to light loads, but with a higher incidence of maximum load.



Heavy ($0.63 < k \leq 0.8$):

Mechanisms, or parts thereof, usually subject to medium loads, and frequently to maximum loads.



Very heavy ($0.8 < k \leq 1$):

Mechanisms, or parts thereof, usually subject to maximum or almost maximum loads.

Load spectrum		Average daily operating time [h]							
		≤ 0.25	≤ 0.5	≤ 1	≤ 2	≤ 4	≤ 8	≤ 16	> 16
Light	$k \leq 0.50$	–	–	–	1 Bm	1 Am	2 m	3 m	4 m
Medium	$k \leq 0.63$	–	–	1 Bm	1 Am	2 m	3 m	4 m	5 m
Heavy	$k \leq 0.80$	–	1 Bm	1 Am	2 m	3 m	4 m	5 m	–
Very heavy	$k \leq 1$	1 Bm	1 Am	2 m	3 m	4 m	5 m	–	–

Wheel Block Quick Selection Table

Group of mechanisms/load factor group					Travel speed [m/min]											
FEM	3 m	2 m	1 Am	1 Bm	12.5	16	20	25	31.5	40	50	63	80	100	125	160
ISO	M 6	M 5	M 4	M 3												
	1160	1460	1840	2320												
	1260	1590	2000	2520												
	1360	1710	2160	2720												
	1460	1840	2320	2750												
	1570	1980	2500	3150												
	1710	2150	2710	3420												
	1840	2320	2920	3680												
	1980	2500	3150	3970												
	2150	2710	3410	4300												
	2320	2920	3680	4640												
	2500	3150	3970	5000												
	3000	3650	4520	5560												
	3260	3960	4870	5990												
	3510	4220	5200	6410												
	3780	4520	5560	6850												
	4090	4850	5980	7000												
	4340	4900	6040	7440												
	4710	5280	6500	8010												
	5080	5650	6950	8560												
	5470	6040	7440	9160												
	5920	6490	7990	9840												
	6340	6950	8560	10000												
	8100	9900	11000	13100												
	8650	10500	11350	14000												
	9300	10750	12150	14950												
	9900	11000	13050	16000												
	10500	11350	14000	16000												
	10750	12150	14950	16000												
	12050	12950	13850	16400												
	12350	13250	14350	17650												
	12650	13550	15350	18900												
	12950	13850	16400	20200												
	13250	14300	17650	21700												
	13550	15350	18900	22000												
	17500	19400	21000	25850												
	18550	19900	22600	27800												
	18950	20350	24150	29750												
	19400	21000	25850	30000												
	21650	24750	28000	34500												
	23100	25400	30150	37150												
	24200	26200	32250	39750												
	24750	28000	34500	40000												

Mass [kg] per wheel block for flat rails with max. useful rail head width

eGB_060812

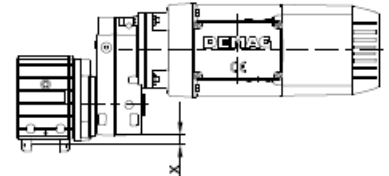
** Conversion Factor:

- Multiply kg value by 2.2 to get mass in lbs.
- Multiply m/min by 3.28 to travel speed in ft/min

