

# equipment list

Heller\_Dynam\_Bed\_2L2C

| device tag  | number | denomination              | Type                                 | Manufacturer           | Heller no. | device tag  | number | denomination              | Type                           | Manufacturer           | Heller no. |
|-------------|--------|---------------------------|--------------------------------------|------------------------|------------|-------------|--------|---------------------------|--------------------------------|------------------------|------------|
| +H1-100.1   | 1      | start-up valve            | MS9-EM-G-VS<br>562178                | Festo                  | 01.107653  | +H1-102.2   | 1      | superfine air filter      | MS4-LFM-1/4-AUV<br>535768      | Festo                  | 01.106321  |
| +H1-100.2   | 1      | silencer                  | U-1 B<br>151990                      | Festo                  | 01.107197  | +H1-102.2-1 | 1      | filter element            | MS4/D-MINI-LFM-A<br>162674     | Festo                  | 01.086419  |
| +H1-100.3   | 1      | filter pressure regulator | MS9-LFR-G-D6-CUV-DI-A4<br>562531     | Festo                  | 01.109059  | +M-102.3    | 1      | distributor block         | FR-4-1/8-B<br>6701             | Festo                  | 01.034751  |
| +H1-100.3-1 | 1      | filter element            | MS9-LFP-C<br>570309                  | Festo                  | 01.107824  |             | 1      | pressure regulator valve  | MS4-LR-1/4-D5-A4<br>527690     | Festo                  | 01.106323  |
| +H1-100.4   | 1      | pressure gauge            | MA-50-10-1/4<br>359873               | Festo                  | 01.092062  | +H1-102.4   | 1      | pressure gauge            | MA-50-2,5-1/4-EN<br>162837     | Festo                  | 01.105605  |
| +H1-100.5   | 1      | porting block             | MS9-FRM-G-VS<br>564145               | Festo                  | 01.107195  | +H1-102.5   | 1      | activated carbon filter   | MS4-LFX-1/4-R<br>529467        | Festo                  | 01.109998  |
| +H1-100.6   | 1      | start-up valve            | MS9-EE-G-V24P-VS<br>562177           | Festo                  | 01.107655  | +H1-102.5-1 | 1      | filter element            | MS4/D-MINI-LFX<br>532912       | Festo                  | 01.106336  |
| +H1-100.7   | 1      | silencer                  | U-1 B<br>151990                      | Festo                  | 01.107197  | +H1-102.7   | 1      | plate                     | Filterelement Festo<br>en      | Heller Maschinenfabrik | 10.500964  |
| +H1-100.9   | 1      | plate                     | Filterelement<br>en                  | Heller Maschinenfabrik | 10.500975  | +H1-102.8   | 1      | plate                     | Filterelement Festo<br>en      | Heller Maschinenfabrik | 10.500965  |
| +H1-100.10  | 1      | manifold                  | MS9-AGF<br>552956                    | Festo                  | 01.107189  | +H1-102.9   | 1      | plate                     | Filterelement Festo<br>en      | Heller Maschinenfabrik | 10.500966  |
| +H1-100.11  | 1      | fastening angle           | MS9-WP<br>552947                     | Festo                  | 01.107190  | +H1-102.10  | 1      | fastening angle           | MS4-WP<br>532184               | Festo                  | 01.106320  |
| +H1-100.12  | 1      | fastening angle           | MS9-WP<br>552947                     | Festo                  | 01.107190  | +H1-102.11  | 1      | fastening angle           | MS4-WP<br>532184               | Festo                  | 01.106320  |
| +H1-100.30  | 1      | distributor block         | FR-8-1/4<br>2078                     | Festo                  | 01.035408  | +M-102.12   | 1      | plastic pipe              | PUN-6x1-BL<br>159664           | Festo                  | 01.092357  |
| +H1-100.31  | 1      | hose line                 | S100-CR-CR-0140<br>DN2 1400mm 250bar | Hydrotechnik           | 01.098903  | +M-102.13   | 1      | connecting piece          | 226-270-02                     | Heidenhain             | 01.064398  |
| +H1-100.32  | 1      | pressure switch           | PN7094<br>-1-10bar, G1/4             | IFM Electronic         | 01.111724  | +MC-102.14  | 1      | connecting piece          | 226-270-02                     | Heidenhain             | 01.064398  |
| +H1-100.33  | 1      | Condensate separator      |                                      | Heller Maschinenfabrik | 00.789878  | +M-102.15   | 1      | connecting piece          | 226-270-02                     | Heidenhain             | 01.064398  |
| +H1-100.34  | 1      | ball valve                | QH-1/4<br>9541                       | Festo                  | 01.101540  | +H1-103.1   | 1      | porting block             | MS6-FRM-1/2<br>529853          | Festo                  | 01.104403  |
| +H1-100.35  | 1      | silencer                  | AMTE-M-LH-G1<br>1205865              | Festo                  | 01.112166  | +H1-103.2   | 1      | pressure regulator valve  | MS6-LRPB-1/2-D2-A8<br>535007   | Festo                  | 01.109947  |
| +H1-100.36  | 1      | shut-off valve            | HE-G1-LO<br>197136                   | Festo                  | 01.093956  | +H1-103.3   | 1      | pressure gauge            | MAP-40-1-1/8-EN<br>161126      | Festo                  | 01.083257  |
| +H1-100.37  | 1      | flow control switch       | SD6001<br>0,25-75 Nm3/h M12x1 NPT    | IFM Electronic         | 01.112294  | +H1-103.10  | 1      | fastening angle           | MS6-WP<br>532195               | Festo                  | 01.106329  |
| +H2-100.40  | 1      | distributor block         | FR-4-1/2-B<br>6704                   | Festo                  | 01.035406  | +H1-103.11  | 1      | fastening angle           | MS6-WP<br>532195               | Festo                  | 01.106329  |
| +H1-101.1   | 1      | superfine air filter      | MS6-LFM-3/8-AUV<br>529673            | Festo                  | 01.107200  | +M-106.1    | 1      | connecting piece          | 226-270-02                     | Heidenhain             | 01.064398  |
| +H1-101.1-1 | 1      | filter element            | MS6-LFM-A<br>532909                  | Festo                  | 01.107201  | +H1-107.1   | 1      | pressure regulator valve  | MS4-LRB-1/4-D6-A8<br>527692    | Festo                  | 01.109945  |
| +H1-101.10  | 1      | fastening angle           | MS6-WP<br>532195                     | Festo                  | 01.106329  | +H1-107.2   | 1      | pressure gauge            | MAP-40-1-1/8-EN<br>161126      | Festo                  | 01.083257  |
| +H1-101.11  | 1      | fastening angle           | MS6-WP<br>532195                     | Festo                  | 01.106329  | +H1-110.1   | 1      | subplate                  | NAV-1/4-1C-ISO<br>10173        | Festo                  | 01.065867  |
| +H1-101.13  | 1      | plate                     | Filterelement Festo<br>en            | Heller Maschinenfabrik | 10.500967  | +H1-110.2   | 1      | directional control valve | MDH-5/3E-D-1-M12-C<br>197126   | Festo                  | 01.095685  |
| +H1-102.1   | 1      | compressed air filter     | MS4-LF-1/4-CRV<br>529397             | Festo                  | 01.109999  | +H1-111.1   | 1      | subplate                  | NAV-1/4-1C-ISO<br>10173        | Festo                  | 01.065867  |
| +H1-102.1-1 | 1      | filter element            | MS4-LFP-C<br>534501                  | Festo                  | 01.109899  | +H1-111.2   | 1      | directional control valve | MDH-5/2-D-1-M12-FR-C<br>533010 | Festo                  | 01.095684  |

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|---|--|---------------|-------------------|------------|-----------|-------------------------|------------|----------------------------|---------------------------|-----------------|----------------------|
| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO |  | Index         | ZONE/ZONA         | DATUM/DATE | NAME/NOME | PROJ./PROJ/<br>PROJ.    | 54793.00   | <b>HELLER</b>              | KUNDE/CUSTOMER/CLIENTE    | PLAN/PLAN/PLANO |                      |
| CAD-System  |  | URSPPR./ORIG. | GEPR./CHECK./REG. |            |           | M-NR/M-NO/<br>M-NO      | M54793     |                            | Paccar, Columbus USA      | project         | MP.05479300_F        |
| ePLAN 2.2.5                                       |  | ERS./REP.     | BEARB./CHG./ALT.  | 29.09.2016 | AHFE/ZAJ  | TYP/TYPE/<br>TIPO       | H 10000 PC | BENENNUNG/NAME/DENOMINAÇÃO | INV-NR/INV-NO/NO-INV      | Machine         | =M54793              |
|   |  | ERS.D./REP.W. | GEZ./DRAWN/DES.   | 29.09.2016 | AHFE/ZAJ  | WERKSTÜCK/<br>PART/PEÇA |            |                            | Device tag list pneumatic | Document type   | &P pneumatic diagram |
|   |  |               |                   |            |           |                         |            |                            | Mounting position         |                 |                      |
|   |  |               |                   |            |           |                         |            |                            | Page name                 | 0               |                      |

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 Schutzvermerk nach DIN 34, beachten!  
 Attention! Observe DIN 34  
 Atenção! Respeite DIN 34

