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## Станки для обработки концов труб EP 424 ORBITALUM. Техническое описание



**E.H.WACHS<sup>®</sup>**

Superior Equipment. Complete Support.™

Machines perfect preps from OD DN 100 - 600 (4" - 24").



EP 424 application.



Auto feed angle generator by "SpeedPrep".



Hydraulic, Electric or Pneumatic drive options.



Compact flange facer.

Pipe End Preparation Machines EP 424





## Pipe End Preparation Machines

- Machines perfect preps from OD DN 100 - 600 (4" - 24")
- Safe cold cutting process, eliminates heat affected zone
- Lathe machining process delivers precise compound bevels and consistent lands
- Speed Prep design feeds automatically in the radial and axial planes
- Hydraulic, Electric or Pneumatic drive options
- EP 424 eliminates the need for accessory templates or external tool slides
- Features fast setup and prep times with quick deploy mandrel legs
- Hardened steel components, large cross section, larger gear sets
- Lightweight yet rigid aluminum housing and mainshaft to enhance portability
- Low friction bearing system provides maximum stability and eliminates chatter

### EP 424 Bevelers

The WACHS EP 424 with the patent pending new speed prep feed system is a precision ID mount end prep machine tool designed to bevel, compound bevel, J prep, face and counterbore pipe, fittings and valves. Utilizing WACHS revolutionary new mechanism that feeds simultaneously in the axial and radial planes, it's able to machine any bevel or compound bevel without templates, incline tool slides or work stoppage. The EP 424 is powerful enough to form tool from DN 100 - 350 (4" - 14") and single point from DN 200 - 600 (8" - 24") up to a 165 mm (6.5") wall thickness.

#### EP 424 design capabilities

- Form tool from pipe OD DN 100 - 350 (4" - 14")
- Single point machining from OD DN 100 - 600 (4" - 24")
- Hardened alloy steel components, larger gear sets for high work loads
- Full roller bearing construction for durability and stability
- Fully enclosed bearings and drive gears for safety and durability
- Corrosion resistant finishes on all components to withstand harsh environments
- Mounts to ID of pipe with easy to use self centering mandrel system
- Fully modular construction for one man set-up and operation
- All new heavy duty design with patent pending Speed Prep feed system

#### Speed prep feed

The EP 424 is an all new design featuring WACHS patent pending Speed Prep feed system. Prior to the EP 424, most end prep machines required a mechanical template or incline tool slide to reproduce the specific and complex preps called for by today's processes. With WACHS speed prep system, it's now possible to dial in the exact prep needed for your application. Select the bevel angle and the land that works best for your application, without work stoppages or additional components. More versatile and powerful to use than any other machine of its kind, the WACHS EP 424 sets the standard in user friendly large diameter end prep machines.

| Specifications                             |                        | EP 424  |
|--|------------------------|---|
| System function                            |                        | ID mount end prep machine tool designed to bevel, compound bevel, J prep, face and counterbore pipe, fittings and valves                              |
| Machine capacity OD<br>(varies by tooling) | [mm]                   | DN 100 - 600  |
|  | [inch]                 | 4 - 24  |
| Drive options                              |                        | Hydraulic or pneumatic  |
| Air requirements                           | [m <sup>3</sup> /min]  | 2.7 at 6.2 bar  |
|  | [ft <sup>3</sup> /min] | 95 at 90 psi  |
| Hydraulic requirements                     | [l/min]                | 30 at 103 bar   |
|  | [gal/min]              | 8 at 1500 psi   |
| Feed method                                |                        | Speed prep feed system with dial control or fully manual  |
| Feed rate                                  |                        | Variable feed rate, user adjustable   |
| Feed stroke<br>(axial)                     | [mm]                   | 71.1  |
|  | [inch]                 | 2.8   |
| Construction                               |                        | Lightweight aluminum housing, oversize hardened alloy steel fully enclosed gear sets, high capacity bearings, rigid mandrel legs, captivated hardware |

