

Festo Model 46101-10 Mechanical Training System – Level 1 PN 580121

Universal Base Assembly 46603

- Universal Base
- Control Panel
- Side Safety Panels
- Front & Back Safety Panels
- T-Slotted Extrusion Bars
- Lockout Devices, Padlocks, Tags

Motor Package 46609

- Constant-Speed Motor
- Variable-Speed Motor
- Mounting Bases

Couplings – Shafts 46610

- Storage Panel
- Sleeve Coupling
- Jaw Coupling
- Stainless Steel Shafts

Pillow Block Bearings 46611

- Storage Panel
- (10) Pillow Block Bearings

Belt Drives 1 46612

- Storage Panel
- (3) V-Belt Sheaves
- Rubber V-Belt
- Belt Tension Tester
- Sheave Gauges

Chain Drives 1 46613

- Storage Panel
- (3) Sprockets
- (2) Roller Chain w/ Connecting Links
- Chain Breaker
- Chain Puller

Gear Drives 1 46614

- Storage Panel
- (4) Spur Gears w/ Setscrew
- (2) Spur Gears w/ Bore for Split Taper Bushing
- Split Taper Bushings

Test/Measurement Package 1 46630

- Photo-Reflective Tachometer
- Dial Indicator
- (2) Levels
- Combination Square
- Feeler Gauge
- Flat Bar

Tool Box Component Package 1 46631

- Tool Cabinet w/ 6 Drawers & 1 Compartment
- Screws
- T-Nuts
- Flat Washers
- Corner Brackets

- Shims
- Risers
- Square Shaft Key
- Square Keystock
- Woodruff Key
- Straightedge
- Tensioners
- Wood Plate

Prony Brake 3154-1

- Scales
- Pulley

(2) Binder for the Manuals in System 46101-1 38369

- Introduction to Mechanical Drive Systems (Job Sheets - Student) 36737-2
- Introduction to Mechanical Drive Systems (Job Sheets - Instructor) 36737-3
- Introduction to Mechanical Drive Systems (Work Orders - Student) 36737-6
- Introduction to Mechanical Drive Systems (Work Orders - Instructor) 36737-7
- Industrial Maintenance (Student Manual) 36737-8
- Belt Drives 1 (Job Sheets - Student) 36891-2
- Belt Drives 1 (Job Sheets - Instructor) 36891-3
- Belt Drives 1 (Work Orders - Student) 36891-6
- Belt Drives 1 (Work Orders - Instructor) 36891-7
- Chain Drives 1 (Job Sheets - Student) 36892-2
- Chain Drives 1 (Job Sheets - Instructor) 36892-3
- Chain Drives 1 (Work Orders - Student) 36892-6
- Chain Drives 1 (Work Orders - Instructor) 36892-7
- Gear Drives 1 (Job Sheets - Student) 36893-2
- Gear Drives 1 (Job Sheets - Instructor) 36893-3
- Gear Drives 1 (Work Orders - Student) 36893-6
- Gear Drives 1 (Work Orders - Instructor) 36893-7

Festo Model 46101-20 Mechanical Training System – Level 2 PN 580128

Belt Drives 2 46612-1

- (2) Storage Panel
- (2) Single-Groove Wedge Pulley
- (2) Double-Groove Wedge Pulley
- (2) Step-Cone Pulley
- (2) Timing Belt Pulley
- Variable Pitch Pulley
- (2) High Torque Drive (HTD) Timing Belt Pulley
- Idler Pulley
- 4L V-Belt
- (2) 3V Wedge V-Belt
- (2) Cogged Wedge V-Belt
- Timing Belt
- HTD Timing Belt

Chain Drives 2 46613-1

- Storage Panel
- Pair of Double-Row Roller Chain Sprockets
- Pair of Silent Chain Sprockets
- Idler Sprocket

