ST-2D

Atlas Copco Wagner Inc.

3.6 Tonne Capacity Scooptram® LHD

Technical specifications and performance data

NOTE: Dimensions shown in millimeters. Turn dimensions are based on standard configuration. Overall dimensions will vary according to bucket width. Vertical dimensions are based on an unloaded vehicle tire radius of 610mm (24 in.)
### CAPACITY — SAE

<table>
<thead>
<tr>
<th>Capacity</th>
<th>kg</th>
<th>(lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tramming Capacity</td>
<td>3600</td>
<td>(8,000)</td>
</tr>
<tr>
<td>Static Tipping Capacity</td>
<td>9862</td>
<td>(21,737)</td>
</tr>
<tr>
<td>Breakout Force, Hydraulic</td>
<td>9000</td>
<td>(19,930)</td>
</tr>
<tr>
<td>Breakout Force, Mechanical</td>
<td>5936</td>
<td>(13,090)</td>
</tr>
</tbody>
</table>

### Boom Speeds: (Seconds)
- Raising: 3.7
- Lowering: 3.0

### Bucket Speeds: (Seconds)
- Dump: 6.4
- Roll Back: 5.3

### VEHICLE SPEEDS
See Vehicle Grade Performance Chart

### ENGINE (STANDARD)
- Deutz Diesel F6L-912W
- MSHA Power Rating @ 2,300 rpm: 63 kW (85 hp)
- Maximum Torque @ 1,500 rpm: 292 Nm (215 ft. lbs.)
- Number of Cylinders: 6, In Line
- Displacement: 5.6 L (345 in³)
- Cooling: Air
- MSHA Part 7 Ventilation
  - Vent Rate: 127m³/min (4,500 cfm)
  - Particulate Index: 142m³/min (5,000 cfm)

### EXHAUST SYSTEM
- Catalytic Purifier Plus Exhaust Silencer

### ELECTRICAL SYSTEM
- System Voltage: 24 Volt Starting, 24 Volt Accessories

### TRANSMISSION
- Modulated Power Shift, 4 Speeds
- Forward/Reverse: Spicer R28000 Series

### TORQUE CONVERTER
- Single Stage: Spicer C-270 Series

### AXLES
- Spiral Bevel Differential, Full Floating, Planetary Wheel End Drive: Spicer 14D2149

### BRAKES
- Service LCB: Hydraulically Applied Spring Released;
  - Fully Enclosed Wet Discs at Each Wheel End
- Parking and Emergency
  - Spring Applied Hydraulically Released;
  - Fully Enclosed Multiple Wet Discs, Built Into Transmission

### TIRES
- Tube Type, Nylon, Smooth Tread Design
  - for Underground Mine Service, on Demountable Rims
  - Tire Size, Front and Rear: 12.00 x 24, 16 Ply, L-5S

### STEERING
- Articulated Hydraulic Power Steering, Pilot-Operated, Monostick Control
- Turning Angle: 81° (40.5° Each Way)
- System Pressure: 13.1 MPa (1,900 psi)

### HYDRAULIC SYSTEM
- Dump and Hoist Control: Dual Lever
  - Cylinders: Double Acting, Chrome-Plated Stems
  - Cylinder Diameter
    - Steer Cylinder (1): 127 mm (5.0 in.)
    - Hoist Cylinder (1): 178 mm (7.0 in.)
    - Dump Cylinder (1): 178 mm (7.0 in.)
- Pumps: Heavy Duty Gear Type
  - Dump/Hoist: 91 + 91 L/min (48 gpm @2,300 rpm)
  - Steering: 91 L/min (24 gpm @2,300 rpm)
- Filtration: Suction Line: 25 Micron
- Dump/Hoist System Pressure: 11.4 MPa (1,650 psi)

### TANK CAPACITIES

<table>
<thead>
<tr>
<th>Component</th>
<th>liters</th>
<th>(gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel</td>
<td>148</td>
<td>(39)</td>
</tr>
<tr>
<td>Hydraulic</td>
<td>144</td>
<td>(38)</td>
</tr>
</tbody>
</table>

