We have got something against corrosion:
Surface and Corrosion Protection
SEW-EURODRIVE gearmotors come equipped with a standard protection against all common corrosive elements found in an industrial environment, such as moisture, oil, dirt or chemicals. It is possible to operate these motors even in extreme weather conditions due to a number of specific, additional treatments and the use of special materials. The synergy of internal and external preventive measures offers reliable protection for SEW-EURODRIVE drives.

The perfect interaction of the internal and external provisions reliably prevents SEW-EURODRIVE drives from damage, e.g.

- Internal treatment and protection of the standard parts with anti-corrosion treatment
- Top coat with surface protection treatment OS1 to OS4

With a combination of the optional SEW-EURODRIVE protective measures, customized to meet your individual requirements, you lay the foundation for a durable drive when placing your order.
### Solutions for internal and external provisions

#### Standard treatment for

| All products | Regular, detailed processing  
|              | Breather valves usually made of rustproof material  
|              | All processed flange and connection surfaces as well as shaft extensions coated with rust-preventing agent |

#### Anti-corrosion treatment for

| Motors | In addition:  
|        | Any fastening components regularly opened for operation made of rustproof material  
|        | Rustproof nameplates  
|        | Internal coating with special enamel |
| IP56 motors | Special bearing design (RS on drive-end, 2RS on non-drive end)  
|            | Additional condensation drain hole |
| Brakes and backstops | Rubber sealing collars fastened with clamping straps. Pressure plates made of non-corrosive material  
|                    | Explosion-proof BC and BD brakes, as well as backstops treated with special finishing varnish |
| Variable-speed gearmotors | VARIMOT®  
| VARIBLOC® | In addition:  
|           | All non-processed internal surfaces covered with special varnish  
|           | Gas-nitrided variable pulleys in VARIBLOC®  
|           | Hard chromium plated drive disk in VARIMOT®  
|           | Fastening components made of rustproof material |

#### Special protection design for output shafts

| NOCO® fluid, food grade quality according to USDA-H1 | Frettng corrosion protection gel  
|                                                       | Suitable for  
|                                                       | Hollow shaft designs to prevent contact corrosion  
|                                                       | Belt pulleys, chain sprockets or coupling halves for easier assembly and to prevent friction corrosion  
|                                                       | To protect free machined surfaces that are not or no longer protected from corrosion (shaft ends, flange ...) |
| Coating on output shaft extension | Oil seal coated with silicone  
|                                 | Particularly demanding applications |
| Output shaft made of stainless steel | Premium quality material  
|                                      | Particularly demanding applications |
Corrosion protection: Treatment packages for internal treatment and standard parts

- Special interior surface coating
- Rustproof nameplates
- RS bearing for IP56
- NOCO® fluid, the contact corrosion inhibitor
- Output shafts made of stainless steel
- Brakes with pressure plate made of non-corrosive materials
- Non-corrosive retaining components
- Special interior surface coating
- Rustproof breather valves
- Optional coating on output shaft end (in the area of the radial oil seal seat)
Surface protection:
Treatment packages for top coating
### Surface Protection

<table>
<thead>
<tr>
<th>Surface protection</th>
<th>Ambient conditions/sample applications</th>
</tr>
</thead>
</table>
| **Standard**       | Suitable for machines and systems in buildings and rooms indoors with neutral atmospheres.  
|                    | Similar to corrosion category*: C1 (negligible)  
|                    | **Sample applications**  
|                    | - Machines and systems in the automobile industry  
|                    | - Conveyor systems in logistics areas  
|                    | - Conveyor belts at airports  
| **OS1**            | Suitable for environments with condensation, and atmospheres with low humidity or contamination level, such as outdoors applications under roof or with protection.  
|                    | Similar to corrosion category*: C2 (low)  
|                    | **Sample applications**  
|                    | - Systems in saw mills  
|                    | - Hall gates  
|                    | - Agitators and mixers  
| **OS2**            | Suitable for environments with high humidity or mean atmospheric contamination, such as outdoors applications subject to direct weathering.  
|                    | Similar to corrosion category*: C3 (moderate)  
|                    | **Sample applications**  
|                    | - Applications in amusement parks  
|                    | - Funiculars and chair-lifts  
|                    | - Applications in gravel plants  
|                    | - Systems in nuclear power plants  
| **OS3**            | Suitable for environments with high humidity and occasionally severe atmospheric and chemical contamination. Occasionally acidic or caustic wet cleaning. Also for applications in coastal areas with moderate salt load.  
|                    | Similar to corrosion category*: C4 (high)  
|                    | **Sample applications**  
|                    | - Sewage treatment plants  
|                    | - Port cranes  
|                    | - Mining applications  
| **OS4**            | Suitable for environments with permanent humidity and severe atmospheric or chemical contamination. Regular acidic or caustic wet cleaning also with chemical cleaning agents.  
|                    | Similar to corrosion category*: C5-I (very high)  
|                    | **Sample applications**  
|                    | - Drives in malting plants  
|                    | - Wet areas in the beverage industry  
|                    | - Conveyor belts in the food industry  

Perfect surface protection for every application
**Surface protection**

<table>
<thead>
<tr>
<th>DAS series aseptic motors</th>
<th>Ambient conditions/sample applications</th>
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</thead>
<tbody>
<tr>
<td>OS2-OS4 as option</td>
<td>Suitable for dry or humid hygienic areas with mean atmospheric contamination. Also suitable for particularly dusty environments. Similar to corrosion category*: C3 (moderate)</td>
</tr>
<tr>
<td></td>
<td><strong>Sample applications</strong></td>
</tr>
<tr>
<td></td>
<td>– Applications in clean rooms</td>
</tr>
<tr>
<td></td>
<td>– Machines in the cosmetic and pharmaceutical industry</td>
</tr>
<tr>
<td></td>
<td>– Systems for processing cereal and flour (without Ex protection)</td>
</tr>
<tr>
<td></td>
<td>– Conveyor belts in cement plants</td>
</tr>
</tbody>
</table>

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<tr>
<th>DAS series aseptic motors with ASEPTIC™ drive package</th>
<th>Ambient conditions/sample applications</th>
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<tbody>
<tr>
<td>OS4</td>
<td>Suitable for hygienic areas in the food and beverage industry with permanent humidity and regular acidic and wet cleaning with chemical cleaning agents. Cleaning with compressive stress up to 80 bar. Similar to corrosion category*: C5-I (very high)</td>
</tr>
<tr>
<td></td>
<td><strong>Sample applications</strong></td>
</tr>
<tr>
<td></td>
<td>– Hygienic and aseptic conveyors in the beverage industry</td>
</tr>
<tr>
<td></td>
<td>– Systems in cheese dairies and butcher shops</td>
</tr>
<tr>
<td></td>
<td>– “Splash zones” in the food industry</td>
</tr>
</tbody>
</table>

* according to DIN EN ISO 12944-2
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