<ul style="list-style-type: none"> <li>• Roller Chain</li> <li>• Silent Chain</li> <li>• Bushings</li> </ul>
<p>Alignment and Couplings 46615</p> <ul style="list-style-type: none"> <li>• (2) Storage Panels</li> <li>• Gear Coupling w/ Plastic Sleeve</li> <li>• Flexible Sleeve Coupling</li> <li>• Flange Coupling</li> <li>• Chain Coupling w/ Cover</li> <li>• Grid Coupling w/ Cover</li> <li>• (2) Universal Joints</li> <li>• Bushings</li> </ul>
<p>Lubrication 46616</p> <ul style="list-style-type: none"> <li>• Lever Grease Gun</li> <li>• Grease Cartridge</li> <li>• Manual Chain Oiler</li> <li>• SAE Grade 30 Oil</li> <li>• Viscometer</li> <li>• Thermometer</li> <li>• Empty Container</li> </ul>
<p>Test/Measurement Package 2 46630-1</p> <ul style="list-style-type: none"> <li>• Dial Indicator</li> <li>• (2) Clamp Attachments</li> <li>• (2) Swivel Clamps</li> <li>• (3) Lengths of Rod for Dial Indicator Assembly</li> <li>• Flat Bar</li> </ul>
<p>Tool Box Component Package 2 46631-1</p> <ul style="list-style-type: none"> <li>• Mounting Bracket</li> <li>• Inspection Mirror</li> <li>• (2) Riser Extensions</li> <li>• Screws</li> </ul>
<p>Binder for the Manuals in System 46101-2      38369-1</p> <ul style="list-style-type: none"> <li>• Belt Drives 2 (Job Sheets - Student)      36963-2</li> <li>• Belt Drives 2 (Job Sheets - Instructor)      36963-3</li> <li>• Belt Drives 2 (Work Orders - Student)      36963-6</li> <li>• Belt Drives 2 (Work Orders - Instructor)      36963-7</li> <li>• Chain Drives 2 (Job Sheets - Student)      36964-2</li> <li>• Chain Drives 2 (Job Sheets - Instructor)      36964-3</li> <li>• Chain Drives 2 (Work Orders - Student)      36964-6</li> <li>• Chain Drives 2 (Work Orders - Instructor)      36964-7</li> <li>• Lubrication (Job Sheets - Student)      36966-2</li> <li>• Lubrication (Job Sheets - Instructor)      36966-3</li> <li>• Lubrication (Work Orders - Student)      36966-6</li> <li>• Lubrication (Work Orders - Instructor)      36966-7</li> <li>• Alignment and Couplings (Job Sheets - Instructor)      52540-3</li> <li>• Alignment and Couplings (Work Orders - Student)      52540-6</li> <li>• Alignment and Couplings (Work Orders - Instructor)      52540-7</li> <li>• Alignment and Couplings (Job Sheets - Student)      52540-2</li> </ul>

Festo Mechanical Trainer System - Level 3 PN580131

46614-10 Gear Drives 2

- (3) Helical Gears
- Set of Miter Gears
- Worm & Worm Gear
- Gearbox
- Accessories (Bearings, Collars, Shaft, Support Plate, Mandrel)
- Storage Panel

46617-00 Bearings

- Ball & Roller Bearings
- Sleeve, Grooved Sleeve, Flange Sleeve, Thrust Plain Bearings
- Open, Shielded, Sealed Radial Ball Bearings
- Angular Ball Bearings
- Thrust Ball Bearing
- Tapered Roller Bearings
- Needle Bearing
- Thrust Needle Bearings
- One-dot Housing
- One-dot Shaft
- Bearing Packer
- Grease Cartridge
- Accessories (Collar, Sleeve, Mandrels, Screws, Washers, O-rings, Retaining Nuts, Lockwashers, Spacers)
- (2) Storage Panels

46618-00 Gaskets & Seals

- (3) Seal Hub
- Lip Seal Tool
- O-Ring
- Lip Seal
- Mechanical Seal
- Cork Sheets
- Punch
- Accessories (Shaft, Nut, Washer, Collar)
- Storage Panel

46631-20 Tool Box Component Package 3

- Bearing Puller
- Spanner Wrench
- Work Gloves

38369-20 Binder for the Manuals in System 46101-3

Manuals:

