

Fact Sheet

dynasteel omni 6x36
...far more than normal

Safety...

What we produce and supply needs special care...,
...Care about consequences in case of failure.
It's not just quality, it's safety that matters.

31.10.2009

A long way to 'far more than normal', or what matters before wire rope production is accomplished.

What we expect a rope to have, is optimum performance, relating to safety, functionality, and service time, minimising the risk of accidents, damages or malfunctions of equipment, waste of time and money.

By implication, this means: What we do not expect is a steel wire rope which surrenders due to insufficient resistance to tensile forces arising from constantly changing loads, tensile forces from accelerated and inconsistent movements, flexural forces on deflection, torsion forces from oblique course of single wires and strands, oscillatory tension, compressional tension from physical touching of rope and sheaves or drums, or between individual wires in the rope, everything a rope may experience in everyday's life.

What we offer, is a 6x36 construction class steel wire rope, locally produced under extreme quality orientated aspects throughout the complete process of manufacture, namely

Heat treating, cleaning, coating and drying unit ensuring high cleanness, and metallic purity level of wire rod material.

Proper wire drawing process with careful surface cleaning, pulling dies exchanged and re-conditioned in early intervals, wire treatment of premium diamond dust based compound, adequate repeats of patenting processes, ensuring first quality wires with optimal accuracy relating to ductility, surface structure, and dimensional accuracy.

Modern galvanizing plant ensuring wire surface with high adhesion of zinc coating, and lowest diameter tolerance.

Computer based rope construction design, allowing accurate calculation of wire diameters, in coordination with lay angles, spaces between wires, and strands, ensuring excellent performance. First class machinery for stranding and closing operations, wires and strands transformed damage free into strands, and rope resp., ensuring highest performance of the finished rope, (which we expect, as detailed above).

What we get is a remarkable result of extraordinary efforts:

dynasteel omni 6x36

...far more than normal!

Computer controlled construction.

Optimised interior lubrication. Increased zinc coating, average 40% over official standards.

Increased flexural (bending) and torsion properties, average 50% over official standards.

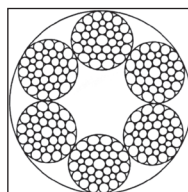
(For details see excerpt from our general catalogue on next pages)



6x36 FC

Parallel lay round strand rope with fibre core

Nominal Rope Diameter	Rope Weight	Minimum Breaking Force at tensile grade			
		1770N (180kgf/mm ²)		1960N/mm ² (200kgf/mm ²)	
mm	~ kg/m	kN	kgf	kN	kgf
9	0,297	47,3	4820	52,4	5340
10	0,367	58,4	5960	64,7	6600
11	0,444	70,7	7200	78,3	7990
12	0,528	84,1	8580	93,1	9500
13	0,620	98,7	10100	109	11100
14	0,719	114	11600	127	13000
15	0,825	131	13400	146	14900
16	0,940	150	15300	166	16900
18	1,19	189	19300	210	21400
20	1,47	234	23900	259	26400
22	1,78	283	28900	313	31900
24	2,11	336	34300	373	38000
26	2,48	395	40300	437	44600
28	2,88	458	46700	507	51700
30	3,30	526	53700	582	59400
32	3,76	598	61000	662	67500
34	4,25	675	68900	748	76300
36	4,76	757	77200	838	85500
38	5,30	843	86000	934	95300
40	5,87	935	95400	1030	105000
42	6,77	1030	105000	1140	116000
44	7,11	1130	115000	1250	128000
46	7,77	1240	126000	1370	140000
48	8,46	1350	138000	1490	152000
50	9,18	1460	149000	1620	165000
52	9,92	1580	161000	1750	179000
56	11,5	1830	187000	2030	207000
60	13,2	2100	214000	2330	238000



dynasteel omni

...far more than normal!

- ⊕ Computer controlled construction
- ⊕ Optimised interior lubrication
- ⊕ Increased zinc coating, average 40% over standard
- ⊕ Increased flexural and torsion properties, average 50% over standard

Regular...

