
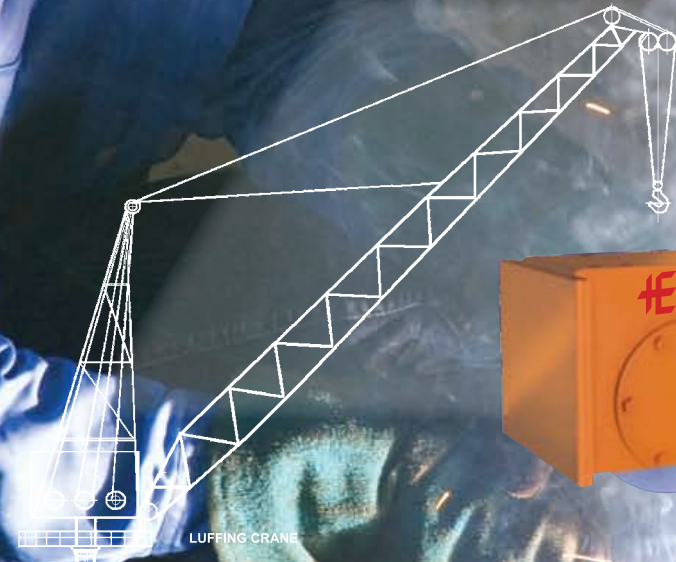
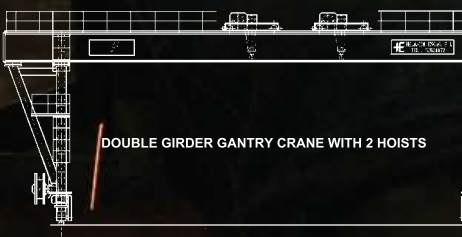
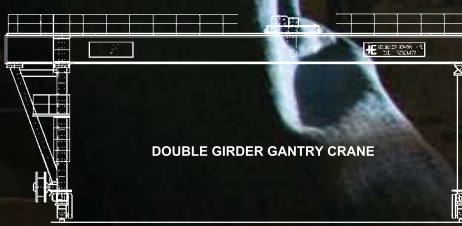
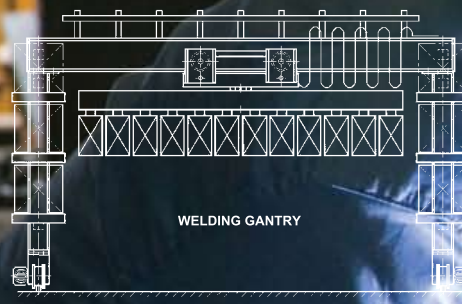


HELM SION ENGINEERING PTE LTD

CRANE COMPONENTS

 Helm Wheel Block / Drive



MEMBER OF UMW GROUP

RAIL WHEELS SELECTION

Rail → Wheel

According to FEM 4.2.4.1.2: FEM 4.2.4.1.3

$$\text{Wheel Pressure } P'_{\max} = D * (b - 2 * r) * K$$

Wheel diameter = D (cm)

Rail width = b (cm)

Radius of rail edge = r (cm)

Strength of material type = K (kg/cm²)

