

wcbAquaMaKks
Water Cooled
Brakes
with Composite
Water Jackets



An Altra Industrial Motion Company



wcbAquaMaKKs brakes are an air actuated water cooled design, featuring copper wear plates optimized for heavy-duty continuous slip tension applications

wcbAquaMaKKs Water Cooled Brakes are designed to provide excellent controllability for drilling feed off, tripping, pay out, and holding functions.

wcbAquaMaKKs brakes are air-applied, spring-released, water-cooled, friction interface brakes designed ideally for draw-works, service rigs, dyno applications, and winches. Models are available in 24" and 36" sizes.

Features:

- Interchangeable with existing 'wcb' types of brakes to allow for ease of installations, conversions, and spare parts utilizations
- Units are available as either Air Tube Disc (atd) actuation, or as with true dual pistons (dpS) actuation
- Reduced overall brake weight that is about 40% less than iron units



Oil and Gas

wcbAquaMaKKs brakes have superior water cooled tension control and very high heat dissipation to provide excellent controllability on draw-works applications



Marine Deck Machinery

Positioning and mooring winches require high heat dissipation and accurate tension control. The performance and corrosion-resistant features of the wcbAquaMaKKs brakes are perfectly suited for these applications.

New engineered composite water jackets improves performance

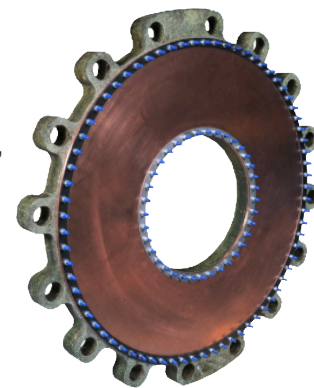
Wichita's unique patented water jacket design, with improved channeled water flow, ensures high heat absorption and torque stability, providing greater heat dissipation compared to similar sized competitive units. All water jackets are made of corrosion-resistant, lightweight engineered composite material.

Corrosion resistant, saltwater friendly

Composite water jackets are not affected by use of hard, acidic water that typically corrodes and plugs up cast iron jackets

Other composite water jacket benefits include:

- Improved channeled water flow – achieved via groove designed and molded into jacket providing enhanced cooling capability
- Fast & easy maintenance created from the lightweight composite jacket design that is about 60% less weight than the competitors metal design
- Water jacket design and material allows for longer life, requiring fewer replacements
- Water Jacket assemblies are interchangeable with WCB compatible brakes
- For added protection, hardware used to attach copper onto the composite water jackets is marine grade, fluoropolymer coated to resist gauling and corrosion



Metal Jacket



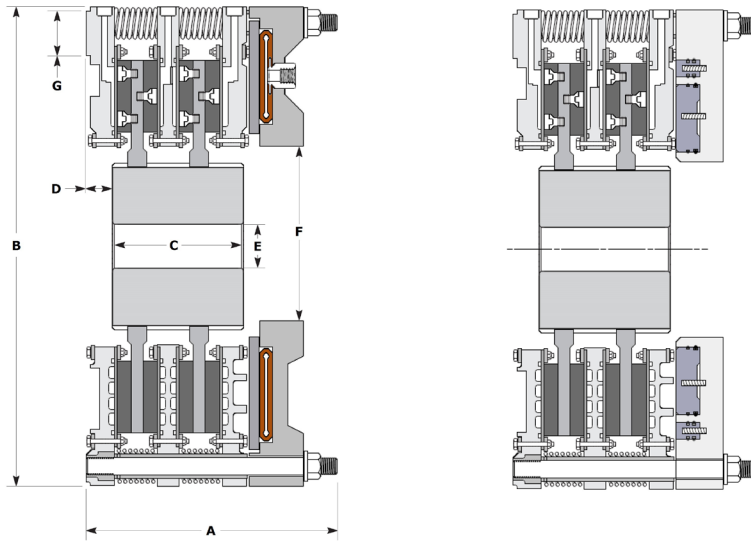
Composite Jacket



* Pictures reflect results after 2,500 hours of operation (1,000 @ low pH [3.8] and 1,500 @ high pH [8.2] simulated for sea water)

Air Tube Actuation (ATD)

True Dual Piston Actuation (dpS)



