



## cLEAN Motor Competitor Comparison

Induction/Asynchronous Motor: uses the electromotive induction from the stator winding's electrical field to apply electrical current to the rotor resulting in its own magnetic field. The interaction between the two magnetic fields causes the rotor to spin and torque to be produced.

IPM (Interior Permanent Magnet) Motor: uses the magnetic force from the permanent magnets embedded in the rotor and the magnetic field from the stator's windings to spin and produce torque.

	<b>STÖBER cLEAN Interior Permanent Magnet (PM) Motor</b>	<b>Competitor A Induction Motor</b>	<b>Competitor B Induction Motor</b>	<b>Competitor C Induction Motor</b>
<b>Horsepower (HP)</b>	1 – 2 HP	0.5 – 30 HP	0.5 – 5 HP	0.5 – 10 HP
<b>Operating Speed</b>	500 – 5000 rpm	1200, 1800, 3600 rpm	1140, 1725, 3450 rpm	1425, 1800, 2500, 3700 rpm
<b>Torque-Speed Characteristics</b>	Constant Torque across operating speed	Non-linear	Non-linear	Non-linear
<b>Efficiency</b>	1 HP – >90% 2 HP – >90%	1 HP – 85.5% 2 HP – 88.5%	1 HP – 85.5% 2 HP – 86.5%	1 HP – 85.5% 2 HP – 86.5%
<b>Enclosure Type</b>	TENV**	TEFC* & TENV**	TENV* (1 HP) & TEFC** (2 HP)	TENV* (1 HP) & TEFC** (2 HP)
<b>Weight</b>	1 HP – 35 lb 2 HP – 45 lb	1 HP – 37 lb 2 HP – 63 lb	1 HP – 57 lb 2 HP – 56 lb	1 HP – 58 lb 2 HP – 61 lb
<b>Total Length Including Shaft</b>	1 HP – 12.04” 2 HP – 13.40”	1 HP – 12.78” 2 HP – 15.04”	1 HP – 13.22” 2 HP – 13.19”	1 HP – 13.62” 2 HP – 15.63”
<b>Stator Temp Class</b>	Class F (<155°C)	Class H (<180°C)	Class F (<155°C)	Class F (<155°C)
<b>Temp Rise @ Full Load</b>	1 HP – 95°F 2 HP – 147°F	Not Published	Not Published	1 HP – 133°F 2 HP – 127°F
<b>Face Drain Holes</b>	No	Yes	Yes	Yes
<b>Sealing Philosophy</b>	2 Sealing Components per Joint	1 Sealing Component per Joint	1 Sealing Component per Joint	1 Sealing Component per Joint
<b>IP Rating</b>	IP68 & IP69k	IP69	IP69k	IP69k
<b>Warranty</b>	3 Year	3 Year	1 Year	3 Year

\*TEFC (Totally Enclosed Fan Cooled): a motor that is isolated from its outside environment and uses a fan to move air across its surface to reduce heat on the motor and gearbox.

\*\*TENV (Totally Enclosed Non-Ventilated): a motor that is isolated from its outside environment and does not use a fan for cooling.



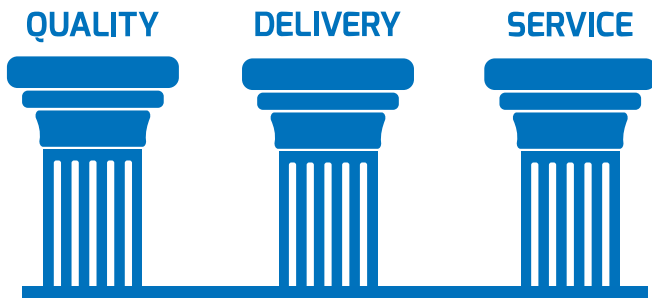
**Weep/Drain Holes:** features located on the shaft side of the motor that allow condensation to drain out of the cavity between the motor and gearbox. If not plugged, water is forced into the cavity during cleaning activities, causing the gearbox input to corrode and fail.



# STÖBER

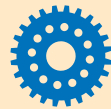
## Our Three Pillars

STOBER is your **trusted partner** in providing the ultimate customer experience. From unsurpassed quality to rapid response support to fast delivery, we are the **gold standard** for gearboxes.



**STÖBER**   
CONFIGURATOR

With the new STOBER Configurator, engineers and designers will save time in product selection and designing. Everything is a simple click away!



World's Toughest Gearbox  
Best components and quality



Quick Delivery  
Build & Ship in 1 Day



24/7, 365 Support  
Real people all the time

## 9.1 YEARS

Average mean time to failure for STOBER gearboxes in 24/7 harsh environment application.

Asset reliability means you can depend on a STOBER gear reducer for years, increasing profits and surpassing plant efficiency and targets.

