

PRODUCTION | SUPPLIES | AUTOMATION

# Product catalogue



ARCHIMEDES

We drive the future



PRODUCTION | SUPPLIES | AUTOMATION

# People and possibilities





LOCATION IN **TORUŃ**



**2** MANUFACTURING  
DIVISIONS IN  
**POLAND**



**80** SUPPLIERS



**100 000**  
PRODUCTS



**OVER 20 YEARS**  
OF EXPERIENCE



**5000m<sup>2</sup>**  
**OF WAREHOUSE**  
AREA



**100**  
EMPLOYEES



**5**  
**PRODUCTION**  
CENTRES

## Archimedes offer



SELECTION,  
MANUFACTURING AND  
DISTRIBUTION  
OF **MACHINE ELEMENTS  
AND INDUSTRIAL  
EQUIPMENT**

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DESIGN,  
PRODUCTION,  
INSTALLATION AND  
**CONVEYOR SYSTEM  
SERVICE**

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AUTOMATION  
AND **ROBOTICS  
ENGINEERING**

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PRODUCTION CENTRES

MACHINE AND CONVEYOR  
CONSTRUCTION CENTRE

PLASTIC PROCESSING CENTRE

SYNTHETIC AND MODULAR BELTS  
PRODUCTION CENTRE

MOTOVARIO GEARBOX AND  
GEARMOTOR ASSEMBLY CENTRE

MACHINING CENTRE

MECHANICAL ENGINEERING

DRIVES OF  
MACHINES AND DEVICES

CONVEYOR CONSTRUCTION  
ELEMENTS

LINEAR TECHNOLOGY

GENERAL UTILITY  
ACCESORIES

CONSTRUCTION ELEMENTS  
OF VIBRATION MACHINES

INDUSTRIAL  
ALUMINUM PROFILES

TRANSMISSION  
COMPONENTS

MACHINES AND DEVICES



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# Production centres





# Machine and Conveyor Construction Centre

**We manufacture systems of conveyors based on constructions made of aluminium, stainless steel and carbon steel profiles.**

**Production scope:**

- constructions of machines
- elevators and turn tables
- rotary buffer tables
- industrial workstations
- belt conveyors (synthetic and monolithic belts)
- conveyors with toothed belts
- chain conveyors
- conveyors with plate chains and modular belts
- gravitation and driven roller conveyors

[VIDEO 1](#)[VIDEO 2](#)[VIDEO 3](#)



# Plastic Processing Centre

**Processing and machining of synthetic materials is executed in the production plant in Dąbrowa Górnicza. The Plastic Processing Centre ensures the guarantee of the top quality of manufacture of the details made only from the materials supplied by reputed manufacturers.**

## Machinery Park:

- **axis plotters** 1700 x 3100 x 300 [mm], 2100 x 3100 x 300 [mm], 1000 x 2000 [mm]
- **CNC milling machines** 450 x 380 x 400 [mm], 900 x 500 x 450 [mm]
- **CNC lathes** D300 x 500 [mm] (passage D65), D300 x 1500 [mm] (passage D105), D150 x 100 [mm] (passage D30)
- **manual milling machine** 1000 x 250 x 450 [mm]
- **manual lathes** D350 x 1500 [mm] (passage D89), D250 x 1400 [mm] (passage D57)
- **large dimension saw**
- **spindle moulder**





# Synthetic And Modular Belts

## Production Centre

**We ensure a complex machining of conveyor drive belts. We cooperate with the largest reputed manufacturers in the world.**

**The machinery park comprises machines for execution of connections and manufacture of synthetic and monolithic belts:**

- heat welding presses (max. 2500 mm)
- belt delaminating and tooth cutting machines
- guide wedge application machines
- HF machine for heat welding in of takes and side waved bands
- cutting and assembly tables
- tools for application of anker, alligator mechanical connecting pieces
- devices for execution of connections of monolithic belts, round V-belts and heat welded V-belts
- heat welding machines for connecting belts, V-belts and polyurethane round belts





# Motovario Gearbox and Gearmotor Assembly Centre

## Types of assembled transmissions:

- helical
- helical with parallel axis
- helical-bevel
- planetary
- versions with an IEC flange,
- reducers with an input shaft
- compact versions

## The machinery park comprises:

- automatic presses
- assembly quality control devices
- marking and measuring devices

## Benefits for a customer:

- assembly in 48h
- service at customer's premises
- EXPRESS supply (on the same day)
- comprehensively stocked spare parts store





# Machining Centre

**The Machining Centre ensures execution of elements for construction of conveyors and details on the basis of the technical documentation provided by the customer.**

**The machinery park comprises:**

- vertical CNC milling centre
- digital CNC slant bed turning lathe
- CNC digital turning lathe
- universal lathes
- universal milling machine
- band saws and disc saws
- thread cutters pneumatic
- presses





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# Drives of machines and devices







## Worm gear reducers - VSF series



### NMRV series

- **sizes: 025-030-040-050-130-150**
- versions: NMRV.RVF, NMRV+NMRV, NRV+NMRV, HA31+NMRV
- gearing range: 5-100
- maximal torque: 1550 Nm
- input power: up to 18.5 kW
- worm material: bronze GCu Sn12 (UNI7013-10)
- worm profile: ZI (UNI4760)
- optional make ATEX 2GD/3GD
- accessories: outlet flanges, torque arm, output shafts, bushing protector, viton seals



### NMRV Power series

- **sizes: 063-075-090-110**
- versions: NMRVpower+NMRV, NRVpower+NMRV, HW/NMRVpower, IHW/NMRVpower
- compatibility with the previous version of NMRV transmission
- assembly versatility of the transmission
- equipped with an intermediate gear to the motor
- optional make ATEX 2GD/3GD
- accessories: inlet flanges, torque arm, output shafts, bushing protector, viton seals



### SW series

- **sizes: 030-040-050-063-075-090-105**
- versions: SW, ISW, SWL
- input power: up to 7.5 kW
- gearing range: 5-100
- maximal torque: 650 Nm
- reduction coefficient: from 5 to 100
- accessories: outlet flanges, torque arm, output shafts, bushing protector, viton seals

## VSF worm gearboxes for aggressive environments



CLEAN DUTY



### SW-CD series

- **machining method MotoNiTech®**
- output bushing of AISI steel
- bolts and nuts of AIS steel
- oil with a certificate for food contact
- seals resistant to high pressure washing
- input power: up to 1.5 kW
- smooth motor without stiffeners



## Helical gear reducers - H Series



### H series

- **sizes: 030-040-050-060-080-100-125-140**
- versions: H, IH, CH, PH
- input power: up to 45 kW
- gears with 1-, 2-, 3- stages
- gearing range: 1.23- 282.1
- maximal torque: 8 000 Nm
- housings made of increased strength cast iron G200
- gears case-hardened, quenched and polished
- optional make ATEX 2GD/3GD
- accessories: outlet flanges, one-way clutch, viton seals



### HA series

- **sizes: A30-A40-A50-A60**
- versions: HA, IHA, CHA
- input power: up to 5.5 kW
- gears with 1-, 2-, 3- stages
- gearing range: 1.33 - 353.98
- maximal torque 500 Nm
- housings made of aluminium alloy
- gears case-hardened, quenched and polished
- optional make ATEX 2GD/3GD

## Helical bevel gear reducers - B Series



### B series

- **sizes: 060-080-100-125-140-150-160**
- versions: B, IB, CB, PB
- input power: up to 90 kW
- gears with 2- and 3- stages
- gearing range: 5.71- 187,24
- maximal torque: 13 000 Nm
- spiral-bevel gears. Gleason System
- housings made of increased strength cast iron G200
- optional make ATEX 2GD/3GD
- accessories: outlet flanges, torque arm, output shafts, collet, bushing protectors, viton seals, one-way clutch



### BA series

- **sizes: A40-A50-A70**
- versions: BA, IBA, CBA
- input power: up to 5.5 kW
- gears with 2- and 3- stages
- gearing range: 7.62- 442.76
- maximal torque: 450 Nm
- housings made of aluminium alloy
- optional make ATEX 2GD/3GD
- accessories: outlet flanges, torque arm, output shafts, collet, bushing protectors, viton seals



## Shaft mounted gear reducers - S Series



### S series

- **sizes: 050-060-080-100-125-140-150**
- versions: SC, SD, SL
- input power: do 45 kW
- gears with 2- and 3- stages
- gearing range: 4.06- 394.69
- maximal torque: 9 500 Nm
- gears case-hardened, quenched and polished
- housings made of increased strength cast iron G200
- optional make ATEX 2GD/3GD
- accessories: outlet flanges, torque arm, output shafts, collet, viton seals

## Variators VAR



### TXF-S series

- **sizes TXF: 002-005-010**
- **sizes S: 003-005-010-020-030-050-100**
- slippage at maximum load: up to 5%
- adjustment sensitivity: 0.5 rev./min
- maximal torque: 144 Nm
- input power: do 9.2 kW
- optional make ATEX 2GD/3GD



### VH-VHA series compact version

- **sizes VHA: 002-005-010**
- **sizes VH: 003-005-010-020-030-050-100**
- slippage at maximum load: up to 5%
- adjustment sensitivity: 0.5 rev./min
- maximal torque: 5 000 Nm
- input power: do 9.2 kW
- optional make ATEX 2GD/3GD



## Mid Heavy Duty gearboxes - MHD Series



### PBZ series

- **sizes: 179, 199, 219, 249, 269, 279, 319, 349, 399, 409**
- versions: P, I
- make: HC, HL, CS, CD
- gears with 2-, 3-, 4- stages
- gearing range: 6-419
- maximal torque: 110 000 Nm



### PBH series

- **sizes: 180, 200, 225, 250, 280, 320, 355**
- versions: P, I
- make: HC, HL, CS, CD, SS, SD
- gears with 1-, 2-, 3-, 4- stages
- gearing range: 1.25- 760
- maximal torque: 78 000 Nm



### PBC series

- **sizes: 176, 196, 216, 246, 266, 276, 316, 346, 396, 406**
- versions: I
- make: HC, CS, CD
- gears with 1-, 2-, 3-, 4- stages
- gearing range: 1.25- 450
- maximal torque: 90 000 Nm



## Electric motors - M Series



### TS/TH/TP/TBS/TBH/TBP series

- **sizes: 56 to 132**
- insulation class F or H
- protection degree IP55, IP56, IP65, IP66
- fixing: foot flange B3, flange B5 or B14
- 2-, 4-, 6- field
- FM brake for DC and MS for AC
- B-class compliant in case of exceeding temperature
- ambient temperature +40°C

- PTC and thermal probe bimetal input
- multicolour diagnostic LED
- external PI-regulator with analogue feedback
- S-ramps with programmable parameters
- Profibus DP communication module (optional)
- input/output extension module (optional)
- dynamic braking module with integrated resistor (optional)
- protection degree: IP55 (IP56, IP65, IP66)
- system autotuning
- optional control panel SMART KEYPAD

## Drives - D Series



### Motors integrated with DRIVON-DV inverter

- single-phase and three-phase power supply
- power: 0.25 - 5.5 kW
- open loop vector control of asynchronous motors
- interface micro USB
- PC software
- built-in STO function
- built-in potentiometer
- built-in CANopen DSP402 and Modbus RTU
- torque overload 200%
- motor thermal circuit-breaker I2 t



### S510 series

- power range: 0.4 - 3.7 kW
- power supply: 200/240 - 400/480 V
- integrated circuit SAFE TORQUE OFF
- integrated EMC filter
- port RJ45 and 2 terminals for daisy-chain connections for integrated ModBus communication.
- optional keyboard with 4-digit display offers an integrated digital potentiometer for control of motor speed



## Drives - D Series



### JNL510 series

- power range: 0.2 - 11 kW
- power supply: 200/240 - 400/480 V
- output frequency: up to 599 Hz
- built-in Modbus RS485 communication for single and multiple control
- built-in digital display and keyboard with a potentiometer for speed adjustment
- RJ45 interface for connection of a computer and to connect a computer and a copying module
- optional set for assembly on a DIN rail
- built-in PID feedback
- 32-bit processor 100M Hz ensures high output, faster A/D conversion and torque compensation
- control modes comprise V/F and SLV
- communication interface modules Profibus/ DeviceNet/Ethernet (TCP/IP)/ CANopen
- new, built-in communication function BACnet
- built-in EMI filter
- PTC output



### JLE510 series

- power range: 0.4- 55 kW
- power supply: 200/240 - 400/480 V
- output frequency: do 599 Hz
- control modes comprise U/F control and advanced SLV
- function of automatic motor adjustment
- removable digital display and a keyboard with a potentiometer for speed adjustment
- built-in Modbus RS485 communication for single and multiple control



- RJ45 interface for a PC computer and a copying module
- communication interface modules for Profibus/ DeviceNet/ Ethernet (TCP/IP)/ CANopen
- internal PLC functions
- 16 programmable constant speeds
- built-in PID feedback PID
- built-in EMI filter of C2 category
- version IP20 and IP66 (NEMA4)
- protection of parameters with a password
- phase loss control on input and output