Dimensions

Model Size - ATD	Assembly Number	(A) Length		(B) Diameter		(C) Length		(D) Length		(F) Diameter		(G) Pilot Diameter			
		in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	OD		ID	
												in.	(mm)	in.	(mm)
124wcbAM	7-124WCB-1000	11.00	279	30.38	772	3.50	89	1.38	35	11.50	292	30.00	762	24.38	619
224wcbAM	7-224WCB-1300	15.38	391	30.38	772	8.63	219	1.38	35	11.50	292	30.00	762	24.38	619
324wcbAM	7-324WCB-1300	19.41	493	30.38	772	13.19	335	1.38	35	11.50	292	30.00	762	24.38	619
424wcbAM	7-424WCB-1300	23.44	595	30.38	772	16.94	430	1.38	35	11.50	292	30.00	762	24.38	619
136wcbAM	7-136WCB-1000	15.25	387	44.94	1141	5.00	127	2.36	60	2.36	60	44.50	1130	18.38	467
236wcbAM	7-236WCB-1300	20.75	527	44.94	1141	9.00	229	2.38	60	2.38	60	44.50	1130	18.38	467
336wcbAM	7-336WCB-1300	27.50	699	44.94	1141	13.00	330	2.38	60	2.38	60	44.50	1130	18.38	467
436wcbAM	7-436WCB-1300	35.00	889	44.94	1141	18.00	457	2.38	60	2.38	60	44.50	1130	18.38	467

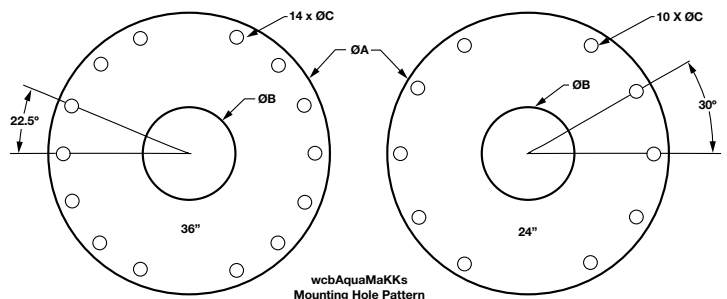
Specifications

Model Size - ATD	Assembly Number	Unit Weight Less Hub		Max Water Temperatures (°F)		Max Water Pressure (PSI)		Heat Capacity Parallel Water Hosting		(E) Max Bore Rect. Key	
		LB	KG	Inlet	Outlet	Inlet	Outlet	HP	kW	in	(mm)
124wcbAM	7-124WCB-1000	445	202	100	150	60	20	350	261	7.25	184
224wcbAM	7-224WCB-1300	646	293	100	150	60	20	700	522	7.38	187
324wcbAM	7-324WCB-1300	831	377	100	150	60	20	1050	783	9.38	238
424wcbAM	7-424WCB-1300	1045	474	100	150	60	20	1400	1044	9.38	238
136wcbAM	7-136WCB-1000	1058	480	100	150	60	20	825	615	11.25	286
236wcbAM	7-236WCB-1300	1658	752	100	150	60	20	1650	1230	11.75	298
336wcbAM	7-336WCB-1300	2255	1023	100	150	60	20	2475	1846	11.75	298
436wcbAM	7-436WCB-1300	2862	1298	100	150	60	20	3300	2461	11.75	298

*Water Inlet/Outlet ports are SAE O-Ring Boss Female
 *Maximum pressure drop across water jacket is 40 PSI
 *Maximum Air Inlet Pressure is 40 PSI

Mounting Hole Pattern

Model Size - ATD	Ø A		Ø B		Ø C		Hole Circle		# Holes
	in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)	Qty
24wcbAM	30.38	772	12.76	324	0.656	17	28.75	730	10
36wcbAM	44.94	1141	16.40	417	1.062	27	42.00	1067	14