| Specifications         |        | EP 424   |  |
|------------------------|--------|--|--|
| Finish                 |        | Multistage bright red enamel finish plus black oxide and clear coated components   |  |
| Machine rotating speed | [rpm]  | 0 - 14 (variable)  |  |
| Tooling                |        | Accepts standard WACHS single point beveling and form tools, high speed steel or carbide tooling   |  |
| Tool slots             |        | Form tooling or single point tooling   |  |
| Packaging              |        | Heavy duty storage case  |  |
| Length                 | [mm]   | 314 / 680  |  |
| (without/with mandrel) | [inch] | 12.35 / 26.75  |  |
| Weight                 |        | Full modular construction with each module under 31.75 kg (70 lbs), total weight with storage case 71.67 kg (158 lbs)  |  |
| Standard equipment     |        | <ul style="list-style-type: none"> <li>• Form tooling</li> <li>• Heavy drive (pneumatic or hydraulic)</li> <li>• Heavy duty storage case</li> <li>• Standard mandrel (depending on machine version)</li> <li>• Extension leg kit (depending on machine version)</li> <li>• Self squaring mounting system (depending on machine version)</li> <li>• Operating hand tools</li> <li>• Operation manual</li> </ul> |  |
| Optional equipment     |        | <ul style="list-style-type: none"> <li>• Flange facing modules for end prep or form tooling applications</li> <li>• Air Control Module "ACM" for pneumatic drive</li> <li>• Interchangeable tooling mounts</li> <li>• Genuine WACHS tooling</li> </ul>   |  |



| Article                       | Version   | Pipe OD      |        | Code        | WACHS Ref.-no. |
|-------------------------------|-----------|--------------|--------|-------------|----------------|
|                               |           | [mm]         | [inch] |             |                |
| EP 424 form tooling           | Pneumatic | DN 100 - 400 | 4 - 16 | 981 000 010 | 81-000-01      |
| EP 424 form tooling           | Hydraulic | DN 100 - 400 | 4 - 16 | 981 000 020 | 81-000-02      |
| EP 424 single point tooling*  | Pneumatic | DN 100 - 600 | 4 - 24 | 981 000 030 | 81-000-03      |
| EP 424 single point tooling*  | Hydraulic | DN 100 - 600 | 4 - 24 | 981 000 040 | 81-000-04      |
| EP 424 single point tooling** | Pneumatic | DN 100 - 600 | 4 - 24 | 981 000 050 | 81-000-05      |
| EP 424 single point tooling** | Hydraulic | DN 100 - 600 | 4 - 24 | 981 000 060 | 81-000-06      |

\* Single point tooling. Includes standard mandrel and self squaring mounting system.

\*\* Single point tooling. Includes only standard mandrel.

## EP 424 single point speed prep upgrade

Converts form tool model Code 981 000 010 or Code 981 000 020 to single point model.

| Standard equipment |  |
|--------------------|--|
|                    | <ul style="list-style-type: none"> <li>• Single point radial tool slide for ID 108 mm (4.25") to OD 609.6 mm (24") (165 mm (6.5") slide travel)</li> <li>• "Speed Prep" auto axial feed gear box for bevel generation up to 45°</li> <li>• Chuck leg extensions for ID range 377.7 - 600 mm (14.87" - 23.64")</li> <li>• Self squaring mounting system and extensions for ID range 193 - 574 mm (7.6" - 22.6")</li> <li>• Dial indicator system</li> <li>• Operating hand tools</li> <li>• Storage case</li> <li>• Manual</li> </ul> |

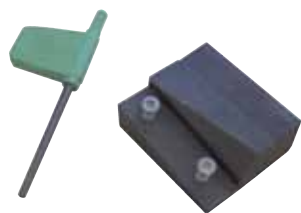
| Article                                | Code        | WACHS Ref.-no. |
|--|-------------|----------------|
| EP 424 single point speed prep upgrade | 981 400 000 | 81-400-00      |





## Accessories for EP 424

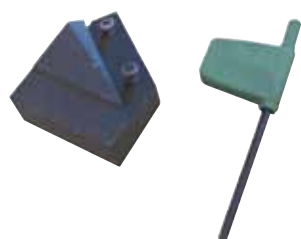
### Form tool EP 424 facing tooling



Facing tool insert holder (high range)



Premium grade HSS insert (2 sided)