### A510s series

- power range: 0.75 - 90 kW
- power supply: 400/480 V
- closed loop vector control,
- control for permanent magnet motors (PM)
- auto-tuning function
- 200% of rated torque at 0 Hz
- RS485 Modbus interface RS485 via RJ45
- PC software
- 3 kinds of PWM modulation available
- 8 multi-function inputs
- 4 multi-function outputs
- programmable relay
- phase loss control on input and output
- protection of parameters with a password
- 7 application patterns available: pumps, fans, conveyors, elevators, compressors, lifting, HVAC
- 16 programmable constant speeds
- 16 ramps of acceleration/slowing down for each determined speed
- PID regulator
- electromechanical brake control logics



## VF, W type worm gears



### VF, W, VFR-WR, VF/VF - VF/W series

- **sizes:** 27, 30, 44, 49, 63, 75, 86, 110, 130, 150, 185, 210
- versions: VF, W, VFR-WR, VF/VF - VF/W
- maximal torque: 7100 Nm
- power: 0.04 - 75 kW
- gear rate 7 - 10.000
- accessories: outlet flanges, torque arm, output shafts, bushing guards, overload clutch, viton seals

## S, C type straight helical gears



### S series

- **sizes:** 10, 20, 30, 40, 50
- maximal torque: 200 Nm
- power: 0.12 - 11,6 kW
- gear rate 1.4 - 13.1
- flange or foot flange fixing,
- IEC flange connection, compact version or input shaft with spline



### C series

- **sizes:** 0.5, 11, 21, 31, 35, 41, 51, 61, 70, 80, 90, 100
- maximal torque: 12 000 Nm,
- power: 0.09 - 213 kW,
- gear rate 2.6 - 1481
- flange or foot flange fixing,
- IEC flange connection, compact version or input shaft with spline

## A type helical-bevel gears



### A series

- **sizes:** 0.5, 10, 20, 30, 35, 41, 50, 55, 60, 70, 80, 90
- maximal torque: 14 000 Nm
- power: 0.22 - 150 kW
- gear rate: 5.4 - 1715
- IEC flange connection, compact version or inlet shaft with spline
- accessories: output flanges, one or two side output shaft, output bushing with a clamping ring, torque arm, backward movement lock

## F, TA type flat helical gears



### F series

- **sizes:** 10, 20, 25, 31, 41, 51, 60, 70, 80, 90
- maximal torque: 14 000 Nm
- power: 0.17 - 125 kW
- gear rate: 6.4 - 2099
- IEC flange connection, compact version or input shaft with spline
- accessories: output flanges, one side or two sided output shaft, output bushing with a clamping ring, torque arm, backward movement lock



### TA series

- **sizes:** 30, 35, 40, 45, 50, 60, 70, 80, 100, 125
- maximal torque: 16 000 Nm
- power: 1.1 - 156 kW
- gear rate: 5.0 - 31.5
- make: output bushing with a groove, backward movement lock, input shaft with spline



## RAN bevel gears



- **sizes: 8, 15, 18, 20, 24, 25, 28, 38, 48, 1,2/2R**
- torque range: 3 - 3.000 Nm
- power: 0.15 - 91 kW
- gear rate: 1.0 – 7.4
- make: output bushing, output shaft single-, two-, or three sided, output bushing with splines, IEC flange connection

## V variators



- **sizes: 0.25, 0.5, 10, 20, 30, 5.5, 10**
- speed range: 150-1000 rev./min
- power: 0.18 - 9.2 kW
- flange or foot flange fixing,
- gravitational speed index
- make: IEC flange connection, input shaft with spline

## 300 planetary gears



- **sizes: 300, 301, 303, 304, 305, 306, 307, 309, 310, 311, 313, 314, 315, 316, 317, 318, 319, 321, 323, 325**
- gear rate: 1 000 - 1.100.000 Nm
- power: do 450 kW
- gear rate: 3.4 - 5.000
- straight or bevel version
- IEC flange connection, hydraulic connection, compact version or input shaft with a spline
- accessories: output flanges, output shaft with splines, output bushing with a clamping ring, torque arm, flange or foot flange fixing

## LC, LCK, MP, SL, TR, KR gears without backlash



### LC series

- **sizes: 050, 070, 090, 120, 155**
- standard angle clearance: 12' - 15'
- reduced angle clearance: 6' - 8'
- rated output torque: 10 - 300 Nm
- gear rate: 3 - 100

### LCK series

- **sizes: 050, 070, 090, 120, 155**
- standard angle clearance: 6' - 8'
- rated output torque: 12- 300 Nm
- gear rate: 6- 100



### MP series

- **sizes: 60, 080, 105, 130, 160, 190**
- standard angle clearance: 15' - 17'
- reduced angle clearance: 10' - 12'
- rated output torque: 30 - 1200 Nm
- gear rate: 3-1000



### SL series

- **sizes: 70, 90, 120,**
- standard angle clearance: 12'
- reduced angle clearance: 6'
- rated output torque: 16 - 160 Nm
- gear rate: 3-10

### KR series

- **sizes: 10, 20, 30, 40**
- standard angle clearance: 8'
- rated output torque: 10-170 Nm
- gear rate: 1-5



## HDP, HDO, HDPE type industrial gears



### HDP series

- **sizes: 60, 70, 80, 90, 100, 110, 120, 125, 130, 140, 150, 160, 170, 180**
- maximal torque: 210 000 Nm
- gear rate: 7.1 - 500
- assembly on foot flange, flange or shaft
- input configuration: input shaft, flange IEC, flange connection with flexible coupling
- output configuration: single or two sided shaft, output bushing, bushing with a clamping ring



### HDO series

- **sizes: 100, 110, 120, 125, 130, 140, 150, 160, 170, 180**
- maximal torque: 210 000 Nm
- gear rate:  $i = 5.6 - 400$
- output configuration: output shaft with a spline, single or two sided, bushing with a keyway, output bushing with a clamping ring, foot flange or flange fixing
- input configuration: input shaft with a key, IEC flange connection, flange connection with a flexible coupling



### HDPE series

- **sizes: 60, 70, 80, 90, 100, 110, 120, 130, 140**
- maximal torque: 75 000 Nm
- gear rate: 7.1 - 125
- assembly on foot flange
- make versions: input shaft, flange IEC, flexible coupling
- assembly options: output shaft
- axial bearings, output bushing
- options: cooling system in side of the gear, external cooling system, oil temperature and level sensors



## Helical gears



### H series

- torque range: 23 - 14000 Nm
- mechanical power: 0.12 - 55 kW
- gear rate: 1 - 8600
- output options: shaft
- fixing: uniblock, flange, foot flange

## Helical gears with parallel axis



### A series

- torque range: 56 - 2800 Nm
- mechanical power: 0,12 - 55 kW
- gear rate: 1.78 - 14000
- output options: shaft, bushing with spline, collet
- special version for agitators
- fixing: to a housing, flange

## Helical-bevel gears



### K series

- torque range: 53 - 20000 Nm
- mechanical power: 0.12 - 90 kW
- gear rate: 5.5 - 8900
- output options: shaft, bushing with spline, collet
- special version for agitators
- fixing: uniblock, flange, torque arm

## Helical-worm gears



### S series

- torque range: 50- 13000 Nm
- mechanical power: 0.12 – 7.5 kW
- gear rate: 3 - 3400
- output options: shaft, bushing with spline, collet
- fixing: uniblock, flange, torque arm, foot flange

## Helical gears with parallel axis



### F series

- torque range: 130 - 18000 Nm
- mechanical power: 0,12 - 30 kW
- gear rate: 2.9 - 4000
- output options: shaft, bushing with a spline, collet
- make for agitators
- fixing: housing, flange

## Helical gears



### C series

- torque range: 50- 18000 Nm
- mechanical power: 0.12 - 75 kW
- gear rate: 2.44 – 375.71
- output options: shaft
- fixing: foot flange, flange



## Electric motors



- mechanical power: 0,12 - 200 kW
- housings 63 - 315
- number of fields 2, 4, 6
- makes B3, B5, B14, B34, B35 brakes
- encoders
- external cooling systems
- ATEX
- protections PTC, PT 100

## Industrial gears



### K RX, F RX series

- torque range: 2,2- 119 Nm
- mechanical power: 0,12 - 75 kW
- gear rate: 4,4-700
- special versions for agitators and extruders



## Planetary backlash gears



### RAW PLANET

- brush type motors DC: with ferrite and rare earths permanent magnets for servomotors and traction drives
- TRA DC 1 - 6 Nm, 200-1000 W
- FER DC 0.05 – 2.2 Nm
- NEO DC 0.12-4 Nm



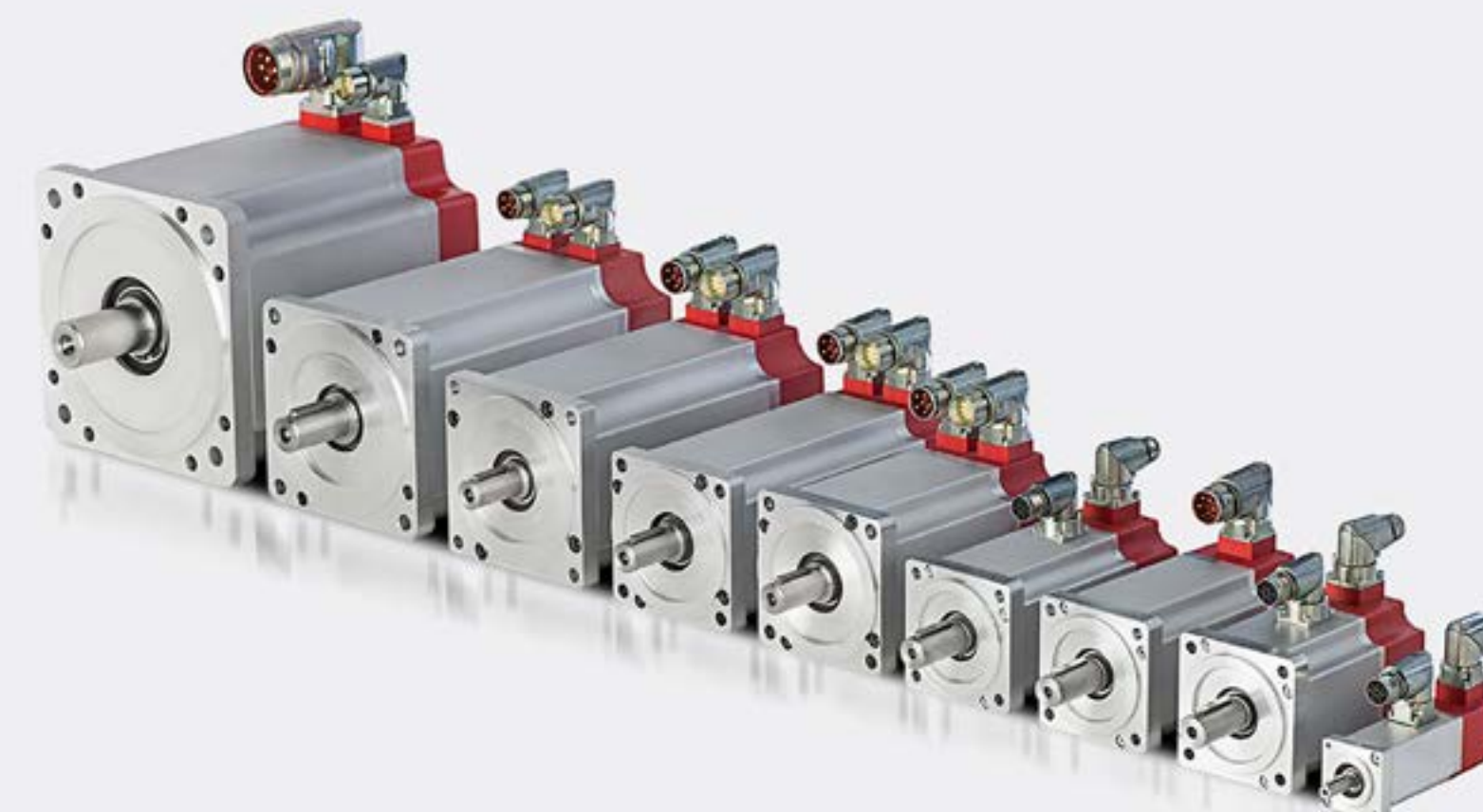
### PRO PLANET

- brushless servomotors: conventional rotary
- brushless servomotors AC and brushless servomotors with integrated electronics
- Proline ONE servo motors, housings 40, 60, 80 mm 0.34 - 3 Nm
- Proline TWO servo motors, housings 100, 120, 140 mm 7.5 - 19 Nm
- PL4 servo motors with built-in control power up to 400 W



### PGB PLANET

- precision planetary gears: also available with wheels and gears
- servo motors, control systems size: 55, 63, 80, 105, 130
- NXT gears, housings 50, 70, 90, 120 mm 20-210Nm, gear ratios 10-100 angle clearance <5arc
- NXR gears, housings 60, 80, 105 mm, 22-248Nm, gear ratios 10-100, angle clearance <5arc
- NXS gears, housings 40, 60, 80, 120 mm, 8-220Nm, gear ratios 10-100, angle clearance <5arc
- RE gears, housings 55, 63, 80, 105, 130 mm, 8-450Nm, gear ratios 10-100, angle clearance <5arc





