

# LOAD CHAIN

## Grade 100, VH, Load Chain for Lifting Purposes

fine tolerance for manually operated chain hoists  
According to IOS16872

WLL = 0.040 044 1dn<sup>2</sup> in tonnes  
F<sub>MFP</sub> = 0.981 747 7dn<sup>2</sup> in kilonewtons  
F<sub>B</sub> = 1.570 796 3dn<sup>2</sup> in kilonewtons

Nominal dia d <sub>n</sub> (mm)	Pitch p <sub>n</sub> (mm)	Link width			Working Load Limit WLL (tonne)	Mfg Proof Force F <sub>MFP</sub> (kN)	Breaking Force F <sub>B</sub> (kN)	Weight (=kg/m)
		Internal w <sub>1</sub> min. (mm)	External w <sub>3</sub> max. (mm)	Internal w <sub>4</sub> min. (mm)				
3	9	3.8	10.7	3.6	0.36	8.8	14.1	0.21
4	12	5.0	14.3	4.8	0.63	15.7	25.1	0.35
5	15	6.3	17.9	6.0	1.00	24.5	39.3	0.54
6	18	7.5	22.5	7.2	1.44	35.3	56.6	0.78
6.3	18.9	7.9	22.6	7.6	1.60	39.0	62.3	0.86
7.1	21.3	8.9	25.4	8.5	2.00	49.5	79.2	1.10
8	24	10.0	28.6	9.6	2.50	62.8	101.0	1.39
9	27	11.3	32.2	10.8	3.15	79.5	127.0	1.76
10	30	12.5	35.8	12.0	4.00	98.2	157.0	2.17

Minimum total ultimate elongation: 17%  
Minimum mean stress at breaking force, F<sub>B</sub>: 1000 N/mm<sup>2</sup>  $\frac{2(F_B)}{\pi d_n^2}$

## Grade 80, TH, Load Chain for Lifting Purposes

fine tolerance for manually operated chain hoists  
According to IOS16877

WLL = 0.032 035 3dn<sup>2</sup> in tonnes  
F<sub>MFP</sub> = 0.785 398 2dn<sup>2</sup> in kilonewtons  
F<sub>B</sub> = 1.256 637 1dn<sup>2</sup> in kilonewtons

Nominal dia d <sub>n</sub> (mm)	Pitch p <sub>n</sub> (mm)	Link width			Working Load Limit WLL (tonne)	Mfg Proof Force F <sub>MFP</sub> (kN)	Breaking Force F <sub>B</sub> (kN)	Weight (=kg/m)
		Internal w <sub>1</sub> min. (mm)	External w <sub>3</sub> max. (mm)	Internal w <sub>4</sub> min. (mm)				
3	9	3.8	10.7	3.6	0.28	7.1	11.3	0.21
4	12	5.0	14.3	4.8	0.50	12.6	20.1	0.35
5	15	6.3	17.9	6.0	0.80	19.6	31.4	0.54
6	18	7.5	22.5	7.2	1.15	28.3	45.2	0.78
6.3	18.9	7.9	22.6	7.6	1.25	31.2	49.9	0.86
7.1	21.3	8.9	25.4	8.5	1.60	39.6	63.3	1.10
8	24	10.0	28.6	9.6	2.00	50.3	80.4	1.39
9	27	11.3	32.2	10.8	2.50	63.6	102.0	1.76
10	30	12.5	35.8	12.0	3.15	78.5	126.0	2.17
11.2	33.6	14.0	40.1	13.4	4.00	98.5	158.0	2.71

Minimum total ultimate elongation: 15%  
Minimum mean stress at breaking force, F<sub>B</sub>: 800 N/mm<sup>2</sup>  $\frac{2(F_B)}{\pi d_n^2}$

Nominal pitch, p<sub>n</sub> based upon 3d<sub>n</sub> with a maximum nominal value of 3, 3d<sub>n</sub>;  
Minimum internal width w<sub>4</sub> = 1.2d<sub>n</sub> at the weld;  
Minimum internal width w<sub>1</sub> = 1.25d<sub>n</sub> away from the weld;  
Maximum external width w<sub>3</sub> = 3.75d<sub>n</sub> over the weld.

