

TDI **TURBOFLOW™** AIR REGULATOR

A Flow-Matched Regulator Delivers Start System Efficiency & Savings!

1

Durable metal T-Handle for fast, simple direct adjustment

2

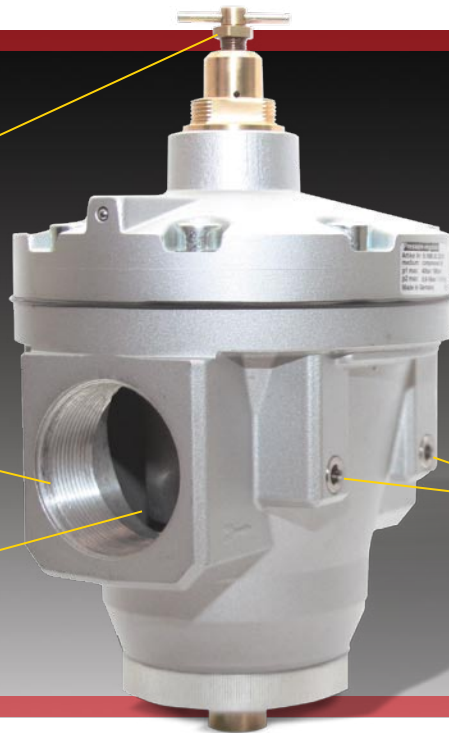
Widest Operating Range (50-580 psig | 3.5-40 BAR)

3

High Cv ratings minimize flow loss

4

Multiple options for flexible pipe connection



5

Lightweight, cast alloy body simplifies installation in tight spaces

6

All-metal external parts for harshest marine & industrial environments

7

Gauge ports for accurate air system diagnostics

TURBOFLOW REGULATOR IMPROVES START SYSTEM PERFORMANCE

Air Efficiency Goes Hand-in-Hand with Savings & Reliability

Start system performance means consistent reliable starts, but it also means having the air required on hand when the engine has to be available. **TURBOFLOW** minimizes dynamic air flow loss, which eliminates wasted air. This improves reliability by assuring the perfect amount of air is delivered to the starter every time.

Air Storage Costs Money—More Space Costs More

TURBOFLOW Air Regulators allow for smaller air tanks to be used, enabling space savings on marine vessels, generation sets, or other tight space applications. Lower stored air pressures reduce wear-and-tear on compressors which means longer uninterrupted service which not only saves money, but improves system reliability too.

Assure Regulatory Compliance Easily & Cost Effectively

Agency compliance with ABS, GL, NFPA and other regulatory standards make it tough to “piece together” a compliant system that does not cost a lot of money. Matching the right air regulator to the start system is the critical issue. One call to TDI and they can help you assemble a system that not only delivers the perfect amount of air for reliable starting every time, but also meets the industries rigorous compliance standards cost effectively. It’s air efficiency, starting reliability, and agency compliance in one cost-effective air regulator solution from TDI!

An OEM Air Regulator Where “One Part Fits All!”

TURBOFLOW's wide operating range 50-580 psig (3.5-40 BAR) assures engine air starting performance on

a large number of typical air system specifications. This versatile air regulator simplifies packaging and buying operations for many global engine OEMs.

TURBOFLOW for:

- Engine Air Starting
- Larger Air Motors
- Plant Air Systems
- Vessel Air Systems
- High or Low Pressure Differential Reduction



Upstream & downstream pressure ports allow for easy troubleshooting.

Specifications	TDI TURBOFLOW Regulator
Max Inlet Pressure	580 PSIG (40 BAR)
Max Outlet Pressure	217 PSIG (15 BAR)
Min. Outlet	50 PSIG (3.5 BAR)
Working Temperature	5° F to 140° F (-15° C to 60° C)
Air/Gas	Compressed Air & Inert Gases only