## Mini gear-motors



### **C2000, PACE, PAE, PAC, PA, ACCE. ACE, ACC, AC, AM, DR-BUS series**

- asynchronous or DC motors, integrated with helical, worm, or worm-planetary gears
- possible versions with DR and DR-BUS, brakes, encoders
- and built-in inverters
- power: 4-740 W
- gear rating 4.1 - 2209
- output torque: 0.07 - 90 Nm
- output options: shaft, bushing
- fitting options: housing, foot flange, flange

## Brushless



### **Servo systems MCBS, MCEBS, BSE, DBS, MCEDBS MINIACTION 300 controllers**

- servo motors, integrated with helical, worm, gears. Possible COA make, wireless communication technology CanOPEN DS301
- BS Servo
- servo systems MCBS, MCEBS, BSE, DBS, MCEDBS
- MINIACTION 300 controllers
- communication systems
- power 32 W - 880 W
- output torque: 0.075 Nm - 94,7 Nm

## Clean



### **3-phase or brushless motors for operation in CLEAN zones, aggressive environments, etc.**

- integrated with helical or worm gears
- makes INOX, IP67K
- possible integration with DRR and DRF-BUS inverters
- power 31 - 740
- gear rating 7.4 - 2209.5
- output torque 0.51 - 90 N





## Ball-screw jacks



### MA, MA BS series

- recommended for continuous operation, work cycle up to 100%
- 8 mechanical sizes
- lifting capacity: 5 - 350 kN
- ball screw  $\varnothing$  16 -  $\varnothing$  120 mm
- trapezoidal screw:  $\varnothing$  18 -  $\varnothing$  100 mm
- gear ratio range 4 -32
- input speed up to 3.000 rev./min



### SJ, SJ BS series

- recommended for interrupted operation to 70%
- 11 mechanical sizes
- gear ratio range: 4 - 36
- input speed up to 1500 rev./min
- ball screw from  $\varnothing$  16 to  $\varnothing$  140 mm
- trapezoidal screw:  $\varnothing$  18 -  $\varnothing$  160 mm
- lifting capacity from 5 to 1000 kN



### HS, HSA series

- recommended for continuous operation, work cycle up to 100%
- 6 mechanical sizes
- bevel gear ratio range: 1- 4
- angle clearance on output shaft max. 10°
- input speed up to 3.000 rev./min
- ball screw from  $\varnothing$  25 to  $\varnothing$  80 mm
- lifting capacity: 10 - 200 kN

## Mechanical linear actuators



### ATL and BSA series

- 11 mechanical sizes
- screw  $\varnothing$  13.5 -  $\varnothing$  120 mm
- linear speed from 1.4 to 140 mm/s
- lifting capacity from 4 -600 kN



### CLA and CLB series

- 3 mechanical sizes
- screw:  $\varnothing$  18 -  $\varnothing$  32 mm
- linear speed: 2 - 60 mm/s
- lifting capacity: 10 - 25 kN



### UAL and UBA series

- 5 mechanical sizes
- screw :  $\varnothing$  13,5 -  $\varnothing$  32 mm
- linear speed: 23 - 875 mm/s
- lifting capacity: 4 - 15 kN



## Linearmech electromechanical actuators



### ILA series

- **6 mechanical sizes**
- screw: Ø 22 - Ø 80 mm
- lifting capacity: 15 - 250 kN
- ILA.B series, ball screw drive



### LMR series

- **3 mechanical sizes**
- screw: Ø 12 - Ø 16 mm
- linear speed: to 52 mm/s
- load: to 6.000 N
- DC current motors (12V, 24V, 36V)
- protection degree IP IP65



### SA IL, SA PD series

- **7 mechanical sizes**
- ball screw: Ø 12 - Ø 40 mm
- lifting capacity up to 46 kN
- linear speed to 1.500 mm/s



### SAM IL, SAM PD series

- **7 mechanical sizes**
- modular construction
- motor assembly in line or parallel
- motor assembly with universal interface
- ball screw: Ø 12 - Ø 40 mm
- lifting capacity up to 46 kN
- linear speed to 1.500 mm/s

## Actuators for solar trackers



### TMA series

- **6 mechanical sizes**
- screw: Ø 22 - Ø 80 mm
- linear speed: 0.1 - 40 mm/s
- lifting capacity: 15 - 200 kN
- standard pitch length to 1.500 mm

## Angular gearboxes



### BG series

- **6 mechanical sizes**
- Hexagonal housing with machined sides, each of them featuring 4 threaded assembly holes
- Tolerance of manufacture f7
- Input speed up to 3000 rev./min
- make with shafts, output bushing, or an IEC flange



## Soft starts



- systems of soft start and stop of a motor that enable precise setting of the starting up parameters and to minimize the energy costs
- possibility of setting of the starting up time, reduction of current, transferring of the data to the automation systems
- different makes and sizes available, relevant for the individual requirements
- power: 1.5 - 900 kW

## Electric brakes



- electronic devices for precise, reliable stopping of electric motors
- different makes and sizes available, relevant for the individual requirements, 6-600 A, stopping time adjustment possible from 0.5 to 320 s
- versions available for safety systems

## Soft start-brake systems



- soft start systems integrated with an electric brake,
- possible setting of the starting up time, braking time, limiting current, transferring of the data to the automation systems
- 2 families available, power range 1.5 - 30 kW



## Three-phase asynchronous motors with brake



### BA, BAX series

- AC brake power supply (DC optional),
- power: 0.09 - 90 kW
- fully enclosed, fan cooled (TEFC)
- oversize brake disc, ensuring high braking torque and long life-span
- manual brake release
- 2-, 4-, 6-, 8- field
- flange and foot flange,
- single- and two-speed
- braking torque 14 - 400 Nm
- protection degree: IP 54-IP 56
- adapted to operate with an inverter



### SM, SMX series

- squirrel cage asynchronous motors
- power 0.09 - 110 kW
- all motors are adapted to operate with an inverter
- single or two pole
- fully enclosed, fan cooled (TEFC)
- continuous operation (Premium Efficiency)



### BM, BMX series

- DC brake power supply with integrated rectifier
- power: 0.09 - 55 kW
- fully enclosed, fan cooled (TEFC)
- manual brake release (option)
- brake terminals connected to motor terminals or on a separate terminal block



- 2-, 4-, 6-, 8- field
- flange and foot flange,
- single or two pole
- braking torque: 2 - 150 Nm
- protection degree: IP 54 - IP 56
- adapted to operate with an inverter
- special BMBM version for theatre applications,
- TV - studio

### Options

- built-in inverter
- external cooling
- built-in encoder
- double output shaft
- brake release lever
- double brake
- rotor with an additional mass for soft start and stop

### BAH series

- mechanical sizes: 80-315
- power range from 0.75 kW to 130 kW
- degree of protection IP 55 (56-65-66 are available on request)
- AC 3-phase brake with lockable release
- manual release, (unlocking by manual release and DC brake on request)
- Class F insulation (Class H on request).
- Fully enclosed cast iron construction





## Explosion proof motors



### A series

#### GASES AND DUSTS

- standards: IEC/EN 60079, IEC 60034, IEC 60072, IEC 61241
- Ex db, Ex db eb / Ex tb, Ex tc
- categories ATEX 1M2, II2G, II2D, II2GD
- explosiveness groups:
  - gases I, IIB, IIC
  - dusts IIIB, IIIC
- temperature class: T3, T4, T5, T6
- maximal surface temperature (°C) for dusts: T150, T135, T125, T100, T85
- protection degree: IP55, IP56, IP65, IP66
- power from 0.12 to 375 kW
- power supply from 3 phases, 1- or 2- speed
- power supply from 1 phase (mechanical size 63 - 100)
- 2-, 4-, 6-, 8- field
- ventilated or with the dedicated ventilation (IC411, IC416, IC410, IC418)
- efficiency classes: IE1, IE2, IE3, IE4
- certificates ATEX, IECEx, GMEE



### D, H WITH BRAKE series

#### GASES AND DUSTS

- standards: IEC/EN 60079, IEC 60034, IEC 60072, IEC 61241
- terminal box Ex db lub Ex eb
- Ex db, Ex db eb, Ex tb, Ex tc
- categories ATEX II2G, II2D, II2GD, II3D
- explosiveness groups:
  - gases IIB, IIC
  - dusts IIIB, IIIC



- temperature class T3, T4, T5, T6
- maximal surface temperature (°C) for dusts: T150, T135, T125, T100, T85
- protection degree: IP55, IP56, IP66
- power from 0.12 to 110 kW
- 2-, 4-, 6-, 8- field
- ventilated or with the dedicated ventilation (IC411, IC416, IC410, IC418)
- disc brake power supply AC or DC
- efficiency classes: IE1, IE2, IE3, IE4
- certificates ATEX, IECEx, GMEE

### AN, TCN, AD series

#### NON-SPARKING, DUSTPROOF GASES AND DUSTS

- standards: IEC/EN 60079, IEC 60034, IEC 60072
- Ex nA, Ex tb, Ex tc
- categories ATEX II2D, II3D, II3G, II3G/II2D, II3GD
- explosiveness groups:
  - gases IIB, IIC
  - dusts IIIB, IIIC
- temperature class T3
- protection degree IP55, IP56, IP65, IP66
- maximal surface temperature (°C) for dusts: T200, T150, T135, T125, T100, T85
- power from 0.12 to 375 kW
- 2-, 4-, 6-, 8- field
- ventilated with the dedicated ventilation (IC411, IC416, IC410, IC418)
- efficiency classes: IE1, IE2, IE3, IE4
- certificates: ATEX, IECEx, GMEE



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# Construction elements of vibration machines







## Suspension units



- application in oscillating, amortizing and vibration dumping systems.

### Kinds of available inserts:

- **RUBMIX 10** - standard
- **RUBMIX 20** - heat resistant
- **RUBMIX 40** - oil resistant
- **RUBMIX 50** - increased rigidity

### New

- **RUBMIX 16** - dedicated for machines and devices in agriculture

### Special features:

- increased dynamic forces
- high chemical resistance

## Universal rubber elements



### DR-S, DR-A, DR-C

- square external profile
- torque: up to 2160 Nm

### DK-S, DK-A

- round external profile
- torque: up to 2160 Nm

### DO-A

- double profile
- torque: up to 1450 Nm

### BR, BK, WS

- handles facilitating assembly



## Vibration suspensions of freely vibrating screens and feeders



### AB, AB TWIN

- load capacity from 50 to 20 000 N

### AB-HD

- load capacity from 500 to 60 000 N

### HS

- elements for suspended systems
- load capacity from 500 to 14 000 N

### ABI

- made of stainless steel
- load capacity from 70 to 6 800 N

### Principal advantages:

- ensuring very long trouble free operation time
- high level of vibration damping
- smooth passing through resonance during starting up and topping
- they are crosswise rigid – no need to install protections
- durable, corrosion resistant, silent and maintenance free

## Elements of eccentric feeders



### AU, AR

- heads of oscillating arms

### AS-P, AS-C

- single oscillating arms

### ST

- heads of eccentric drive

### AK, AV

- oscillating heads of sieves

### DO-A

- vibration accumulators





## Self-tensioning motor bases



- **MB 27** - 0.75 - 4 kW
- **MB 38** - 3-15 kW
- **MB 50** - 7.5-45 kW
- **MB 75** - 37-200 kW
- **MB 100** - 90-250 kW

### Principal advantages:

- extends life span of belts and bearings of motor
- ensures constant, perfect tension of belts
- constant torque, diminishing of energy loss, more quiet operation of drive
- allows for a short slippage of a belt at starting up of large masses thus preventing an excessive tension increase
- fast and easy belt exchange with no need to re-align wheels
- fully maintenance free tensioning system

## Vibroisolators Rosta



- **ESL** - vibration insulating suspension
- **V** - vibration insulating joints
- **N, NOX, M** - vibration insulating feet (possibility of operation within temperature range from -40°C to +250°C)
- **NE 50 80, 400** - washers
- **AWI** - stainless steel vibration insulating suspensions

## Scrapers for conveyor belts



- easy to assemble, operate and maintenance
- SE type Rosta tensioners mounted on both sides
- scrapers provide automatic tensioning system, which guarantees an automatic, perfect blade pressing against the belt, regardless its surface
- blades with thickness 2 mm are made of steel or sintered carbide
- special system of blade fixing enables their easy and fast replacement
- adjustable setting assembly plates
- durable construction ensures long time of trouble free operation
- available in 7 standard sizes (non-standard size manufacture is also possible)





## Electric vibrators



### MVSI, MVSI-E

- foot vibrators
- in standard with certificate ATEX (II 2 D)
- E version - certificate ATEX (II 2 G, D)

### MVSI-TS

- vibrators with split mass cover
- in standard with certificate ATEX (II 2 D)

### MVSI-ACC

- vibrators with split mass cove and elongated shaft
- in standard with certificate ATEX (II 2 D)

### MICRO

- vibrators with minimized dimensions and small exciting force

### M3/65, M3/65-E

- vibrators with minimized dimensions and adaptive installation holes
- in standard with certificate ATEX (II 2 D)
- E version - certificate ATEX (II 2 G, D)

### MVSS, MVSS-P

- exciting force: to 30,560 kg
- static moment: to 27,285 kg/mm
- in standard 2-, 4-, 6- and 8- field
- special make 10- and 12- field

