

PRODUCT NOTE

# Baldor-Reliance® EC Titanium™

## VFD ready IE5+ motor technology



EC Titanium motors utilize a highly efficient new rotor technology that when paired with ABB's ACH580 drive and advanced motor control algorithms enables higher efficiencies across the speed load for a sustainable, wirelessly connected solution that improves the bottom line.

### ABB ACH580 Drive and EC Titanium motor for premium efficient operations

1 to 20 HP  
 NEMA 140, 180 and 210 Frames  
 230/460V 3-Phase Input

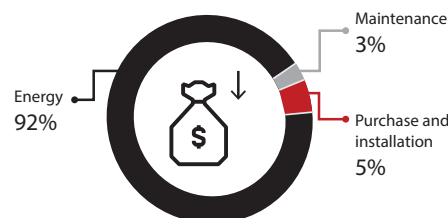
#### EC Titanium motor benefits

- Optimized partial load efficiencies
- Over-speed constant HP operational range
- High power factor (92% to 98%)
- Lower current draw & smaller power converter
- Drop in replacement NEMA frames
- Shaft grounding brush standard feature
- Class F insulation with Class B rise
- IP54 motor enclosure with shaft seal
- 1.5 service factor design
- For inverter use only per NEMA MG 1 Part 31.4.4.2
- Designed for longevity with 3 year warranty



#### ABB Drive feature support

- ACH 580 V2.12 ID Run Firmware Support
- Advanced motor control algorithms
- Superior performance Titanium motor
- Integral harmonic mitigation
- Ultra low harmonics compatible
- Wide range network interfaces
- Extensive pump and fan drive features



#### Is it worth upgrading? Savings and payback

Initial purchase price is a smaller percent of the overall cost in energy for operation. Payback time for higher IE efficiency class is less than one year.



## EC Titanium IE5+ Motor Efficiency



**IP54**

Ideal for fans, pumps, blowers, compressors, vacuum pumps, HVAC systems, variable speed applications

### Foot Mount – Three Phase – Totally Enclosed Fan Cooled

HP	Base Speed RPM	C.H. Speed RPM	NEMA Frame	Enclosure	Catalog Number	Disc Sym.	“C” Dim	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
1	1800	4000	143T	TEFC	ECS101M0H1DF4	EC1	12.29	28	89.3%	230/460	2.3/1.2
2	1800	4000	143T	TEFC	ECS101M0H2DF4	EC1	12.29	35	90.7%	230/460	4.5/2.3
3	1800	4000	145T	TEFC	ECS101M0H3DF4	EC1	13.29	44	91.4%	230/460	7.0/3.5
3	1800	4000	182T	TEFC	ECS101M0H3EF4	EC1	16.54	59	92.8%	230/460	7.3/3.7
5	1800	4000	143T	TEFC	ECS101M0H5DF4	EC1	15.54	64	93.0%	230/460	10.4/5.2
5	1800	4000	182T	TEFC	ECS101M0H5EF4	EC1	16.54	68	93.7%	230/460	10.5/5.3
7.5	1800	4000	184T	TEFC	ECS101M0H7EF4	EC1	18.04	92	94.0%	230/460	17.5/8.8
7.5	1800	3000	213T	TEFC	ECS101M0H7FF4	EC1	17.89	105	94.0%	230/460	17.4/8.7
10	1800	3000	213T	TEFC	ECS101M0H10FF4	EC1	19.02	123	94.8%	230/460	22.0/11.0
15	1800	3000	215T	TEFC	ECS101M0H15FF4	EC1	21.96	168	95.6%	230/460	34.8/17.4
20	1800	3000	215T	TEFC	ECS101M4H20FF4	EC1	23.51	218	95.9%	460	21.6

### C-Face Foot Mount – Three Phase – Totally Enclosed Fan Cooled

HP	Base Speed RPM	C.H. Speed RPM	NEMA Frame	Enclosure	Catalog Number	Disc Sym.	“C” Dim	Aprx. Wt. (lb)	Full oad Efficiency	Voltage	Full Load Amps
1	1800	4000	143TC	TEFC	ECS101M0H1DB4	EC1	12.29	28	89.3%	230/460	2.3/1.2
2	1800	4000	143TC	TEFC	ECS101M0H2DB4	EC1	12.29	35	90.7%	230/460	4.5/2.3
3	1800	4000	145TC	TEFC	ECS101M0H3DB4	EC1	13.29	44	91.4%	230/460	7.0/3.5
3	1800	4000	182TC	TEFC	ECS101M0H3EB4	EC1	16.54	59	92.8%	230/460	7.3/3.7
5	1800	4000	143TC	TEFC	ECS101M0H5DB4	EC1	15.54	64	93.0%	230/460	10.4/5.2
5	1800	4000	182TC	TEFC	ECS101M0H5EB4	EC1	16.54	68	93.7%	230/460	10.5/5.3
7.5	1800	4000	184TC	TEFC	ECS101M0H7EB4	EC1	18.04	92	94.0%	230/460	17.5/8.8
7.5	1800	3000	213TC	TEFC	ECS101M0H7FB4	EC1	17.89	105	94.0%	230/460	17.4/8.7
10	1800	3000	213TC	TEFC	ECS101M0H10FB4	EC1	19.02	123	94.8%	230/460	22.0/11.0
15	1800	3000	215TC	TEFC	ECS101M0H15FB4	EC1	21.96	168	95.6%	230/460	34.8/17.4
20	1800	3000	215TC	TEFC	ECS101M4H20FB4	EC1	23.51	218	95.9%	460	21.6

### C-Face Footless – Three Phase – Totally Enclosed Fan Cooled

HP	Base Speed RPM	C.H. Speed RPM	NEMA Frame	Enclosure	Catalog Number	Disc Sym.	“C” Dim	Aprx. Wt. (lb)	Full oad Efficiency	Voltage	Full Load Amps
1	1800	4000	143TC	TEFC	ECS101M0H1DC4	EC1	12.29	28	89.3%	230/460	2.3/1.2
2	1800	4000	143TC	TEFC	ECS101M0H2DC4	EC1	12.29	35	90.7%	230/460	4.5/2.3
3	1800	4000	145TC	TEFC	ECS101M0H3DC4	EC1	13.29	44	91.4%	230/460	7.0/3.5
3	1800	4000	182TC	TEFC	ECS101M0H3EC4	EC1	16.54	59	92.8%	230/460	7.3/3.7
5	1800	4000	143TC	TEFC	ECS101M0H5DC4	EC1	15.54	64	93.0%	230/460	10.4/5.2
5	1800	4000	182TC	TEFC	ECS101M0H5EC4	EC1	16.54	68	93.7%	230/460	10.5/5.3
7.5	1800	4000	184TC	TEFC	ECS101M0H7EC4	EC1	18.04	92	94.0%	230/460	17.5/8.8
7.5	1800	3000	213TC	TEFC	ECS101M0H7FC4	EC1	17.89	105	94.0%	230/460	17.4/8.7
10	1800	3000	213TC	TEFC	ECS101M0H10FC4	EC1	19.02	123	94.8%	230/460	22.0/11.0
15	1800	3000	215TC	TEFC	ECS101M0H15FC4	EC1	21.96	168	95.6%	230/460	34.8/17.4
20	1800	3000	215TC	TEFC	ECS101M4H20FC4	EC1	23.51	218	95.9%	460	21.6