- 37855-20 Gear Drives 2, Student Job Sheets
- 37855-30 Gear Drives 2, Instructor Job Sheets
- 37855-60 Gear Drives 2, Student Work Orders
- 37855-70 Gear Drives 2, Instructor Work Orders
- 37856-20 Bearings, Student Job Sheets
- 37856-30 Bearings, Instructor Job Sheets
- 37856-60 Bearings, Student Work Orders
- 37856-70 Bearings, Instructor Work Orders
- 37857-20 Gaskets & Seals, Student Job Sheets
- 37857-30 Gaskets & Seals, Instructor Job Sheets

- 37857-60 Gaskets & Seals, Student Work Orders
- 37857-70 Gaskets & Seals, Instructor Work Orders

#### Festo Mechanical Trainer System - Level 4 PN 580134

##### 46619-00 Clutches & Brakes

- Electromagnetic Clutch-Brake Unit
- Inertia Load
- Roller Ramp Clutch & Sprocket
- Torque Limiter & Sprocket
- Shaft
- Accessories (Collars, Screws, Thrust Bearings)
- Storage Panel

##### 46620-00 Ball Screws & Linear Bearings

- Driving Guides
- Main Supports
- Plate
- Ball Nut
- Linear Bearings
- Ball Screw
- Shafts
- Accessories (Handwheel, Retaining Rings, Flange Bearing, Angular Ball Bearings, Bearing Locknut, Screws)
- (2) Storage Panels

##### 46631-30 Tool Box Component Package 4

- Retaining Ring Pliers
- Spanner Wrench

##### 38369-30 Binder for the Manuals in System 46101-4

##### Manuals:

- 37858-20 Clutches & Brakes, Student Job Sheets
- 37858-30 Clutches & Brakes, Instructor Job Sheets
- 37858-60 Clutches & Brakes, Student Work Orders
- 37858-70 Clutches & Brakes, Instructor Work Orders
- 37859-20 Ball Screws & Linear Bearings, Student Job Sheets
- 37859-30 Ball Screws & Linear Bearings, Instructor Job Sheets
- 37859-60 Ball Screws & Linear Bearings, Student Work Orders
- 37859-70 Ball Screws & Linear Bearings, Instructor Work Orders

#### TP 101 America Pneumatics (4 trays):

- Lockable on-off valve with -filter regulator (PN 4795290)
- (2) Pressure gauge (PN 152865)
- One-way flow control valve (PN 193967)
- (2) 3/2-Way-Panel mounted with Pushbutton Actuator, normally closed (PN 152860)
- 3/2-Way- Panel mounted Valve with Pushbutton Actuator, normally open (PN 152861)
- 5/2-way double pilot valve, pneumatically actuated on both sides (PN 576303)
- Single-acting cylinder (PN 152887)
- Double-acting cylinder, smooth running (PN 4809915)
- Double-acting cylinder (PN 152888)

- Air pressure reservoir, 0.4 l (PN 152912)
- Vacuum generator, type H (PN 573258)
- Vacuum gauge (PN 573042)
- Suction gripper 30 SN (PN 573044)
- Manifold (PN 152896)
- Spring load for cylinders, pneumatic (PN 4646789)
- Compressed air motor (PN 4645172)
- Air Bearing (PN 4809899)
- Flow indicator with float, pneumatic (PN 4741762)
- Pneumatic resistance, long (PN 4646991)
- Ball Valve (PN 153483)
- (2) Plastic tubing (PN 151496)
- Contact tachometer (PN 8062148)

TP102 Advanced Pneumatics (3 trays):

- (2) 3/2-Way-Panel mounted with Pushbutton Actuator, normally closed (PN 152860)
- 3/2-way valve with mushroom-head emergency switch (red), normally open (PN 152864)
- 3/2-way roller lever valve with idle return, normally closed (PN 152867)
- Back pressure valve (PN 152868)
- (4) 3/2-way valve, pneumatically actuated on one side (PN 576302)
- (2) 5/2-way double pilot valve, pneumatically actuated on both sides (PN 576303)
- (4) Shuttle valve (OR) (PN 539771)
- (3) Dual-pressure valve (AND) (PN 539770)
- Pneumatic timer, normally open (PN 539759)
- Pneumatic preset counter (PN 152877)
- Stepper module (PN 152886)
- (2) One-way flow control valve (PN 193967)
- (2) Non-return valve, delockable (PN 540715)
- (2) Double-acting cylinder (PN 152888)
- Plastic tubing (PN 151496)