### zasilanie:

- 3-phase: 24-690 V, 50 or 60 Hz
- 1-phase: 100-130 V, 60 Hz, 200-240 V, 50 Hz



### MTF, MTF-E

- vibrators with flange mounting and mass cover underside
- in standard with certificate ATEX (II 2 D)
- E version - certificate ATEX (II 2 G, D)

### MVB, VB-E, MVB-FLC, MVB-E-FLC

- vibrators with central flange mounting on both sides
- A, B versions – without masses
- C, D versions – with masses
- in standard with certificate ATEX (II 2 D)
- E version - certificate ATEX (II 2 G, D)

### VB, VB-E

- vibrators with double flange mounting with shafts on both sides
- supplied without masses
- in standard with certificate ATEX (II 2 D)
- E version - certificate ATEX (II 2 G, D)

### CDX

- vibrators with an explosion protection certificate for environments with a potential risk of gas or dust explosion ATEX (II 2 G, D)
- special construction preventing the explosion force against getting outside the vibrator in case of an explosion

### ITV-VR, ITVAF

#### high frequency vibrators:

- ITV-VR with adjustable frequency ITVAF with a constant frequency
- mounting with screws or on a quick fastener plate





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# Conveyors construction elements



**SYSTEM  
PLAST®**

**Regal**  
*Rexnord*

**reveyron**

 **esbelt**

**AM MEGA**



**NOVABELT**

**volta**<sup>TM</sup>  
Belting Technology

 **MARKES**

**OKARTEK**

  
**MODUTECH®**

**FLEXCO**

**Martin**  
Levelling Components

  
**ARCHIMEDES**



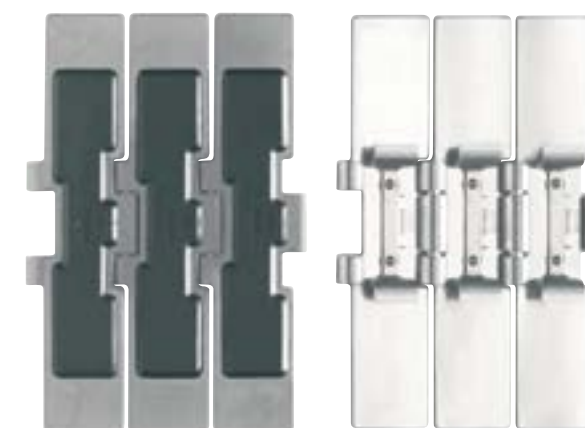
## Metal hinge plate chains



- intended for transport of glass and heavy packaging
- made in widths from 25 to 190 mm in straight or arc versions

### Available in special makes:

- with a small curve radius
- with rubber covers
- with lip covers for vertical transport
- with roller load chain
- with a double hinge



### Materials of chains:

#### C45 - carbon steel

- high load and mechanical strength steel with high abrasion resistance
- due to lack of corrosion resistance suitable for dry working environment only
- special features: surface hardness: 44HRC

#### STANDARD - stainless steel

- stainless steel AISI 430 – good mechanical properties and corrosion resistance, economic solution for many application with transport

#### EXTRA PLUS - stainless steel

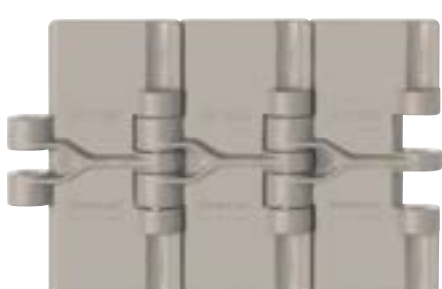
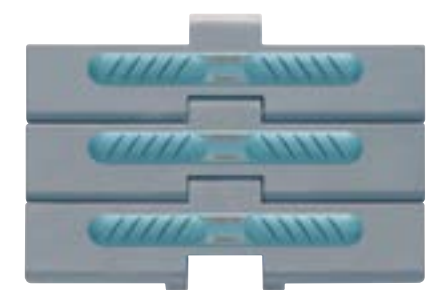
- stainless steel with high strength
- provides excellent resistance to corrosion and high surface durability
- suitable for long and fast conveyors
- ensures high stability of transport
- special features: surface hardness: HRC 26-39

#### AUSTENITIC - austenitic steel AISI 304

- stainless steel, which offers top resistance to acids and corrosion
- special features: stainless steel, containing 18% of chromium and 8% of nickel



## Plastic hinge plate chains



- intended for transport of glass packaging, cans, PET bottles, cardboard packaging
- made in width from 25 to 304 mm in straight or arc versions

### Available in special makes:

- with small curve radius
- with rubber covers
- with accumulation rollers
- with lip covers for vertical transport
- with a roller hoisting chain
- with double hinge
- openwork make
- multiflex
- for transport of boxes

### Materials of chains:

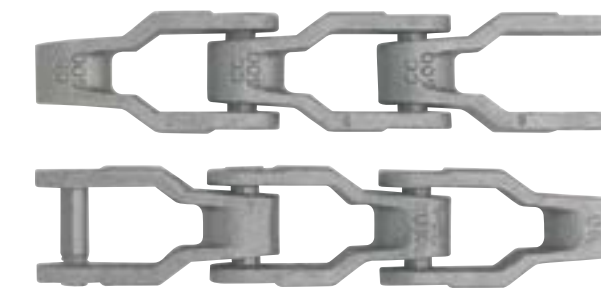
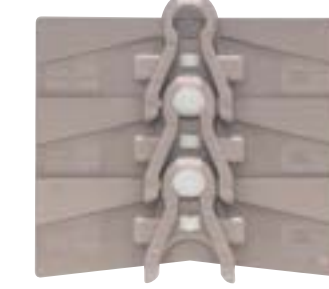
#### Acetal resin

- material intended for transport chains
- it features high tensile strength, good friction coefficient and exceptional resistance to wear

#### New generation

- PBT polyester (NG EVO) with the lowest friction coefficient in the whole offer
- it features a good strength and optimal resistance to wear
- good material for systems operating without lubricants and with high speed
- pins connecting material: austenitic steel AISI 304, PPM – acetal plastic

## Hinge plate chains



- intended for transport of small glass, cardboard packaging, cans and PET packaging with a very small curve radius

### Available in makes:

- multiflex
- multiflex with side guiding
- multiflex with pick-ups
- flat and openwork
- with carrier plates
- for box transport

### Materials of chains:

#### Acetal resin

#### Acetal resin with low friction coefficient

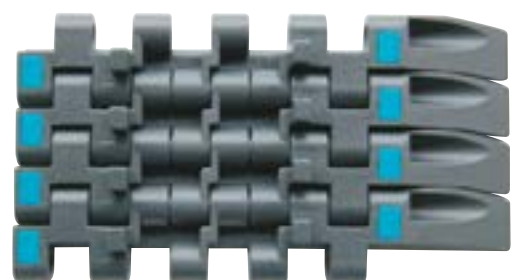
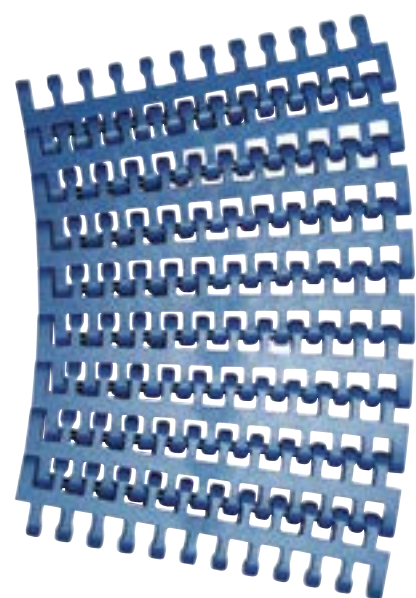
- commonly used material with a lower friction coefficient
- suitable for applications at high speeds

#### New generation

- **NG Evo** - dedicated for applications operating without lubrication



## Modular belts



- intended for transport of glass bottles, cans, cardboard boxes and PET packaging
- made in width from 34 to over 3000 mm in straight or arc version

### Available in special makes:

- with small curve radius
- with rubber covers
- with accumulation rollers
- with a positioning device
- with transfer sides
- FG openwork, FT solid

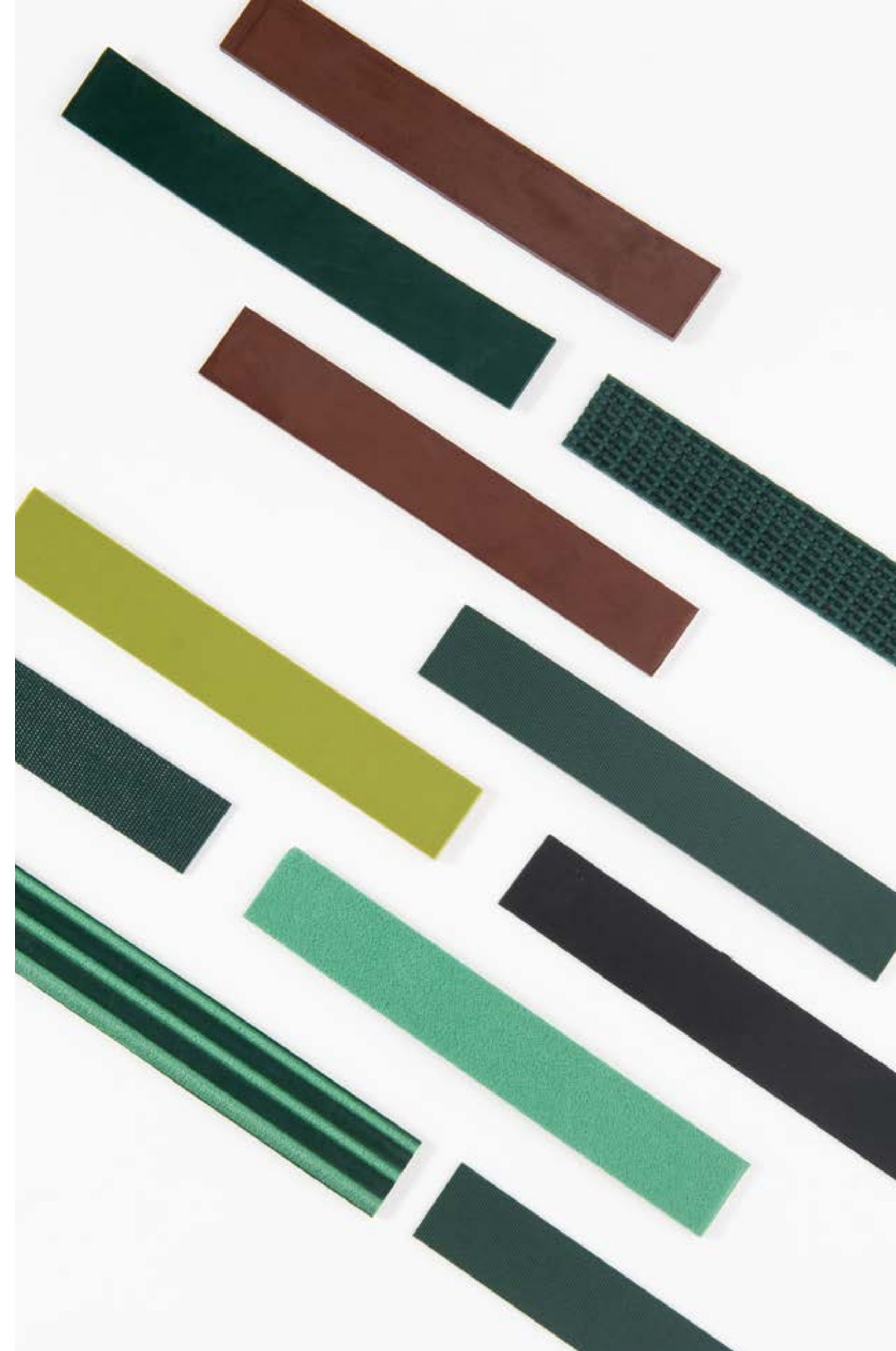
### Materials of chains:

Acetal resin with a low friction coefficient

New generation NG Evo

### Other materials - options:

- **AS (antistatic acetal resin)** - material with better surface conductivity for protection against electric discharges
- **CR** - chemical resistant



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## Accessories for construction of conveyors



- return rollers and slides
- brackets and transfer modules
- guides, supports and slides
- connecting elements
- assembly handles
- roller guides
- brackets, supports, heads

## Wheels and guides



### Drive wheels, driven wheels, slides and guides

makes:

- milled wheels
- injection moulded wheels
- divided wheels
- single and multi-row arc guides
- guides with heat dissipation
- return wheels

## Feet and subassemblies



- D40
- D80 with holes
- D.110
- Threaded inserts
- D.80, D.100, D.125 with holes • bipod
- bipod 1200
- tripods FI