### OSCILLATION
- Rear Axle, Bronze/Ball Bushing
- Degree of Oscillation: Total 16° (8° Each Side)

### OPERATOR’S ARRANGEMENT
- Side Seated Operator for Bi-Directional Operation & Maximum Visibility and with MSHA - FOPS Certified Canopy

### OPERATING WEIGHT (APPROXIMATE)

<table>
<thead>
<tr>
<th>Condition</th>
<th>kg</th>
<th>(lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empty</td>
<td>11540</td>
<td>(25,444)</td>
</tr>
</tbody>
</table>
### DEUTZ F6L-912W 63 kW (85 hp) — Loaded

<table>
<thead>
<tr>
<th>Percent Grade</th>
<th>Grade</th>
<th>1st Gear kph</th>
<th>2nd Gear kph</th>
<th>3rd Gear kph</th>
<th>4th Gear kph</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0%</td>
<td></td>
<td>3.3</td>
<td>6.7</td>
<td>11.2</td>
<td>18.9</td>
</tr>
<tr>
<td>2.0%</td>
<td></td>
<td>3.2</td>
<td>6.5</td>
<td>10.6</td>
<td>16.6</td>
</tr>
<tr>
<td>4.0%</td>
<td></td>
<td>3.2</td>
<td>6.3</td>
<td>10.1</td>
<td>12.0</td>
</tr>
<tr>
<td>6.0%</td>
<td></td>
<td>3.1</td>
<td>6.1</td>
<td>9.2</td>
<td>8.4</td>
</tr>
<tr>
<td>8.3%</td>
<td>1:12</td>
<td>3.0</td>
<td>5.9</td>
<td>7.6</td>
<td>5.2</td>
</tr>
<tr>
<td>10.0%</td>
<td>1:10</td>
<td>3.0</td>
<td>5.8</td>
<td>6.4</td>
<td>2.6</td>
</tr>
<tr>
<td>12.5%</td>
<td>1:8</td>
<td>2.9</td>
<td>5.3</td>
<td>5.1</td>
<td>3.1</td>
</tr>
<tr>
<td>14.3%</td>
<td>1:7</td>
<td>2.9</td>
<td>4.9</td>
<td>4.2</td>
<td>2.6</td>
</tr>
<tr>
<td>16.0%</td>
<td></td>
<td>2.9</td>
<td>4.5</td>
<td>3.5</td>
<td>2.2</td>
</tr>
<tr>
<td>18.0%</td>
<td></td>
<td>2.8</td>
<td>4.0</td>
<td>2.6</td>
<td>1.6</td>
</tr>
<tr>
<td>20.0%</td>
<td>1:5</td>
<td>2.8</td>
<td>3.6</td>
<td>1.7</td>
<td>1.0</td>
</tr>
<tr>
<td>25.0%</td>
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<td>2.7</td>
<td>2.7</td>
<td>2.7</td>
<td>1.7</td>
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<tr>
<td>30.0%</td>
<td></td>
<td>2.5</td>
<td>2.0</td>
<td>2.0</td>
<td>1.2</td>
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</table>

