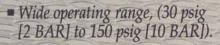
### TOITURBOSTART

56 Series Gas Turbine Starters.

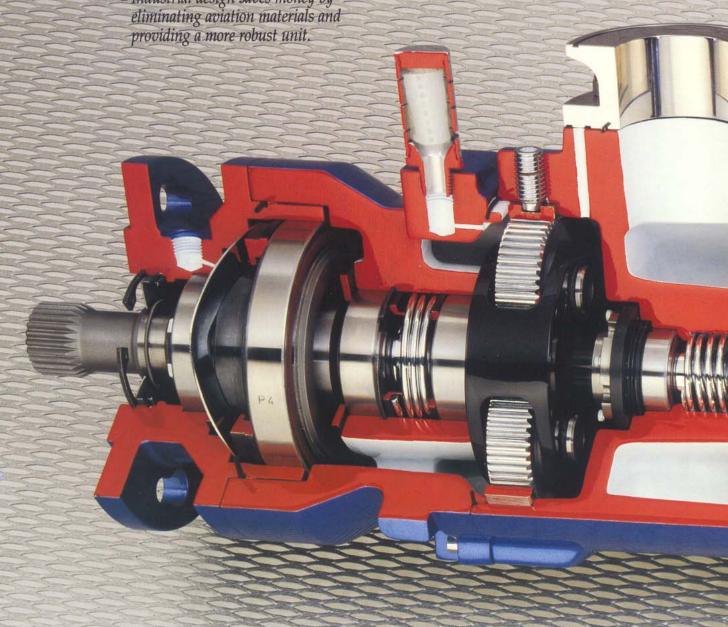


The Value You Want. The Power You Need.



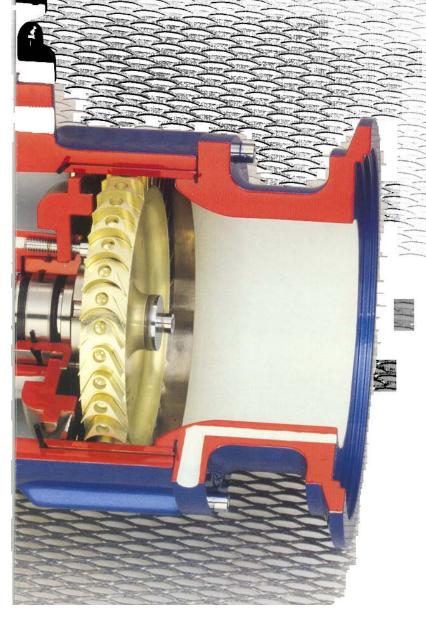
- Efficient and compact design.
- Standard oil sump or optional pressure lubrication system available.
- Not effected by contaminated air supply.
- 150 HP (112 kW) of cranking power at 150 psig (10 BAR).
- Industrial design saves money by eliminating aviation materials and

- Sprag clutch evenly distributes the torque load.
- Simple planetary gear transfers power efficiently.
- Variety of housings to fit an array of applications.
- No air lubricating system to install, maintain or fail.



## Starting Power For Industrial Gas Turbines.

The 56 Series easily takes your engine up through light off, delivering up to 150 HP of cranking power at 150 psig (10 BAR) inlet pressure. Power output is matched to each manufacturer's starting requirements to achieve the most efficient start-cycle. And the 56 Series is so powerful that in certain applications it develops adequate starting power while using less air, allowing you to reduce your air system requirements and your costs.



## Reduce Maintenance And Eliminate Exhaust Concerns.

Because there is no contact between the turbine elements in the TDI vane-less design, adding lubricants to the drive air is unnecessary. With nothing added to the drive air, no oily fugitive exhaust is produced – a step towards compliance with emissions regulations compared to vane-type motors. No expensive air lubrication system to install and maintain ... no messy and hazardous starter exhaust ... no lubrication system to fail.

# Robust Design For Reliable, Dependable Operation.

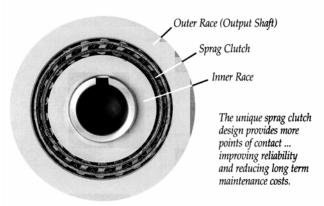
Reliability and safety are a result of the 56 Series' simple design and fewer parts. The overall strength is a result of quality components. Comprised entirely of metal parts – like a billet aluminum rotor and nozzles carved from steel – there are no fragile cast turbine elements or composite plastic parts. The open air path design helps make these parts extremely resistant to erosion and tolerant of contaminants that would clog or destroy other starters.

#### Efficient Single Planetary Gear.

To match the starter RPM to the start-cycle of the engine, TDI uses an efficient single planetary gear reducer. Complex sets of compound gears are less efficient, requiring the rest of the system to work harder to make up for the power lost in the gear train. And in the event that your starter should ever fail, replacing the planetary gear train is a much simpler operation than rebuilding a compound gear set, which can take hours, at much greater expense.

## Superior Clutch Design For Any Application.

Unlike other clutch mechanisms that rely on just a few contact points, the heavy duty overrunning sprag clutch distributes the torque load evenly to 22 points. This upgrade is the best choice for windmilling applications or to economically replace the pneumatic jaw-type clutch found on older gas turbine engine designs.



## Flexible Options For A Variety Of Situations.

The long start cycle of a gas turbine requires that critical components receive adequate lubrication. To reduce maintenance and prevent premature wear during windmilling, optional ports allow pressurized lubrication to guarantee sufficient oil supply and lubrication. The heavy duty gearbox housing is rotatable to six different positions to allow different inlet positions while various exhaust outlets are available to adapt the starter to any application.

### Worldwide Support From The TDI Service Center Network.

A worldwide network of authorized TDI Turbostart distributors and OEMs provide the service and support essential to your operation. Providing prompt delivery, product training and distributor support, TDI can work within the parameters of your turbine maintenance program (PM) to help you keep your starter service costs to a minimum. And if you're not currently using a starter manufactured by TDI, talk to us about a program tailored to your specific needs.

So if you're interested in taking advantage of the documented benefits we've just described, contact us today for the name of the authorized TDI distributor nearest you.

513-898-9600

TURBOSTART 56 SERIES APPLICATIONS			
MANUFACTURER	ENGINE	PART NUMBER	REMARKS
ALLISON	570KA	56B-1021L	
	501KB	5-51680-021	INST/GEAR BOX
DRESSER-CLARK	DC-990	56B-2021L	
DRESSER-RAND	DR-990	56B-2021L	
	DJ-50	56B-2021L	
GENERAL ELECTRIC	LM500	56B-1021L	
	LM1600	56S-2021L-000-0-75	
KONGSBERG	KG3	5-51650-021-200	
	KG2	5-51255-021-002	
PRATT&WHITNEY	FT4/8	56A-1121L-206-3	NATURAL GAS
	GG3/4	56A-1121L-200-3	AIR USE
ROLLS-ROYCE	AVON	56A-1121L	
	SPEY	56A-1121L-001-0-09	W/SPEED P/U
270 C			
SOLAR	CENTAUR	T106-60006-MOR-1	REQ. 2 MTRS
	SATURN	56S-2007L	W/CLUTCH
	SATURN	T106-60006-MOL-1	W/O CLUTCH

### TDI TURBOSTART

TECH DEVELOPMENT INC.

6800 Poe Avenue, P.O. Box 13557 Dayton, Ohio 45413-0557



Tel: (937) 898-9600 Fax: (937) 898-8431 Barber Colman - A Siebe Company