The Benefits Are Yours

- The gear train and bearings are factory grease-packed for the life of the starter, so it requires no maintenance. There are no rubbing parts, so there is no external lubrication required. Lubricator problems, installation expense, system maintenance, and the messy and hazardous oil film around the starter exhaust... all are eliminated.

- The TURBOTWIN T30-I starter fits a wide range of engine applications, up to 20 liters. One basic design can be used for a broad range of engine types.

- The TURBOTWIN T30-I is ideal for remote or "black" start applications. The unit requires no control lines or electrical wiring for its operation. And there are no complicated pre-engagement pistons to become a source of problems due to contamination or corrosion.

- Piping consists of only a single supply line with a ball valve or TDI relay valve in the line. There are no complicated control lines needed. See the typical manual or electric installation diagrams.

- The efficient twin-turbine motor design increases the torque applied to the ring gear, using less air per start than competitive designs. Refer to the performance curves for 6 nozzle models. The T30 Series includes models with 3, 6, and 12 nozzles.

- The T30-I starter can be used over a wide range of drive pressures from 30 psig (2 BAR) to 150 psig (10 BAR). It is suitable for operation on either compressed air or natural gas. The lightweight, 29 Lb, unit is capable of delivering over 21 HP (15.65 kW) of cranking power at only 120 psig (8 BAR).

- The TURBOTWIN T30-I starter contains absolutely no plastic or composite materials. All components are made from high strength aluminum or steel alloy.

- The durable turbine motor design in the TURBOTWIN T30 Series has no rubbing parts. It's tolerant of solid and liquid contamination in the supply gas with nearly no adverse affects. The motor is well adapted to running on "sour" natural gas.

from TECH DEVELOPMENT INC.
6800 Poe Ave. • Dayton, OH 45413-0557
Tel: 937 / 898 - 9600  Fax: 937 / 898 - 8431
• TECH DEVELOPMENT INC. introduced the first turbine technology for starting industrial engines in 1979. The TURBOTWIN T30 Series features an innovative and more reliable turbine motor than anything on the market today.

The TURBOTWIN T30 Series is the result of TDI’s continuing turbine starter design innovations. Based on our successful TURBOTWIN T100 Series starters, the TURBOTWIN T30 Series starters should exceed customer requirements in every installation.

• The high horsepower of a turbine air motor combined with the planetary gear speed reducer results in a very efficient and compact unit. The TURBOTWIN T30 Series models are powered by a pair of axial flow turbines coupled to a simple planetary gear reduction set. Model T30-I uses an inertia Bendix drive to engage and disengage the pinion from the ring gear.

from TECH DEVELOPMENT INC.
6800 Poe Ave. • Dayton, OH 45413-0557
Tel: 937 / 898 - 9600   Fax: 937 / 898 - 8431
ELECTRIC INSTALLATION

Use #16 (1") Hose When Starter Is Within 25 Feet Of Air Reservoir

Use #20 (1.25") Hose When Starter Is Beyond 25 Feet Of Air Reservoir

Air Starter Reservoir
(Vehicle)
or
Main Air Supply
(Stationary)

Manual Override Button

(+) From Power Source
(-) From Power Source
From Interlock System
To Interlock System

NOTE For The Best Results, Mount The Relay As Close To The Starter As Possible

P/N RLVA-25683-024-1-00 (1.25" NPT In/Out Port, 24 VDC)
or
P/N RLVA-25683-012-1-00 (1.25" NPT In/Out Port, 12 VDC)

SAE 3 Mounting Flange

6/8 Pitch, 11 Tooth Pinion
8/10 Pitch, 12 Tooth Pinion

WARNING
Refer To Specific Operation & Installation Manuals For Precise Starter Model Control Port Locations

MANUAL INSTALLATION

Use #16 (1") Hose When Starter Is Within 25 Feet Of Air Reservoir

Use #20 (1.25") Hose When Starter Is Beyond 25 Feet Of Air Reservoir

Air Starter Reservoir
(Vehicle)
or
Main Air Supply
(Stationary)

Manual Control Valve
52-83504

CAUTION
The total control line length from the starter control valve "A" port to the relay must not exceed 10 feet.

#4 (.25") Control Lines

from TECH DEVELOPMENT INC.
6800 Poe Ave. • Dayton, OH 45413-0557
Tel: 937 / 898 - 9600  Fax: 937 / 898 - 8431
**TDI TurboTwin**

**T30-I**

**PERFORMANCE CURVES**

Model T306-I

6 NOZZLES

70°F, Compressed Air

11.4:1 Ratio

<table>
<thead>
<tr>
<th>INLET Pressure</th>
<th>FLOW (Scfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 PSIG</td>
<td>478</td>
</tr>
<tr>
<td>90 PSIG</td>
<td>365</td>
</tr>
<tr>
<td>60 PSIG</td>
<td>255</td>
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Model T306-I

6 NOZZLES

70°F, Methane Gas

11.4:1 Ratio

<table>
<thead>
<tr>
<th>INLET Pressure</th>
<th>FLOW (Scfm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 PSIG</td>
<td>600</td>
</tr>
<tr>
<td>90 PSIG</td>
<td>465</td>
</tr>
<tr>
<td>60 PSIG</td>
<td>330</td>
</tr>
</tbody>
</table>

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T30 Series: *Flexibility To Meet Any Requirement*

T30-I Inertia Engagement  T30-P Pre-Engaged  T30-Y Pre-Engaged/Overhung  T30-M Industrial Air/Gas Drive Motor

from **TECH DEVELOPMENT INC.**

6800 Poe Ave.  •  Dayton, OH 45413-0557
Tel: 937 / 898 - 9600  Fax: 937 / 898 - 8431

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