# equipment list

Heller\_Dynam\_Bed\_2L2C

| device tag | number | denomination              | Type                           | Manufacturer | Heller no. | device tag  | number | denomination              | Type                           | Manufacturer | Heller no. |
|------------|--------|---------------------------|--------------------------------|--------------|------------|-------------|--------|---------------------------|--------------------------------|--------------|------------|
| +H1-112.1  | 1      | subplate                  | NAV-1/4-1C-ISO<br>10173        | Festo        | 01.065867  | +GMS-131.3  | 1      | directional control valve | 3/2, G1/8<br>0 820 402 002     | AVENTICS     | 01.076981  |
| +H1-113.1  | 1      | subplate                  | NAV-1/4-1C-ISO<br>10173        | Festo        | 01.065867  | +GMS-131.4  | 1      | silencer                  | U-1/8<br>2307                  | Festo        | 01.034261  |
| +H1-113.2  | 1      | directional control valve | JMDH-5/2-D-1-M12-C<br>532687   | Festo        | 01.095683  | +GMS-131.5  | 1      | plastic pipe              | PUN-8x1,25-BL<br>159666        | Festo        | 01.092358  |
| +MU-113.3  | 1      | plastic pipe              | PUN-10x1,5-BL<br>159668        | Festo        | 01.092359  | +GMS-131.6  | 1      | plastic pipe              | PUN-8x1,25-BL<br>159666        | Festo        | 01.092358  |
| +MU-113.4  | 1      | plastic pipe              | PUN-10x1,5-BL<br>159668        | Festo        | 01.092359  | +GMS-131.7  | 1      | plastic pipe              | PUN-8x1,25-BL<br>159666        | Festo        | 01.092358  |
| +MU-113.5  | 1      | throttle check valve      | GRLA-1/4-B<br>151172           | Festo        | 01.032677  | +GMS-131.8  | 1      | pneumatic cylinder        | D40xH10<br>0 822 010 551       | AVENTICS     | 01.092306  |
| +MU-113.6  | 1      | throttle check valve      | GRLA-1/4-B<br>151172           | Festo        | 01.032677  | +H1-132.1   | 1      | subplate                  | NAV-1/4-1C-ISO<br>10173        | Festo        | 01.065867  |
| +MU-113.10 | 1      | pneumatic cylinder        | DNC 50-50 PPV<br>163366        | Festo        | 01.099235  | +H1-132.2   | 1      | cover plate               | NDV-1-ISO<br>9489              | Festo        | 01.083700  |
| +H1-115.1  | 1      | end plate                 | NEV-1DA/DB-ISO<br>320839       | Festo        | 01.110979  | +H1-135.1   | 1      | subplate                  | NAV-1/4-1C-ISO<br>10173        | Festo        | 01.065867  |
| +H1-115.2  | 1      | end plate                 | NEV-3DA/DB-ISO<br>320840       | Festo        | 01.110981  | +H1-135.2   | 1      | cover plate               | NDV-1-ISO<br>9489              | Festo        | 01.083700  |
| +H1-115.4  | 1      | subplate                  | NAV-1/4-1C-ISO<br>10173        | Festo        | 01.065867  | +H2-140.1   | 1      | manifold                  | NAS-1/4-1A-ISO<br>9484         | Festo        | 01.064355  |
| +H1-115.5  | 1      | directional control valve | MDH-5/2-D-1-M12-FR-C<br>533010 | Festo        | 01.095684  | +H2-140.2   | 1      | directional control valve | JMDH-5/2-D-1-M12-C<br>532687   | Festo        | 01.095683  |
| +H1-115.7  | 1      | connecting set            | MS4-6-AMV<br>543489            | Festo        | 01.109948  | +H2-140.3   | 1      | throttle check valve      | GRLZ-1/4-B<br>151195           | Festo        | 01.107336  |
| +H1-115.8  | 1      | pressure regulator valve  | MS4-LRB-1/4-D6-A8<br>527692    | Festo        | 01.109945  | +H2-140.4   | 1      | throttle check valve      | GRLZ-1/4-B<br>151195           | Festo        | 01.107336  |
| +H1-115.9  | 1      | pressure gauge            | MA-40-10-1/8-EN<br>162835      | Festo        | 01.109949  | +H2-140.5   | 1      | silencer                  | AMTE-M-LH-G14<br>1205861       | Festo        | 01.112271  |
| +H1-115.10 | 1      | plug                      | NSC-1/4-1-ISO<br>11550         | Festo        | 01.108866  | +H2-140.6   | 1      | silencer                  | AMTE-M-LH-G14<br>1205861       | Festo        | 01.112271  |
| +H1-115.13 | 1      | intermediate plate        | ISO3-1<br>3815065              | Festo        | 01.110980  | +H2-141.1   | 1      | manifold                  | NAS-1/4-1A-ISO<br>9484         | Festo        | 01.064355  |
| +H1-115.14 | 1      | silencer                  | AMTE-M-LH-G38<br>1205862       | Festo        | 01.112270  | +H2-141.2   | 1      | silencer                  | AMTE-M-LH-G14<br>1205861       | Festo        | 01.112271  |
| +H1-115.15 | 1      | silencer                  | AMTE-M-LH-G38<br>1205862       | Festo        | 01.112270  | +H2-141.3   | 1      | silencer                  | AMTE-M-LH-G14<br>1205861       | Festo        | 01.112271  |
| +H1-116.1  | 1      | subplate                  | NAV-1/4-1C-ISO<br>10173        | Festo        | 01.065867  | +H2-141.5   | 1      | directional control valve | MDH-5/2-D-1-M12-FR-C<br>533010 | Festo        | 01.095684  |
| +H1-116.2  | 1      | cover plate               | NDV-1-ISO<br>9489              | Festo        | 01.083700  | +GLS-141.6  | 1      | plastic pipe              | PUN-8x1,25-BL<br>159666        | Festo        | 01.092358  |
| +H1-117.1  | 1      | subplate                  | NAV-1/4-1C-ISO<br>10173        | Festo        | 01.065867  | +GLS-141.7  | 1      | directional control valve | F-5-1/4-B<br>8992              | Festo        | 01.087927  |
| +H1-117.2  | 1      | cover plate               | NDV-1-ISO<br>9489              | Festo        | 01.083700  |             | 1      | safety hood               | FH<br>4500                     | Festo        | 01.087928  |
| +H1-121.1  | 1      | subplate                  | NAV-1/4-1C-ISO<br>10173        | Festo        | 01.065867  | +GLS-141.9  | 1      | plastic pipe              | PUN-8x1,25-BL<br>159666        | Festo        | 01.092358  |
| +H1-121.2  | 1      | directional control valve | MDH-5/2-D-1-M12-FR-C<br>533010 | Festo        | 01.095684  | +GLS-141.10 | 1      | plastic pipe              | PUN-8x1,25-BL<br>159666        | Festo        | 01.092358  |
| +H1-122.2  | 1      | cover plate               | NDV-1-ISO<br>9489              | Festo        | 01.083700  | +H1-161.1   | 1      | subplate                  | NAV-1/2-3C-ISO<br>10175        | Festo        | 01.082248  |
| +GMS-131.1 | 1      | directional control valve | F-5-1/4-B<br>8992              | Festo        | 01.087927  | +H1-161.2   | 1      | directional control valve | MDH-5/3E-D-3-M12-C<br>533017   | Festo        | 01.097873  |
|            | 1      | safety hood               | FH<br>4500                     | Festo        | 01.087928  | +APC-161.10 | 1      | rotary distributor        |                                |              |            |

Änderungen nur im CAD-Original!  
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 Attention! Observe DIN 34  
 Atenção! Respeite DIN 34

|   |  |  |   |   |                                   |   |  |  |   |           |
|---|--|--|---|---|-----------------------------------|---|--|--|---|-----------|
| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO<br>CAD-System<br><b>ePLAN 2.2.5</b> |  | URSPR./ORIG.<br>ERS./REP.<br>ERS.D./REP.W. | Index<br>GEPR./CHECK./REG.<br>BEARB./CHG./ALT.<br>GEZ./DRAWN/DES. | ZONE/ZONA<br>DATUM/DATE<br>29.09.2016<br>29.09.2016 | NAME/NOME<br>AHFE/ZAJ<br>AHFE/ZAJ | PROJ./PROJ./PROJ.<br>54793.00<br>M-NR/M-NO/<br>M-NO<br>M54793<br>TYP/TYPE/<br>TIPO<br>H 10000 PC<br>WERKSTÜCK/<br>PART/PEÇA | <div style="text-align: center; font-weight: bold; font-size: 1.2em;">HELLER</div> BENENNUNG/NAME/DENOMINAÇÃO<br>Device tag list pneumatic | KUNDE/CUSTOMER/CLIENTE<br>Paccar, Columbus USA<br>INV-NR/INV-NO/NO-INV | PLAN/PLAN/PLANO<br>project<br>Machine<br>Document type<br>Mounting position<br>Page name<br>MP.05479300_F<br>=M54793<br>&P pneumatic diagram<br>0.a | 0.b<br>A3 |
|---|--|--|---|---|-----------------------------------|---|--|--|---|-----------|

# equipment list

Heller\_Dynam\_Bed\_2L2C

| device tag    | number | denomination              | Type                             | Manufacturer   | Heller no. |
|---------------|--------|---------------------------|----------------------------------|----------------|------------|
| +H2-170.1     | 1      | input module              | 19 504 230                       | Norgren        | 01.095501  |
| +H2-170.1-1   | 1      | pressure regulator valve  | 19 24 001                        | Norgren        | 01.095502  |
| +H2-170.1-2   | 1      | pressure gauge            | 01 00 930                        | Norgren        | 01.095503  |
| +H2-170.2     | 1      | directional control valve | MDH-5/3E-D-1-M12-C<br>197126     | Festo          | 01.095685  |
| +H2-170.3     | 1      | function module           | 19 50 429                        | Norgren        | 01.095505  |
| +H2-170.6     | 1      | adapter                   | 19 50 447                        | Norgren        | 01.095500  |
| +H2-170.7     | 1      | pressure switch           | PN5004<br>0-10bar, G1/4          | IFM Electronic | 01.097702  |
| +ATC-181.1    | 1      | manifold                  | AXT512-1A-B04F - ISO5599-1 Gr. 2 | SMC            | 01.111800  |
| +ATC-181.2    | 1      | directional control valve | EVS7-8-FJG-D-3CVO-Q<br>ISO2      | SMC            | 01.102540  |
| +ATC-181.2-1  | 1      | connector adapter         | 7000-41301-0000000-M12           | SMC            | 01.102531  |
| +ATC-181.2-2  | 1      | connector adapter         | 7000-41301-0000000-M12           | SMC            | 01.102531  |
| +ATC-181.3    | 1      | end plate                 | AXT512-LA-04F - ISO5599-1 Gr. 2  | SMC            | 01.111802  |
| +ATC-181.4    | 1      | silencer                  | AN400-04<br>G1/2                 | SMC            | 01.103674  |
| +ATC-181.5    | 1      | throttle check valve      | ASP63F-04-12S                    | SMC            | 01.102541  |
| +ATC-181.6    | 1      | pneumatic cylinder        | RHCL40-880-DCL018HL              | SMC            | 01.102879  |
| +ATC-181.7    | 1      | silencer                  | AN400-04<br>G1/2                 | SMC            | 01.103674  |
| +ATC-181.11   | 1      | manifold                  | AXT512-1A-B04F - ISO5599-1 Gr. 2 | SMC            | 01.111800  |
| +ATC-181.12   | 1      | directional control valve | EVS7-8-FG-S-3CVO-Q<br>ISO2       | SMC            | 01.110658  |
| +ATC-181.12-1 | 1      | connector adapter         | 7000-41301-0000000-M12           | SMC            | 01.102531  |
| +ATC-181.13   | 1      | end plate                 | AXT512-RA-04F - ISO5599-1 Gr. 2  | SMC            | 01.111801  |
| +ATC-181.14   | 1      | throttle check valve      | AS 3201 F-03-12S                 | SMC            | 01.110661  |
| +GOS-184.1    | 1      | directional control valve | F-3-1/4-B<br>8984                | Festo          | 01.102129  |
| +GOS-184.2    | 1      | silencer                  | U-1/4 B<br>6842                  | Festo          | 01.078584  |
| +GOS-184.4    | 1      | nozzle                    | D=1,2 - M5 K861                  | Solex          | 01.091653  |
| +GOS-184.5    | 1      | nozzle                    | D=1,2 - M5 K861                  | Solex          | 01.091653  |
| +H1-185.1     | 1      | subplate                  | NAV-1/4-1C-ISO<br>10173          | Festo          | 01.065867  |
| +H1-185.2     | 1      | directional control valve | MDH-5/3E-D-1-M12-C<br>197126     | Festo          | 01.095685  |
| +GMS-185.3    | 1      | throttle check valve      | GRLA-1/8-QS-8-RS-B<br>162966     | Festo          | 01.096680  |