Ground Clearance Tables- Vertical Gearbox

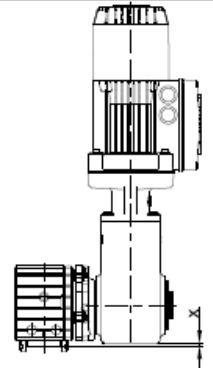
Wheel block	Gearbox	Ground clearance x ¹⁾ [mm]	Component obstacle edge
DRS 112	AM. 10	+5.0	G / D
	AM. 20	-1.5	G
	WU. 10	-18	D
	WU. 20	-24	G
DRS 125	AM. 10	+5.5	D
	AM. 20	+5.0	G
	AM. 30	-13	G / D
	WU. 10	-13	D
	WU. 20	-18	G
	WU. 30	-28	G
DRS 160	AM. 20	+11	D
	AM. 30	+5.0	G / D
	AM. 40	-10	G
	WU. 20	-2.0	D
	WU. 30	-10	G
	WU. 40	-25	G
DRS 200	AM. 30	+15	D
	AM. 40	+10	G
	AD. 50	-15	G
	WU. 30	-5.0	D
	WU. 40	-5.0	D
	WU. 50	-20	G / D
	WU. 60	-10	G
DRS 250	AD. 40	+20	D
	AD. 50	+10	G
	AD. 60	-15	G
	WU. 40	+20	D
	WU. 50	+5.0	G
	WU. 60	+15	G
	WU. 70	-5.0	G
DRS 315	AD. 50	+30	D
	AD. 60	+18	G
	AD. 70	-7.5	G
	WU. 50	+30	D
	WU. 60	+30	D
	WU. 70	+28	G
	WU. 80	-28	G
DRS 400	AD. 60	+55	D
	AD. 70	+35	G
	AD. 80	0	G
	WU. 70	+55	D
	WU. 80	+15	G
	WU. 90	-5.0	G
DRS 500	AD. 70	+82	D
	AD. 80	+50	G
	AU. 90	+10	G
	WU. 80	+65	G
	WU. 90	+45	G
	WU. 100	-10	G

AM/AD offset gearbox



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WU angular gearbox



41804544.eps

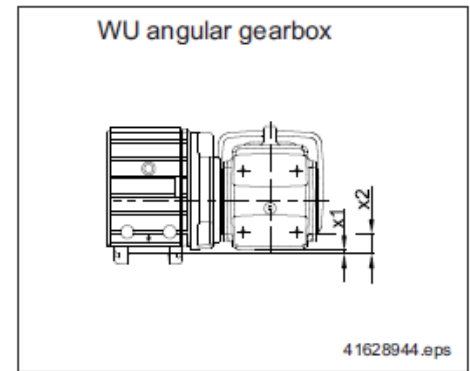
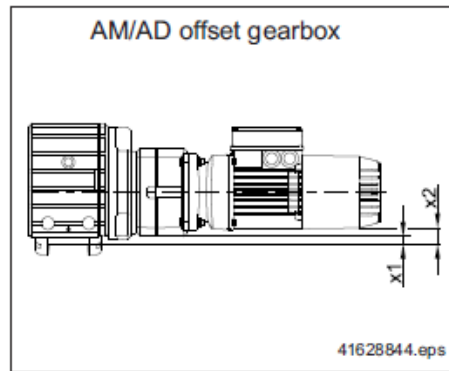
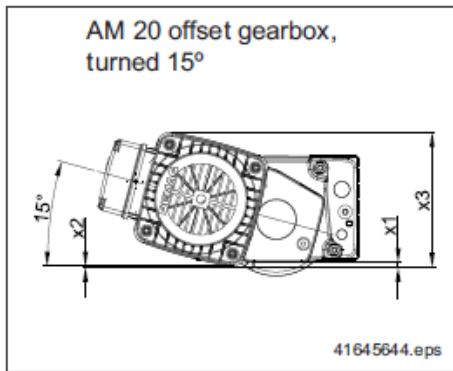
Obstacle edge G = Gearbox housing
Obstacle edge D = Torque bracket

**** Conversion Factor:**
Multiply mm by 0.03937
to get inches

20335044_034

1) Table values are based on the nominal travel wheel diameter (wheel block size). The ground clearance increases for travel wheel types C, E and F owing to the larger travel wheel diameter.