TP 201 America Electro-Pneumatics (3 trays):

- Limit switch, electrical, left-actuated (PN 183322)
- Limit switch, electrical, right-actuated (PN 183345)
- M12 optical proximity sensor, diffuse sensor (PN 8062967)
- (2) Proximity sensor, electronic, with cylinder mounting (PN 2344752)
- 5/2-way solenoid valve with LED (PN 567199)
- Pressure sensor, 0 to 1000 kPa, with switching output (PN 8062966)
- 5/3-way solenoid valve, mid position closed (PN 567201)
- Dual-pressure valve (AND) (PN 539770)
- Pressure regulator valve with pressure gauge (PN 539756)
- Shuttle valve (PN 539771)
- (2) Relay, three-fold (PN 8062958)
- Preset counter, electronic (PN 8062962)
- Time relay, two-fold (PN 8062960)
- Signal input, electrical (PN 8062950)
- Quick-exhaust valve (PN 539772)
- Plastic tubing (PN 151496)

TP501 America Hydraulics (4 trays):

- Differential cylinder 16/10/200 with cover (PN 152857)
- Differential cylinder 25/18/200 with cover (PN 184490)
- 2-way flow control valve (PN 544338)
- 4/3-way hand lever valve, closed mid-position, detenting (PN 544343)

- Non-return valve, delockable (PN 544339)
- Shut-off valve (PN 152844)
- One-way flow control valve (PN 152843)
- Pressure relief valve (PN 544335)
- Pressure relief valve, piloted (PN 8025067)
- Spring load for cylinders, hydraulic (PN 4914138)
- Flow indicator with float (PN 4857121)
- 3-way pressure reducing valve (PN 544337)
- (2) 4-way distributor with pressure gauge (PN 159395)
- (2) Pressure gauge (PN 152841)
- (4) T-distributor (PN 152847)
- (2) Cover for Cylinder (PN556290)
- Differential cylinder adaptor (PN 573272)

#### TP230 Vacuum Technology Equipment Set

- Air pressure reservoir, 0.4 l 152912
- Pressure switch, 0 – -1 bar 548624
- Vacuum gauge 573042
- Flow control valve 193972
- Vacuum generator, type H 573258
- Vacuum generator, type L 573259
- Non-return valve 153462
- Non-return valve, delockable 540715
- Suction gripper 20 SN 573043
- Suction gripper 30 SN 573044
- Suction gripper 20 SS 573045
- Suction gripper 30 SS 573046
- (2) Suction gripper 20 CS with vacuum security valve 573047
- Suction gripper 4x20 ON 573257

#### Festo 8038623-U Measuring Station

##### Technical Data:

- Operating Pressure: 600 kPa (6 bar)
- Power Supply: 24V DC
- (8) Digital Sensors
- (7) Digital Actuators
- (1) Analog Input

#### 170395 Aluminum Profile Plate

##### 8032692 Conveyor Module

- DC Motor
- (2) Diffuse Sensors
- Light Barrier
- Mini I/O Terminal
- Mounting Material for Profile Plate
- Feed Separator/Stopper, Electric

##### 8035936 Rotary/Lifting Module

- Mini I/O Terminal
- Valve Slices, 3x5/2-way Monostable Valve

- Double-acting Cylinder w/ Guide
- Swivel Cylinder
- (4) Magnetic Limit Switches
- Parallel Gripper w/ Gripper Jaws
- Mounting Accessories for Profile Plate

653393 Slide Module

8040204 MPS Measuring Table

- Diffuse Sensor
- Profile
- Connecting Cable
- Mounting Accessories for Profile Plate

8046324 Stopper, Simple, with Valve

540691 Start-up Valve w/ Filler Control Valve

8034300 Cable Holder w/ Hook-and-Loop Fastener (pack of 10)

8025738 C Interface (Input Module)

8026327 Quick-Fix Clamping Adapter