| device tag | number | denomination               | Type  | Manufacturer | Heller no. |
|------------|--------|----------------------------|---|--------------|------------|
| +GMS-185.4 | 1      | throttle check valve       | GRLA-1/8-QS-8-RS-B<br>162966                  | Festo        | 01.096680  |
| +GMS-185.5 | 1      | pilot operated check valve | HGL-1/8<br>12938                              | Festo        | 01.077466  |
| +GMS-185.6 | 1      | pneumatic cylinder         | RHCL40-525-DCM1071M                           | SMC          | 01.102878  |
| +H1-185.7  | 1      | end plate                  | NEV-1DA/DB-ISO<br>10174                       | Festo        | 01.065868  |
| +H1-185.8  | 1      | silencer                   | AMTE-M-LH-G38<br>1205862                      | Festo        | 01.112270  |
| +H1-185.9  | 1      | silencer                   | AMTE-M-LH-G38<br>1205862                      | Festo        | 01.112270  |
| +H1-185.11 | 1      | subplate                   | NAV-1/4-1C-ISO<br>10173                       | Festo        | 01.065867  |
| +H1-185.12 | 1      | directional control valve  | MDH-5/2-D-1-M12-FR-C<br>533010                | Festo        | 01.095684  |
| +H1-185.13 | 1      | subplate                   | NAV-1/4-1C-ISO<br>10173                       | Festo        | 01.065867  |
| +H1-185.14 | 1      | cover plate                | NDV-1-ISO<br>9489                             | Festo        | 01.083700  |
| +GOS-186.1 | 1      | directional control valve  | 3/2, G1/4<br>0 820 400 002                    | AVENTICS     | 01.032165  |
| +GOS-186.2 | 1      | silencer                   | U-1/4 B<br>6842                               | Festo        | 01.078584  |
| +H1-187.1  | 1      | subplate                   | NAV-1/4-1C-ISO<br>10173                       | Festo        | 01.065867  |
| +H1-187.2  | 1      | directional control valve  | JMDH-5/2-D-1-M12-C<br>532687                  | Festo        | 01.095683  |
| +GMS-187.3 | 1      | throttle check valve       | GRLA-1/8-QS-8-RS-B<br>162966                  | Festo        | 01.096680  |
| +GMS-187.4 | 1      | throttle check valve       | GRLA-1/8-QS-8-RS-B<br>162966                  | Festo        | 01.096680  |
| +GMS-187.5 | 1      | pneumatic cylinder         | D32x40H<br>0 822 240 0/.                      | AVENTICS     | 01.098050  |
| +H1-187.6  | 1      | end plate                  | NEV-1DA/DB-ISO<br>10174                       | Festo        | 01.065868  |
| +H1-187.7  | 1      | silencer                   | AMTE-M-LH-G38<br>1205862                      | Festo        | 01.112270  |
| +H1-187.8  | 1      | silencer                   | AMTE-M-LH-G38<br>1205862                      | Festo        | 01.112270  |
| +GLS-190.1 | 1      | blowing valve              | LSP-1/4-D<br>35528                            | Festo        | 01.100460  |
| +GLS-190.2 | 1      | coiled hose                | HJP06 M005/2AF151<br>DN10 2xG1/4a L=5000 gelb | Stäubli      | 01.107894  |
| +GLS-190.3 | 1      | coupling                   | DN6, G1/4<br>LP-006-2-WR513-11-1              | Walther      | 01.089276  |
| +GLS-190.4 | 1      | coupling                   | DN6, G1/4A<br>LP-006-0-WR013-11-1             | Walther      | 01.094650  |

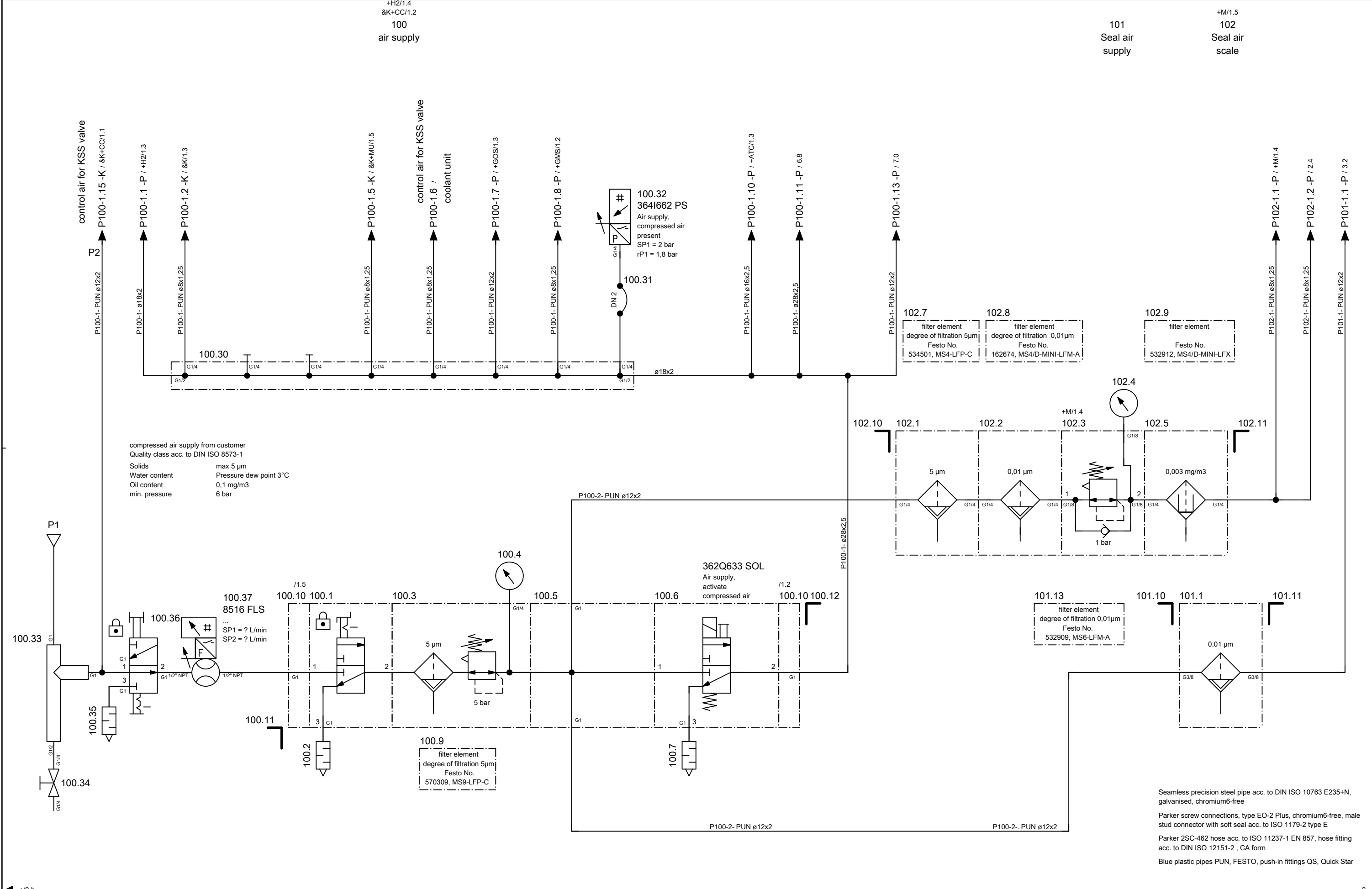
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|---|--|--|---|---|--|--|---|----|
| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO<br>CAD-System<br><b>ePLAN 2.2.5</b> |  | URSPR./ORIG.<br>ERS./REP.<br>ERS.D./REP.W. | INDEX<br>ZONE/ZONA<br>DATUM/DATE<br>NAME/NOME | PROJ./PROJ./PROJ.<br>54793.00<br>M-NR/M-NO/<br>M-NO<br>M54793<br>TYP/TYPE/<br>TIPO<br>H 10000 PC<br>WERKSTÜCK/<br>PART/PEÇA | <div style="text-align: center; font-weight: bold; font-size: 1.2em;">HELLER</div> KUNDE/CUSTOMER/CLIENTE<br>Paccar, Columbus USA<br>BENENNUNG/NAME/DENOMINAÇÃO<br>Device tag list pneumatic | PLAN/PLAN/PLANO<br>project<br>Machine<br>Document type<br>Mounting position<br>Page name | MP.05479300_F<br>=M54793<br>&P pneumatic diagram<br>0.b | A3 |
|---|--|--|---|---|--|--|---|----|

