

PRODUCT NOTE

Critical Cooling motors

Highest reliability with lifetime motor bearing protection



Baldor-Reliance® Critical Cooling motors are ideal for variable speed applications where downtime is not an option. Specially designed hybrid ceramic bearings offer a lifetime warranty against motor bearing failure caused by shaft currents.

BALDOR • RELIANCE



Features:

- Lifetime warranty on motor bearings against shaft currents caused by VFDs
- TEAO and TEFC enclosures
- Hybrid ceramic ball bearings on both motor ends
- IP54 ingress protection
- Turndown ratio 20:1 variable torque
- Induction rotor for NEMA Premium® efficiency (IE3) or ultra premium efficiency (IE5+)
- NEMA Design A
- Multi-color leads for ease of connections
- Suitable for inverter use per MG1 Part 31.4.4.2
- Designed for longevity with 5-year warranty

Applications:

The Baldor-Reliance Critical Cooling motor is best suited for direct drive or belt-driven HVAC applications that utilize VFDs. Ideal for applications where stable temperature control and continuous operation are critical such as data centers, clean rooms, hospitals, and other commercial and industrial buildings.



Lifetime warranty
against bearing failure
from shaft currents

Energy efficient and reliable

Critical cooling motors are offered in two different rotor designs: (1) Induction rotor that meets NEMA Premium® efficiency (IE3) levels and (2) Ferrite Assisted Synchronous Reluctance, or FASR rotor, that is ultra-premium and achieves (IE5+) efficiency levels.



(1)



(2)

Critical cooling motor, 3 phase, TEFC, ultra premium efficiency (IE5+) 5 thru 20 Hp



Hp	Base speed RPM	C.H. speed RPM	NEMA frame	Enclosure	Catalog number	"C" dim.	Aprx. wt. (lb.)	Full load efficiency	Voltage	Full load amps
5	1800	4000	143T	TEFC	ECC101M0H5DF4	15.54	64	93.0%	230/460	10.4/5.2
		4000	182T	TEFC	ECC101M0H5EF4	16.54	68	93.7%	230/460	10.5/5.3
7.5	1800	4000	184T	TEFC	ECC101M0H7EF4	18.04	92	94.0%	230/460	17.5/8.8
		3000	213T	TEFC	ECC101M0H7FF4	17.89	105	94.0%	230/460	17.4/8.7
10	1800	3000	213T	TEFC	ECC101M0H10FF4	19.02	123	94.8%	230/460	22.0/11.0
15	1800	3000	215T	TEFC	ECC101M0H15FF4	21.96	168	95.6%	230/460	34.8/17.4
20	1800	3000	215T	TEFC	ECC101M4H20FF4	23.51	218	95.9%	460	21.6

Critical cooling motor, 3 phase, TEFC

1 thru 30 Hp



Hp	RPM	NEMA frame	Catalog number	"C" dim.	Aprx. wt. (lb.)	Full load efficiency	Voltage	Full load amps
1	1800	143T	HBEM3546T	12.31	30	85.5	230/460	1.5
		143T	HBEM3581T	12.54	55	85.5	230/460	1.5
	1200	145T	HBEM3556T	13.31	43	82.5	230/460	1.8
		145T	HBEM3582T	12.54	56	82.5	230/460	1.7
1-1/2	1800	145T	HBEM3554T	13.31	42	86.5	230/460	2.2
		145T	HBEM3584T	12.54	61	86.5	230/460	2.3
	1200	182T	HBEM3607T	16.54	76	87.5	230/460	2.4
		182T	HBEM3667T	15.24	99	87.5	230/460	2.5
2	1800	145T	HBEM3558T	13.31	42	86.5	230/460	2.9
		145T	HBEM3587T	12.54	62	86.5	230/460	2.9
	1200	184T	HBEM3614T	18.04	94	88.5	230/460	3.5
		184T	HBEM3664T	15.24	123	88.5	230/460	3.15
3	1800	182T	HBEM3611T	16.54	74	89.5	230/460	4.2
		182T	HBEM3661T	15.24	105	89.5	230/460	4.1
	1200	213T	HBEM3704T	19.01	135	89.5	230/460	4.6
		213T	HBEM3764T	18.45	211	89.5	230/460	4.5
5	1800	184T	HBEM3615T	18.04	92	89.5	230/460	6.7
		184T	HBEM3665T	15.24	115	89.5	230/460	6.6
	1200	215T	HBEM3708T	19.76	154	89.5	230/460	7.3
		215T	HBEM3768T	18.45	198	89.5	230/460	7.4
7-1/2	1800	213T	HBEM3710T	19.01	129	91.7	230/460	9.4
		213T	HBEM3770T	18.45	193	91.7	230/460	9.5
	1200	254T	HBEM2276T	23.3	281	91	230/460	11
10	1800	215T	HBEM3714T	20.51	156	91.7	230/460	12
		215T	HBEM3774T	18.45	232	91.7	230/460	12.2
	1200	256T	HBEM2332T	23.3	322	91	230/460	14.1
15	1800	254T	HBEM2333T	23.3	270	92.4	230/460	18.1
	1200	284T	HBEM4100T	27.76	369	91.7	230/460	21
20	1800	256T	HBEM2334T	23.3	295	93	230/460	24
	1200	286T	HBEM4102T	27.76	393	91.7	230/460	27
25	1800	284T	HBEM4103T	27.76	400	93.6	230/460	30
30	1800	286T	HBEM4104T	27.76	410	93.6	230/460	38

Cast iron frame

Critical cooling motor, 3 phase, TEAO

1 thru 30 Hp



Hp	RPM	NEMA frame	Catalog number	"C" dim.	Aprx. wt. (lb.)	Full load efficiency	Voltage	Full load amps
1	1800	143T	HBAO3581T	11.44	58	86.5	230/460	2.9
	3600	145T	HBAO3586T	11.44	64	86.5	230/460	5.4
2	1800	145T	HBAO3587T	11.44	64	86.5	230/460	5.7
	3600	182T	HBAO3660T	13.89	95	89.5	230/460	7.5
3	1800	182T	HBAO3661T	13.89	100	89.5	230/460	8.4
	3600	184T	HBAO3663T	13.89	105	90.2	230/460	12
5	1800	184T	HBAO3665T	13.89	120	90.2	230/460	13.7
	3600	213T	HBAO3769T	16.88	173	91	230/460	19
7.5	1800	213T	HBAO3770T	16.88	198	91.7	230/460	19
	3600	215T	HBAO3771T	16.88	203	91.7	230/460	24
10	1800	215T	HBAO3774T	16.88	231	92.4	230/460	26.3
	3600	254T	HBAO2394T	20.75	239	91.7	230/460	34.4
15	1800	254T	HBAO2333T	20.75	268	92.4	230/460	36.2
	3600	256T	HBAO4106T	23.00	293	91	230/460	23
20	1800	256T	HBAO2334T	23.00	293	93	230/460	24
	3600	284T	HBAO4118T	25.63	378	91.7	230/460	29
25	1800	286T	HBAO4103T	25.63	378	93.6	230/460	30
	3600	286T	HBAO4108T	25.63	410	91.7	230/460	34
30	1800	286T	HBAO4104T	25.63	410	93.6	230/460	38

Cast iron frame

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