Power take-offs

Split shaft and engine driven power take-offs
OMSI Trasmissioni S.p.A. was founded in 1959 and today is the leader in application studies and development of custom mechanical drives including:

**SPLIT SHAFT AND ENGINE POWER TAKE-OFFS**
Used in sewer cleaning machines, concrete pumpers, fire fighting vehicles.

**COMBINED DRIVE GROUPS - MECHANICAL / HYDROSTATIC**
Used in street sweepers, street flushers, airport support equipment.

**AXLES, TRANSMISSIONS AND GEARBOXES**
Used in agricultural and industrial machines.

**RAILWAY TRANSMISSIONS**
Used in railway maintenance vehicles.

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**OMSI’s quality**
The company has been certified as UNI EN ISO 9001 compliant since 1993 and updated to the new norm of UNI EN ISO 9001:2000 in 2003.

**OMSI’s world**

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**Applications**
Cement Mixers, Concrete Pumpers, Sewer Cleaning Combination Machines, Street Washer, Fire Trucks and Drilling Rigs. The PTO can be installed in most brands of vehicles provided to the market without engine driven power take-off. Available with three speed-increase ratios and one or two clutch-controlled outputs. Aluminum alloy housing.

Stone crushers and Wood Chippers. The PTO can be installed on a diesel engine with SAE 1 flange in which it is required a through output coupled with a clutch or a hydrodynamic PTO and auxiliary outputs for various services.

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**Engine driven power take-offs for truck mounted equipment and industrial applications**

<table>
<thead>
<tr>
<th>PFT - PC4/3000</th>
<th>PFT - PC6/3000</th>
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</thead>
<tbody>
<tr>
<td>Torque-mechanical transmission</td>
<td>30.000 Nm</td>
</tr>
<tr>
<td>Range of drive ratios</td>
<td>1 / 1 - 1.27</td>
</tr>
<tr>
<td>Maximum output power</td>
<td>110 kW</td>
</tr>
</tbody>
</table>

**OMKA**

<table>
<thead>
<tr>
<th>Engine and gearbox size</th>
<th>SAE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of drive ratios</td>
<td>1 / 1 - 1.48</td>
</tr>
<tr>
<td>Maximum output power</td>
<td>180 kW</td>
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</tbody>
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**OMKA 2H**

<table>
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<th>Engine and PTO size</th>
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<tbody>
<tr>
<td>Range of drive ratios</td>
<td>1 / 1 - 1.3</td>
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<td>Maximum output power</td>
<td>120-140 kW</td>
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</table>
OMSI split shaft PTO's with two, four or six outputs for direct mount of axial piston and gear type hydraulic pumps

**Applications**

Concrete Pumping Equipment, Sewer Cleaning Combination Machines, Fire Trucks and Drilling Rigs.

<table>
<thead>
<tr>
<th>PFT - WGO250/1700 - HD/3000</th>
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<td>Torque mechanical transm.</td>
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Particularly suitable for the installation of in-line pumps up to 190 cc. These compact PTO's with aluminum alloy housings provide extremely high through-torque in the heavy duty "HD" version.

<table>
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<tr>
<th>PFT - WGS280/3000</th>
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Particularly suitable for the installation of in-line pumps up to 250 cc.

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<th>PFT - PCV/3000 Pump Drive</th>
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The OMSI Trasmissioni S.p.A. line of power take-offs includes a number of basic models covering the full range of power drive requirements.

Split shaft and engine driven PTO's eliminate the necessity of installing an auxiliary engine drive. They are used in cases where conventional transmission PTO's are not capable of providing the required power.

The split shaft PTO is positioned within the truck chassis between the transmission and differential. By selecting the most suitable drive range, it allows to transmit the maximum engine horsepower. The PTO can be operated with the vehicle in the stationary mode or in motion, if required.

These units are designed for truck power trains from 50 to 370 kW (67 to 500 HP).

The engine driven PTO is independent of the clutch and it is installed directly between the engine and transmission, allowing the maximum power transfer even when the vehicle is in motion.