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| ePLAN 2.2.5                                       |  | ERS./REP.     | BEARB./CHG./ALT.  | 26.08.2016 | AHFE/ZAJ  | TYP/TYPE/<br>TIPO       | H 10000 PC | pneumatic diagram | Machine                | =M54793              |
|   |  | ERS.D./REP.W. | GEZ./DRAWN/DES.   | 09.09.2015 | AHFE/HOP  | WERKSTÜCK/<br>PART/PEÇA |            |                   | Document type          | &P pneumatic diagram |
|   |  |               |                   |            |           |                         |            |                   | Mounting position      | +H1 HELP1            |
|   |  |               |                   |            |           |                         |            |                   | Page name              | 1                    |
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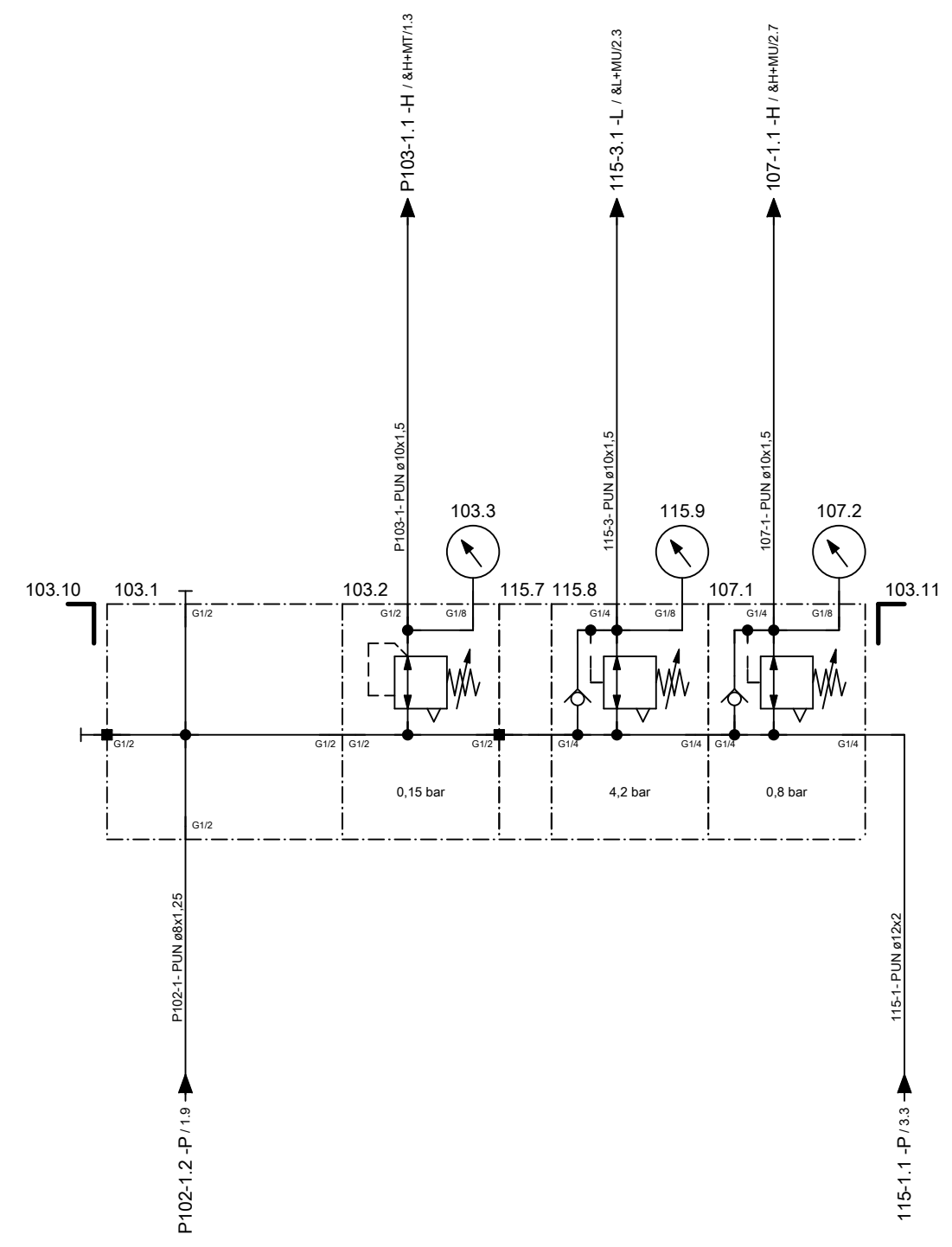
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119  
weight relief

103  
Seal air,  
B-axis

3.3  
115  
lubrication compressed air

107  
Seal air rotary distributor



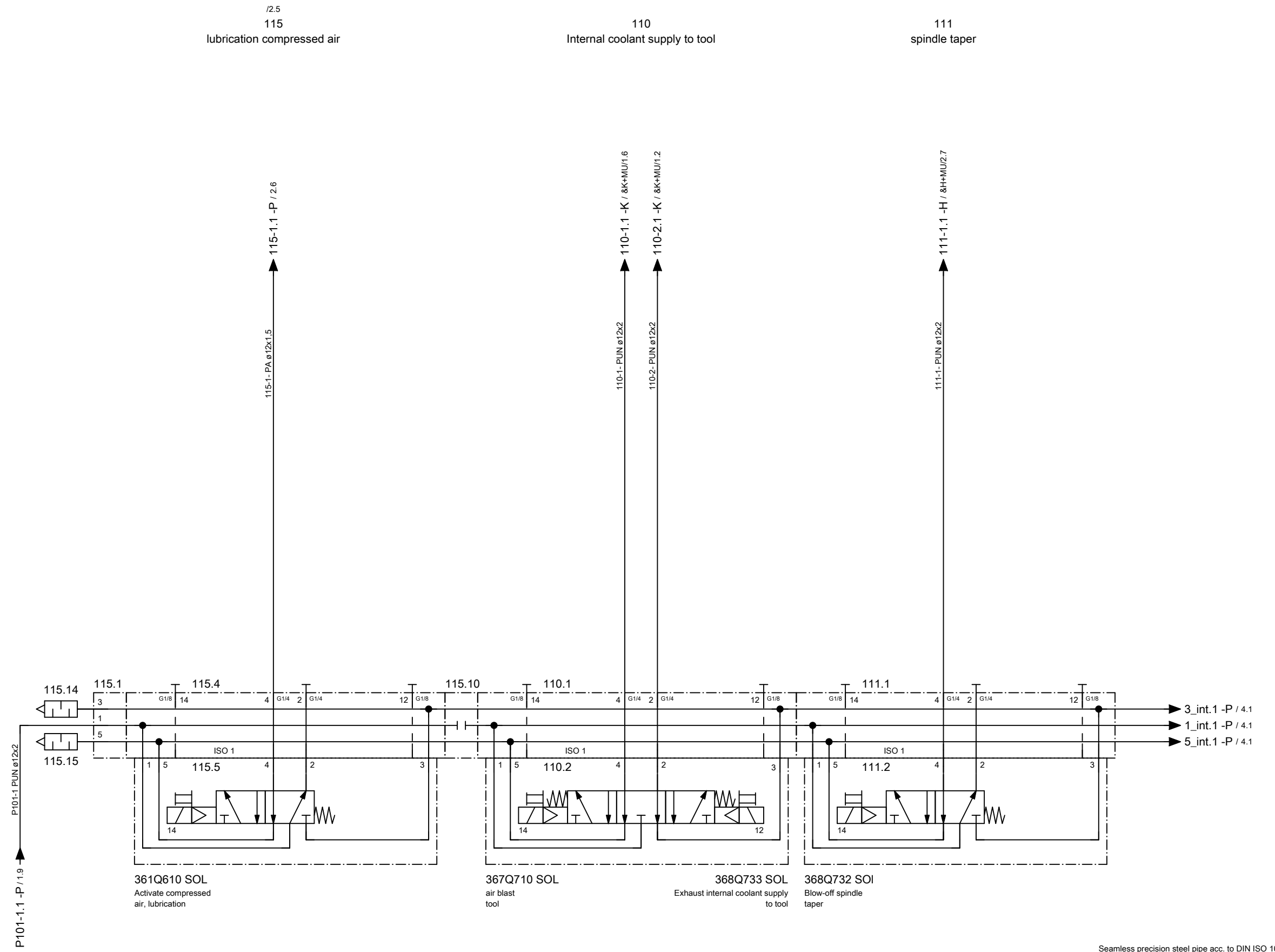
Seamless precision steel pipe acc. to DIN ISO 10763 E235+N, galvanised, chromium6-free  
Parker screw connections, type EO-2 Plus, chromium6-free, male stud connector with soft seal acc. to ISO 1179-2 type E  
Parker 2SC-462 hose acc. to ISO 11237-1 EN 857, hose fitting acc. to DIN ISO 12151-2, CA form  
Blue plastic pipes PUN, FESTO, push-in fittings QS, Quick Star

|  |                     |                          |                         |                   |                  |                   |                  |   |  |  |   |
|--|---------------------|--------------------------|-------------------------|-------------------|------------------|-------------------|------------------|---|--|--|---|
| <p>ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO</p> |                     |                          |                         | <p>Index</p>      | <p>ZONE/ZONA</p> | <p>DATUM/DATE</p> | <p>NAME/NOME</p> | <p>PROJ./PROJ./PROJ. 54793.00</p> <p>M-NR/M-NO/M-NO M54793</p> <p>TYP/TYPE/TIPO H 10000 PC</p> <p>WERKSTÜCK/PART/PEÇA</p> | <p><b>HELLER</b></p> <p>BENENNUNG/NAME/DENOMINAÇÃO<br/>pneumatic diagram</p> | <p>KUNDE/CUSTOMER/CLIENTE<br/>Paccar, Columbus USA</p> <p>INV-NR/INV-NO/NO-INV<br/>13.503596</p> | <p>PLAN/PLAN/PLANO<br/>project MP.05479300_F<br/>Machine =M54793<br/>Document type &amp;P pneumatic diagram<br/>Mounting position +H1 HELP1<br/>Page name 2</p> |
| <p>CAD-System<br/><b>ePLAN 2.2.5</b></p>                 | <p>URSPR./ORIG.</p> | <p>GEPR./CHECK./REG.</p> | <p>BEARB./CHG./ALT.</p> | <p>13.07.2016</p> | <p>AHFE/ZAJ</p>  | <p>09.09.2015</p> | <p>AHFE/HOP</p>  | <p>HELLER</p>   | <p>Paccar, Columbus USA</p>  | <p>MP.05479300_F</p>   | <p>2</p>  |

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Seamless precision steel pipe acc. to DIN ISO 10763 E235+N, galvanised, chromium6-free  
Parker screw connections, type EO-2 Plus, chromium6-free, male stud connector with soft seal acc. to ISO 1179-2 type E  
Parker 2SC-462 hose acc. to ISO 11237-1 EN 857, hose fitting acc. to DIN ISO 12151-2, CA form  
Blue plastic pipes PUN, FESTO, push-in fittings QS, Quick Star

