

# CLEAN DUTY

WORM GEARBOXES FOR AGGRESSIVE ENVIRONMENTS  
AND HIGH HYGIENE REQUIREMENTS



**MOTOVARIO**<sup>®</sup>

HEART OF MOTION

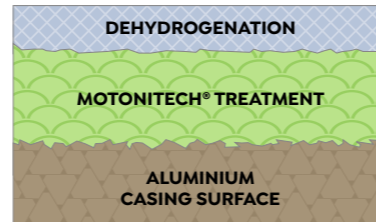
a TECO Group company

## SURFACE TREATMENT

### MOTONITECH® TREATMENT

Thanks to the high chemical resistance of the coating and the complete coverage of the surface, this treatment protects against:

- the acids of food products
- washing with acids and alkalis with PH from 2 to 12
- high-pressure washing
- aggressive chemical solutions



### TEST CARRIED OUT AND DETERGENTS SUPPLIED BY ECOLAB®

Immersion corrosion tests have been carried out using the most representative detergents and sanitisers in the industrial cleaning market.

#### TEST PROCEDURE PERFORMED:

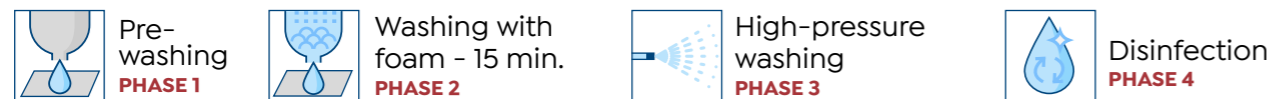
##### Immersion test

Complete immersion in the test fluid.

##### Duration

28 days, which simulates a product used for 7 years.

##### Example of washing cycle



##### Assessment

No decoration change (colour, degree and shine), no changes in protective properties according to DIN EN ISO 4628-1.

### DECLARATION OF COMPATIBILITY

**ECOLAB®**

**DECLARATION OF COMPATIBILITY**  
between ECOLAB hygiene products  
and MOTOVARIO gearmotors

For the completely safe cleaning  
of your plant

**MOTOVARIO®**  
HEART OF MOTION  
a TECO Group company

Motovario has available a range of gearmotors suitable for working in damp and corrosive environments, such as the food industry (meat, fish, fruit and vegetables), pharmaceuticals and marine applications. Supplier of hygiene solutions for Food and Beverage Industries.



The declaration proves the high resistance of MotoNiTech® surface treatment to Ecolab products below described.

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www.motovario.com

**ECOLAB®**

**Products**



**Equipment**



**Services**



ECOLAB s.r.l.  
Via Trento 26 - 20871 Vimercate (MI)  
www.it.ecolab.eu

**ECOLAB®**

**Compatible products with Gearmotors with MotoNiTech® treatment**

See below for the test procedure

PRODUCT	%	DEFECT QUANTITY	DEFECT QUALITY	COLOR VARIATION	WEIGHT VARIATION
P3-topax 66	6	2	2	0	0
Topaz AC2	6	0	0	0	-0.5%

DEFECT QUANTITY: 0 means - No detectable defect - 2 means - Few very small but detectable defects  
DEFECT QUALITY: 0 means - Up to 10x magnification no detectable defect 2 means - Might be visible to the human eye  
COLOR VARIATION: 0 means - Unchanged, no discoloration

**Test procedure**

- Test performed by Ecolab Technical Application Service
- Ecolab reference method 40.1 - ISO 4068-1 for the evaluation
- Full immersion of parts in detergent/disinfectant solutions
- Water hardness of 200 ppm CaCO3
- 28 days total time at 20°C, equivalent to the contact time that occurs in 6 years of daily cleaning
- Concentrations tested 30% higher than those normally recommended
- Test solution renewed every 3-4 days for oxidizing products (P3-topax 66)

**Final statement**

The Ecolab Technical Application Service Italy certifies that the Motovario Gearmotors with the surface treatment MotoNiTech® are compatible with the above listed Ecolab detergents and disinfectants. The trial covers 6 years of daily cleaning with the products used in a concentration 30% higher than those normally recommended.