Engineered with extensive safety margins and combined with the selection of the highest grade of gears, shafts materials and precision machined components, the OMSI PTO's provide maximum efficiency and reliability.
OMSI Trasmissioni S.p.A. has developed and introduced to the market Split Shaft PTO’s with multi-disc oil-bath heavy duty clutch. This unique and special feature has been PATENTED throughout the major markets of the world. The drive outputs can be operated with the main drive shaft in motion while engaging and disengaging the auxiliary systems (water pumps, vacuum pumps, compressors, etc.). Thus, eliminating the need to stop the rotation of the drive system and disabling the main power source. It minimizes the possibility for operator errors. The PowerClutch driven power take-offs provide the operator with the most simplistic controls. As a result, the downtime is drastically reduced, improving significantly the machine’s efficiency.

**HOT-SHIFT PowerClutch PFT - PC4/3000**
- Torque mechanical transmission: 30,000 Nm
- Range of drive ratios: 1 / 1 - 1.27
- Maximum output power: 110 kW

**HOT-SHIFT PowerClutch PFT - PCV/3000 - C**
- Torque mechanical transmission: 30,000 Nm
- Range of drive ratios: 1 / 1 - 1.47
- Maximum output power: 380 kW

**PFT - 2AV/3000**
- Torque mechanical transmission: 30,000 Nm
- Range of drive ratios: 1 / 1 - 1.27
- Maximum output power: 160 kW

**PFT - 4AV - E/3000**
- Torque mechanical transmission: 30,000 Nm
- Range of drive ratios: 1 / 1 - 1.27
- Maximum output power: 290 kW

**PFT - 300**
- Torque mechanical transmission: 4,500 Nm
- Range of drive ratios: 1 / 1 - 1.5
- Maximum output power: 75 kW

**PFT - 2AV/450**
- Torque mechanical transmission: 4,500 Nm
- Range of drive ratios: 1 / 1 - 1.5
- Maximum output power: 75 kW

**Applications**
OMSI split shaft PTO's with two or four outputs for hydraulic pumps and direct drives

**HOT-SHIFT PowerClutch**

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### Applications


### Torque Mechanical Transmission

- **PFT - 2AV/3000**
  - Torque mechanical transmission: 30,000 Nm
  - Range of drive ratios: 1 / 1 - 2.28
  - Maximum output power: 160 kW

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OSMI split shaft PTO's with two, four or six outputs for direct mount of axial piston and gear type hydraulic pumps

Applications

Concrete Pumping Equipment, Sewer Cleaning Combination Machines, Fire Trucks and Drilling Rigs.

### PFT - WGO250/1700 - HD/3000
- Torque mechanical transm.: 17,000 - 30,000 Nm
- Range of drive ratios: 1 / 1 - 1.5
- Maximum output power: 200 kW - 345 kW

Particularly suitable for the installation of in-line pumps up to 190 cc. These compact PTO’s with aluminum alloy housings provide extremely high through-torque in the heavy duty “HD” version.

### PFT - WGS280/3000
- Torque mechanical transmission: 30,000 Nm
- Range of drive ratios: 1 / 1 - 1.5
- Maximum output power: 345 kW

Particularly suitable for the installation of in-line pumps up to 250 cc.

### PFT - PCV/3000 Pump Drive
- Torque-mechanical transmission: 30,000 Nm
- Range of drive ratios: 1 / 1 - 1.7
- Maximum output power: 380 kW

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- Range of drive ratios: 1 / 1 - 1.27
- Maximum output power: 110 kW

**PFT - PC6/3000**
- Torque-mechanical transmission: 30,000 Nm
- Range of drive ratios: 1 / 1 - 1.27
- Maximum output power: 110 kW

**OMKA**
- Engine and gearbox size: SAE 1
- Range of drive ratios: 1 / 1 - 1.48
- Maximum output power: 180 kW

**OMKA 2H**
- Engine and PTO size: SAE 1
- Range of drive ratios: 1 / 1 - 1.3
- Maximum output power: 120-140 kW