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|---|--|--------------|-------------------|------------------|-----------|-------------------------|------------|--|------------------------|----------------------|---------------|
| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO |  | Index        | ZONE/ZONA         | DATUM/DATE       | NAME/NOME | PROJ./PROJ./PROJ.       | 54793.00   | <h1 style="text-align: center;">HELLER</h1> <p style="text-align: center;">pneumatic diagram</p> | KUNDE/CUSTOMER/CLIENTE | PLAN/PLAN/PLANO      |               |
| CAD-System  |  | URSPR./ORIG. | GEPR./CHECK./REG. | BEARB./CHG./ALT. | AHFE/ZAJ  | M-NR/M-NO/<br>M-NO      | M54793     |  | Paccar, Columbus USA   | project              | MP.05479300_F |
| ePLAN 2.2.5                                       |  | ERS./REP.    | GEZ./DRAWN/DES.   | 09.09.2015       | AHFE/HOP  | TYP/TYPE/<br>TIPO       | H 10000 PC |  | INV-NR/INV-NO/NO-INV   | Machine              | =M54793       |
| ERS.D./REP.W.                                     |  |              |                   |                  |           | WERKSTÜCK/<br>PART/PEÇA |            | 13.503939  | Document type          | &P pneumatic diagram |               |
|   |  |              |                   |                  |           |                         |            |  | Mounting position      | +H1 HELP1            |               |
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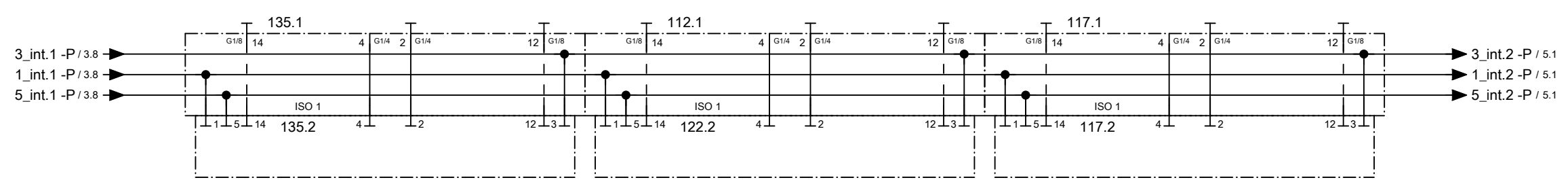
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135  
Air  
for tool cleaning

112  
Air for multi-spindle head

117  
Multi-spindle head location pad



Seamless precision steel pipe acc. to DIN ISO 10763 E235+N, galvanised, chromium6-free  
Parker screw connections, type EO-2 Plus, chromium6-free, male stud connector with soft seal acc. to ISO 1179-2 type E  
Parker 2SC-462 hose acc. to ISO 11237-1 EN 857, hose fitting acc. to DIN ISO 12151-2, CA form  
Blue plastic pipes PUN, FESTO, push-in fittings QS, Quick Star

← 3

5 →

|   |  |               |                   |            |           |                         |   |                        |                      |               |
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| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO |  | Index         | ZONE/ZONA         | DATUM/DATE | NAME/NOME | PROJ./PROJ/<br>PROJ.    | <p><b>HELLER</b></p> <p>BENENNUNG/NAME/DENOMINAÇÃO</p> <p>pneumatic diagram</p> | KUNDE/CUSTOMER/CLIENTE | PLAN/PLAN/PLANO      |               |
| CAD-System  |  | URSPPR./ORIG. | GEPR./CHECK./REG. |            |           | M-NR/M-NO/<br>M-NO      |   | Paccar, Columbus USA   | project              | MP.05479300_F |
| ePLAN 2.2.5                                       |  | ERS./REP.     | BEARB./CHG./ALT.  | 26.08.2016 | AHFE/ZAJ  | H 10000 PC              |   | INV-NR/INV-NO/NO-INV   | Machine              | =M54793       |
|   |  | ERS.D./REP.W. | GEZ./DRAWN/DES.   | 09.09.2015 | AHFE/HOP  | WERKSTÜCK/<br>PART/PEÇA | 13.503939, 3x 13.503944   | Document type          | &P pneumatic diagram |               |
|   |  |               |                   |            |           |                         |   | Mounting position      | +H1 HELP1            |               |
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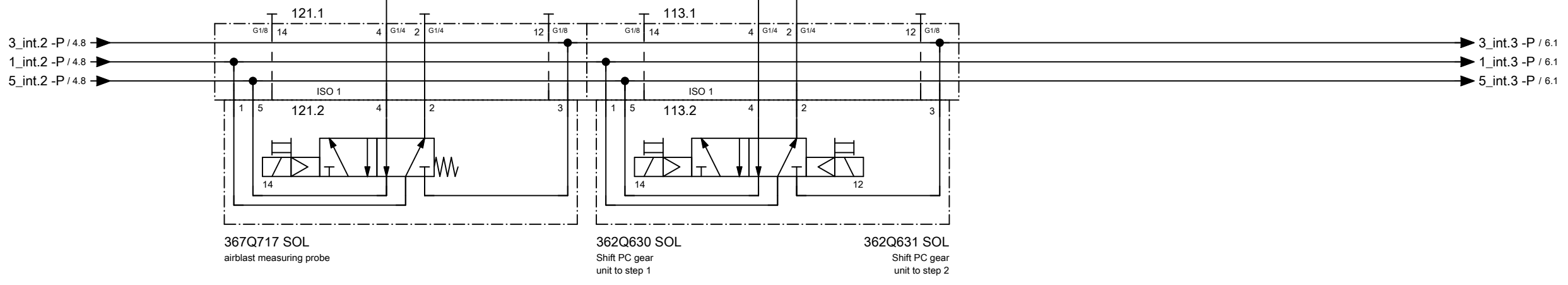
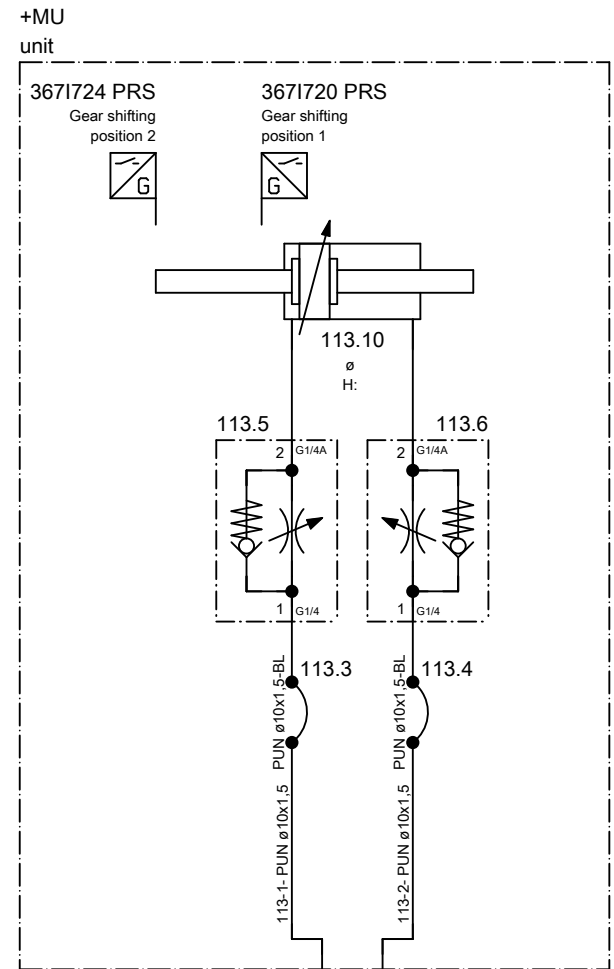
A3

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121  
airblast measuring probe

113  
gear shift



Seamless precision steel pipe acc. to DIN ISO 10763 E235+N, galvanised, chromium6-free  
Parker screw connections, type EO-2 Plus, chromium6-free, male stud connector with soft seal acc. to ISO 1179-2 type E  
Parker 2SC-462 hose acc. to ISO 11237-1 EN 857, hose fitting acc. to DIN ISO 12151-2, CA form  
Blue plastic pipes PUN, FESTO, push-in fittings QS, Quick Star

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|--|--|--|--|--|--|---|--|--|--|
| PROJ./PROJ./PROJ. 54793.00<br>M-NR./M-NO./M-NO. M54793<br>TYP./TYPE./TIPO H 10000 PC |  |  |  | <b>HELLER</b><br>BENENNUNG/NAME/DENOMINAÇÃO<br>pneumatic diagram |  | KUNDE/CUSTOMER/CLIENTE<br>Paccar, Columbus USA            |  | PLAN/PLAN/PLANO<br>project MP.05479300_F<br>Machine =M54793                      |  |
| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO<br>CAD-System ePLAN 2.2.5          |  |  |  |  |  | INV-NR./INV-NO./NO-INV<br>13.503939, 13.503063, 13.503064 |  | Document type &P pneumatic diagram<br>Mounting position +H1 HELP1<br>Page name 5 |  |
| URSPR./ORIG.<br>ERS./REP.<br>ERS.D./REP.W.   |  | GEPR./CHECK./REG.<br>BEARB./CHG./ALT.<br>GEZ./DRAWN/DES. |  | DATUM/DATE<br>26.08.2016<br>09.09.2015                           |  | NAME/NOME<br>AHFE/ZAJ<br>AHFE/HOP                         |  | Index ZONE/ZONA<br>Name/Parte  |  |