Load pressure P' = (kg) - At four wheel crane system

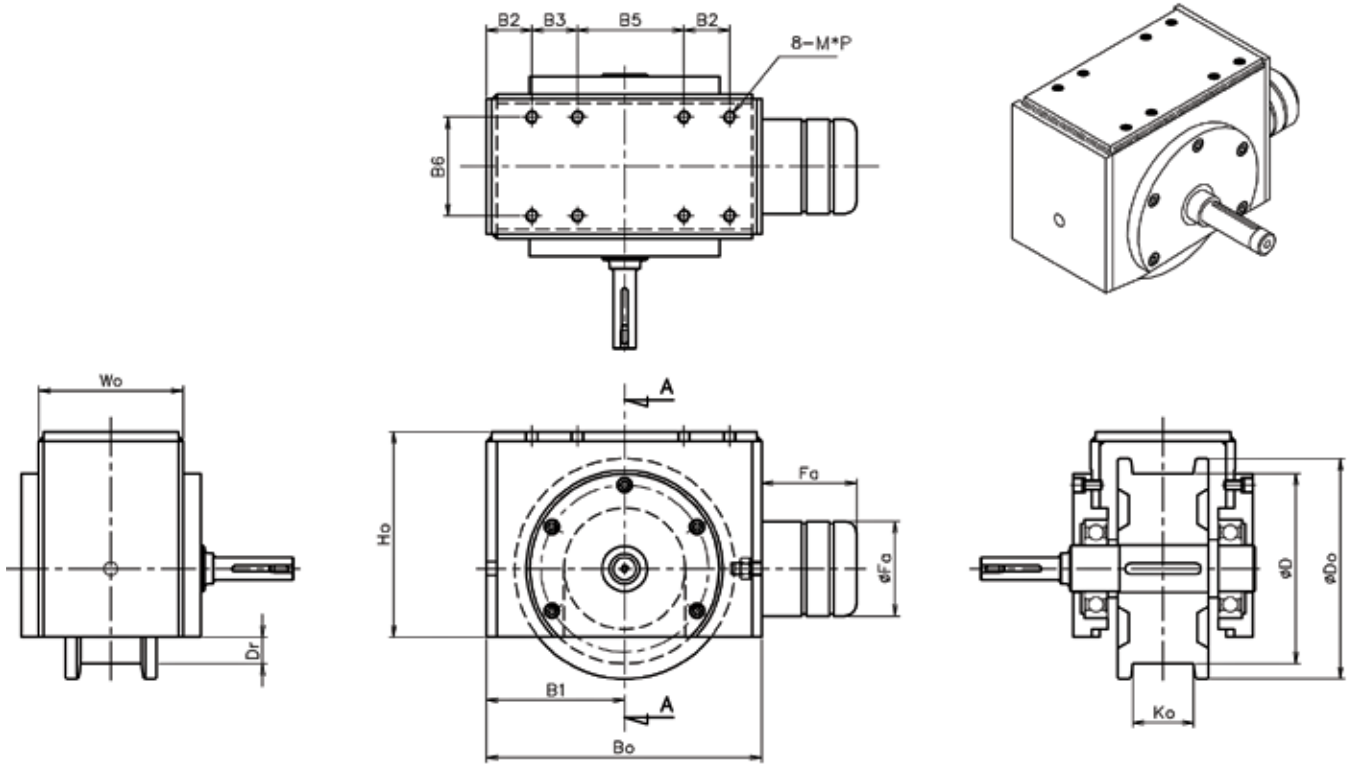
Material of wheel SCM435 (34CrMo4) : Hrc 42~48 (K=80 kg/cm²)

Dia (mm)	125	160	200	250	320	400	500	630
P'max=	kg	kg	kg	kg	kg	kg	kg	kg
JIS 12 kg/m	2540	3251	4064	5080	6502	8126	10160	12802
JIS 15 kg/m	2698	3453	4317	5396	6907	8634	10792	13598
JIS 22 kg/m	3492	4470	5587	6984	8940	11174	13968	22403
JIS 30 kg/m	4445	5690	7112	8890	11379	14224	17780	17600
JIS 37 kg/m	4683	5994	7493	9366	11988	14986	18732	23602
JIS CR73 kg/m	8400	10752	13440	20800	26624	33280	41600	52416
JIS CR100 kg/m	10400	13312	16640	6984	8940	11174	13968	17600
DIN A45	3967	5077	6347	7933	10155	12693	15867	19992
DIN A55	4833	6187	7733	9667	12373	15467	19333	24360
DIN A65	5700	7296	9120	11400	14592	18240	22800	28728
DIN A75	6433	8235	10293	12867	16469	20587	25733	32424
DIN A100	8667	11093	13867	17333	22187	27733	34667	43680
DIN A120	10667	13653	17067	21333	27307	34133	42667	53760
SQ. Bar 32	2800	3584	4480	5600	7168	8960	11200	14112
SQ. Bar 38	3400	4352	5440	6800	8704	10880	13600	17136
SQ. Bar 44	4000	5120	6400	8000	10240	12800	16000	20160
SQ. Bar 50	4600	5685	7360	9200	11776	14720	18400	23184
SQ. Bar 65	6100	7808	9760	12200	15616	19520	24400	30744
SQ. Bar 75	7100	9085	11360	14200	18176	22720	28400	35784
SQ. Bar 90	8600	11008	13760	17200	22016	27520	34400	43344
SQ. Bar 100	9600	12288	15360	13440	24576	30720	38400	48384
Shaff d(mm)	30	30	30	40	50	60	70	80

Travelling resistance due to wheel friction:

Wr (kg/kg) =	0.0122	0.0103	0.0091	0.0082	0.00736	0.0068	0.0062	0.0057
	125	160	200	250	320	400	500	630

Selection and Dimension Chart



WHEEL BLOCK	WHEEL LOAD (KN)	TRAVEL WHEEL D	DIMENSIONS IN (MM)												
			B0	B1	B2	B3	B5	B6	Do	Dr	Ho	Ko	Fa	Wo	M*P
HEW-12	35	125	200	100	40	30	60	80	155	10	150	60	80	126	M12*P1.75
HEW-16	50	160	235	117.5	37.5	30	100	100	195	20	180	65	100	146	M12*P1.75
HEW-20	80	200	280	140	45	35	120	120	240	30	220	70	100	160	M16*P2.0
HEW-25	100	250	350	175	60	40	150	120	290	0	260	80	125	190	M16*P2.0
HEW-32	120	320	440	220	70	50	200	120	360	50	335	80	125	200	M20*P2.5
HEW-40	180	400	580	290	90	50	300	120	440	70	410	85	160	215	M20*P2.5
HEW-50	260	500	650	325	95	70	320	130	540	100	470	85	200	225	M20*P2.5