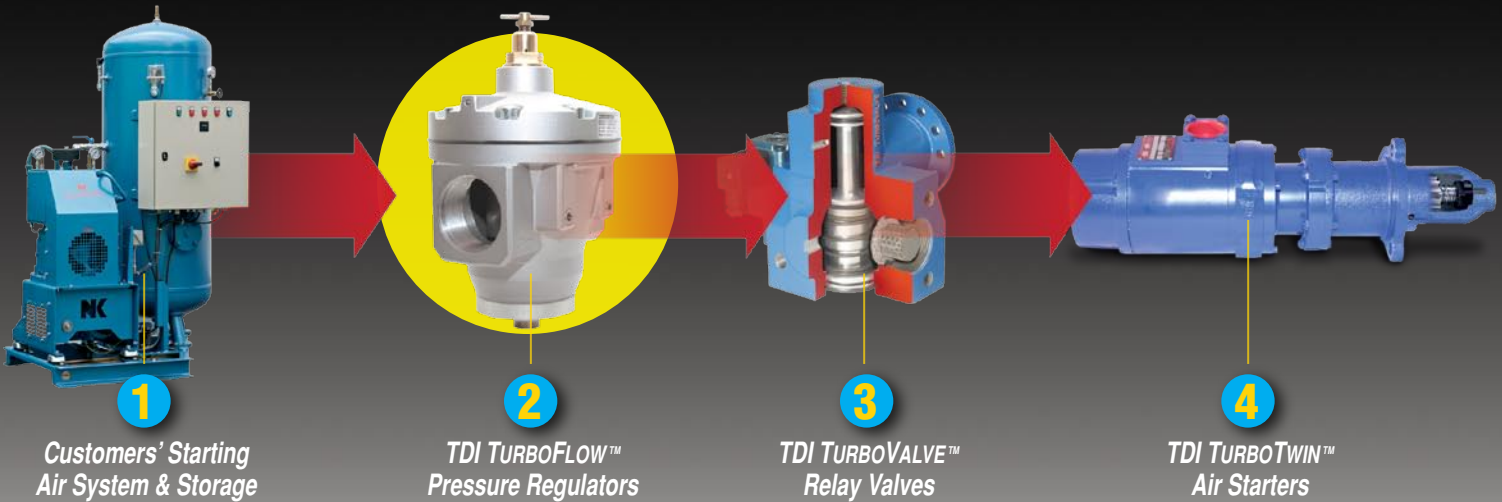
TDI
TECH DEVELOPMENT

ANYTHING LESS THAN A TURBOFLOW™ IS A COMPROMISE

6800 Poe Ave. • Dayton, OH 45414
Tel: 937-898-9600 • Fax: 937-898-8431
www.tdi-turbotwin.com

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A Flow-Matched Regulator Delivers Start System Efficiency & Savings!



A GREAT WAY TO IMPROVE STARTER PERFORMANCE & RELIABILITY!

Air Efficiency Goes Hand-in-Hand with Savings & Reliability

Most air pressure regulators found in start systems are woefully inadequate. These components are frequently selected based on pipe size and pressure ratings instead of their Cv factor or flow capability. There are four negative consequences for this error: 1) Higher pressure drops/flow losses between tank air pressure and the air starter, 2) reduced starter performance, 3) wasted air capacity, and 4) higher air costs.

Real Component Performance is In the System!

A TDI start system featuring **TURBOFLOW** air regulators and other TDI accessory components, make these problems a thing of the past by optimizing air delivery. TDI has been continuously improving starter reliability and performance since they pioneered low pressure air starting more than 30 years ago.

Dynamic Pressure Regulation

The critical issue in optimizing the air system is minimizing the pressure drop to the starter "in a dynamic manner" under high flow conditions. That's exactly what the high Cv factor on TDI's **TURBOFLOW** makes available more useable air pressure in the tank. This translates to greater air flow delivered to the air starter motor, even at low pressures. Additional benefits to these efficiency gains include:

- More engine starts on fixed air volume (tank size).
- More powerful starter performance on engines additionally loaded under cranking conditions.
- Utilization of smaller air storage tanks, without impacting regulatory compliance.
- Maintaining a lower stored air pressure, which reduces air compressor wear and costs.

TURBOFLOW REGULATOR REPLACEMENT TABLE

ORIGINAL TDI PART NUMBER	DESCRIPTION	NEW TDI PART NUMBER
2-29394	2" NPT Pipe Thread	3-30327-002
2-29394-001	2" NPT Pipe Thread w/gauge	3-30327-001
2-29394-002	1 1/2" NPT Pipe Thread	3-30332-002
2-29394-003	1 1/2" NPT Pipe Thread w/gauge	3-30332-001
2-29394-004	2" ISO G 228 Parallel Pipe Thread	3-30331-002
2-29394-005	2" ISO G 228 Parallel Pipe Thread w/gauge	3-30331-001
2-29394-006	1 1/2" ISO G 228 Parallel Pipe Thread	3-30331-002
2-29394-007	1 1/2" ISO G 228 Parallel Pipe Thread w/gauge	3-30331-001
N/A	2" ISO 7.1 Parallel Pipe Thread	3-30331-002
N/A	1 1/2" ISO 7.1 Parallel Pipe Thread	3-30331-001

The TURBOFLOW Regulator is a direct replacement for the previous TDI Regulator. If flexible tubing is used, replacement will be seamless. If hard piping is used in current installation, there will be some minor new piping required.

What Flow-Matched Air Regulators Have Accomplished in the Field

A marine workboat fleet operator attained ABS & GL compliance by improving engine starting performance from only five main engine starts, to eight starts using TDI air components.

A gas turbine power generator set attained light-off speed faster and with air to spare for additional start cycles using TDI air components.

A facility operator reduced annual air compressor maintenance & replacement costs simply by reducing stored starting air pressure settings from 195 psig, to 150 psig using TDI air components.

A "black-start" emergency generator set provider was able to attain NFPA110 compliance at a hospital site using TDI air components.

A fire pump met NFPA regulations, while reducing package air storage footprint by 25%, saving valuable "platform real estate" using TDI air components.



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