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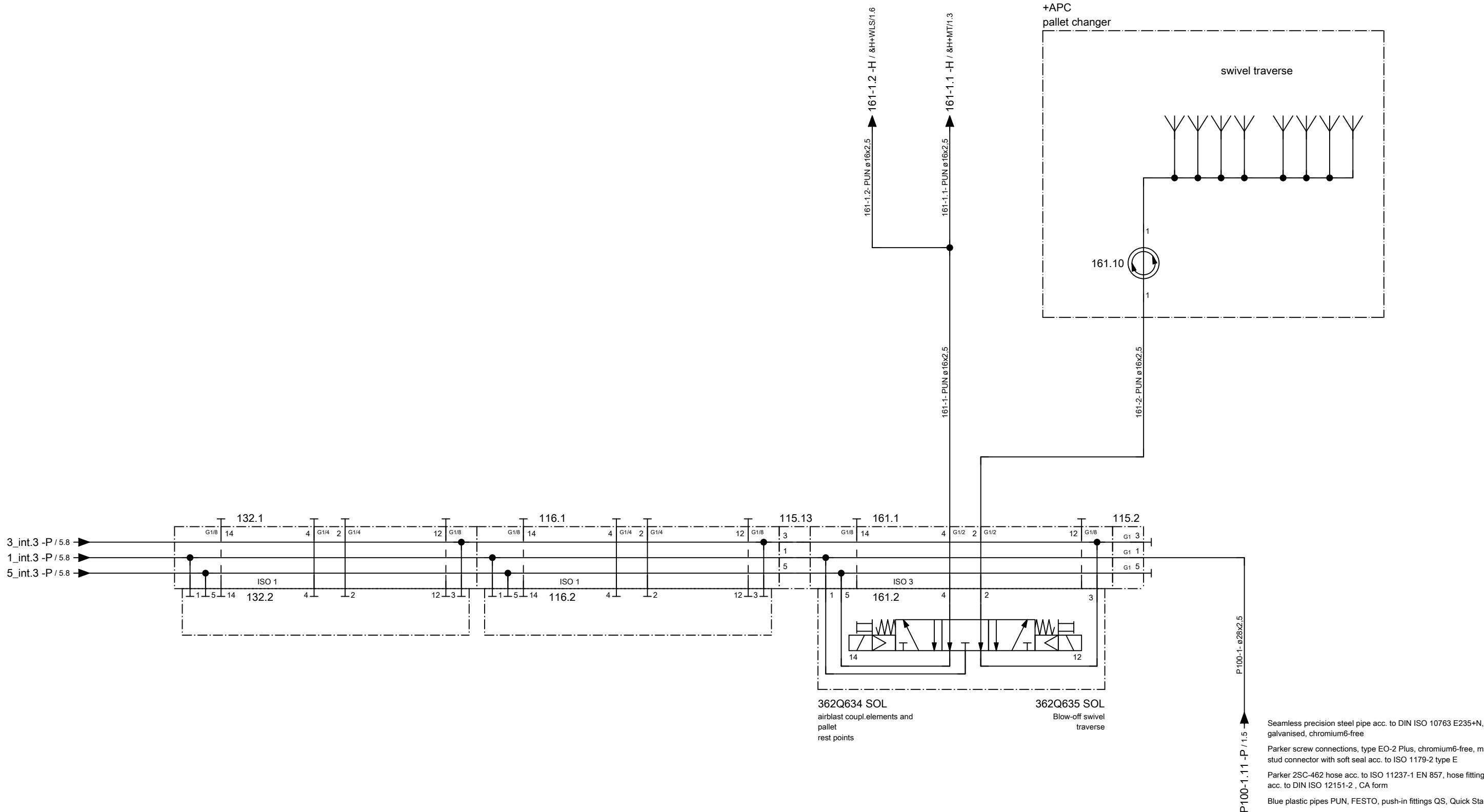
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132  
Tool in gripper

116  
Air  
for spindle nozzles

161  
Blow off work  
area



P100-1-ø28x2,5  
P100-1.11 -P / 1,5

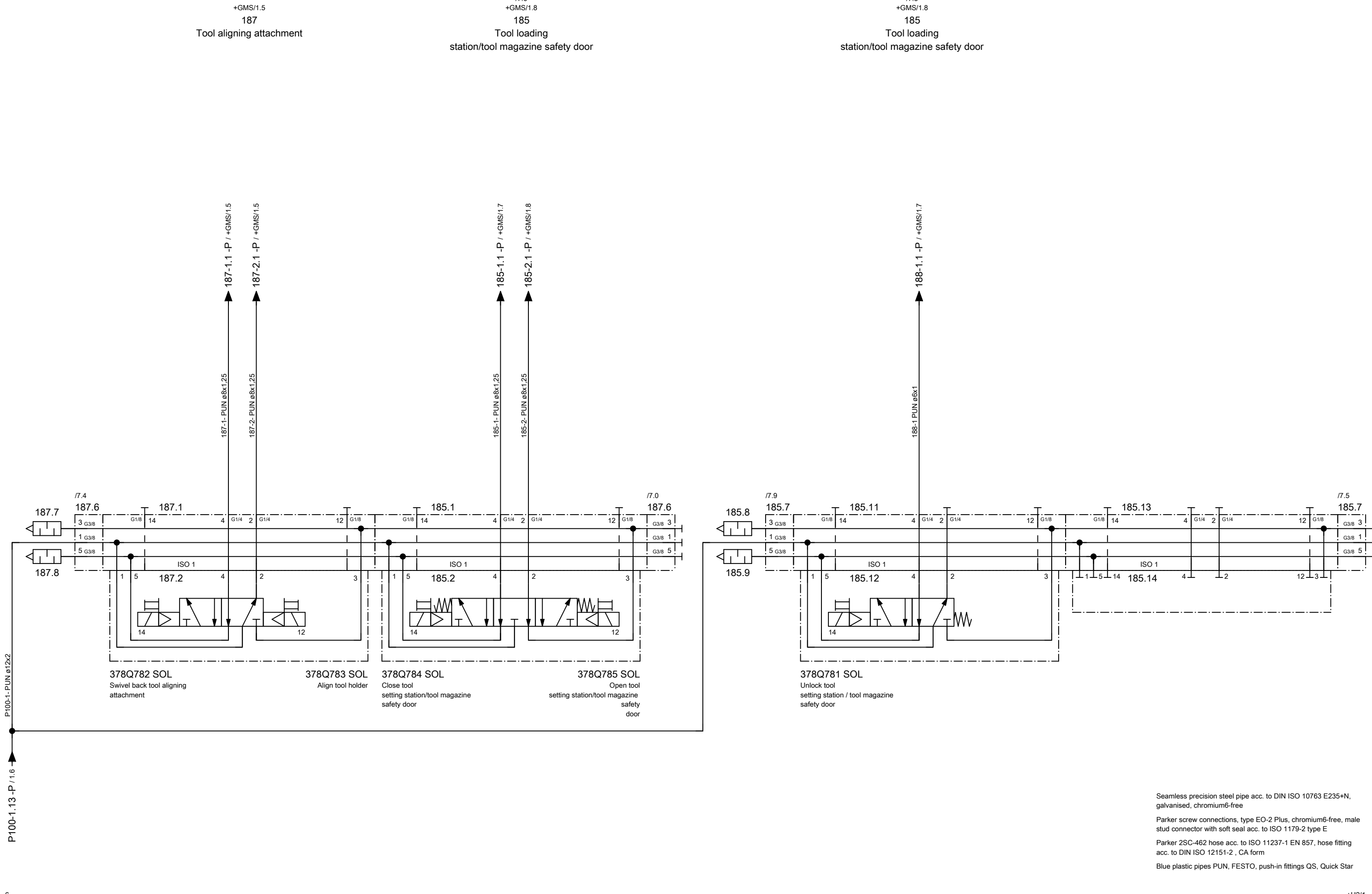
Seamless precision steel pipe acc. to DIN ISO 10763 E235+N, galvanised, chromium6-free  
Parker screw connections, type EO-2 Plus, chromium6-free, male stud connector with soft seal acc. to ISO 1179-2 type E  
Parker 2SC-462 hose acc. to ISO 11237-1 EN 857, hose fitting acc. to DIN ISO 12151-2, CA form  
Blue plastic pipes PUN, FESTO, push-in fittings QS, Quick Star

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|---|--|--|--|---------------|-------------------|------------|-----------|-------------------------|------------|-----------------------------------|------------------------|----------------------|---------------|
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| CAD-System  |  |  |  | URSPPR./ORIG. | GEPR./CHECK./REG. |            |           | M-NR/M-NO/<br>M-NO      | M54793     |                                   | Paccar, Columbus USA   | project              | MP.05479300_F |
| ePLAN 2.2.5                                       |  |  |  | ERS./REP.     | BEARB./CHG./ALT.  | 26.08.2016 | AHFE/ZAJ  | TYP/TYPE/<br>TIPO       | H 10000 PC |                                   | INV-NR/INV-NO/NO-INV   | Machine              | =M54793       |
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|   |  |  |  |               |                   |            |           |                         |            |                                   | Mounting position      | +H1 HELP1            |               |
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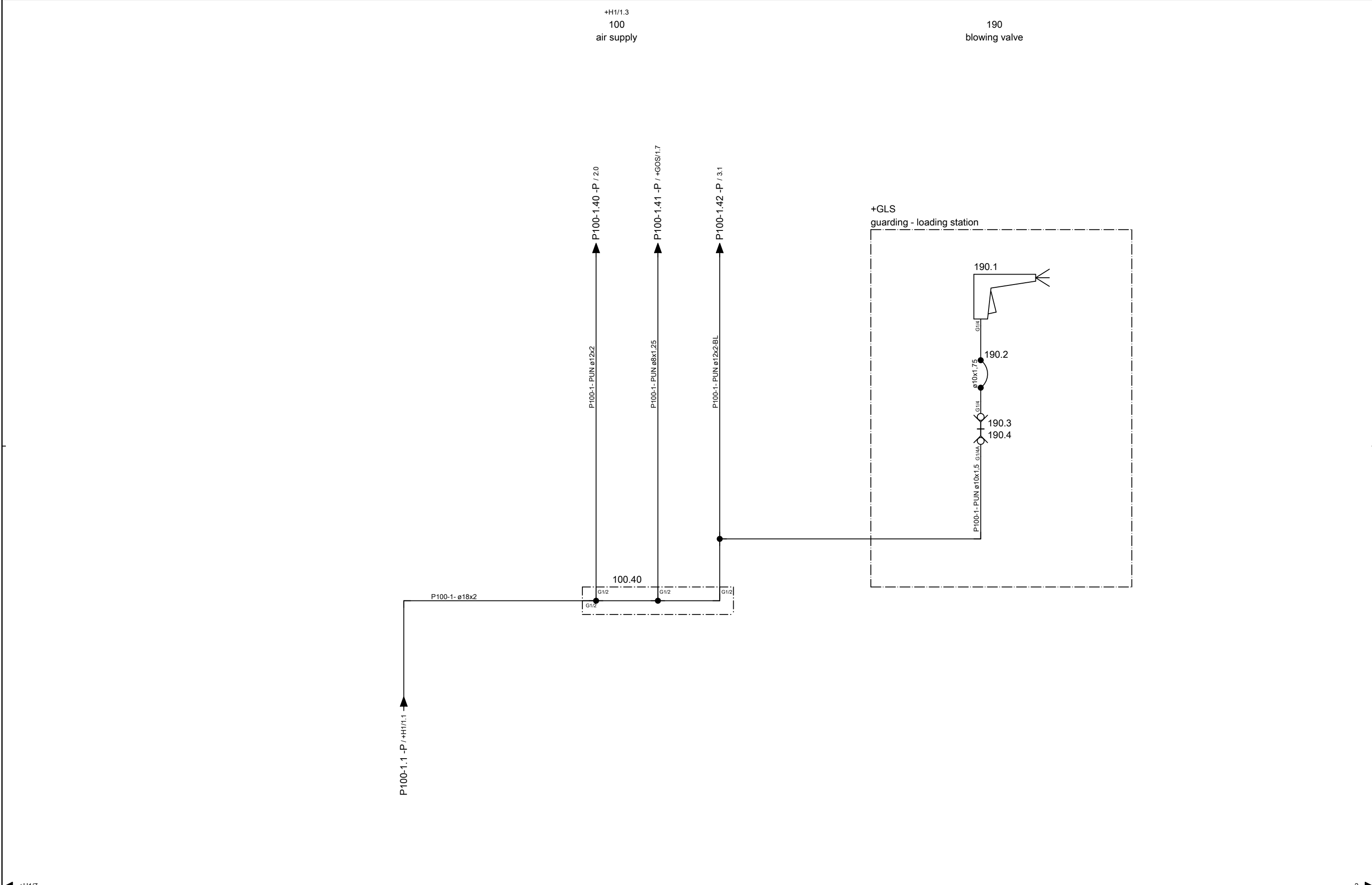