## APPLICATIONS

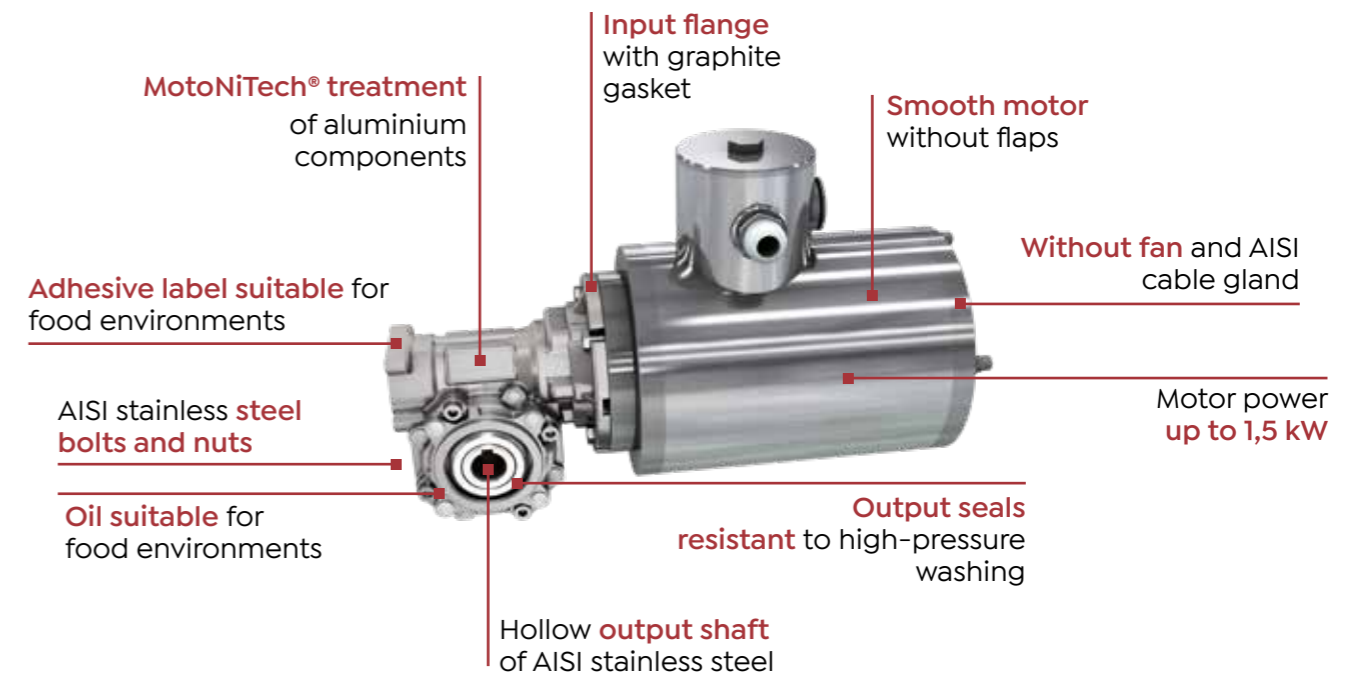
Motovario offers a wide range of gearmotors suitable to operate in humid and corrosive environments, such as food industry (meat, fish, fruit and vegetables), pharmaceutical industry and marine applications.

Motor and gear reducer are designed and manufactured with treatments able to increase their resistance and reliability characteristics and ensure resistance to wear using specific products for environment sanitisation.

MotoNiTech® the chemical treatment applied to the gear reducer casing, and the use of **AISI stainless steel components** make CLEAN DUTY a product suitable for various application requirements.

The chemical treatment and the use of the round casing effectively prevent water and dirt from stagnating and depositing.

### CLEAN DUTY GEARMOTOR



### RANGE

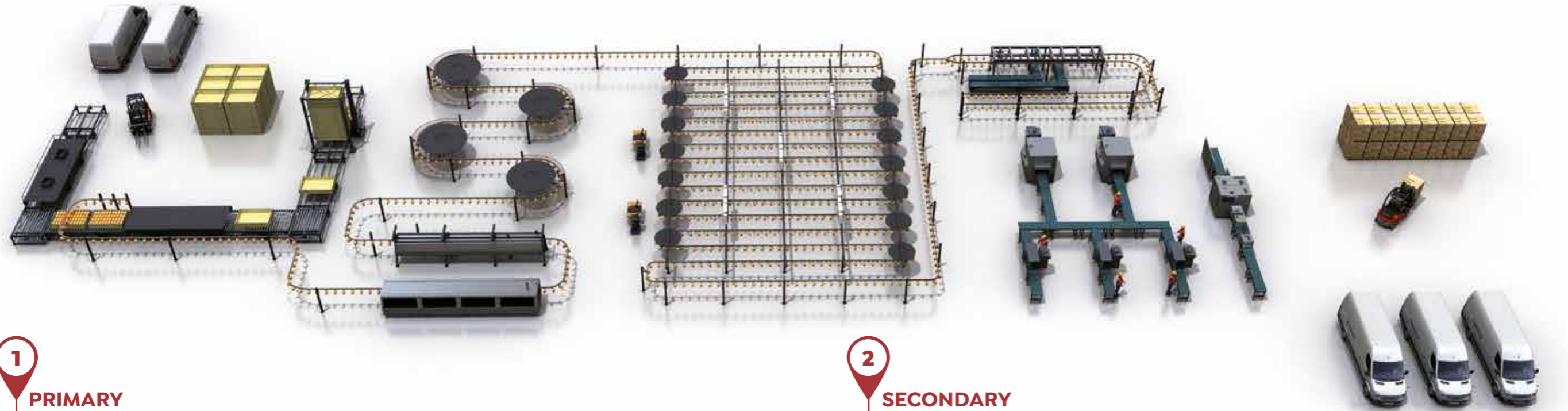
SIZE	M2 min	M2 max	RATIO MIN	RATIO MAX	
030	13	22	5	80	
040	29	48		7.5	100
050	55	88			
063	118	160			
075	180	230			
090	270	432			

Motor power up to 1,5 KW



# FIELDS OF APPLICATION

## EXAMPLE OF PRODUCTION PLANT



1

### PRIMARY PROCESS

- APPLICATIONS**
- Power Systems
  - Vaccination machines
  - Conveyors



Motovario offers solutions with:

- High quality paints that ensure suitable protection in **very harsh and corrosive environments**
- Inverters to reduce consumption and with installation inside cabinet or on-board the motor (up to IP66)
- Inverters with soft start, deceleration ramps and STO functions
- Compact size

2

### SECONDARY PROCESS

- APPLICATIONS**
- Cutting, slicing, dosing
  - Heating, cooling
  - Outer packaging



Motovario offers solutions with:

- Surfaces with **chemically treated aluminium** for washing with cleaning products with pH from 2 to 12 and washing with high-pressure water
- Lubricants for food use, high and low temperatures
- **Motors with smooth surfaces** and protection up to IP69K
- Several configurations with or without fan

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[MY.MOTOVARIO.COM](http://MY.MOTOVARIO.COM)



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