Bevel tool insert holder kit 30°

| Article   | Code               | WACHS Ref.-no. |  |  |
|---|--------------------|----------------|--|--|
| <b>Facing tool insert holders, axial</b>  |                    |                |  |  |
| <b>Facing tool insert holder (low range).</b><br>Includes:<br>• 1 holder (956 198 010)<br>• 2 insert screws (956 190 000)<br>• 1 wrench (956 191 000)   | <b>956 708 010</b> | 56-708-01      |  |  |
| <b>Facing tool insert holder (high range).</b><br>Includes:<br>• 1 holder (956 198 020)<br>• 2 insert screws (956 190 000)<br>• 1 wrench (956 191 000)  | <b>956 708 020</b> | 56-708-02      |  |  |
| <b>Inserts for facing and beveling</b>  |                    |                |  |  |
| <b>Premium grade HSS insert (2 sided).</b><br>For facing and beveling.<br>For use with all WACHS SDB 206, 412 and EP 424 insert holders.  | <b>956 711 010</b> | 56-711-01      |  |  |
| <b>Carbide 2 sided insert.</b><br>For facing and beveling.<br>For use with all WACHS SDB 206 and 412 insert holders.  | <b>956 712 010</b> | 56-712-01      |  |  |
| <b>Facing insert holder kit for axial facing and beveling 37.5°</b>   |                    |                |  |  |
| <b>Insert holder kit for axial facing and beveling 37.5°.</b><br>Includes:<br>• 1 low range facing insert holder (956 708 010)<br>• 1 high range facing insert holder (956 708 020)<br>• 1 bevel insert holder 37.5° (956 709 030)<br>For WACHS models SDB, SDB 412 and EP 424. | <b>956 710 010</b> | 56-710-01      |  |  |
| <b>Screw and wrench</b>   |                    |                |  |  |
| <b>Screw, insert.</b>   | <b>956 190 000</b> | 56-190-00      |  |  |
| <b>Insert screw torx wrench.</b>  | <b>956 191 000</b> | 56-191-00      |  |  |
| <b>Customized tools ground to customer specification (specific code to be assigned upon receipt of order)</b>   |                    |                |  |  |
| <b>Custom HSS facing tool bit (form tool).</b>  | <b>on request</b>  | 56-SPT-02      |  |  |
| <b>Custom form tool or single point insert holder.</b>  | <b>on request</b>  | 56-SPT-10      |  |  |

### Form tool EP 424 beveling tooling

| Article  | Code               | WACHS Ref.-no. |  |  |
|--|--------------------|----------------|--|--|
| <b>Bevel tool insert holder kits</b>   |                    |                |  |  |
| <b>Bevel tool insert holder kit 30°.</b><br>Includes:<br>• 1 holder (956 199 02)<br>• 2 insert screws (956 190 000)<br>• 1 wrench (956 191 000)  | <b>956 709 020</b> | 56-709-02      |  |  |
| <b>Bevel tool insert holder kit 37.5°.</b><br>Includes:<br>• 1 holder (956 199 030)<br>• 2 insert screws (956 190 000)<br>• 1 wrench (956 191 000)   | <b>956 709 030</b> | 56-709-03      |  |  |
| <b>"J" bevel tool insert holder kit 20° (low range).</b><br>Includes:<br>• 1 holder (956 199 010)<br>• 2 insert screws (956 190 000)<br>• 1 wrench (956 191 000)<br>Use with 956 708 010 facing insert holder for 1 mm (0.040") land extension.  | <b>956 709 010</b> | 56-709-01      |  |  |
| <b>"J" bevel tool insert holder kit 20° (high range).</b><br>Includes:<br>• 1 holder (956 199 050)<br>• 2 insert screws (956 190 000)<br>• 1 wrench (956 191 000)<br>Use with 956 708 010 facing insert holder for 1 mm (0.040") land extension. | <b>956 709 050</b> | 56-709-05      |  |  |

| Article   | Code               | WACHS Ref.-no. |  |  |
|---|--------------------|----------------|--|--|
| <b>Insert holder kit.</b><br>Includes:<br>• 1 low range facing insert holder (956 708 010)<br>• 1 high range facing insert holder (956 708 020)<br>• 1 bevel insert holder 37.5° (956 709 030)<br>For WACHS models SDB 206, SDB 412 and EP 424. | <b>956 710 010</b> | 56-710-01      |  |  |
| Compound bevel form tool 10° x 37.5°  | <b>956 707 000</b> | 56-707-00      |  |  |
| <b>Inserts for facing and beveling</b>  |                    |                |  |  |
| <b>Premium grade HSS insert (2 sided).</b><br>For use with all WACHS SDB 206, 412 and EP 424 insert holders.  | <b>956 711 010</b> | 56-711-01      |  |  |
| <b>Carbide 2 sided insert.</b><br>For use with all WACHS SDB 206 and 412 insert holders.  | <b>956 712 010</b> | 56-712-01      |  |  |
| <b>Premium grade HSS 2 sided 3/32 radius "J" bevel insert.</b><br>For use with 956 709 010 and 956 709 050 insert holders.  | <b>956 711 020</b> | 56-711-02      |  |  |
| <b>Carbide 2 sided 3/32 radius "J" bevel insert.</b><br>For use with 956 709 010 and 956 709 050 insert holders.  | <b>956 712 020</b> | 56-712-02      |  |  |
| <b>Screw and wrench</b>   |                    |                |  |  |
| <b>Screw, insert</b>  | <b>956 190 000</b> | 56-190-00      |  |  |
| <b>Insert screw torx wrench</b>   | <b>956 191 000</b> | 56-191-00      |  |  |
| <b>Customized tools ground to customer specification (specific code to be assigned upon receipt of order)</b>   |                    |                |  |  |
| <b>Custom HSS bevel tool bit single angle (form tool).</b>  | <b>on request</b>  | 56-SPT-01      |  |  |
| <b>Custom HSS bevel tool bit compound angle (form tool).</b>  | <b>on request</b>  | 56-SPT-03      |  |  |
| <b>Custom HSS bevel tool bit single angle "J" (form tool).</b>  | <b>on request</b>  | 56-SPT-04      |  |  |
| <b>Custom HSS bevel tool bit compound angle "J" (form tool).</b>  | <b>on request</b>  | 56-SPT-05      |  |  |