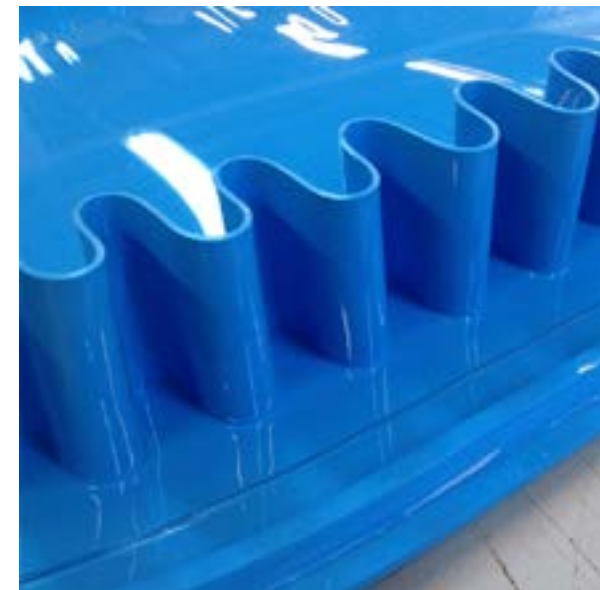
## Bearing units



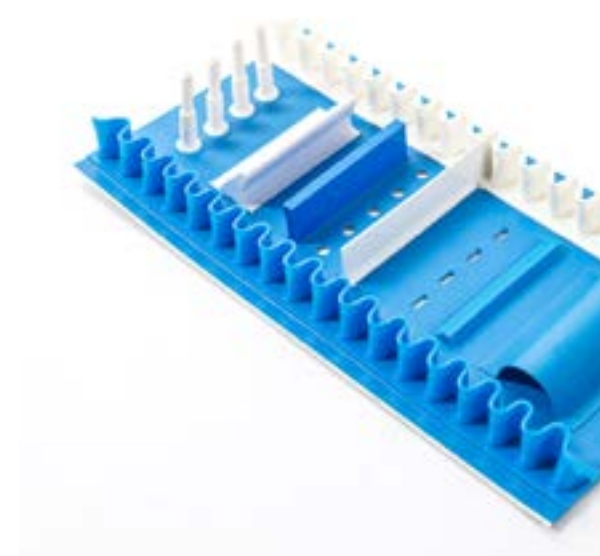
- UCF-R
- UCFC-R
- UFL-Z
- UCP-R
- UCHA-R
- UCFQ-R
- UCFA-R
- F
- UCFH-RL
- UCF-RL
- UCFQ-RL
- US
- UCPA
- UCHE
- SQL



## Transport belts



- wide production range of belts for different applications in light and medium industry
- product transport,
- transport and accumulation,
- product separation,
- ascending and descending applications,
- drying of products,
- cutting and forming,
- heating and cooling



### Materials of belts:

- PVC – polyvinyl chloride,
- PU - polyurethane,
- silicon,
- polyester,
- polyolefin,
- cotton,
- felt,
- rubber,
- materials with certificates for contact with food products,
- antistatic properties

### Additional accessories installed on belts:

- guide wedges
- pick-ups: straight, oblique, reinforced
- side limitations of product – side waved band with a foot and without foot
- metal and plastic connecting pieces

## Modular belts



### Modular straight and arc running belts:

- openwork surface
- flat surface
- large strength
- small friction coefficient
- high abrasion resistance
- compact drive
- construction facilitating washing
- easy and short lasting servicing
- long time of use
- Materials:
- Polypropylene PP
- polyethylene PE
- acetal POM
- nylon PA 6.6
- certificates for contact with food products

### Accessories:

- gears
- pick-ups
- side limitations
- accumulation rollers
- transfer combs
- rubber covers
-



## Flat belts



- flat belts available in the offer are made from extremely durable materials
- modern technology enables manufacturing of classic belts with a polyamide or polyester core
- various types of coats and cores ensure very high durability of belts, their relevant selection will ensure long and trouble free operation of the device

## Geared belts



- special toothed belts with endless coating (rubber, silicone) for packing machines in "Pull Down" bushing - Manufacturers: Bosch, Rovena, Aqarius, Wolf



NOVABELT



## Polyurethane bands and belts - monolithic



- **application:** belts are chiefly used in the food branch
- large resistance to mechanical damages
- operation in temperature range from -40°C to +80°C
- easy to keep clean
- odourless, highly resistant to greases and humidity and washing agents
- uniform construction

## Belts with toothed graduation



- series: **Super Drive, Dual Drive, Dual Drive SP (small pulley), Mini Dual Drive**
- integrated teeth allow for execution of drives via gears (Positive Drive)
- no risk of slippages during belt operation
- possibility to transport large mass products
- belts are produced in two material hardness types H and M
- easy way to keep clean

## Round and V-belts VaR - heat sealed



- polyurethane belts with round, V, dual V and pentagonal cross section
- this group of products is widely used among other things for ceramic tile and food product transport, drives of roller conveyors, in sorting devices and in many other general and food branch applications (CERTIFICATES for contact with food products)

## Polyurethane jackets for rollers

- high resistance to mechanical damage (hardness 85ShA)
- protection of transported material against damage





## Accessories for transport rollers



### Ball rollers

- material: steel
- capacity: to 250 daN
- ball diameter: 16 mm, 22 mm

### Multi-directional rollers

- material: plastic
- capacity: do 40 daN
- ball diameter: 40 mm, 80 mm
- roller axis diameter: from 8 to 15 mm



### Bearing mountings for rollers – from metal

- material: carbon steel, galvanized steel
- roller diameter: from 30 to 108
- roller axis diameter: from 5 to 25

### Bearing mountings for rollers – from plastic

- material: polypropylene
- roller diameter: from 16 to 89
- roller axis diameter: od 5 do 25



## Multi-directional rollers



### Multi-directional rollers Roll-Flex

- they allow for smooth moving of products in different directions
- core material: polyacetal
- roller material: polyacetal or soft polyurethane
- available antistatic models



## Modutech modular belts

- wide range of belt application – food branch - materials (POM, PE, PP, PA) for belts with certificates for direct contact with food products, general application – packed products
- special make – antistatic materials, materials detectable by metal detectors, materials with increased resistance to temperature



### MP80 series (C, FG, NS, NP)

- Micropitch series – small ascending graduation, 8 mm only
- designed for operation on small roller diameters 6 mm
- belts and wheels of this series provide short transfer of small products
- headless cotters cause that the belt can be easily mounted and dismounted for maintenance



### EC127 series (C, FG, GT)

- operation on small roller diameters 18 mm
- possibility of operation with large speeds, no vibrations
- draining and drying products for FG surfaces
- ascending applications for the belt version with GT rubber
- exceptional application of gears reduces shocks
- possibility of transport of small products



### MD127 series GAP%50

- belt ensures optimal open surface 50%, which enables draining and air circulation
- smaller friction and minimized contact Surface, which enables thermal processing, cooling and freezing of products



- diminished accumulation of impurities and oxidizing, thanks to self-cleaning surface
- easy cleaning reduces technical breaks by 80%

### HC127 C series

- exceptional application of wheels allows for larger loading of the belt and application in longer conveyors
- for applications that require tightness
- reduction of bacteria proliferation, easy cleaning of the belt



### XP254 series (C, PR%22, FG)

- extra strong, bi-directional belt for long conveyors
- food branch applications – transport, draining, drying
- exceptional application of gears reduces shocks and increases load capacity
- milled belt edges



### XP254 series (CR, FLT CR)

- reinforced construction of modules increases belt load capacity and allows for application in long and wide conveyors
- dedicated for the cardboard manufacturing branch
- milled belt edges
- belt surface CR (non-slip) increases safety of work of operators
- available belt modules in yellow colour – clear signalling of device operation





#### EC254 series (C, PR%16, NT)

- easy cleaning of the belt shortens production breaks even by 70%
- reduction of bacteria proliferation
- transport, draining, cooling, freezing of product
- openwork wheels facilitate washing process



#### MD254 series (C, FG, GT, RR, GAP%48)

- belts of this series are available with different types of surface (open surfaces FG, GAP, RR, closed surfaces C, GT surface with rubber vulcanized on modules)
- open surfaces enable draining and air circulation
- reduced friction and minimized Surface of contact with products, which facilitates thermal processing, cooling and freezing of products
- reduced accumulation of impurities and oxidizing thanks to the self-cleaning surface
- bi-directional belt for long conveyors
- optional stainless steel cotters for operation in high temperatures



#### EC508 series

##### (C, FG, PR%22, FG-NT, PR%11, PR%13, DT, NT)

- the largest diversity of surfaces of belts of this series appropriately to the requirements of the application and transported goods
- module construction facilitating cleaning
- reduction of bacteria proliferation
- openwork wheels facilitate washing process
- robust, thicker bracings allow for larger load with no risk of breaking the belt
- resistance to shocks and impacts



#### MD508 series (C, FG, PR%25)

- very strong, bi-directional belt for long conveyors and large loads
- various types of surface finishing adequate to the executed process
- resistance to shocks and impacts causes that heavy products may fall onto the belt
- robust gears increase load capacity of the conveyor

## Accessories and additional equipment of Modutech modular belts



#### For the majority of the manufactured series there are available:

- straight pick-ups height from 25 to 150 mm
- arched pick-ups height from 75 to 150 mm
- bucket pick-ups height from 75 to 150 mm
- product side limitations from 25 to 100 mm
- arched belts – side modules with additional guiding elements - TAB
- split rings limiting wheels on square and round shafts
- possibility of ordering non-standard wheels manufactured with CNC machines





## Mechanical connectors for transport belts



- stainless steel connector, galvanized plastic
- for applications in industry in general and in food industry
- types of connectors: Anker, Alligator, plastic Spiral type, plastic for texturing

### Accessories



- machines and devices for production of belts
- heat sealing machines
- devices for cutting teeth and delamination of belts
- devices for application of connectors Anker, Alligator

## Feet



- levelling feet
- machine tool supports
- adjustable feet
- anti vibration system
- accessories

The offer of Martin company comprises a family of levelling feet, supports for machines and machine tools, adjustable feet and anti vibration systems and accessories.

### Products are applied in:

- food branch,
- packaging branch,
- machine and conveyor production,
- electronics device production,
- household appliance production,
- pharmaceuticals (special finishing of stainless steel surface),
- chemical and cosmetics branches





## Transport belt scrapers



- made from non-toxic materials scrapers / blades for conveyors with PCV and PU belts
- they are produced using a method of co-extrusion of two TPU based thermoplastic polymers
- rigid shell is intended for drilling and fixing to a supporting structure of the belt conveyor using steel bolts
- flexible end of the profile is finished with a sharp edge in order to ensure removing of even the finest impurities without breaking the belt surface
- softness of the tip ensures adherence even to all belt surface imperfections

### Models:

- model with the tip of TPU ShA 90 (art.4S 70 PW / BF-M 2000)
- model with the tip of TPU ShA 75 (art.4SS 70 PW / SB-M 2000)





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# Industrial aluminum profiles



## Profile technology system 2000



- base system for creating all kinds of constructions from show displays, device housings through stairs, platforms up to heavy supporting structures
- four compatible series based on overall dimensions of the basic profiles
- over 200 different profiles
- easy and fast assembly and disassembly of constructions
- possibility of reusing disassembled elements
- short time of designing and construction thanks to the modular construction
- aesthetic appearance
- maximal profile lengths 5.1 m and 6.1 m (depending on type)
- produced of high strength aluminium alloys, anodized
- wide selection range of connecting systems
- we cut the profile to the requested dimensions
- machine profiles - boring, threading, bevelling

### D28 series

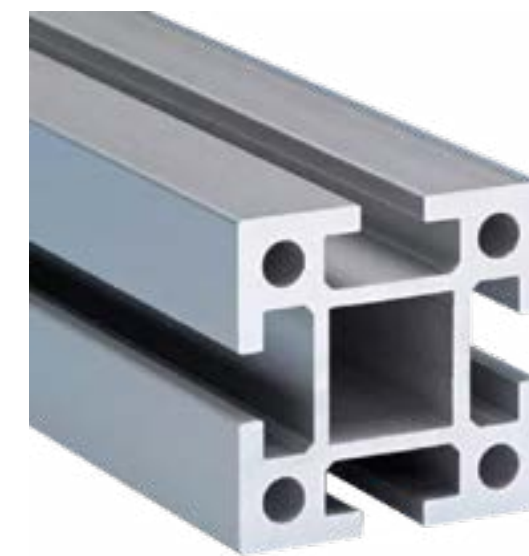
- material: EN AWW 6063 T66 AlMgSi 0.5 F25
- round profiles with dia. 28 mm

### 25 series

- material: EN AWW 6063 T66 AlMgSi 0.5 F25
- largest profile: 25 x 150, 50 x 50 mm
- typical applications: light constructions of show displays, devices housings, devices, racks, furniture

### 40 series

- basic profiles in 3 weight variants
- material: EN AW 6063 T66 AlMgSi 0.5 F25
- largest profile: 160 x 160 mm
- typical applications: machine frames, working stands, guards, protective fencing



### 50 series

- basic profile in 3 weight variants
- material: EN AW 605A T6 AlMgSi 0.5 F25
- largest profile: 50 x 200, 100 x 100 mm
- typical applications: bearing structures of machines and devices

### 60 series

- material: EN AW 6005A T6 AlMgSi 0.7 F28
- largest profile: 120 x 240 mm
- typical applications: supporting frames of heavy industrial devices, entresols

### Special profiles

- telescopic
- edge, for construction of aesthetic panel covers
- guides for sliding doors and windows
- covering for aesthetic finishes
- for construction of platforms and stairs
- filled with foam
- arch bent

### Assembly elements

- fixed and adjustable angles
- tensioned connectors
- angle supports
- side plates
- front plates
- corners
- grating supports
- parallel connectors
- clamps



## Profile system accessories



### Supporting accessories

- assembly plates
- floor platforms and supports
- hinged feet
- fixed and rotary traction wheels

### Working components

- handles
- levers
- hand wheels



### Door components

- hinges
- locks
- catches
- guides of slide doors



### Seals and masking profiles, plugs

### Panels and filling nets

### Conveyor rollers

### Pneumatic connections

### Electric accessories

### End stops and limiters

### Slides and guides of polyethylene

### Ball and socket joints

### Rod clamps

### Slide guides

### Rotary tables

## Conveyor technology

Conveyors manufactured by MK are made on the basis of System 2000, thanks to which they are compatible with other constructions from these profiles and easy to assemble and extend. The MK offers a whole variety of accessories: side limitations, slides, sensor holders, adjustable assembly supports, etc.