Ground Clearance Tables- Horizontal Gearbox & Direct Input



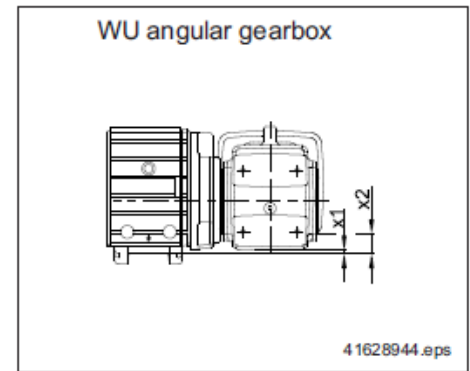
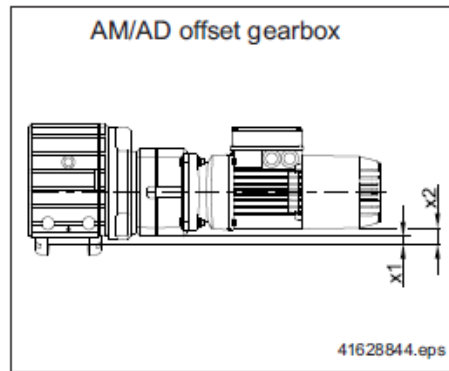
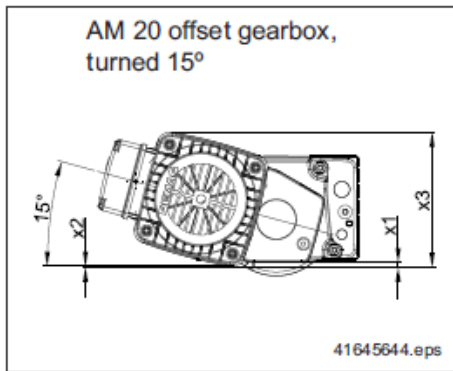
Wheel block	Gearbox	Ground clearance x1 ¹⁾ [mm] to gearbox housing	Component obstacle edge	Ground clearance x2 ¹⁾ [mm] to motor housing depending on size						
				ZB. 63/71	ZB. 80/90A	ZB. 90B/100	ZB. 112/132	ZB. 160/180A	ZB. 180B/200	ZB. 225
DRS 112	AM. 10 D	+1.0	G	-14	-23	-42	-	-	-	-
	AM. 20 D/T	-9.5	G	-14	-23	-42	-	-	-	-
	WU. 10 D	-18	D	+7.3	-1.2	-	-	-	-	-
	WU. 20 D/T	-24	G	+11	+2.0	-18	-	-	-	-
DRS 125	AM. 10 D	+5.5	D	-7.5	-16	-	-	-	-	-
	AM. 20 D/T	-3.0	G	-7.5	-16	-36	-	-	-	-
	AM. 30 D/T	-17	G	-7.5	-16	-36	-	-	-	-
	WU. 10 D	-13	D	+14	+5.3	-	-	-	-	-
	WU. 20 D/T	-18	G	+17	+8.5	-11	-	-	-	-
	WU. 30 D/T	-28	G	+20	+12	-8.0	-	-	-	-
DRS 160	AM. 20 D/T	+11	D	+10	+1.5	-18	-	-	-	-
	AM. 30 D/T	+1.0	G	+10	+1.5	-18	-	-	-	-
	AM. 40 D/T	-15	G	+10	+1.5	-18	-50	-	-	-
	WU. 20 D/T	-2.0	D	+35	+26	+6.5	-	-	-	-
	WU. 30 D/T	-10	G	+38	+29	+9.5	-	-	-	-
	WU. 40 D/T	-25	G	+39	+30	+11	-21	-	-	-
DRS 200	AM. 30 D/T	+15	D	+30	+22	+2.0	-	-	-	-
	AM. 40 D/T	+5.0	G	+30	+22	+2.0	-30	-	-	-
	AD. 50 D/T	-21	G	+30	+22	+2.0	-30	-	-	-
	WU. 30 D/T	-5.0	D	+58	+49	+30	-	-	-	-
	WU. 40 D/T	-5.0	G / D	+59	+50	+31	-1.4	-	-	-
	WU. 50 D/T	-20	G	+63	+55	+35	+3.3	-	-	-
	WU. 60 T	-105	G	+19	+10	-9.5	-42	-	-	-
	WU. 60 Q	-105	G	-25	-33	-53	-85	-	-	-
DRS 250	AD. 40 D/T	+20	D	+55	+47	+27	-5.0	-	-	-
	AD. 50 D/T	+4.0	G	+55	+47	+27	-5.0	-	-	-
	AD. 60 D/T	-20	G	+55	+47	+27	-5.0	-	-	-
	WU. 40 D/T	+20	G / D	+84	+75	+56	+24	-	-	-
	WU. 50 D/T	+5.0	G	+88	+80	+60	+28	-	-	-
	WU. 60 T	-80	G	+44	+35	+16	-17	-44	-	-
	WU. 60 Q	-80	G	+0.5	-8.0	-28	-60	-87	-	-
	WU. 70 T	-120	G	+49	+41	+21	-11	-38	-78	-101
	WU. 70 Q	-120	G	-1.0	-9.5	-29	-61	-88	-128	-151

