



# Basic Parameters for Concrete Drilling and Sawing equipment

IACDS Standard 2007/1  
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## **Preamble**

The IACDS Standard 2007/1 has been elaborated by manufacturers of machines for the concrete drilling and sawing industry including contractors knowing the business for many years.

First ideas to unify the description parameters of hydraulic machines were presented to the IACDS delegates already in 2002. It took some more years until a draft for uniform parameters was ready to be discussed by the delegates in 2006. A broad discussion finally lead to a final draft, discussed and amended on the occasion of the IACDS 2007 annual meeting.

IACDS expects that manufacturers of machines update their specifications within one year after publication of this standard.

## **Main authors:**

Martin Ch. **Braun**, Austria  
Martin **Goedickemeier**, Liechtenstein  
Andrey **Kosolapov**, Russia  
Jan **Lemos**, Sweden  
Siegfried **Uebleis**, Austria

## compulsory parameters for machines (example EU) to be modified in other countries

applicable to	Standard
<b>Safety rules</b>	DIN/ISO 3744
<b>Wire and wall saws</b>	prEN 15027
<b>Core drilling machines on drill rigs</b>	EN 12348
<b>Safety requirements for grinding tools with diamond or boron nitride</b> (includes diamond saw blades and diamond wires)	EN 13236

## power packs (hydraulic units)

parameter	example
<b>connected load / power input</b>	400 V / 32 A / 18,0 kW
<b>hydraulic power output</b>	13,7 kW (l/min x bar / 600) piston pump - variable
<b>kind of pump</b>	geared pump - constant
	multiple geared pump, 3-stage
<b>pump capacity</b>	0 - 60 l/min / 0 - 260 bar (variable displacement pump)
	45 l/min / 210 bar (fixed displacement pump )
<b>Weight (including oil and fixed cables)</b>	139,0 kg

<b>wall saws and floor saws</b>	
<b>parameter</b>	<b>example</b>
<b>max. saw blade diameter</b>	1500 mm
	<b>without precut</b>
<b>max. cutting depth</b>	620 mm
<b>motor for saw blade drive</b> on electric motors input (P1) and output power (P2) at the saw blade rating mode (S1) and speed	hydraulic geared motor
	hydraulic piston motor
	three phase AC motor P1: 10 kW -S1; 2.850 rpm; P2: 7,5 kW-S1; 2.850 rpm
	high-cycle-motor P1: 20 kW-S1; 0 - 30.000 rpm; P2: 14,7 kW-S1; 0 - 30.000 rpm
<b>power train</b>	gears
	belt
	chain
	direct drive
<b>output speed</b>	0 - 1200 rpm
<b>max.drive torque at the saw blade</b>	190 Nm @rpm
	<b>starting torque</b>
<b>feeding system / control</b>	electric / fully automated
	electric / manual
	hydraulic / manual
	manual operated / manual
<b>weight</b>	32,0 kg

<b>wire saws</b>	
<b>parameter</b>	<b>example</b>
<b>motor for wire drive</b> on electric motors input (P1) and output power (P2) at the drive wheel rating mode (S1) and speed	hydraulic geared motor
	hydraulic piston motor
	three phase AC motor P1: 10 kW -S1; 2.850 rpm; P2: 7,5 kW-S1; 2.850 rpm
	high-cycle-motor P1: 20 kW-S1; 0 - 30.000 rpm; P2: 14,7 kW-S1; 0 - 30.000 rpm
<b>circumferential speed at the drive wheel</b>	0 - 30 m/s
<b>max. drive torque at the drive wheel</b>	230 Nm @ 20000 rpm
	<b>starting torque</b>
<b>feeding system / control</b>	electric / fully automated
	electric / manual
	hydraulic / manual
	pneumatic / fully automated
	pneumatic / manual
<b>wire storage capacity</b>	12 linear meter
<b>weight</b>	138,0 kg

<b>drill rigs</b>	
<b>parameter</b>	<b>example</b>
<b>max. core bit diameter</b>	250 mm
<b>usable feeding length</b>	660 mm
<b>recommended drilling motor</b> (drive power max.)	electric motors: DK 2203, Diamant 9, .....
	hydraulic motors: OMR 100, .....
	2300 W
<b>system of infeed / control</b>	gear rack / manually operated
	thread spindle / manually operated
	chain / manually operated
	hydraulic / manually operated
	electric / fully automated
<b>weight</b>	19,0 kg

<b>electric drilling motors</b>	
parameter	example
<b>type of motor</b> on electric motors input (P1) and output power (P2) at the core bit rating mode (S1) and speed	single phase 110 V
	3-phase 400 V / 16 A
	high-cycle-motor P1: 20 kW-S1; 0 - 30.000 rpm; P2: 14,7 kW-S1; 0 - 30.000 rpm
<b>output power</b>	2100 W
<b>drive torque per gear (under load)</b>	87/42/23 Nm
<b>speeds / gears (under load)</b>	230/480/720 rpm
<b>max. / min. core bit diameter</b>	55 - 350 mm
<b>Tool fixture</b>	1 1/4 UNC
<b>Foot fastening</b>	Standard 4 x M8 with groove 10 mm
	..... quick fastening system
<b>weight</b>	11,9 kg

<b>hydraulic drilling motors</b>	
parameter	example
<b>kind of motor</b>	geared motor
	torque motor
	piston motor
<b>geometric displacement</b>	160 ccm
<b>speeds / gears (under load)</b>	230/480/720 rpm
<b>max. pressure / torque per gear (load)</b>	180 bar 460/230/160 Nm
<b>speed at l/min / transmission</b>	32l / 200 rpm / direct drive
<b>max. / min. core bit diameter</b>	150 - 350 mm
<b>Tool fixture</b>	1 1/4 UNC
<b>weight (whole unit)</b>	18,9 kg