R / SG
for
Plate Heat Exchanger

alkitronic®
Applications

- These tools are ideally specialized for bolting connections on plate heat exchangers, e.g. in the food and beverage sector, the paper industry, and the chemical industry. They save much time when tightening and loosening plate packs where perfect retention and absolute tightness are essential.
- Reliable, low-wear operation due to continuous rotation when bolting with spindles or long threaded bolts.
- Depending on the application, electrical or pneumatic driven torque multipliers: torque up to 4,800 Nm.

Advantages

- Load-free operation, with short assembly time.
- Fast simultaneous tightening of large plate packs when using two or more torque multipliers diagonally.
- *alkitronic® RCL, CL2-SG* and battery driven torque multiplier *EA* with fast gear for turning in and simple, quick switching to power gear.

*alkitronic® specials*

- Targeted types for convenient working in every tightening situation: among other options between radial gearing (R) with high-performance worm drive; tangential gearing (SG) with highly efficient spur gear.
- Long lifetime due to extremely robust motor housing made of cast aluminum or break-proof polymer.

Specifications

**Pneumatic driven models:**
Prerequisites for best work with the indicated torques are an operating pressure of 2-7 bar at a volume flow of approx. 10-15 l/s. The torque accuracy depends on the stability of the supply system.

**Electric driven models:**
Universal AC input 100 V – 253 V, frequency 45 Hz – 66 Hz, power max. 2000 W, protection category I, *EFCip with protection class IP 54* (EF optional). *EA* models with two lithium-ion battery packs 18 V, 5.2 Ah, and battery charger.

Load-free operation, with short assembly time.

Fast simultaneous tightening of large plate packs when using two or more torque multipliers diagonally.

*alkitronic® RCL, CL2-SG* and battery driven torque multiplier *EA* with fast gear for turning in and simple, quick switching to power gear.

**Targeted types** for convenient working in every tightening situation: among other options between radial gearing (R) with high-performance worm drive; tangential gearing (SG) with highly efficient spur gear.

Long lifetime due to extremely robust motor housing made of cast aluminum or break-proof polymer.

**Product information Remote Control**

*alkitronic® CLV-R or CLV-SG*
Model range with convenient remote control and individual pneumatic drive. When using several torque multipliers with radial (R) or tangential (SG) gearing, large packs can be tightened fast, simultaneously, and evenly.

- **Operation** of up to four torque multipliers simultaneously.
- Especially effective for multiple bolting connections and serial assemblies in semi-automatic operations.
- **Low-level sound emission** due to integrated sound reduction.

For highly efficient bolting connections with one or up to four *alkitronic® CLV* torque multipliers, preconfigured *alkitronic® Remote Systems* are already available.

*FBL DUO* for two *CLV* torque multiplier, *FBL QUATTRO* available on request.
## Technical Data

### alkitronic® Radial Gearing (R)

**Dimensions [mm]**

<table>
<thead>
<tr>
<th>Model</th>
<th>RCL 36</th>
<th>RCL 46</th>
<th>RCL 80</th>
<th>EA-R 36</th>
<th>EA-R 46</th>
<th>EFCip-R 36</th>
<th>EFCip-R 46</th>
<th>EF-R 80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque range 2nd gear (approx.) Nm</td>
<td>160-470</td>
<td>250-780</td>
<td>670-1975</td>
<td>150-450</td>
<td>250-730</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Torque range 1st gear (approx.) Nm</td>
<td>500-1500</td>
<td>800-2500</td>
<td>1645-4840</td>
<td>500-1500</td>
<td>750-2500</td>
<td>150-1590</td>
<td>250-2530</td>
<td>480-3840</td>
</tr>
<tr>
<td>Width across flat (AF) mm</td>
<td>36</td>
<td>46</td>
<td>80</td>
<td>36</td>
<td>46</td>
<td>36</td>
<td>46</td>
<td>80</td>
</tr>
<tr>
<td>Height (approx.) H mm</td>
<td>400</td>
<td>435</td>
<td>450</td>
<td>400</td>
<td>450</td>
<td>385</td>
<td>425</td>
<td>475</td>
</tr>
<tr>
<td>Bolt distance (approx.) A1/A2 mm</td>
<td>100/128</td>
<td>112/145</td>
<td>156/194</td>
<td>100/128</td>
<td>112/145</td>
<td>100/128</td>
<td>112/145</td>
<td>156/194</td>
</tr>
<tr>
<td>Dimensions (approx.) X/Y mm</td>
<td>56/56</td>
<td>75/75</td>
<td>98/98</td>
<td>56/56</td>
<td>75/75</td>
<td>56/56</td>
<td>75/75</td>
<td>98/98</td>
</tr>
<tr>
<td>Weight (approx.) kg</td>
<td>11</td>
<td>13.5</td>
<td>21</td>
<td>11</td>
<td>13.5</td>
<td>12</td>
<td>14.5</td>
<td>21</td>
</tr>
<tr>
<td>Idle speed 1st gear (approx.) rpm</td>
<td>5</td>
<td>4.5</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Idle speed 2nd gear (approx.) rpm</td>
<td>15</td>
<td>14</td>
<td>12</td>
<td>10</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

When loosening a bolted connection, up to 20% higher torque may be required (loosening torque). We will gladly advise you in detail.

### alkitronic® Tangential Gearing (SG)

**Dimensions [mm]**

<table>
<thead>
<tr>
<th>Model</th>
<th>CLS2-SG 80</th>
<th>EFCip-SG 80</th>
<th>EF-SG 80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque range 2nd gear (approx.) Nm</td>
<td>440-1330</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Torque range 1st gear (approx.) Nm</td>
<td>1400-3780</td>
<td>560-3780</td>
<td>560-3780</td>
</tr>
<tr>
<td>Width across flat (AF) mm</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Weight (approx.) kg</td>
<td>17</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>Idle speed 1st gear (approx.) rpm</td>
<td>3.5</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Idle speed 2nd gear (approx.) rpm</td>
<td>10</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

When loosening a bolted connection, up to 20% higher torque may be required (loosening torque). We will gladly advise you in detail.
alkitronic® provides all drive technologies.

Extract from our product range:

✓ ELECTRIC

✓ PNEUMATIC

✓ HYDRAULIC

✓ MANUAL

alkitronic

YOUR PLUS FOR MORE PERFORMANCE

Increased quality
- Premium production
- Highest quality materials
- Long product life cycles
- 30 years experience in bolting technology
- Made in Germany – international patents

Increased precision
- Precise, customer-specific torques
- High repeatability
- Reliability in permanent operation
- Dokumentation of tightening results
- Automatic shut-off

Increased productivity
- Quicker tightening without reworking
- No environmentally caused failures (IP54, ATEX)
- High work safety
- Easy to use: clear, simple instructions
- Low maintenance and cost efficient

Better service
- Technical advice on site
- Training offers
- Manufacturer's calibration and certification
- Lifecycle support
- Spare part and repair service

TORQUE POWER WORLDWIDE

alki TECHNIK GmbH
Development, Production and Distribution of Bolting Systems
Unterlettenweg 4 – 85051 Ingolstadt/Germany – fon +49 841 97499-0 – fax +49 841 97499-90
info@alkitronic.com – www.alkitronic.com