### Belt conveyors

- different kinds of transport belts depending on their application
- simple and compact construction
- cylinder rollers facilitating guiding of the belt
- optional rubber coated drive rollers

### Available models:

GUF-P MINI – for the smallest items

GUF-P 2000 – for medium items

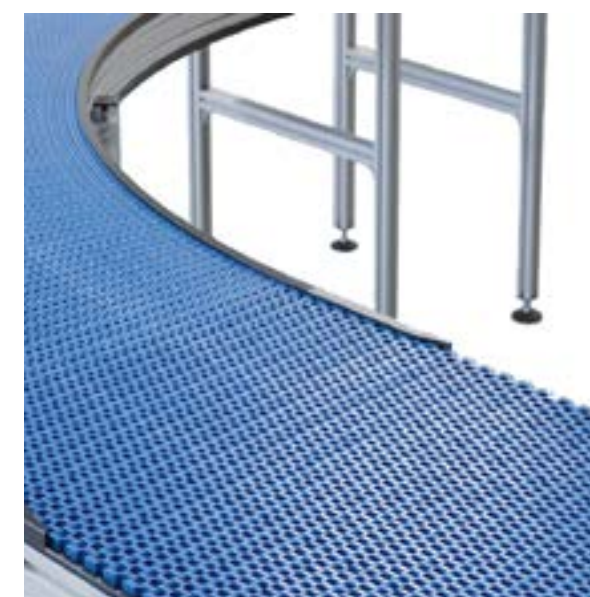
GUF-P 2041 – for heavy and large items

GUF-P 2004 – for heavy and exceptionally large items

KGF-P 2040 - arched 90° and 180°

DGF-P 2001 – two parallel belts

GUF-P 2045 – driven with a drum motor



### Conveyors with modular belt

- they carry heavy loads
- wide range of applied modular belts
- belt resistant to wear and hard operation conditions

### Available models:

MBF-P 2040.02 – straight running

KMF-P 2040 – arched and cross

MBF-P 2040.86 – straight running with a steel belt

KMF-P 2040.86 – cross with a steel belt





### Incline conveyors

- they enable transport of materials on different levels
- designed for multi shift operation

#### Available models:

KGF-P 2000 – with a synthetic belt  
KFM-P 2040.86 – with a modular belt  
KFS-P 2040.86 – with a modular belt

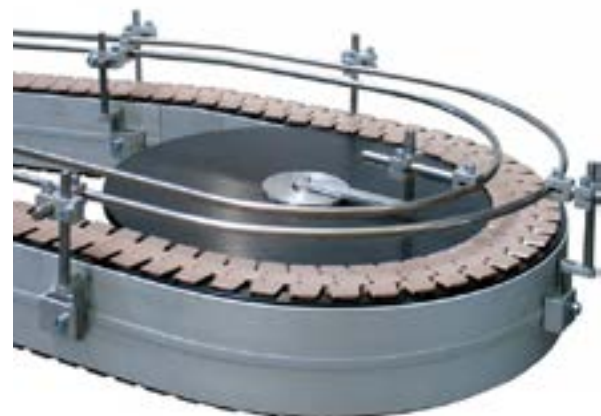


### Conveyors with toothed belts

- for transport of heavy, yet stable items
- no slippage — perfect for operation requiring positioning

#### Available models:

ZRF-P 2010 – two parallel belts  
ZRF-P 2040 – single belt



### Chain conveyors

- single and multi-line systems
- suitable for soiled and oily products

#### Available models:

KTF-P 2010 – ordinary roller chain  
SRF-P 2010 – accumulation chain  
SRF-P 2012 – accumulation chain

### Flat top chain conveyors

- standard chain widths: 82 and 114 mm
- steel and plastic chains
- length: to 5 m
- possibility of guiding the chain on arches and on different levels
- safe and aesthetic construction

#### Available models:

SBF-P 2254, Versaflex



### Roller conveyors

- gravitational, with a chain or belt drive
- all models available as straight and arched
- wide choice of rollers and accessories

#### Available models:

RBS-P 2065/2066 - gravitational  
RBS-P 2255 - gravitational  
RBM-P 2255 – belt drive  
RBT-P 2255 – chain drive



### Conveyors made of stainless steel

- for applications in pharmaceutical, cosmetic and food industry
- construction from drawn plates
- easy for cleaning and maintenance
- different grades of steel depending on applications

#### Available models:

GUF-I - belt  
RBS-I - roller  
SBF-I – with a chain flat top conveyor



## Versamove systems

- Versamove Standard, Plus and Ultra systems were created on the basis of proven component profiles, linear technology and conveyor technology, which have been used separately up till now
- The systems are applied in many industrial branches, among other things in machine manufacturing, appliances, automotive

### The principal features of this system are:

- safe transport of pallets on conveyors with a toothed belt, chain or accumulation chain
- compact elevators and conveyors for efficient transport and separation of product
- precise positioning units
- transport possible on some levels
- safe stopping and separation
- adjusted to the requirements of the location and product properties



#### System Versamove Standard

- up to 40 kg on one pallet
- pallet dimensions: from 240 x 240 to 400 x 400 mm
- compatible with the systems already existing in the market
- base profile 100 x 45 mm
- available arched conveyors



#### System Versamove Plus

- up to 100 kg on one pallet
- pallet dimensions: from 400 x 400 to 800 x 1040 mm
- versatile and tailored individually
- base profile 100 x 50 mm

#### System Versamove Ultra

- up to 300 kg on one pallet
- pallet dimensions: 600 x 600 to 1200 x 1200 mm,
- durable and suitable for large loads
- base profile 135 x 60 mm

## Linear glides



### VST linear modules

- drive via a hand wheel or motor reducer
- high static load ability
- silent operation
- maximal length: 1,4 m
- possible assembly in double axis layout
- various options of carriage movement
- optional scale or meter to determine carriage movement
- on a base profile 50 x 50 mm and 100 x 100 mm

### Bar guiding glides

- round or square bars
- bars placed inside the MK 2000 (50 x 50) profile
- length: to 750 mm
- bars moved in polyacetal bushings
- available separately or in a set with pneumatic actuators
- also applied as hinges



### Roller guides without drive

- guide rails with steel
- bars with diameters 6, 10, 16 and 20 mm
- carriages with rollers on bearings
- roller pins centric and eccentric for backlash elimination and preload adjustment
- possibility to carry loads in all directions
- rigid and light construction
- they are suitable for applications in dusty environment
- low movement resistance
- for high speeds (10 m/s) and accelerations (50 m/s<sup>2</sup>)





## Driven roller guides



- drive is transferred by a toothed belt
- accuracy of positioning up to 0.2 mm
- construction on the basis of profiles series 25 and 50
- carriage is guided by rollers cooperating with steel bars
- drive head featuring the possibility of direct mounting of a motor reducer
- easy assembly thanks to longitudinal T-slots
- possibility of construction of parallel and multiaxial systems

## MK software

### QuickDesigner conveyor configurator

- available on-line after registration on the website [quickdesigner.com](http://quickdesigner.com)
- possibility of generating CAD models and direct visualisation for the basic belt conveyors
- possibility of receiving an offer for the generated conveyor directly to the mail box
- easy step-by-step configuration

### CAD models

- free library of files in CAD formats
- available on the web site [www.mk-group.com](http://www.mk-group.com)

### Configurator of working stand fencing

- available on the web site [www.mk-group.com](http://www.mk-group.com)
- allows to design protective covers and fencing
- easy to operate
- export of the design to files in CAD formats

### Profile bending calculator

- available on the web site [www.mk-group.com](http://www.mk-group.com)
- calculates bending of MK profiles for different ways of assembly
- useful at profile selection

## Elements of production line equipment

Versatility of the profile system allows for construction of complex industrial plant equipment starting from protective covers and fencing, through partition walls, working stands even up to construction of platforms, stairs and even office equipment.



### Protective covers and fencing

- based on 40 series profiles
- wide choice of panels and finishing materials
- modular construction facilitating designing and assembly
- complex equipment for construction of complete set of protective covers
- wide arrangement possibilities
- possibility of assembly of swing, slide, lifted doors and windows



### Working stands

- complex construction system of fully functional and ergonomic working stands
- available electric, pneumatic accessories, tool slings, foot rests, swivelling chairs, shelves and drawers
- construction based on profiles of series 40



### Stairs, platforms, handrails

- safe and ergonomic constructions based on profiles series 40
- modular construction allows for easy assembly, disassembly and transport even of very complex constructions
- easy integration of electric and pneumatic installations
- special makes – e.g. mobile assembly platforms on air cushions



PRODUCTION | SUPPLIES | AUTOMATION

# Linear technology







## Steel linear guides with profile rail



- rolling guides with very small movement resistance
- equal loads in each direction
- rigid, entirely no-backlash make
- precise and durable
- international dimensional standard
- high precision, small friction and low maintenance costs
- high speed with low noise
- built-in carriage sealing
- interchangeability of carriages
- short delivery time of guides in N and H classes
- as a standard with light preload guaranting rigidity and guiding accuracy
- most popular types and dimensions of guides available from a warehouse in Poland

## Rails



- as a standard made in sections 4 m; SME 15 - 2 m; MSD - 1 m
- possible application of a rail set with lengths exceeding 4 m

### available in version:

- R – graded assembly holes+caps, protection tape as an option
- T – assembly blind holes, threaded

## Carriages



- flange and straight
- several assembly variants
- different preload
- lubrication connections for solid and liquid lubricants
- tight execution as a standard
- additional sealing and metal scrappers available as an option

## Linear guides



### MSA – ball guides

- sizes from 15 to 65
- very rigid guides for high loads
- carriages available with an additional reservoir for a lubricant

### MSB- compact ball guides

- sizes from 15 to 35
- guides for large loads
- carriages available with an additional reservoir for a lubricant

### MSC/MSD – miniature ball guides

- sizes from 7 to 15
- made in whole of stainless steel

### MSG – miniature wide ball guides

- sizes 21, 27 i 35
- low and at the same time wide guides recommended especially for single installation





## Ball screws



- ball screws, also called feed screws, comprise a spindle with circular thread and nuts with circular thread
- steel balls located on the nut operate in a closed circuit thanks to simple redirection mechanism
- ball screws enable changing of circular motion into forward progression and vice versa
- they feature high precision and high efficiency coefficient

### SME – ball guides with a guide chain

- sizes from 15 to 45
- very rigid guides for high loads
- very smooth and silent movement
- excellent lubrication thanks to mini reservoirs of a lubricant

### MSR – guides with bearing rollers

- sizes from 25 to 65
- for the largest loads and the most demanding applications
- available exchangeable and nonexchangeable models

### SMR – guides with bearing rollers with a guide chain

- sizes from 25 to 65
- for the largest loads and the most demanding applications
- only nonexchangeable models – prepared by the manufacturer directly
- very smooth and silent movement
- excellent lubrication thanks to mini reservoirs of a lubricant

## Polished precision screws



- precision ground ball screws are made of German alloy steel
- they are subject to careful heat treatment to ensure high precision and durability
- they feature the largest precision and the widest range of available variants

## Rolled screws



- they are a reasonable alternative for trapezoid screws
- thread is formed in the process of rolling while nuts are made in the same way as for the polished screws
- nut without initial tensioning and with maximal axial clearance are exchangeable i.e. different types of nuts can be used



## Brake clamps for linear guides and round bars



- brake clamps of linear guides are connected with carriages and enable clamping on the guide rail
- depending on version the clamping is effected manually, pneumatically or by spring pressing

## Compact linear modules



### CI system

- anodized aluminium profile constitutes guides
- guiding of a carriage is provided by two parallel chromed and polished steel bars
- guide channel provide compact, close housing
- eccentric roller of a carriage provides the possibility of adjustment of the initial tension
- two centric rollers provide firm guiding

### Straight guides

- guide based on aluminium profile with chromed, polished steel bars
- rollers with an eccentric pin allow for adjustment of the initial tension
- rollers with a centric pin ensure precise guiding of a carriage



## Compact driven guides

### AK208R

- linear modules driven with a toothed belt, aluminium guide of the carriage with steel bars
- heads enable driving from four sides
- adapted for operation in dusty environment



### AK208R INOX

- version of guide AK208R with elements of stainless steel
- adapted for operation in food industry and aggressive corrosive environments

### AKR20

- linear modules driven with a toothed belt, steel ball guide ensures precise guiding and high rigidity
- drive heads enable driving from four sides
- for application that require high rigidity and load capacity





## Standard guides with drives



### Belt guides

- toothed belt drive AT10 allows for silent operation with speed to 2-3 m/s
- maximum length 6-7 m
- drive connected to one of the heads
- carriage provided with a pair of rollers with eccentric pins ensures adjustment of the initial tension



### Guides with toothed strip

- drive used for long guides or in the situation when the carriage is to be motionless and the movement is performed by the guide
- as a standard a straight tooth strip is used



### Guides with screw drive

- used in applications that require precise positioning and compact dimensions
- module lengths up to 2 m
- accuracy:  $\pm 0.1$  mm for a trapezoid screw and  $\pm 0.03$  mm for a ball screw
- it requires only 30% of the torque necessary for driving a trapezoid screw

## Compact linear modules



### Guides with chain drive

- used for operation in vertical position in lifting devices and in higher temperature conditions, which exclude use of toothed strips
- use of a chain eradicated a risk of strip leaping or breaking teeth, which can take place in case of a violent loading of the vertically operating belt guide



### Guides in push-pull system

- two carriages moving opposite enable operation in the counterweight layout during operation in vertical position
- the next application is a slide door drive, compactor drive or pick-up system, etc.

