

# HydroCool XT™

## Efficient cooling for demanding applications



The Baldor-Reliance® HydroCool XT motor is quiet, versatile, and excels in the harshest environments. The water-jacket cooling technology extends motor life while saving space, energy and maintenance costs.

### BALDOR • RELIANCE

#### High performance variable speed capabilities:

- Continuous full load torque from zero to base speed when used with ABB DTC (Direct Torque Control) or other high-performance vector control inverters
- Wider constant power ranges available with custom base speeds
- 200% minimum overload torque starting at base speed and below for 1 minute
- Compact, power dense design
- Quiet operation

#### DOL & variable speed electrical designs:

- Lower maintenance costs because bearings and windings are protected from overheating. In dirty environments, traditional cast iron TEFC frame fins fill with debris and require additional cleaning and maintenance.
- The Baldor-Reliance HydroCool XT product line includes induction & IPM (Interior Permanent Magnet) designs. Induction designs are suitable for DOL (direct on line) & variable speed use. IPM designs are for variable speed use exclusively.
- Lower inertia rotors provide fast dynamic response.

Main specifications	
<b>Output power:</b>	60 to 1250 Hp (45-932 kW)
<b>NEMA frame sizes:</b>	360, 400, 440 and 5800
<b>Efficiency:</b>	NEMA Premium® (IE3) with induction rotor Ultra-premium (IE5) with IPM (Interior Permanent Magnet) rotor
<b>Electrical design:</b>	DOL & variable speed
<b>Material design:</b>	No dust-collecting cooling ribs - corrosion resistant fabricated steel frame
<b>Protection:</b>	IP55 (optionally IP56)
<b>Bearings:</b>	PLS (Positive Lubrication System) for prolonged bearing life
<b>Insulation:</b>	Class F (optionally Class H)
<b>Inverter duty:</b>	Withstands voltage spikes requirements of MG1 Part 31.4.4.2
<b>Mounting:</b>	Horizontal with F1/F2 conduit box options
<b>Ex protection types:</b>	Class 1 Division 2 certifications (Class A,B,C,D)
<b>Thermostats:</b>	3 (one per phase)
<b>Fully customizable:</b>	Power ratings, base speeds, constant power speeds available upon request
<b>Condition monitoring:</b>	Mounting provisions for ABB Ability™ Smart Sensor

## Advanced motor cooling technology

The HydroCool XT motor uses a highly efficient cooling method to transfer heat away from the motor by circulating water through a water jacket without the use of fans. Cooling efficiency is maintained even at lower speeds, making this motor ideal for constant torque applications.

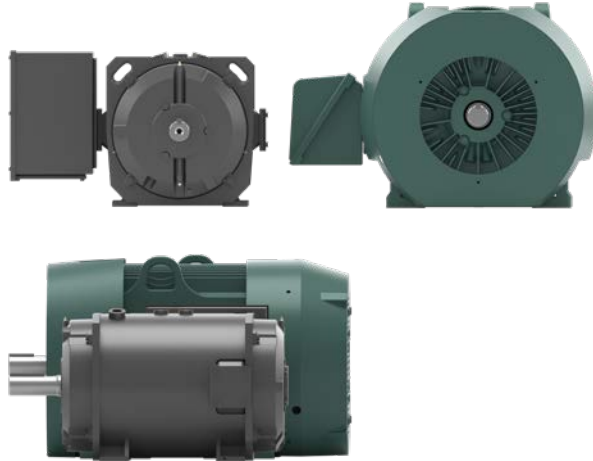
HydroCool XT motors offer a power dense solution for the most compact and demanding applications found in marine, mining and other process industries.



Video of water-cooled vs. air-cooled technology

01 Comparison of 360 frame TEWC vs. 447 TEFC NEMA frame motors

### Unmatched torque density



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### Commitment to quality

HydroCool XT motors are designed and built in Flowery Branch, Georgia, USA under a certified ISO 9001 program. All water-cooled motors are available with UL component recognition, CE mark and CSA approval.

Hp (kW)	Std. NEMA TEFC Induction/ 1800 RPM <sup>(1)</sup>	HydroCool XT TEWC Induction/ 1800 RPM <sup>(2)</sup>	HydroCool XT TEWC IPM/ 1200 RPM <sup>(2)</sup>
60 (45)			
75 (56)	360		
100 (75)	400	360	
125 (93)			360
150 (112)			
200 (149)			
250 (186)	440	400	
300 (224)			400
350 (261)			
400 (298)	L449		
450 (336)		L449	440
500 (373)			
600 (447)	5000		L449
700 (522)			
800 (597)			
900 (671)			
1000 (746)	5800		5800
1250 (932)	6800		

(1) 2:1 CT; 4:1 VT

(2) 1000:1 CT

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