Seamless precision steel pipe acc. to DIN ISO 10763 E235+N, galvanised, chromium6-free  
Parker screw connections, type EO-2 Plus, chromium6-free, male stud connector with soft seal acc. to ISO 1179-2 type E  
Parker 2SC-462 hose acc. to ISO 11237-1 EN 857, hose fitting acc. to DIN ISO 12151-2, CA form  
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| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO |  | Index         | ZONE/ZONA         | DATUM/DATE | NAME/NOME | PROJ./PROJ/<br>PROJ. | 54793.00   | <h1 style="text-align: center;">HELLER</h1> <p style="text-align: center;">pneumatic diagram</p> | KUNDE/CUSTOMER/CLIENTE  | Paccar, Columbus USA | PLAN/PLAN/PLANO   | project | MP.05479300_F |                      |
| CAD-System  |  | URSPPR./ORIG. | GEPR./CHECK./REG. |            |           | M-NR/M-NO/<br>M-NO   | M54793     |  | INV-NR/INV-NO/NO-INV    | 13.503942,13.503943  | Machine           | =M54793 | Document type | &P pneumatic diagram |
| ePLAN 2.2.5                                       |  | ERS./REP.     | BEARB./CHG./ALT.  | 26.08.2016 | AHFE/ZAJ  | TYP/TYPE/<br>TIPO    | H 10000 PC |  | WERKSTÜCK/<br>PART/PEÇA |                      | Mounting position | +H1     | HELP1         | Page name            |
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| ← +H1/7   |  |               |                   | 2 →        |           |                        |            |
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| CAD-System  |  | URSPPR./ORIG. | GEPR./CHECK./REG. |            |           | M-NR/M-NO/ M-NO        | M54793     |
| ePLAN 2.2.5   |  | ERS./REP.     | BEARB./CHG./ALT.  | 26.08.2016 | AHFE/ZAJ  | TYP/TYPE/ TIPO         | H 10000 PC |
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| <p style="text-align: center;"><b>HELLER</b></p> <p style="text-align: center;">pneumatic diagram</p> |  |               |                   |            |           | KUNDE/CUSTOMER/CLIENTE |            |
|   |  |               |                   |            |           | Paccar, Columbus USA   |            |
|   |  |               |                   |            |           | PLAN/PLAN/PLANO        |            |
|   |  |               |                   |            |           | project                |            |
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|   |  |               |                   |            |           | &P pneumatic diagram   |            |
|   |  |               |                   |            |           | Mounting position      |            |
|   |  |               |                   |            |           | +H2 HELP2              |            |
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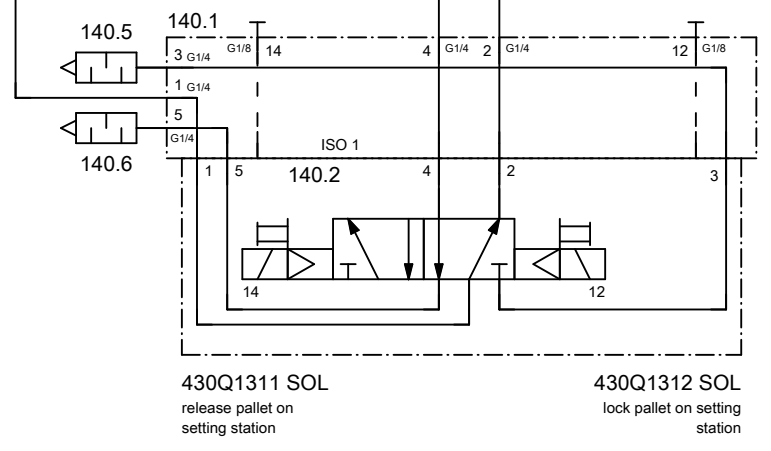
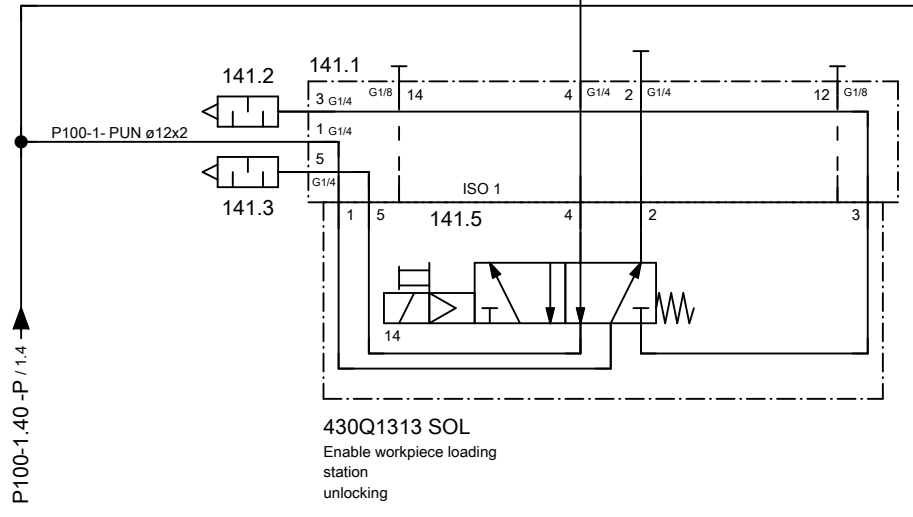
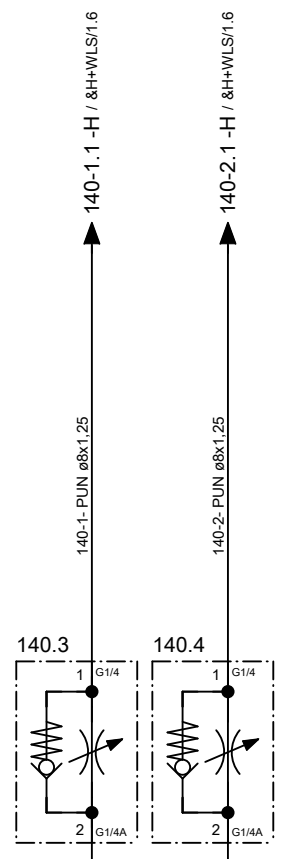
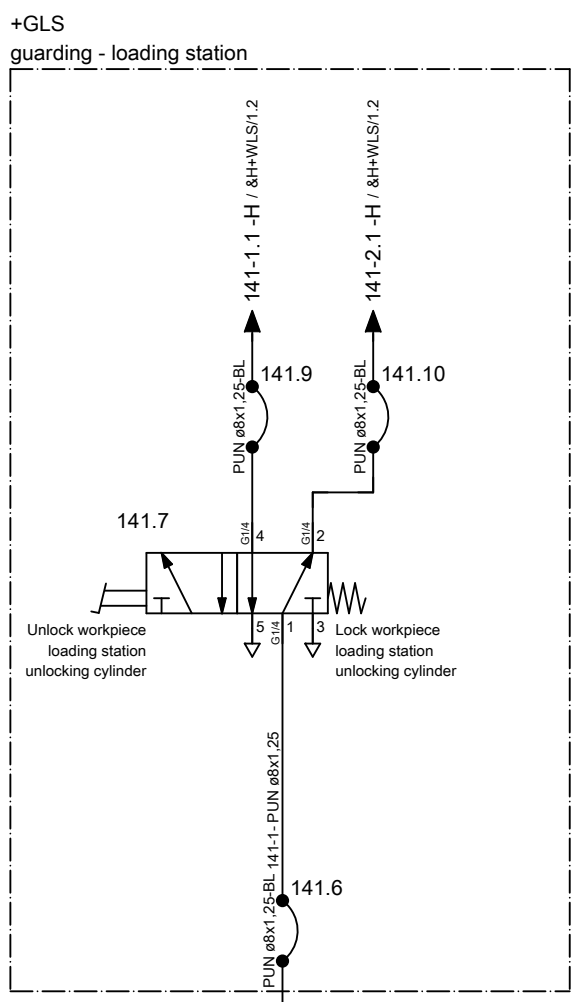
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Schutzvermerk nach DIN 34 beachten!  
Attention! Observe DIN 34  
Atenção! Atenção DIN 34