Obstacle edge G = Gearbox housing
Obstacle edge D = Torque bracket

**** Conversion Factor:**
Multiply mm by 0.03937
to get inches

1) Table values are based on the nominal travel wheel diameter (wheel block size). The ground clearance increases for travel wheel types C, E and F owing to the larger travel wheel diameter.

Ground Clearance Tables- Horizontal Gearbox & Direct Input



Wheel block	Gearbox	Ground clearance x1 ¹⁾ [mm] to gearbox housing	Component obstacle edge	Ground clearance x2 ¹⁾ [mm] to motor housing depending on size						
				ZB. 63/71	ZB. 80/90A	ZB. 90B/100	ZB. 112/132	ZB. 160/180A	ZB. 180B/200	ZB. 225
DRS 315	AD . 50 D/T	+30	D	+88	+79	+60	+28	-	-	-
	AD. 60 D/T	+13	G	+88	+79	+60	+28	-	-	-
	AD. 70 D/T	-16	G	+88	+79	+60	+28	-	-	-
	WU. 50 D/T	+30	D	+121	+112	+93	+61	-	-	-
	WU. 60 T	-48	G	+76	+68	+48	+16	-11	-51	-74
	WU. 60 Q	-48	G	+33	+25	+5.0	-27	-54	-94	-117
	WU. 70 T	-88	G	+82	+73	+54	+22	-5.5	-46	-69
	WU. 70 Q	-88	G	+32	+23	+3.5	-29	-56	-96	-119
	WU. 80 T	-118	G	+56	+47	+28	-4.5	-32	-72	-95
DRS 400	WU. 80 Q	-118	G	+5.5	-3.0	-23	-55	-82	-122	-145
	AD. 60 D/T	+55	G / D	+130	+122	+102	+70	-	-	-
	AD. 70 D/T	+27	G	+130	+122	+102	+70	-	-	-
	AD. 80 D/T	-11	G	+130	+122	+102	+70	-	-	-
	WU. 70 T	-45	G	+124	+116	+96	+64	+37	-3.0	-26
	WU. 70 Q	-45	G	+74	+66	+46	+14	-13	-53	-76
	WU. 80 T	-75	G	+98	+90	+70	+38	+11	-29	-52
	WU. 80 Q	-75	G	+48	+40	+20	-12	-39	-79	-102
	WU. 90 T	-115	G	+98	+90	+70	+38	+11	-29	-52
DRS 500	WU. 90 Q	-115	G	+37	+29	+9.0	-23	-50	-90	-113
	AD. 70 D/T	+77	G	+180	+172	+152	+120	+93	+53	+30
	AD. 80 D/T	+39	G	+180	+172	+152	+120	+93	+53	+30
	AU. 90 D/T	0	G	+180	+172	+152	+120	+93	+53	+30
	WU. 80 T	-25	G	+148	+140	+120	+88	+61	+21	-2.0
	WU. 80 Q	-25	G	+98	+90	+70	+38	+11	-29	-52
	WU. 90 T	-65	G	+148	+140	+120	+88	+61	+21	-2.0
	WU. 90 Q	-65	G	+87	+79	+59	+27	0	-40	-63
	WU. 100 T	-140	G	+136	+128	+108	+76	+49	+9.0	-14
	WU. 100 Q	-140	G	+58	+50	+30	-2.0	-29	-69	-92