Premium grade HSS insert (2 sided)

## Form tool EP 424 counterbore and ID tooling

| Article  | Code               | WACHS Ref.-no. |  |  |
|--|--------------------|----------------|--|--|
| <b>ID deburring tools</b>  |                    |                |  |  |
| <b>ID deburring tool 10°.</b><br>3.81 mm (0.150") required between mandrel and ID.   | <b>956 702 010</b> | 56-702-01      |  |  |
| <b>ID deburring tool 10°.</b><br>11.4 mm (0.449") required between mandrel and ID.   | <b>956 702 020</b> | 56-702-02      |  |  |
| <b>ID deburring tool 10°.</b><br>19.4 mm (0.762") required between mandrel and ID.   | <b>956 702 030</b> | 56-702-03      |  |  |
| <b>Counterbore tools</b>   |                    |                |  |  |
| <b>Counterbore tool taper 4:1.</b><br>8 mm (0.315") required between mandrel and ID.   | <b>956 705 010</b> | 56-705-01      |  |  |
| <b>Counterbore tool taper 4:1.</b><br>22.2 mm (0.875") required between mandrel and ID.  | <b>956 705 020</b> | 56-705-02      |  |  |
| <b>Counterbore tool taper 4:1.</b><br>35 mm (1.375") required between mandrel and ID.  | <b>956 705 030</b> | 56-705-03      |  |  |
| <b>Counterbore tool taper 4:1; 9.5 x 9.5 mm (3/8" x 3/8").</b><br>Use with single point beveling tool holder Code 956 424 000 and 956 424 010. | <b>956 713 000</b> | 56-713-00      |  |  |
| <b>Customized tools ground to customer specification (specific code to be assigned upon receipt of order)</b>                                  |                    |                |  |  |
| <b>Custom HSS tool bit ID deburring</b>  | <b>on request</b>  | 56-SPT-06      |  |  |
| <b>Custom HSS tool bit counterboring</b>   | <b>on request</b>  | 56-SPT-07      |  |  |



Counterbore tool taper 4:1



Single point beveling tool holder



Standard HSS tool bit 9.5 x 9.5 mm

## EP 424 single point tooling

| Article   | Code               | WACHS Ref.-no. |  |  |
|---|--------------------|----------------|--|--|
| <b>Tool holders</b>   |                    |                |  |  |
| <b>Single point beveling tool holder, low range.</b><br>For OD 108 - 600 mm (4.25"-23.62") for EP 424.<br>For EP 424, FF313 and FF424.                                      | <b>956 424 000</b> | 56-424-00      |  |  |
| <b>Single point beveling tool holder, high range.</b><br>For OD 184 - 609.6 mm (7.25"-24") for EP 424.<br>For EP 424, FF313 and FF424.                                      | <b>956 424 010</b> | 56-424-01      |  |  |
| <b>Tool bit</b>   |                    |                |  |  |
| <b>Standard HSS tool bit 9.5 x 9.5 mm (3/8" x 3/8").</b><br>For single point facing, beveling and flange facing.<br>For use with EP 424, LCSF/3, FF, SWR and SDSF machines. | <b>952 701 010</b> | 52-701-01      |  |  |

## Hydraulic Power Pack

Hydraulic Power Pack "SafeQuip", see page 55.

## Air Control Module

Air Control Module "ACM", see page 57.

## Cutting lubrication

Cutting lubrication "KSS-TOP", see page 32.

**По вопросам продаж и поддержки обращайтесь:**

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