- Material: Drawn galvanized steel wire
- Lubrication: Neutral acid-free inside and outside
- Type/direction of lay: Ordinary lay sZ
- Tensile grade: 1770N/mm²

Other requirements? By arrangement we can supply: No or special galvanization, different type/direction of lay, special lubrication. Also for higher tensile grades (1960 with 10.7%, and 2160 with 22.0% higher breaking force in relation to 1770).

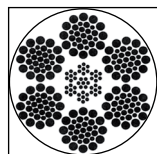
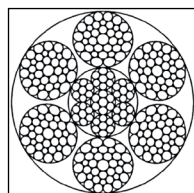
Rules and standards...

Even if not explicitly indicated: Compliance with standards (ISO, EN, DIN) and statutory provisions. Product specifications continually updated to meet requirements

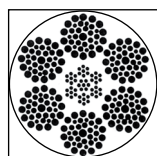
The rope weight is defined as the approximate calculated length mass kg/m (informative). The rope grade is the acronym for the nominal tensile strength of the wires in N/mm². The permitted limit deviation of the rope diameter from nominal diameter is +8-0% for 2 to <4mm, +7-0% for 4 to <6mm, +6-0% for 6 to <8mm and +5-0% for 8mm and more.

For the case at hand...

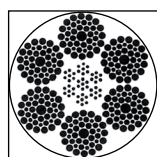
Wear resistant through parallel lay and high outer wire diameter, high breaking strength. Almost universal deployment where no rotation resistance or extreme breaking strength required. Flexible and very robust if with fibre core (FC), or still flexible, but extremely robust if with steel core (IWRC).



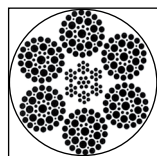
6x31 Warrington-Seale



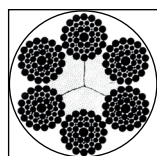
6x36 Warrington-Seale



6x41 Warrington-Seale



6x46 Seale-Filler



6x49 Filler-Seale

All examples of rope construction shown here have identical parameters and features, hence are summarised into one rope grade. 6x36 is not only the description of a rope construction, rope structure or number of strands and wires but also the universal description of a rope grade. Where individual rope constructions hardly differ in their technical application summarisation into one rope grade represents a welcome simplification in the choice of suitable rope for a specific service application.

6x36 IWRC

Parallel lay round strand rope with steel core

Nominal Rope Diameter	Rope Weight	Minimum Breaking Force at tensile grade			
		1770N/mm ² (180kgf/mm ²)		1960N/mm ² (200kgf/mm ²)	
mm	~ kg/m	kN	kgf	kN	kgf
9	0,331	51,0	5200	56,5	5770
10	0,409	63,0	6430	69,8	7120
11	0,495	76,2	7770	84,4	8610
12	0,589	90,7	9250	100	10200
13	0,691	106	10800	118	12000
14	0,802	124	12700	137	14000
15	0,920	142	14500	157	16000
16	1,05	161	16400	179	18300
18	1,33	204	20800	226	23100
20	1,64	252	25700	279	28500
22	1,98	305	31100	338	34500
24	2,36	363	37000	402	41000
26	2,76	426	43500	472	48100
28	3,21	494	50400	547	55800
30	3,68	567	57900	628	64100
32	4,19	645	65800	715	72900
34	4,73	728	74400	807	82300
36	5,30	817	83300	904	92200
38	5,91	910	92800	1010	103000
40	6,54	1010	103000	1120	114000
42	7,21	1110	113000	1230	125000
44	7,92	1220	124000	1350	138000
46	8,65	1330	136000	1480	151000
48	9,42	1450	148000	1610	164000
50	10,2	1580	161000	1740	177000
52	11,1	1700	173000	1890	193000
56	12,8	1980	202000	2190	223000
60	14,7	2270	231000	2510	256000
64	16,8	2580	263000	2860	292000

Regular...

- Material: Drawn galvanized steel wire
- Lubrication: Neutral acid-free inside and outside
- Type/direction of lay: Ordinary lay sZ
- Tensile grade: 1770N/mm²

Other requirements? By arrangement we can supply: No or special galvanization, different type/direction of lay, special lubrication. Also for higher tensile grades (1960 with 10.7%, and 2160 with 22.0% higher breaking force in relation to 1770).