

**EXTRUDER DUTY MOTORS** 

# **Designed Specifically for Extrusion**

Plastic Extrusion is one of the toughest applications for electric motors. When retrofitting from DC motors to AC motors in this application several things must be considered. Many inverter-rated motors are not suited for this application since they are built in NEMA frames which have a higher shaft-height than that of a DC motor and they do not have a wide enough constant torque speed range. A laminated designed motor with a square frame is better suited physically for the applications but other considerations such as heat and bearing life have been a concern. The Extruder Duty Motors from Integrated Control Technologies (ICT) addresses these issues by incorporating insulated bearings and a bearing brush mounted on the shaft extending bearing life. In addition, RTD's are designed inside of the windings allowing the motors temperature to be accurately measured and monitored by external devices such as the new Extruder Drive Guardian from ICT. All of these features will extend motor life and is backed with a 3-year warranty.

# **About the Motor**

The Extruder Duty Motor is designed specifically for ICT by a 100-year-old European motor manufacturer. The IEC frame meets international standards as well as those in the US and is in some of the harshest applications in industry. The line offered by ICT has features added to the product that have high value for extrusion and promote the longest possible life for the motor.



## **Added Features**

#### **INSULATED BEARINGS**

Insulated bearings are bearings that can block the passage of electric current and have insulating properties of the bearing itself. Its insulating properties are usually ensured by using a special process to cover a layer of insulating material on the outer or inner ring of the bearing, or by using ceramics for its rolling body. Its main function is to prevent current from passing through the bearing, thus effectively protecting the motor from damage caused by stray current or electric arc.

### **SHAFT GROUNDING RING**

A Shaft Grounding Ring is the standard for protection against variable frequency drive-sourced shaft voltage and bearing current. Each ring employs 360° of specially engineered conductive microfibers that surround the motor shaft in a multiple-row design to provide incomparable shaft grounding that keeps your bearings safe and working.

### **RESISTANT TEMPERATURE DETECTORS (RTDs)**

The older practice of touching the motor frame to estimate winding temperature is no longer practical. For this reason, it is imperative that methods to measure winding temperature is installed for reliable and accurate thermal monitoring. The most popular method to measure motor stator temperature is to insert Resistance Temperature Detectors [RTD] in to the winding slots.

# FEATURES

.000:1 Constant Torque

L.15 Service Factor

AEGIS Shaft Grounding Ring

RTD's on Windin

Compact Frame

Klixon type Thermostat NC

Blower Included

Air Filter Include

C 60034-14 Balanced, Grad



480VAC/3-Phase / Motor Characteristics												
	Base	Constant				Weight	Torque		Nominal	Mechanical		
HP	Speed	HP Speed	Catalog #	Frame	List Price	LBS	Nm	ft-lbs	Amps	Speed	Drawing Reference	Stock
125	1800	2880	XD1251800F2*	160	\$23,888	758	495	365	155	3400	XD1251800F2	
150	1800	2880	XD1501800F1	160	\$25,539	838	594	438	191	3400	XD1501800F1	
150	1800	2880	XD1501800F2*	160	\$25,539	838	594	438	191	3400	XD1501800F2	
200	1800	2880	XD2001800F1	160	\$31,341	1067	792	584	238	3400	XD2001800F1	
200	1800	2880	XD2001800F2*	180	\$31,341	1067	792	584	238	3400	XD2001800F2	
250	1800	2880	XD2501800F1	180	\$37,021	1263	989	729	293	3200	XD2501800F1	
300	1800	2880	XD3001800F1	225	\$42,633	1667	1188	876	360	3200	XD3001800F1	
400	1800	2880	XD4001800F1	225	\$54,238	2017	1592	1174	475	3200	XD4001800F1	
500	1800	2880	XD5001800F1	225	\$62,184	2198	1979	1460	592	3200	XD5001800F1	
600	1800	2880	XD6001800F1	250	\$79,741	2822	2377	1753	701	3400	XD6001800F1	
700	1800	2880	XD7001800F1	250	\$86,628	3163	2771	2044	817	3400	XD7001800F1	

\*F2 conduit box location

# **The Perfect Pairing**

When it comes to extrusion, having the perfect laminated frame motor can only be improved by pairing it with a drive enhanced to work in concert with the motor. The Drive Guardian is just that drive. Based upon an ABB 880 drive, the Drive Guardian firmware from ICT adds features that improve your extruder drive control.

### **FEATURES**

- High Pressure Alarm and Shut Off
- Low Pressure Alarm
- Screw Break Prevention
- Zero Speed with Controlled Ramp
- Barrel at Temperature Start Prevention
- Motor Temperature Measurement for ICT Motors
- Enclosure Temperature
- Outputs for Stack Light and Buzzer



#### powered by

## Already Have an AC Drive?



The Guard Dog from ICT can provide you with many of the protective features like those above when using the Yaskawa or ABB drive with the ICT Motor.

### **FEATURES**

- Screw Break Prevention
- Temperature: Drive, Cabinet, and Motor
- Trending
- Extruder Speed and Load

## **About ICT**

Integrated Control Technologies (ICT) is a technology company that provides products, engineering and repair service for the Plastic Industry to aid in the resolution of problems created by aging equipment and a changing workforce.

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