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Note: More favourable ground clearance can be achieved when gearbox type WU 60 – 100 model B14.2/B14.8 is used.

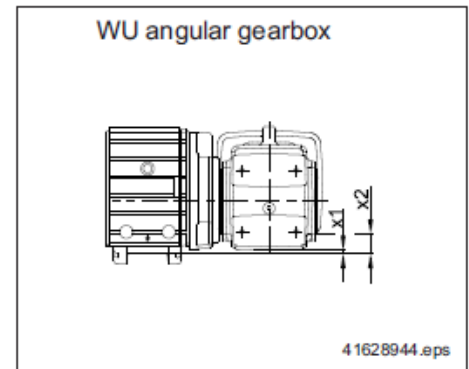
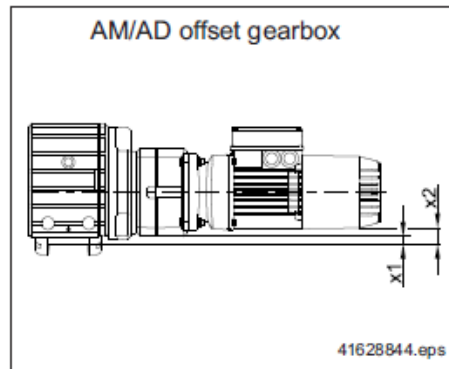
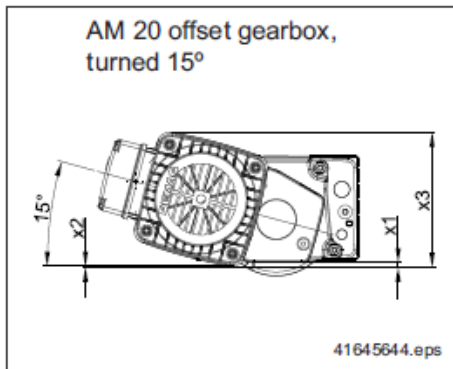
Obstacle edge G = Gearbox housing

Obstacle edge D = Torque bracket

**** Conversion Factor:**
Multiply mm by 0.03937
to get inches

1) Table values are based on the nominal travel wheel diameter (wheel block size). The ground clearance increases for travel wheel types C, E and F owing to the larger travel wheel diameter.

Ground Clearance Tables- AM 20 Offset Gearbox Turned 15°



Wheel block	Gearbox	Ground clearance x1 ¹⁾ [mm] to gearbox housing	Component obstacle edge	Ground clearance x2 ¹⁾ [mm] to motor housing depending on size			Overall height x3 ¹⁾ [mm] to motor housing depending on size		
				ZB. 63/71	ZB. 80/90A	ZB. 90B/100	ZB. 63/71	ZB. 80/90A	ZB. 90B/100
DRS 112	AM. 20	-1.4	G	+3.5	-6.2	-28	+162	+172	+194
DRS 125		+5.1	G	+10	0	-22	+169	+179	+201
DRS 160		+11	D	+27	+18	-4.3	+186	+196	+218

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Obstacle edge G = Gearbox housing

Obstacle edge D = Torque bracket

**** Conversion Factor:**
Multiply mm by 0.03937
to get inches

1) Table values are based on the nominal travel wheel diameter (wheel block size). The ground clearance increases for travel wheel types C, E and F owing to the larger travel wheel diameter.