### Guides in XY, XZ, XYZ layout

- different combinations of guides are possible in two and three axes in double configuration

## One-way clutches, freewheels



- one-way clutches enable transferring of torque from one ring to another in one direction only
- revolution in the opposite direction is free
- used for locking of reversed movement (conveyors, motor reducers) or as free wheels
- precise execution allows for full availability for locking — backlash has been limited to minimum





## Cable guides



### Chain cable guides

- provide guiding and protection of electric cables, hydraulic and pneumatic lines and optical fibre lines in applications that require their movement



### Steel cable guides

- guides for application where nylon guides are not recommended due to extremely hard operation conditions e.g. foundries, steel mills, some machine tools
- made of galvanized steel
- available with covers and partitions
- for special applications the steel elements are made of stainless steel AISI 316



### Nylon cable guides

- made of special polyamide called BRYLON 6 reinforced with fiberglass
- BRYLON 6 is a self-extinguishing plastic resistant to UV radiation and to a number of aggressive chemical agents
- wide range of the nylon guides is divided into 6 series in order to meet the requirements of dynamic protection of all kinds of cables

### Light series

- for the smallest applications where the chain load does not exceed a few kilo per one meter, possible guide channel
- some models feature open frames and separators



### Medium series

- guides of small and medium dimensions with separate pins in yellow colour
- adapted for operation with large speeds and accelerations
- available with internal partitions and open segments



### Heavy series

- guides intended for applications where the cable mass reaches even up to a few dozen kilo per one meter
- adapted for fast and efficient operation with large loads
- opening on inside or outside
- developed system of internal separators prevent friction between the cables



### Gliding series

- foreseen to operate on long distances with use of guiding channels that lead even to a few hundred meters
- the particular links are provided with special glides enabling chain sliding on itself
- made of a special polymer ensuring low wear and friction



### Closed series

- guides completely protecting the guided lines against the external factors
- each link features an integral, easy removable cover

### Robot series

- guides bent in two planes, especially useful for industrial robots



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# Transmission components







## Sprockets and chain wheels



- one-, two-, and three row
- graduation: 5 mm - 2"
- material: steel C43, C45, hardened HRC 45-53
- hardened with a hole and spline
- INOX, with bearing, under bushings TB, ASA
- possibility to order chain and cast iron wheels

## Roller chains



- graduation: 5 mm - 2"
- one-, two-, and three row
- steel, stainless steel, nickel-plated
- sleeve chains, transport chains
- chains with pick-ups and mounting plates

## Chain guides



- material: polyethylene PE-UHMW with high molecular weight
- profiles for one-, two- and three row chains
- profiles: T, T2, T3, E, K, U, KG, CT, CT2, C type profiles available in steel version,
- galvanized

## Spring tensioners



- maintenance free systems on chain and belt tensioning
- LP, T, AS, E series
- wide choice of accessories: wheels, rollers, glides
- make: steel, INOX

## Gears and toothed strips



- Helical gears with simple teeth
- make: acc. to standard UNI 7845
- material: C45; tooth module: 1-16

- Standard toothed stripes with straight teeth
- material: C40; stripe tooth module: 1-16
- stripe length: 500 mm, 1000 mm, 2000 m

## Bevel gears



- straight tooth gears DIN 3971
- arch tooth gears
- material: steel C45; module: 1-5
- gearing ratios: 1:1-1:4



## Gears and toothed shafts under imp. synchronic belts



- graduation 1/5', - 1', (MXL, XL, L, H, XH, XXH)
- material: steel C45, aluminium, cast iron G20
- made with input hole or Taper Lock
- number of teeth: 10 - 120
- shafts: length up to 160 mm

## Metric gears and shafts T, CT



- graduation: T 2.5, T5, T10, AT5 (CT5), AT10 (CT10)
- material: aluminium
- made with input hole
- shafts: length up to 160 mm
- number of teeth: 10 - 264

## Gears and belt toothed shafts HTD



- graduation: 3 M, 5 M, 8 M, 14 M, 3 MR, 5 MR
- gears with a pilot hole
- gears under bushings Taper Lock
- material: steel, cast iron, aluminium
- shafts: length up to 200 mm
- number of teeth: 10 - 264

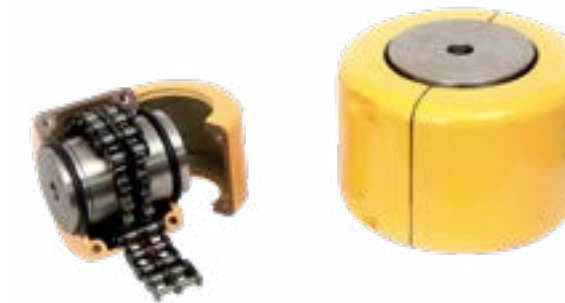
## Giflex couplings



GET, GFA, GFAS series

- cast iron, steel and aluminium bushings
- 3 kinds of inserts with different Shore hardness
- maximal hole diameter: 100 mm
- maximal torque 55000 Nm

## Torque limiters LC



- bushings to be re-bored
- maximal hole diameter: 65 mm
- maximal torque: 1800 Nm
- available spare parts

## Wheels under V-belts



- SPA, SPB, SPC, SPZ
- multi groove PPV-J, PPV-L
- diameters: 40 - 1250 mm
- make Taper Lock
- wheels with a pilot hole
- material: cast iron GG20
- others



## Assembly bushings



- conical bushings Taper Lock
- metric make acc. to ISO G7, DIN 6885-JS9
- 18 types
- Hole diameters: 10 - 125 mm

## RCK expansion clamping bushings



- used for rigid connection of rotary elements with a shaft
- 14 types of self-centering bushings
- hole diameters: 6 mm - 30 mm
- gearing ratio: up to 68000 Nm
- tolerances of cooperating surfaces: shaft h8, hub H8

## Bearing units



- cast iron - UCP, UCF, UCFL, UCFA, UCPA  
sizes: 201-218, d15-d80
- plate - PP, PF, PFL  
sizes: 201-207
- bearings - UC, SB, SA UK  
sizes: 201-218

## Assembly accessories



- hubs and wheel flanges
- plates for belt connections
- motor mounts
- locking rings

## Production and services

We perform all services related to machining of wheels, stripes, shafts and other elements of machine mechanics on the basis of customer's documentation.



## Tensioners and accessories



- SE - standard
- SE-G oil resistant
- SE-W- heat resistant
- SE-R – with strengthened arm
- SE-I – corrosion resistant
- SE-F- front mounted
- SE-B- boomerang type
- N, R, P, VS, SV – tensions accessories (gears, rollers, glides, mechanism aiding tensioning)

### Principal advantages:

- durable and operation free
- extend durability of belts and chains, increase wheel belting
- compensation of belt elongation
- constant, determined pressing, quick reaction to deformations
- silent operation, insulation of vibrations, easy assembly





## Rubber belts – open end version



**MXL, XL, L, H, RPP 3, RPP 5, RPP 8, SLV 5, SLV 8, STD 8M series**

- material: chloroprene
- production length: 50 m
- intended use: linear drives

## Drive rubber belts - endless version



**MXL, XL, L, H, XXH, RPP 3, RPP 5, RPP 8, RPP 14, RPP 20, RPP 5 SILVER, RPP 8 SILVER, RPP 14 SILVER, RPP 8 GOLD, RPP 14 GOLD series**

- material: chloroprene, nylon teeth coating, reinforcement from fiberglass
- intended use: drive belts – power transfer

## Multi grove belts



**H, J, L, M (K – on request) series**

- material: polybutadiene plastics
- intended use: drive belts – for large gears

## Rubber V-belts



**Z, A, B, C, D, E profile (19, 20, 25, 45, 50), SPZ, SPA, SPB, SPC, profile (3 V, 5 V, 8 V), profile (AA, BB, CC), profile XDV2 (38, 48, 58), profile (XPZ, XPA, XPB, XPC), profile (AX, BX, CX), profile (3VX, 5VX, 8VX), VARISECT variator belts series**

- material: polybutadiene plastics
- intended use: drive belts

## MEGAFLAT – polyurethane and rubber flat belts, endless



**T2.5, T5, T10, T2.5 DL, T5 DL, T10 DL, AT5, AT10, MXL, XL, L, H series**

- material: polyurethane
- intended use: light synchronous and stepper drives, office automation, household appliances

## MEGALINEAR – polyurethane open end belts



**T2.5, T5, T10, T20 series**

- AT3, AT5, AT10, AT20,
- MTD 3M, MTD 5M, MTD 8M, MTD 14M,
- STD 5M, STD 8M,
- RPP5, RPP8, RPP14,
- MXL, XL, L, H, XH
- P1, P2, P4, TG5, TG10, TG20, ATG5, ATG10, ATG20, HG
- material: polyurethane, additional teeth and upper side coating with nylon, steel, Kevlar cord
- production length: 50 or 100 m
- intended use: linear drives – product transport



## MEGAFLEX - polyurethane endless belts



**T5, T10, T5 DL, T10 DL, T20 DL, AT5, AT10, AT20, AT5 DL, AT10 DL, AT20 DL, XL, L, H, XH, XL, DL, L DL, H DL, RPP5, RPP8, RPP14, RPP5 DL, RPP8 DL, RPP14 DL, MTD 8M, P2, ATG10 series**

- material: thermoplastic polyurethane with spiral steel cord
- special constructions:
- highly resilient fibres
- (NTF) nylon coating of teeth (available for length over 1900 mm)
- milling, polishing and drilling performed on demand
- additional coating of the belt back side:
  - ' PU 85° ShA
  - ' Tenax 50° ShA
  - ' Linatex 40° ShA
  - ' yellow PUR 60° ShA
  - ' grey PUR 60° ShA
  - ' neoprene rubber 70° ShA
- intended use: drive and transport belts

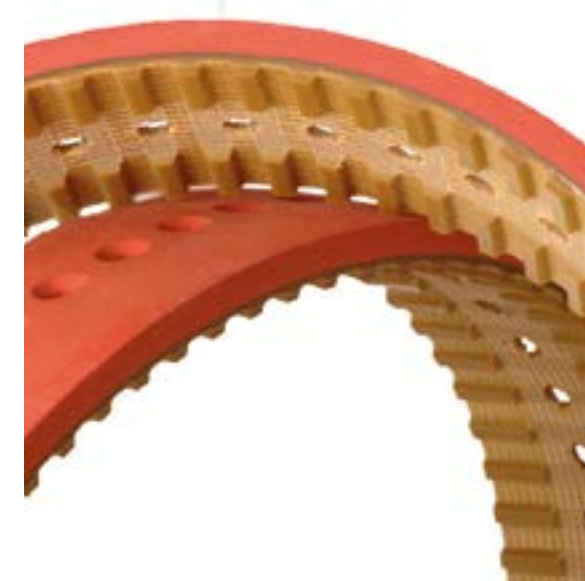
## MEGARIB – multi grove polyurethane endless belts



### J, H, TB2 series

- material: polyurethane with polyester fibre
- intended use:
- food processing,
- lawn mowers,
- electric household devices,
- washing machines,
- electric tools,
- wood machining tools,
- home electric tools

## Engineering belts



- special coatings
- milling
- joining



## Backlash-free precision couplings



### Bellows couplings BK

- high precision, torsionally stiff couplings, the properties of which are defined by a stainless steel bellows, used in precision demanding machine drive systems



### Bellows couplings MK

- high precision, torsionally stiff couplings, the properties of which are defined by a stainless steel bellows, used in precision demanding small device drive systems



### Elastomer couplings EK

- vibration damping
- easy installation
- electric insulation

### Transmission shafts ZA, EZ

- allow to transfer drive between distant machine elements
- bellows and elastomer versions are available



### Overload clutches SK, SL

- they constitute mechanical protection of a drive system against the overload effects
- many assembly variants
- different variants of starting

### Disc couplings SCL

- precision couplings for servo drive
- packages of spring steel discs ensure precise operation and compensate for assembly misalignments

## Heavy industry couplings



### Safety couplings ST

- many assembly variants
- automatic and immediate disconnection after overload
- torsionally stiff and elastomer variants



