

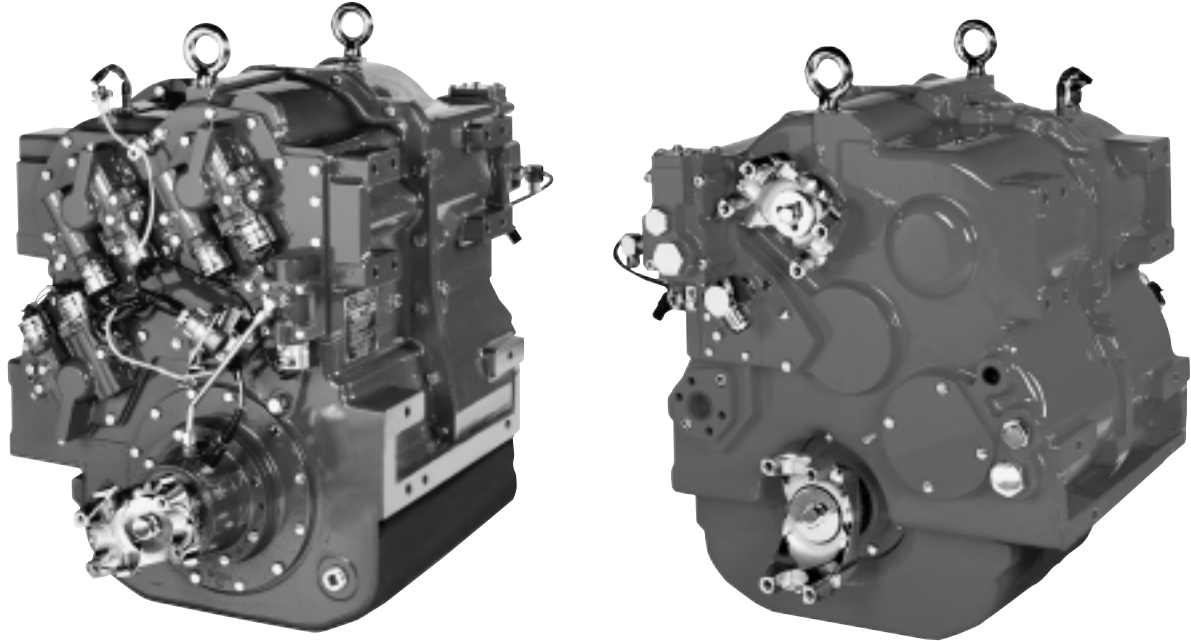
# TD61-1179

# TD61-1180

## Up to 630 hp

## 470 kW

### Twin Disc Automatic Transmission Systems



TD61-1180 shown with standard equipment

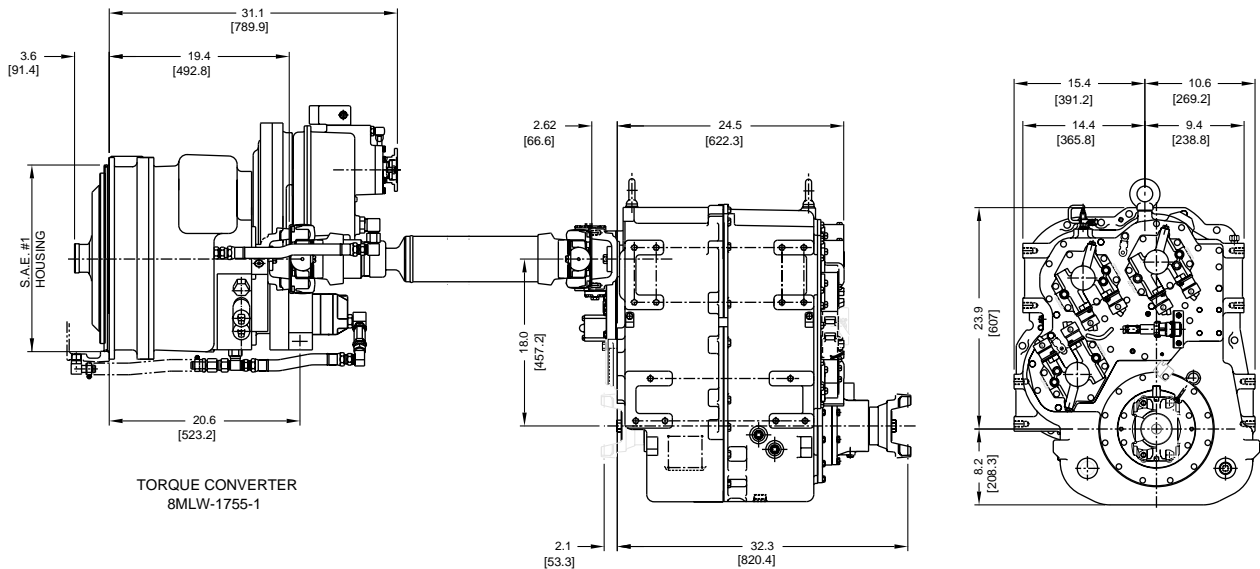
The 1180 Series transmission system consists of an engine mounted 17.5 or 18.5 inch type 8 torque converter, a 6 speed power-shift transmission and an advanced electronic control system.

#### Features at a glance

- Increased power and torque capacity to mate with modern 4-cycle 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 with ability to shift on the fly at high speeds.
- State of the art TDEC-400 electronic control system.

#### Benefits

- Increased fire fighting efficiency: The Twin Disc transmission system 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: Advanced electronic control system tailored for ARFF vehicles integrates the control of drive mode, PTO engagement, PUMP AND ROLL mode and frees the vehicle operator to concentrate on his 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's error, result in increased machine availability and less wear and tear on other machine components.
- Extended service life: The 1180 Series 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.



### Specifications

Maximum gross input power	630 hp (470 kW) @ 2100 RPM
Maximum gross input torque	1950 lb-ft (2644 N-m)
Maximum input speed	2300 RPM

### Torque Converter

#### Models

8MLW-1755-1	Up to 600 hp (447 kW)
8MLW-1856-1	600 to 630 hp (447 to 470 kW)

#### Mounting

SAE 1 wet flywheel housing

#### PTOs

Water pump: 0.98:1, 1.28:1, 1.64:1 ratio  
 Auxiliary: SAE B pump pad standard,  
 0.98:1 or 1.28:1 ratio

#### Weight, dry

900 lbs. (408 kg), depending on options

### Transmission

#### Models

TD61-1179	output rotation same as engine for forward
TD61-1180	output rotation opposite engine for forward

#### Mounting

Remote mounted  
 Sump capacity 7 gal (26.5 L)

#### Weight, dry

1700 lbs. (770 kg)

Consult factory for other PTO configurations and locations.  
 Consult factory for reduced weight options.

### Ratios

	1st	2nd	3rd	4th	5th	6th	Rev	Overall
TD61-1179	6.029	3.951	2.608	1.704	1.117	.737	6.70	8.18
TD61-1180	6.70	4.39	2.898	1.893	1.241	.819	7.443	8.18

Cooling pump capacity: 46.5 GPM @ 2100 RPM  
 Maximum oil temperature at converter outlet: 250° F  
 Cooling required: 25% of GHP

Consult Twin Disc regarding availability and specifications for optional hydraulic retarder.

**Important Notice: Torsional Vibration** Disregarding propulsion 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 propulsion 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 marine transmission.

Twin Disc, Incorporated reminds users of these products that their safe operation depends on use in compliance with engineering information provided in this bulletin. 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 user (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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