wcbAquaMaKKS Mounting Hole Pattern

<p>Electromagnetic Clutches and Brakes</p> <p>Warner Electric <i>Electromagnetic Clutches and Brakes</i> New Hartford, CT - USA 1-800-825-6544 <i>For application assistance: 1-800-825-9050</i></p> <p>St Barthelemy d'Anjou, France +33 (0) 2 41 21 24 24</p> <p><i>Precision Electric Coils and Electromagnetic Clutches and Brakes</i> Columbia City, IN - USA 1-260-244-6183</p> <p>Matrix International <i>Electromagnetic Clutches and Brakes, Pressure Operated Clutches and Brakes</i> Brechin, Scotland +44 (0) 1356 602000 New Hartford, CT - USA 1-800-825-6544</p> <p>Inertia Dynamics <i>Spring Set Brakes; Power On and Wrap Spring Clutch/Brakes</i> New Hartford, CT - USA 1-800-800-6445</p>	<p>Couplings</p> <p>Ameridrives Couplings <i>Mill Spindles, Ameriflex, Ameridisc</i> Erie, PA - USA 1-814-480-5000</p> <p><i>Gear Couplings</i> San Marcos, TX - USA 1-800-458-0887</p> <p>Bibby Turboflex <i>Disc, Gear, Grid Couplings, Overload Clutches</i> Dewsbury, England +44 (0) 1924 460801 Boksburg, South Africa +27 11 918 4270</p> <p>TB Wood's <i>Elastomeric Couplings</i> Chambersburg, PA - USA 1-888-829-6637 – Press #5 <i>For application assistance: 1-888-829-6637 – Press #7</i></p> <p><i>General Purpose Disc Couplings</i> San Marcos, TX - USA 1-888-449-9439</p> <p>Ameridrives Power Transmission <i>Universal Joints, Drive Shafts, Mill Gear Couplings</i> Green Bay, WI - USA 1-920-593-2444</p> <p>Huco Dynatork <i>Precision Couplings and Air Motors</i> Hertford, England +44 (0) 1992 501900 Chambersburg, PA - USA 1-888-829-6637</p> <p>Lamiflex Couplings <i>Flexible Couplings, Bearing Isolators, and Coupling Guards</i> São Paulo, SP - Brasil +55-11-5679-6533</p>	<p>Heavy Duty Clutches and Brakes</p> <p>Wichita Clutch <i>Pneumatic Clutches and Brakes</i> Wichita Falls, TX - USA 1-800-964-3262 Bedford, England +44 (0) 1234 350311</p> <p>Twiflex Limited <i>Caliper Brakes and Thrusters</i> Twickenham, England +44 (0) 20 8894 1161</p> <p>Industrial Clutch <i>Pneumatic and Oil Immersed Clutches and Brakes</i> Waukesha, WI - USA 1-262-547-3357</p> <p>Gearing</p> <p>Boston Gear <i>Enclosed and Open Gearing, Electrical and Mechanical P.T. Components</i> Charlotte, NC - USA 1-800-825-6544 <i>For application assistance: 1-800-816-5608</i></p> <p>Bauer Gear Motor <i>Gearred Motors</i> Esslingen, Germany +49 (711) 3518 0 Somerset, NJ - USA 1-732-469-8770</p> <p>Nuttall Gear and Delroyd Worm Gear <i>Worm Gear and Helical Speed Reducers</i> Niagara Falls, NY - USA 1-716-298-4100</p>	<p>Overrunning Clutches</p> <p>Formsprag Clutch <i>Overrunning Clutches and Holdbacks</i> Warren, MI - USA 1-800-348-0881 – Press #1 <i>For application assistance: 1-800-348-0881 – Press #2</i></p> <p>Marland Clutch <i>Roller Ramp and Sprag Type Overrunning Clutches and Backstops</i> South Beloit, IL - USA 1-800-216-3515</p> <p>Stieber Clutch <i>Overrunning Clutches and Holdbacks</i> Heidelberg, Germany +49 (0) 6221 30 47 0</p> <p>Belted Drives and Sheaves</p> <p>TB Wood's <i>Belted Drives</i> Chambersburg, PA - USA 1-888-829-6637 – Press #5 <i>For application assistance: 1-888-829-6637 – Press #7</i></p> <p>Engineered Bearing Assemblies</p> <p>Kilian Manufacturing <i>Engineered Bearing Assemblies</i> Syracuse, NY - USA 1-315-432-0700</p> <p><i>For information concerning our sales offices in Asia Pacific check our website www.altramotion.com.cn</i></p>
<p>Linear Products</p> <p>Warner Linear <i>Linear Actuators</i> Belvidere, IL - USA 1-800-825-6544 <i>For application assistance: 1-800-825-9050</i></p> <p>St Barthelemy d'Anjou, France +33 (0) 2 41 21 24 24</p>			



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