

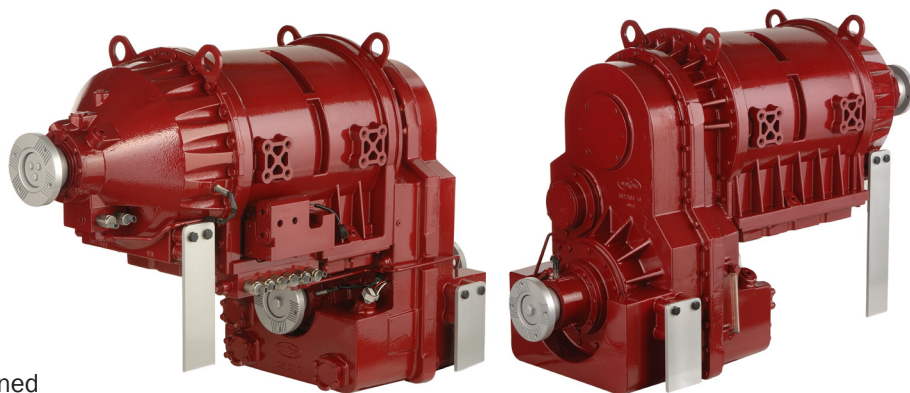
## TAD81-4001

UP TO 800 HP (596 kW)

The 4001 transmission system consists of an engine-mounted 17 or 18 inch type 8 torque converter, an 8 speed power-shift transmission and the advanced TDEC-500 electronic control system.

### FEATURES & BENEFITS:

- Increased power and torque capacity designed for modern high torque engines.
- Full-time all-wheel drive with differential lock, 30-70 and 50-50 biasing differentials available for 4x4, 6x6 and 8x8 vehicles. Optional part-time AWD system available.
- High capacity PTO clutch on the torque converter (not shown) with ability to engage at any engine speed.
- Full aluminum alloy housing.
- 1.55 step up ratio ground driven PTO for emergency steering pump. Available in SAE or DIN.
- **Increased Fire Fighting Efficiency:** The TAD81-4001 transmission has evenly-spaced ratio steps matching the torque characteristics of modern diesel engines, which permits faster shifts, rapid acceleration and precise control of vehicle speed to meet ground requirements and varying tractive conditions. The vehicle gets to location faster and starts pumping sooner to fight life-threatening fires quickly.
- **Ease of Use:** The state-of-art TDEC-500 Electronic Control System tailored for ARFF vehicles integrates the control of drive mode, PTO engagement and pump and roll mode and frees the vehicle operator to concentrate on the primary mission. Simple operation reduces training requirements.
- **Reduced Downtime:** Durable heavy-duty components, combined with electronic controls which prevent overspeed, shift shocks and reduce the effects of operator error, result in increased machine availability and less wear and tear on other machine components.
- **Extended Service Life:** The 4001 transmission system utilizes the same components used in heavy-duty off-highway units. This assures long life in ARFF vehicle operation.
- **Integrated System Components:** Torque converter with integral power dividing, drop box-type transmission and advanced electronic controls are all designed to work together as a system rather than a collection of parts.



TDEC-500  
ELECTRONIC CONTROL SYSTEM

### RATIOS

1st	2nd	3rd	4th	5th	6th	7th	8th	Reverse	Overall
6.50	4.02	2.95	2.07	1.55	1.07	0.81	0.71	5.82	9.17

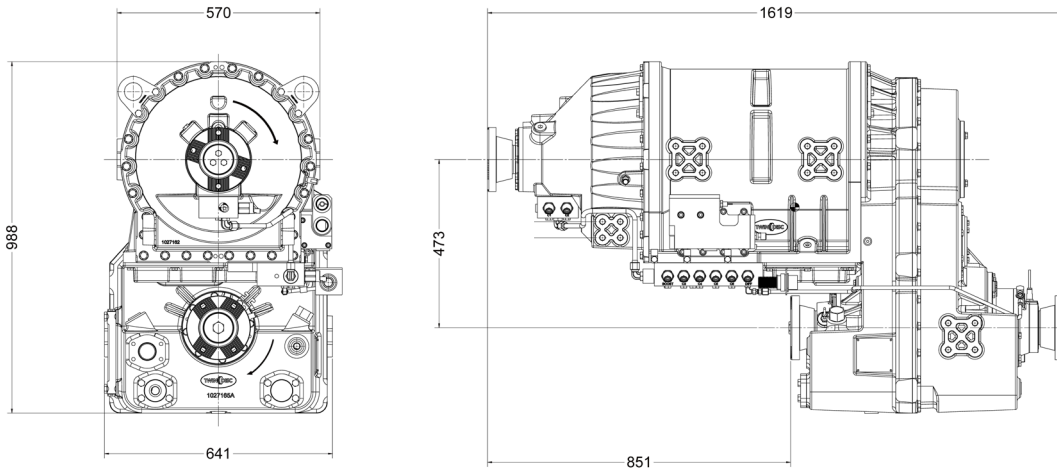


Specifications subject to change without prior notice in the interest of continual product improvement.  
Contact your local Twin Disc representative for engineering specifications. Patent pending.

Scan QR code to see Twin Disc's entire Power Transmission product line.



## TAD81-4001 TRANSMISSION SYSTEM FOR ARFF VEHICLES



### SPECIFICATIONS

Maximum gross input power (ARFF only)	800 hp (596 kW) @ 1900 RPM
Maximum gross input torque	2618 lb-ft (3550Nm)
Maximum input speed	1900 RPM
Weight	2455 lbs. (1114 kg)
Maximum oil temperature at converter outlet	250° F
Sump capacity	13 USG (49.2 liters)
Cooling required	25% of GHP
Cooling pump capacity	45 GPM @ 1900 RPM
Remote mounted	
30-70, 50-50, 70-30 biasing differential with differential lock	
TAD81-4001 output rotation same as engine for forward	
Consult Twin Disc regarding availability and specifications for optional outputs, PTOs and accessories.	

#### Important Notice: Torsional Vibration

Disregarding system torsional compatibility could cause damage to components in the drive train resulting in loss of mobility. At minimum, system incompatibility could result in gear clatter at low speeds.

The responsibility for ensuring that the torsional compatibility of the system is satisfactory rests with the assembler of the drive and driven equipment.

Torsional vibration analysis can be made by the engine builder, marine survey societies, independent consultants and others. Twin Disc is prepared to assist in finding solutions to potential torsional problems that relate to the transmission.

Twin Disc, Incorporated reminds users of these products that their safe operation depends on use in compliance with engineering information provided in our catalog. Users are also reminded that safe operation depends on proper installation, operation and routine maintenance and inspection under prevailing conditions. It is the responsibility of users (and not Twin Disc, Incorporated) to provide and install guards or safety devices which may be required by recognized safety standards or by the Occupational Safety and Health Act of 1970 and its subsequent provisions.

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For nearly a century, we've been putting horsepower to work by designing, engineering and manufacturing rugged-duty industrial products. Our products and our reputation are bolted to the most renowned engine manufacturers and equipment OEMs in the world. Our mission is to make your machines and vehicles more productive, more durable, more operator-friendly, more cost-effective. From design and installation consultation through after-sale support, Twin Disc and its distributors are committed to your business. No one knows more about managing horsepower in more ways than Twin Disc.

TRANSMISSIONS • CLUTCHES • PTOS  
PUMP DRIVES • TORQUE CONVERTERS  
GEARBOXES • HYDRAULIC PTO PRODUCTS



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