

Hydraulic winches



Selection table

Please fill in the table for 10 to 50 tons

Operating conditions – Design criteria (All values related to <input type="checkbox"/> first / <input type="checkbox"/> top rope layer)			
Rope loads and winch ratings			
No. of ropes on drum	W		
Nominal line pull (for each rope)			
Line pull at drum	F ₁	(kN)	
Rope speed	V ₁	(m/min)	
Empty hook			
Line pull at drum	F _{empty}	(kN)	
Rope speed	V _{empty}	(m/min)	
Installed power	P	(kW)	
Rating acc. to FEM Section I			
Drive unit class	Load conditions	Betriebsklasse	
<input type="checkbox"/> M	<input type="checkbox"/> L	<input type="checkbox"/> T	
Approval acc. to classification society			
<input type="checkbox"/> ABS	<input type="checkbox"/> DNV	<input type="checkbox"/> GL	
<input type="checkbox"/> LRS	<input type="checkbox"/> RMRS	<input type="checkbox"/> Others	
Alternative rating			
Load cond.	F ₁ (kN)	T _{dyn} (Nm)	V ₁ (m/min) n ₁ (min ⁻¹) Time slice (%)
1			
2			
3			
4			100 %
Calculated life time _____ (hour)			
Safety against _____ (-)			
<input type="checkbox"/> Yield strength <input type="checkbox"/> Break			
with			
<input type="checkbox"/> T _{dyn} <input type="checkbox"/> T _{stat} _____ (Nm)			
<input type="checkbox"/> F _{dyn} <input type="checkbox"/> F _{stat} _____ (kN)			

Technical data

Diameter of rope drum	D ₁	(mm)	Drum Lead	No. of rope layers	z	(-)
Length of drum			<input type="checkbox"/> right <input type="checkbox"/> left	Length of rope to		
between flanges	L ₂	(mm)	Type of rope groove	be wound including		
Rope diameter	d	(mm)	<input type="checkbox"/> DIN 15061 <input type="checkbox"/> Special <input type="checkbox"/> grooveless	3 safety turns	L _s	(m)
Rope groove pitch	p	(mm)	Position of rope anchor	Diameter of drum flanges	D ₂	(mm)
			<input type="checkbox"/> drive side <input type="checkbox"/> opposite to drive	Ratio	i	(-)

Drive electric motor

Power		(kW)
Speed		(min.)
Control (Frequency inverter; ON/OFF; Softstarter)		
Voltage, AC/DC		
Starting torque	T _A	(Nm)
Breakdown torque	T _k	(Nm)
Power-on time	ED	(%)
Starting per hour		

Drive hydraulic motor

Available oil flow	Q	(l/min)
Available differential pressure	Δp	(bar)

Brake

Apply as	
<input type="checkbox"/> Parking brake	<input type="checkbox"/> Service brake
Design	
<input type="checkbox"/> Spring loaded multi disc brake	
<input type="checkbox"/> with backstop	
<input type="checkbox"/> Brake motor	
<input type="checkbox"/> Disc brake	
<input type="checkbox"/> Drum brake	
Actuation	
<input type="checkbox"/> hydraulically	min. release pressure _____ (bar)
<input type="checkbox"/> electric	max. release pressure _____ (bar)
	expected back pressure _____ (bar)