GOB FORMING AND DELIVERY

• SERVO FEEDER
• SERVO GOB DISTRIBUTOR
• DELIVERY EQUIPMENT
**SERVO GOB DISTRIBUTOR**

**Mechanical Features**
- High-performance mechanics with low drive inertia
- Ultra-reliable pinion-rack mechanical drive with inclined teeth
- Oil bath lubrication
- Interchangeable with mechanical gob distributors
- C.D.: SG - DG 4" 3/8 - TG 3"
- Automatic retraction via pneumatic cylinder with end-stroke cushioning system
- Mechanical end stroke with rack decelerators
- Pneumatic positioning of the scoops in the machine central line during an emergency stop for safety improvement
- Suitable for all types of delivery
- Gob interceptor with double pneumatic cylinder with out-stroke spring assist
- Scoop cooling with compressed-air or water
- Ring design spray system for scoop funnel (option)
- Gob speed booster with ring system (option)

**Electrical Features**
- Stand-alone or integrated control for installation on any type of machine
- Data programmed via computer and hand terminal
- Dual position control with motor resolver and mechanism resolver
- Working speed: more than 200 deliveries per minute
- Positioning accuracy of 0.13 mm, measured on the scoop tip
- Three automatically-selected positioning cams to optimise delivery time
- Control of the scoops positioning during the mechanism retraction
- Self-learned positions plus semi-automatic operation check
- Quick, efficient diagnostics
- Digital drive and brushless servo motor
- Local start, stop and emergency controls

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**DELIVERY EQUIPMENT**

“BDF-EASY ALIGNING”

**Mechanical Features**
- Trough and deflector support design with spider support for a correct trough/deflector alignment during the delivery adjustment
- Adjustable rigidity with belleville washers
- New deflector adjuster with anti-backlash device
- Laser gauge for a precise setup of the delivery
Servo Feeder composed by:
• Servo Plunger Mechanism
• Servo Parallel-Shear Mechanism
• Gear Type Revolving Tube Mechanism
able to work like a standard high speed feeder or to produce a series of gobs with different weight in the same machine production cycle.

Main Data

<table>
<thead>
<tr>
<th>FEEDER TYPE</th>
<th>SPOUT</th>
<th>PULL (T/24h)</th>
<th>GOB WEIGHT (gr)</th>
<th>REFRACTORY</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>SG</td>
<td>DG</td>
</tr>
<tr>
<td>64D</td>
<td>144 Std</td>
<td>5-20</td>
<td>10-650</td>
<td>10-300</td>
</tr>
<tr>
<td></td>
<td>144 Deep</td>
<td>10-30</td>
<td>80-1800</td>
<td>50-350</td>
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<tr>
<td>65D</td>
<td>81 Std</td>
<td>5-35</td>
<td>100-2000</td>
<td>10-300</td>
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<tr>
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<td>81 Deep</td>
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<td>140-2300</td>
<td>-</td>
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<td>194 Std</td>
<td>5-35</td>
<td>100-2000</td>
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<td>194 Deep</td>
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<td>180-2800</td>
<td>100-1200</td>
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<td>30-90</td>
<td>180-2800</td>
<td>100-1200</td>
</tr>
<tr>
<td></td>
<td>503 Deep</td>
<td>55-110</td>
<td>180-2800</td>
<td>100-1200</td>
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<tr>
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<td>515</td>
<td>55-150</td>
<td>180-2800</td>
<td>100-1200</td>
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GEAR TYPE REVOLVING TUBE MECHANISM

**Mechanical Features**

- Height adjusting stroke = 130 mm
- Tube supports size: 5”-6”-7”-8”-10”-12”
- Lifting mechanism with 0,5 mm of positioning stroke per revolution
- Tube rotation speed and direction controlled with brushless motor by the machine computer
- Air cooling with fanned or compressed air
- Torque limiting device to prevent damage to the refractory
- Ball bearing or carbon bearing for the tube support
- Manual or servo controlled lifting device

SERVO PLUNGER

**Mechanical Features**

- Housing structure in cast iron containing the carriage, the linear guides and the ball-screw in oil bath
- Ball screw with double preloaded ball-bushings for long-life service
- Low inertia brushless motor
- Long-life synchronous belt transmission

**Technical Features**

- Possible to install on conventional feeders
- Use of standard plunger chuck
- Use of low inertia brushless motor and digital electronic drive
- Plunger position accuracy < 0,02 mm
- Motion control with electronic cams
- Controlled by integrated or stand-alone system
- Interface with any type of machine

SERVO PARALLEL SHEAR

**Mechanical Features**

- Ball-screw with ceramic technology achieves axial speeds up to 3 m/sec and 5 g acceleration
- Arms holder carriages in aluminium with triple cylindrical guide
- Left shear blades holder arm with adjusting system for blades tension
- Right shear arm with manual controls for gob guides adjustment
- Low inertia brushless motor directly coupled with the ball-screw
- Lateral support with pneumatic cylinder for mechanism locking
- Safety shear arms opening with pneumatic cylinders
- Shears mechanism support with height adjustment and lateral centring system

<table>
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<tr>
<th>Max. Speed</th>
<th>220 cuts/min</th>
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<tbody>
<tr>
<td>Min. Cutting Time</td>
<td>139x2 = 278 msec</td>
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<tr>
<td>Max. Shear Stroke</td>
<td>145 mm per side (290 mm total)</td>
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</tbody>
</table>
Technical Features

- Cut angles 0°÷90° LH and 0°÷30° RH
- Possible to install on conventional feeders
- C.D.: SG - DG 4" 3/8 - TG 3"
- 45° mechanism rotation for orifice ring and shears change
- Motion control with electronic cams
- Shears position accuracy < 0.03 mm
- Controlled by integrated or stand-alone system
- Interface with any type of machine
- Programming of the data by operator’s computer or hand-terminal
- Easy and efficient trouble diagnostic
- Local control panel with start, stop, manual MODE, jog, emergency, hand terminal connector

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<tbody>
<tr>
<td>Max. Speed</td>
<td>220 cuts/min</td>
</tr>
<tr>
<td>Max. Plunger Stroke</td>
<td>7&quot; (180 mm)</td>
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<tr>
<td>Min. Plunger Stroke</td>
<td>5 mm</td>
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