### DEUTZ F6L-912W 63 kW (85 hp) — Empty

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<tbody>
<tr>
<td>0.0%</td>
<td></td>
<td>3.4</td>
<td>6.9</td>
<td>11.4</td>
<td>19.5</td>
</tr>
<tr>
<td>2.0%</td>
<td></td>
<td>3.3</td>
<td>6.6</td>
<td>10.9</td>
<td>18.2</td>
</tr>
<tr>
<td>4.0%</td>
<td></td>
<td>3.2</td>
<td>6.5</td>
<td>10.5</td>
<td>15.8</td>
</tr>
<tr>
<td>6.0%</td>
<td></td>
<td>3.2</td>
<td>6.3</td>
<td>10.1</td>
<td>12.3</td>
</tr>
<tr>
<td>8.3%</td>
<td>1:12</td>
<td>3.1</td>
<td>6.1</td>
<td>9.5</td>
<td>7.7</td>
</tr>
<tr>
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<td>6.0</td>
<td>8.6</td>
<td>5.3</td>
</tr>
<tr>
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<td>1:8</td>
<td>3.0</td>
<td>5.8</td>
<td>7.2</td>
<td>4.5</td>
</tr>
<tr>
<td>14.3%</td>
<td>1:7</td>
<td>3.0</td>
<td>5.7</td>
<td>6.3</td>
<td>3.9</td>
</tr>
<tr>
<td>16.0%</td>
<td></td>
<td>3.1</td>
<td>5.6</td>
<td>5.6</td>
<td>3.5</td>
</tr>
<tr>
<td>18.0%</td>
<td></td>
<td>2.9</td>
<td>5.2</td>
<td>5.2</td>
<td>3.2</td>
</tr>
<tr>
<td>20.0%</td>
<td>1:5</td>
<td>2.9</td>
<td>4.9</td>
<td>4.9</td>
<td>3.0</td>
</tr>
<tr>
<td>25.0%</td>
<td></td>
<td>2.8</td>
<td>4.0</td>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td>30.0%</td>
<td></td>
<td>2.8</td>
<td>3.2</td>
<td>3.2</td>
<td>2.0</td>
</tr>
</tbody>
</table>

NOTE: 3% rolling resistance assumed. Actual performance may vary depending on the application.
# ST-2D

## Bucket Dimensions

### MATERIAL DENSITY

<table>
<thead>
<tr>
<th>Standard</th>
<th>1.5</th>
<th>1.6</th>
<th>1.7</th>
<th>1.9</th>
<th>2.1</th>
<th>2.4</th>
<th>2.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>tonnes/m³</td>
<td>1.5</td>
<td>1.6</td>
<td>1.7</td>
<td>1.9</td>
<td>2.1</td>
<td>2.4</td>
<td>2.8</td>
</tr>
<tr>
<td>lbs/yd³</td>
<td>2538</td>
<td>2707</td>
<td>2876</td>
<td>3215</td>
<td>3553</td>
<td>4061</td>
<td>4720</td>
</tr>
</tbody>
</table>

### STANDARD BUCKETS

- **Bucket Volume (Nominal Heaped)**
  - m³: 2.5, 2.3, 2.1, 1.9, 1.7, 1.5, 1.3
  - yd³: 3.3, 3.0, 2.8, 2.5, 2.3, 2.0, 1.7

- **Bucket Width (A)**
  - mm: 1651, 1651, 1651, 1651, 1651, 1549, 1651

### TRAM POSITION

- **Axle Centerline to Bucket Tip (B)**
  - mm: 2443, 2407, 2344, 2251, 2191, 2191, 2025

- **Ground to Bucket Tip (C)**
  - mm: 1510, 1462, 1381, 1443, 1368, 1368, 1285

### RAISED POSITION

- **Back Height (D)**
  - mm: 3889, 3845, 3814, 3732, 3676, 3676, 3478

- **40° Dump Angle**
  - **Reach (F)**
    - mm: 1023, 977, 988, 989, 814, 814, 666
  - **Bucket Tip Height (E)**
    - mm: 1339, 1378, 1444, 1467, 1523, 1523, 1621

- **30° Dump Angle**
  - **Reach (F)**
    - mm: 1216, 1156, 1074, 1070, 978, 978, 815
  - **Bucket Tip Height (E)**
    - mm: 1548, 1570, 1630, 1661, 1693, 1693, 1764

### E-O-D® (EJECT-O-DUMP) BUCKETS

- **Bucket Volume (Nominal Heaped)**
  - m³: 1.9, 1.7, 1.5
  - yd³: 2.5, 2.3, 2.0

- **Bucket Width (A)**
  - mm: 1651, 1651, 1549
  - inches: 65, 65, 61

### TRAM POSITION

- **Axle Centerline to Bucket Tip (B)**
  - mm: 2331

- **Ground to Bucket Tip (C)**
  - mm: 1555

### RAISED POSITION

- **Back Height (D)**
  - mm: 3909, 3782

- **Level Bucket-Eject Position**
  - **Reach (H)**
    - mm: 1496, 1450, 1450
  - **Bucket Tip Height (G)**
    - mm: 2327, 2282, 2282

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Atlas Copco Wagner Inc.

Working Harder and Smarter

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