### Disc couplings LP

- torsionally stiff and durable
- operation temperature range from -30°C to +280°C
- optional certificates ATEX and API



### Toothed flexible joints BZ

- torsionally stiff and durable
- low restoring forces
- transferred torque over 2 million Nm

### Bellows couplings BX

- welded construction
- double bellows ensuring compensation for shaft misalignment
- operation temperature range from -40°C to +300°C

### Elastomer couplings EK

- vibration damping
- easy installation
- electric insulation



## Toothed wheels and racks



### Toothed wheels with a hub of straight teeth

- made of nylon 6 reinforced with fiberglass
- angle on contact position 20°
- wheel module: M0.5 - M4
- number of teeth: Z=12 do Z=200 (depending on module)



### Toothed racks made of nylon 6

- reinforced with fiberglass acc. to standard DIN 782
- angle on contact position 20°
- module M0.5 - M4 (from module M1.5 to M4 with a steel core)
- dimensions 150 mm - 1000 mm (depending on module)

## Bevell gear wheels



### Bevel gear wheels with straight teeth

- made of nylon 6 reinforced with fiberglass
- angle on contact position 20°
- gear rating 1:1 - 1:4
- module M1 - M3.5

## Chain toothed wheels



### Chain wheels with hub and discs with bearing

- made of nylon 6 reinforced with fiberglass
- one row with a bearing (graduation 3/8", - 1")
- one-, two-, three row with a hub (graduation 3/8", - 5/8")
- number of teeth depending of the graduation

## Belt toothed wheels



### Belt wheels

- made of nylon 6 reinforced with fiberglass
- imp. graduation MXL, XL, L, H
- wheels HTD (graduation 3M, 5M, 8M)
- wheels RPP (graduation 3M, 5M, 8M)
- metric wheels graduation T2.5, T5, T10, AT5, AT10





## Cardan joints



### S (DIN 808) series

- yoke connection
- speed max.: 1000 rev./min.
- angle max. 45°



### G (DIN 808) series

- make with slide bearing
- GD series – double joint
- GA series – extendable joint
- speed max. 1000 rev./min.
- angle max. 45°- 90°



### H (DIN 808) series

- make with needle bearing
- HD series - double joint
- HA series - extendable joint
- speed max. 4000 rev./min.



### H (DIN 808/7551) series

- make with needle bearing
- HD series - double joint
- HA series - extendable joint
- speed max. 4000 rev./min.



### X (DIN 808) series

- made of stainless steel
- maximal operation angle: 45° (XD series - 90°)

### Joint covers M

- resistant to oils and dusts

### Splined shafts A5

- material: C40
- standard length: 1 bm

### Splined bushings BB

- material: 9SMnPb3





## Bearings



### Stainless steel bearings

- UCF, UCFL, UCP, UCPA, UPFC, UCT
- mounting of stainless steel AISI 300
- bearing of stainless steel AISI 440
- retainer of stainless steel AISI 302
- lubricant with certificate USDA

### Cast iron bearings LK

- UCF, UCFL, UCP, UCPA, UCFC, UCT



### Bearing sets with extruded steel mounting

- SBPF, SBPFL, SBPP
- high quality galvanized surface
- non-standard make with a stainless steel mounting
- bearing with a set screw or clamping ring

### Bearing sets with aluminium mounting

- UFL, UP



### Bearing sets of plastic

- UCF, UCFL, UCP, UCPA, UCFC, UCT

### Linear bearings and guides

- of the warehouse: KB, KBO, KH
- on order: KB AJ, SKB, SKBO
- mounting with a round or square flange
- mounting seats for precision shafts



### Bearings

- ball bearings
- stainless ball bearings
- needle bearings
- special bearings compliant with customer documentation
- bearing rings

## Chains



### Stainless chains

- Gall chains made of AISI 304 stainless steel
- full roll for high strength
- pre-tensioned
- sleeved Gall chains
- conveyor chains
- transmission chains

## Precision shafts



- W – inductively tempered and polished shafts (metric)
- WZ - inductively tempered and polished shafts (imp.)
- WV - inductively tempered and chromium plated shafts
- WVZ - inductively tempered and chromium plated shafts (imp.)
- WRA - inductively tempered stainless shafts (of stainless steel)
- WRB - inductively tempered stainless shafts (of stainless steel)
- WRAZ - WRBZ - inductively tempered stainless shafts (of stainless steel, imperial)
- WH - WHZ - inductively tempered hollow shafts
- WHV - WHVZ - inductively tempered and chromium plated hollow shafts
- WP - WPZ – deep tempered and polished shaft for ball screws
- WB – tempered and polished shafts with drilled and threaded setting holes





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# General utility accessories





**SYNTHETIC  
MATERIALS**



## Electric cable rotary glands

- Mercotac rotary glands are used to transfer electric signals onto machine rotary elements
- it is possible to transfer power supply as well as measurement signals
- all gland can work with voltages up to 250 V, some of them up to 500 V
- much smaller, more durable from conventional rotary brush systems



### Coaxial connections

- number of connections: 1-3
- small power applications
- current: 4 A (10 A for single connection models)

### Modular connections

- number of connections: 1-8
- current: up to 4 A or to 30 A (250 A for single connection models)



### New model 215-2K, 215-2KSS

- two channels
- voltage: up to 2000 V
- current: 15 A per channel
- up to 1200 rev. /min.

### Advantages:

- durability counted in millions of revolutions
- sealed, provided with bearings and maintenance free construction
- very low noise level
- upper frequency 100 MHz

### Accessories:

- set of correction connections
- dust proof connection covers IP51
- tools for assembly

## Accessories for construction of machines and devices



### Clamping levers

- lever handles
- rotary handles
- tilted handles



### Cranks and hand wheels

- cranks with foldable handle
- hand and three arm wheels
- two arm hand wheels with a foldable handle
- full hand wheels with rotation counter

### Bow-type handles

- handles with a through and blind hole
- handles with internal thread

### Handles

- ball
- oval
- rotary
- star
- click



### Hinges

- with through holes
- with threaded holes
- with a mounting screw







### Locks

- tube locks with a triangular key
- tube locks with a square key
- tube locks with a safe key
- bracket clasps



### Tightening knobs

- fixing knobs with splines
- three arm knobs
- knobs with knurl handle
- knobs with knurl handle and stepped positioning or a meter
- knurled nut
- adjustment keys



### Welder machine accessories

- cable connection elements
- reels, covers, drum adapters,

### Construction feet

- with non-slip inserts
- with anchor holes
- steel mandrel, galvanized or of stainless steel
- thread from M6 to M20
- polyethylene or polyamide base reinforced with fiberglass
- diameters: D19 - D130
- capacity: up to 17 000 N



### Special elements for machine construction

- plunger knobs
- movement limiters
- covers
- boxes with electric terminals



### Accessories and metal subassemblies

- hand wheels
- clamping levers
- construction feet



## High quality thermoplastic materials



**The Archimedes Company ensures very good availability of the materials. The principal materials at our stock are following:**

- Pe300; Pe500; Pe1000; Pe1000R; Pe500R (also AST) - rolls/plates, colours: black/natural/green/ blue
- Pa6/Pa6g (also MO) - rolls/plates, colours black/ natural
- POM-C - rolls/plates, colours: black/natural
- PTFE - rolls/plates colour: natural
- PC - plates, colourless
- PET - plates, colour: natural
- PEEK - plates, colour: natural
- PE1000 LUBX CV - plates, colour: blue



- Other materials such as PMMA; Pa66; Pa46; or modified materials (dedicated for applications e.g. POM-C ELS) are supplied by us in possible short lead times.
- Each material features its own individual overall dimensions produced acc. to manufacturers' standards. The plates are available from stock from 1 mm to 100 mm in size 610x3000; 1000x2000; 1220x3000; 2050x3050. The rolls are available from stock from 5 mm to 200 mm.
- We also have much larger thicknesses of plates, roll diameters or sizes, but also other kinds of materials (frequently tailored for a customer request) available from our suppliers in short lead times (frequently it is in 1-2 weeks).

## SYNTHETIC MATERIALS



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# Machines and devices







## Material guiding systems and sheet tensioning control



### Elguider

- material guiding systems with a rotary frame
- material width: 160 - 6000 mm
- kind of material: foil, paper, hygienic materials



### Elroller

- material guiding systems with rotary-moveable rollers
- material width: 400 - 10 000 mm
- kind of material: foil, paper, rubber



### Eltuner

- material guiding systems with turning rods
- material width: 400 - 3000 mm
- kind of material: foil, paper, fabric

### Elbander

- material guiding systems with a rotary roller
- kind of material: textiles

### Elwinder

- electric linear setting drives

### Elplacer

- material guiding system with a moveable roller
- kind of material: rubber
- material width: 600 - 1900 mm

### Elcut

- material cutting system



### Eltens

- sheet tensioning measurement systems
- thermostatic sensors



### Elsor Ols, Elscad, Elsis

- control and measurement systems

### Accessories

- Edge detectors
- CCD cameras
- position adjusters
- control devices



## Tomra sorters



### TOMRA 5B

- maximal food safety
- production of the top quality products
- optimised output
- high performance
- operator friendly for users
- hygienic construction

[WATCH VIDEO](#)


### BLIZARD

- high effectiveness of removal of foreign bodies
- sorting according to shape using a wide range of available picture analysis functions
- active background in infra-red
- glass and transparent foil detection
- operator friendly for a user
- low maintenance and operation costs
- large output
- adapted for cooperation with tunnel fast freezers and with packing lines

[WATCH VIDEO](#)


### TOMRA 3A

- substantial reduction of manpower
- higher outputs and better product quality
- better removal of foreign bodies and smaller risk of “deductions” at supplies
- removing of undesired green potatoes
- high output for faster harvest (possible up to 100 t/h)
- adapts itself to various kinds of soil
- optimized construction ensures delicate treatment of product in the course of fast sorting
- lower costs of storage
- continuous precision of sorting
- fast and easy assembly
- friendly for user, simple in operation and maintenance

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### TOMRA 5A

- high effectiveness of removal of foreign bodies
- maximal food safety
- production of repeatable class and quality products
- high output and profit optimizing
- easy for operation
- access to production data and sorting statistics

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### ODYSSEY – Steam peeler

- application: vegetables (carrot, pumpkin, celeriac, turnip cabbage, potatoes), fruit (apple, peach)
- high functionality
- large steam container for large vegetables
- low operation cost
- easy operation
- large output
- simple user's interface
- construction easy to keep clean

[WATCH VIDEO](#)


### ORBIT - Steam peeler

- output
- reliability
- lower costs of operation
- easy maintenance
- wide adjustment range
- minimal product loss
- large capacity

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## Compact control cabinets - Sterbox™



Compact control cabinets Sterbox™ can be configured depending on:

- **type of power supply:**
  - 1~phase (230VAC)
  - 3~phase (400VAC)
- **inverter manufacturer:**
  - TS - TECO scalar inverter
  - TW - TECO vector inverter
  - M - Mitsubishi inverter FR-D700 series (scalar/ vector)
  - L - LS inverter iG5A series (scalar/ vector)
  - B – direct start of motor (contactor)
- **power of control cabinets:**
  - 1~ phase (230 VAC): 0.18 kW; 0.37 kW; 0.75 kW
  - 3~ phase (400 VAC): 0.75 kW; 1.5 kW; 2.2 kW
- type of housing of the control cabinet: epoxy-polyester powder coated steel, stainless steel (INOX)

On the front of the Sterbox™ control cabinet there will be placed as follows: E-stop pushbutton (EMS), safety circuit reset button, double pushbutton start/ stop, inverter speed adjustment potentiometer and main switch.

Safety circuit category 1.

**An example of order code:**

**Sterbox™ Power 0.18 kW 1-phase TS Painted Housing**

- TECO inverter 1~phase scalar (230V AC)
- power 0.18 kW, current 1.8A
- command run/stop of inverter operation
- speed adjustment via a potentiometer
- safety circuit category 1
- inverter configuration for a motor with power of 0.18 kW
- housing 300x300x210 of powder coated steel
- IP65



### Control cabinets acc. to specification

- prefabrication of a control cabinet is possible on the basis of the technical documentation made by Archimedes or received from the Recipient
- the electrical documentation is made with use of engineering software SolidWorks Electrical
- electrical documentation contains diagrams: electric, pneumatic, etc., list of materials, list of I/O terminal blocks, list of cables and wires
- development of control design on the basis of assumptions and agreements with the Recipient
- preferred PLC controllers: Siemens S7 1200, Mitsubishi iQ-F in case of standard application, Siemens LOGO! in case of low-cost application
- control cabinets are prefabricated according to obligatory standards, ex. Machinery Directive or Electromagnetic Compatibility (EMC) Directive
- the control cabinet prefabricated by Archimedes receives the declaration of compliance LVD
- prefabrication of the control cabinets can be based on low-voltage equipment of the following manufacturers: Eaton, Schneider, Relpol, Finder, Weidmüller, Rittal, Siemens
- it is possible to use any equipment on the Recipient demand
- possibility of installation, starting up and training in operation of the control cabinet and HMI panel on the Recipient site
- on the Recipient demand it is possible to execute electrical measurements of the completed installation



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# Archimedes drives the future





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