

Heavy Lifting Solutions

 **NUSA**[®]
KRANTECHNIK

INDONESIA LIFTING TECHNOLOGY



MADE IN
INDONESIA 
Gerak Maju Angkat NUSANTARA

PRODUCT FEATURES - VARIOUS



**MADE IN
INDONESIA**



Gerak Maju Angkat NUSANTARA



NUSA CRANES is the pioneer of hoist manufacturer in Indonesia. Designer and manufacturer we provides of wire rope hoist and crane components. As well as efficiency with particular attention on safety, durable components, easy maintenance, long time service and after sales services.

HOIST COMPONENT



HOIST DRIVE UNIT

Heavy duty gear motor design based on FEM regulation machinery directive EC 2006/42/AT for lifting gear, allowing safe reliable lifting of loads. Double speed motor, smooth and safe acceleration, high power density, and double surface brake.



TROLLEY WHEEL

Designed complies to DIN 15070. Induction heat treatment process, more wear resistant and crush. With groove indicator as weariness limit for long time-easy maintenance.

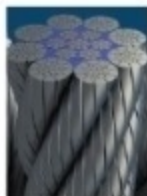
ELECTRO-MAGNETIC BRAKE

High performance of electromagnetically released spring - applied brake. Complied to safety rules FEM 1.001. In case if your main electric power supply is suddenly shut down, however, it may also perform a braking function, so your goods will not fall down.



WIRE ROPE

High quality grade of material parallel-laid eight strand. And the most important is crush resistant, high breaking force, long life and reduce down time cost.



HOOK

Forged hook with safety latch to ensure your goods stay in right position. Material high grade class V compliance to DIN 15404.

VARIOUS TYPE OF WHEEL BLOCK

Wheel block system with optimum performance. Wheel load up to 550 kN – with compact dimensions



LIFTING APPLIANCES

- FEM Group regulation
- DIN Standard

SELECTION CRITERIA

To choose the right hoists the following criteria should be taken by your needs:

- Maximum loading capacity
- Mean lifting height (lifting path hook)
- Mean hoisting speed
- Number of lifting operations per hour (cycles/ hour)
- Working time per day

The type of the hoists to be defined in accordance with the load spectrum, the average operating time per day in hours, the loading capacity and the reeving.

SELECTION EXAMPLE

Load capacity	: 5000 kg
Mean lifting height(H)	: 4 m
Hoisting speed (V)	: 5 m/min *
Reeving	: 4/1 Fall **
Load spectrum	: "medium"
Cycles per hour (N)	: 10 C/h
Working time/ day (T)	: 8 hours

The average operating time per day of the hoist is to be calculated in the following equation:

$$t = \frac{2 * H * N * T}{V * 60} = \frac{2 * 4 * 10 * 8}{5 * 60} = 2.13 \text{ hours}$$

For the "medium" load spectrum and average operating time/ day of 2.13 hours, the group "2m" is shown in table "LOAD SPECTRUM - CLASS OF OPERATING TIME".

The FEM group is one the main criteria in hoisting unit selection beside of other requirements such as load capacity, lifting height, lifting speed and others. Standard hoist is normally designed for a mean theoretical service life after 10 years. The general overhaul must be carried out once the theoretical service life has been attained.

Mechanism FEM Group	1Bm/M	1Am/M	2m/M5	3m/M6	4m/M7
Load Spectrum	Theoretical service life in hour				
1.Light duty	3200	6300	12500	25000	50000
2.Medium	1600	3200	6300	12500	25000
3.Heavy duty	800	1600	3200	6300	12500
4.Very heavy duty	400	800	1600	3200	6300

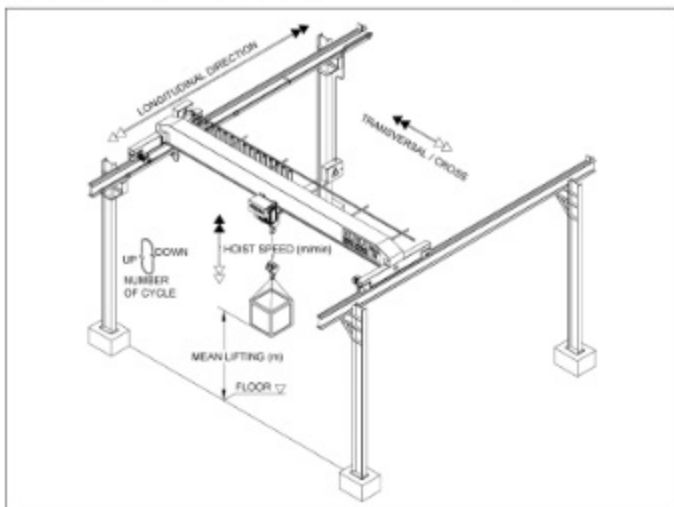
From data above given mechanism FEM group at 2m and load spectrum at medium duty, so the theoretical service life is 6300 hour (hoist operating time). Converted to year then obtained:

$$\left(\frac{\text{Theoretical service life in hour}}{\text{Average operating time per day}} \right) = \left(\frac{6300 \text{ hours}}{2.13 \text{ hours}} \right) = 11.8 \text{ year}$$

Work 250 days per year 250 days

LOAD SPECTRUM	WORKING TIME				
	Mean working time per working day (in hour)				
1 LIGHT DUTY (K ≤ 0.5) Hoist unit which are usually max load in exceptional cases. Mainly at very small loads. Small dead load	≤ 2	2 - 4	4 - 8	8 - 16	> 16
2 MEDIUM DUTY (0.5 < K ≤ 0.83) Hoist unit which are usually subject to small loads but rather often to maximum loads. Medium dead loads	≤ 1	1 - 2	2 - 4	4 - 8	8 - 16
3 HEAVY DUTY (0.83 < K ≤ 0.8) Hoist unit which are usually subject to medium load but frequently to maximum loads. Heavy dead loads	≤ 0.5	0.5 - 1	1 - 2	2 - 4	4 - 8
4 VERY HEAVY DUTY (0.8 < K ≤ 1) Hoist unit which are usually subject to maximum or almost maximum loads. Very heavy dead	≤ 0.25	0.25 - 0.5	0.5 - 1	1 - 2	2 - 4

Mechanism according to DIN 15020 or FEM 9.551 1Bm/M3 1Am/M4 2m/M5 3m/M6 4m/M7

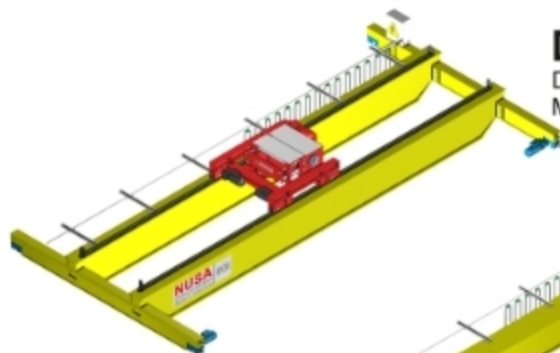


**Reeving Mechanism



If the FEM group of the hoisting unit not selected properly, the life time of the hoist may be shortened considerably, it will cause the increase of the maintenance cost and down time in production process. The maintenance team should ensure that the operation period does not exceed the theoretical service life. In this case, the maintenance inspector has to determine, the operation of hoist can be continued or general overhaul should be carried out. The objective of this rule is to ensure that the hoisting unit will work within the specified range of its capacity and so will reach the intend service life-time. Further information please contact manufacturer.

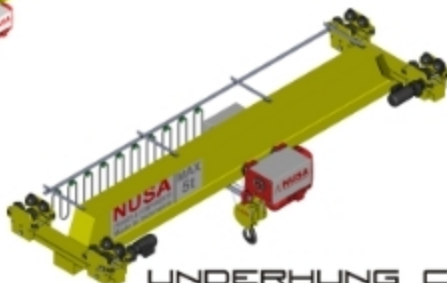
VARIOUS CRANE TYPE



DG-OHC
Double Girder Overhead Crane
Max SWL up to 80 tons



SG-OHC
Single girder overhead crane
Max SWL up to 20 tons



UNDERHUNG CRANE
Max SWL up to 16 tons

MONORAIL HOIST
ARTICULATED TROLLEY
Single Girder curved profile
Max SWL up to 20 tons



DG-FGC
Double Girder Full Gantry Crane
Max SWL up to 80 tons

SG-FGC
Single Girder Full Gantry Crane
Max SWL up to 20 tons



Quality Satisfaction

in action. . . .



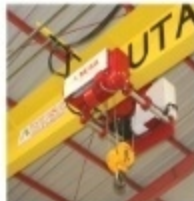
SS TYPE



SA TYPE



F TYPE



S TYPE



D TYPE



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Further Information, Please Contact :