NOTES:

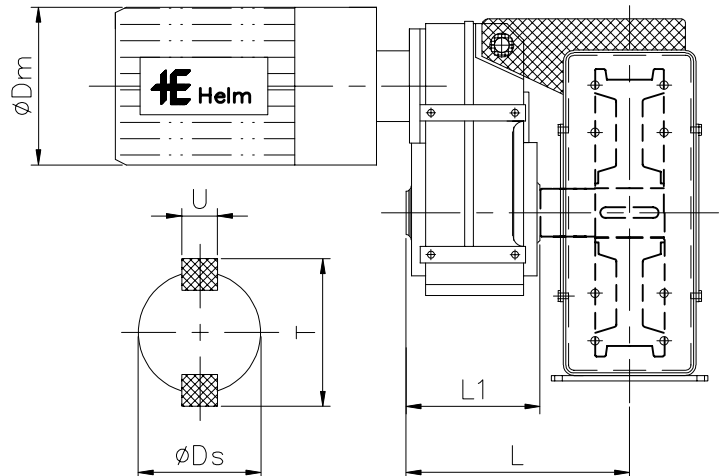
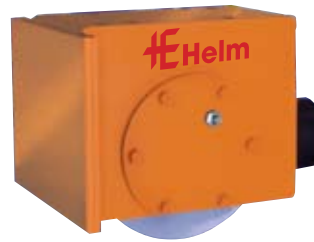
Dimensions are for estimating purposes only.

Wheel Block Travel System

The HEW wheel block travel system is an advanced rail-mounted range designed for moving loads at variable speeds and the ideal choice for most handling operations.

The wheel block travel units system is precision engineered for outstanding performance and minimal maintenance proven under full dynamic load tests. Stringent testing and multi-stage quality control ensures maximum safety and reliability under the toughest service condition.

- Size ranges for wheel load up to 260kN.
- Designed to allow for ease of maintenance in situ.
- Alloy steel (34CrMo4) travel wheel reduces friction between wheel flanges and rails giving less wear than normally encountered with other materials.
- Heavy duty steel housing protects the bearing assembly from damage and dirt.
- Torque arm, connecting parts and buffer are easily fitted.
- Rapid fitting and removal for all connection variants.
- The perfect match for the HEW axle drive system.



HELM WHEEL BLOCK / DRIVE - ASSEMBLY SELECTION

Wheel Type	Gearbox	Brake Motor	Gear Ratio	Travel Speed (M/min)	Power (kw)	Dm (mm)	Ds (mm)	T (mm)	U (mm)	L (mm)	LI (mm)
HEW - 12	HEPA37 (2K)	AM71N4-BU-PO.64/F87	47.02	0-20	0.64	145	30	36.6	8	179	95
		AM80N4-BU-P1.3/F87	23.88	0-40	1.3	175					
HEW - 16	HEPA47 (2K)	AM71N4-BU-PO.64/F87	65.36	0-20	0.64	145	30	36.6	8	199	130
		AM80N4-BU-P1.3/F87	28.88	0-40	1.3	175					
HEW - 20	HEPA47 (2K)	AM80K4-BU-PO.96/F87	79.72	0-20	0.96	175	30	36.6	8	220	130
		AM90S4-BU-P1.91/F87	36.61	0-40	1.91	195					
HEW - 25	HEPA67 (2K)	AM80N4-BU-P1.3/F87	95.94	0-20	1.3	175	40	46.6	12	240	150
		AM90L4-BU-P2.6/F87	50.74	0-40	2.6	195					
HEW - 32	HEPA77 (2K)	AM90S4-BU--P1.9/F87	114.45	0-20	1.9	200	50	59.4	14	288	160
		AM100L4-BU-P4.4/F87	72.23	0-40	4.4	215					
HEW - 40	HEPA87 (2K)	AM190L4-BU-P2.6/F87	159.61	0-20	2.6	215	60	68.8	18	325	180
		AM100L4-BU-P6/F100	88.01	0-40	6	250					
HEW - 50	HEPA97 (2K)	AM100L4-BU-P4.4/F100	223.88	0-20	4.4	300	70	79.8	20	348	200
		AM112M4-BU-P8.0/F100	112.99	0-40	8	300					