141  
Workpiece  
loading station unlocking cylinder

140  
Pallet at setting station

180  
Workpiece  
loading station safety door



← 1

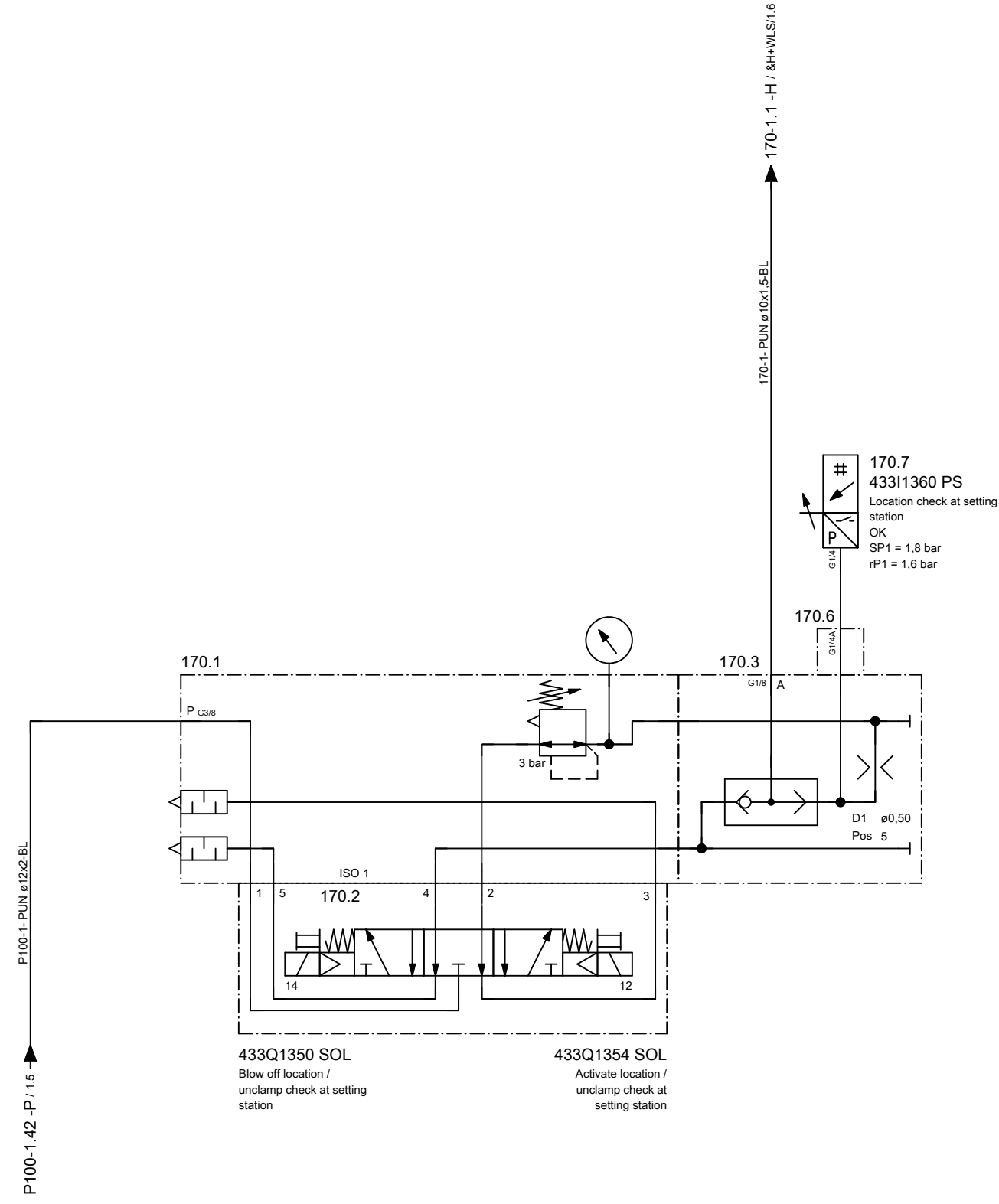
3 →

|   |  |               |                   |            |           |                                 |  |   |  |                    |
|---|--|---------------|-------------------|------------|-----------|---------------------------------|--|---|--|--------------------|
| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO |  | Index         | ZONE/ZONA         | DATUM/DATE | NAME/NOME | PROJ./PROJ./PROJ.<br>54793.00   |  | KUNDE/CUSTOMER/CLIENTE<br>Paccar, Columbus USA  | PLAN/PLAN/PLANO<br>project<br>MP.05479300_F  |                    |
| CAD-System<br>ePLAN 2.2.5                         |  | URSPPR./ORIG. | GEPR./CHECK./REG. |            |           | M-NR/M-NO/<br>M-NO<br>M54793    |  | BENENNUNG/NAME/DENOMINAÇÃO<br>pneumatic diagram | INV-NR/INV-NO/NO-INV<br>13.503940, 13.503941 | Machine<br>=M54793 |
|   |  | ERS./REP.     | BEARB./CHG./ALT.  | 26.08.2016 | AHFE/ZAJ  | TYP/TYPE/<br>TIPO<br>H 10000 PC |  |   | Document type<br>&P pneumatic diagram        |                    |
|   |  | ERS.D./REP.W. | GEZ./DRAWN/DES.   | 17.09.2015 | AHFE/HOP  | WERKSTÜCK/<br>PART/PEÇA         |  | Mounting position<br>+H2 HELP2                  | Page name<br>2                               |                    |

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Schutzvermerk nach DIN 34 beachten!  
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Atenção! Atenção DIN 34

170  
Location / unclamp check  
at setting station



| nozzle wheel | nozzle ø |
|--------------|----------|
| 0            | 0,00     |
| 1            | 0,30     |
| 2            | 0,35     |
| 3            | 0,40     |
| 4            | 0,45     |
| 5            | 0,50     |
| 6            | 0,55     |
| 7            | 0,60     |
| 8            | 0,70     |
| 9            | 0,80     |
| 10           | 1,00     |
| 11           | 1,20     |
| 12           | 1,50     |
| 13           | 1,70     |
| 14           | 2,00     |
| 15           | 2,50     |

**setting up the location check**  
Place the feeler gauge with a maximum tolerance (e.g. 0,03 mm) between workpiece and support.  
Attention: do not cover discharge nozzle!  
Turn nozzle wheel so many positions to the left (higher number = larger nozzle diameter) until a pressure of 1,8 bar (+ 0,2 bar) is set on the measuring connection.  
Insert feeler gauge above max permissible tolerance (e.g. 0,04 mm) The pressure on the measuring connection C must be clearly below 1,8 bar.

← 2

+M/1 →

|   |  |  |  |               |                   |            |           |                         |          |                   |                        |                 |               |
|---|--|--|--|---------------|-------------------|------------|-----------|-------------------------|----------|-------------------|------------------------|-----------------|---------------|
| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO |  |  |  | Index         | ZONE/ZONA         | DATUM/DATE | NAME/NOME | PROJ./PROJ./PROJ.       | 54793.00 | <b>HELLER</b>     | KUNDE/CUSTOMER/CLIENTE | PLAN/PLAN/PLANO |               |
| CAD-System  |  |  |  | URSPPR./ORIG. | GEPR./CHECK./REG. |            |           | M-NR./M-NO/<br>M-NO     | M54793   |                   | Paccar, Columbus USA   | project         | MP.05479300_F |
| ePLAN 2.2.5                                       |  |  |  | ERS./REP.     | BEARB./CHG./ALT.  | 26.08.2016 | AHFE/ZAJ  | TYP/TYPE/<br>TIPO       |          | pneumatic diagram | INV-NR./INV-NO/NO-INV  | Machine         | =M54793       |
|   |  |  |  | ERS.D./REP.W. | GEZ./DRAWN/DES.   | 26.08.2016 | AHFE/ZAJ  | WERKSTÜCK/<br>PART/PEÇA |          |                   | 13.503069              | Document type   | &P            |
|   |  |  |  |               |                   |            |           |                         |          |                   | Mounting position      | +H2             | HELP2         |
|   |  |  |  |               |                   |            |           |                         |          |                   | Page name              | 3               |               |

Heller\_2L

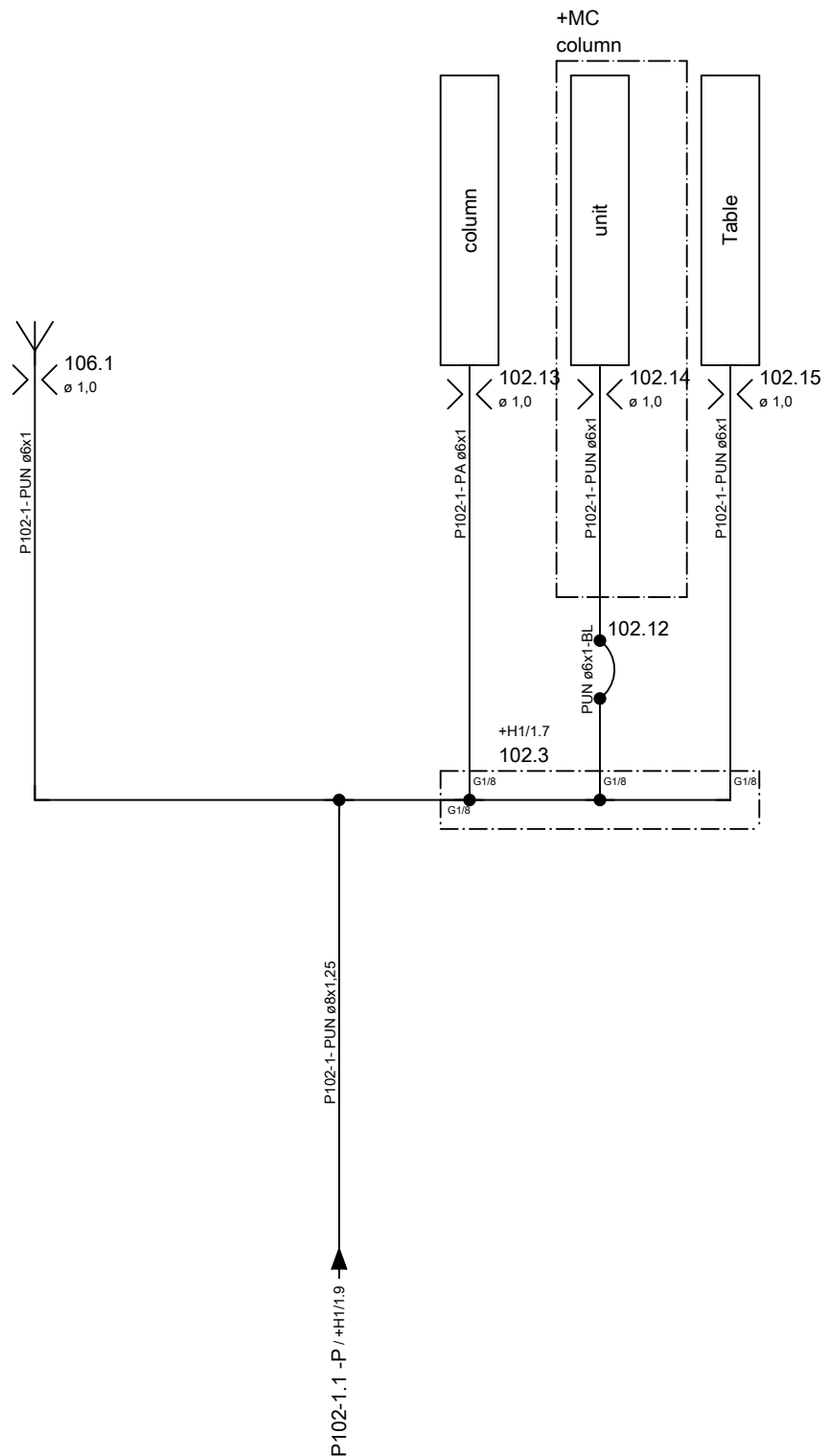
A3

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Atenção! Atente DIN 34

106  
seal air of tool break monitoring

+H1/1.8  
102  
Seal air  
scale



← +H2/3

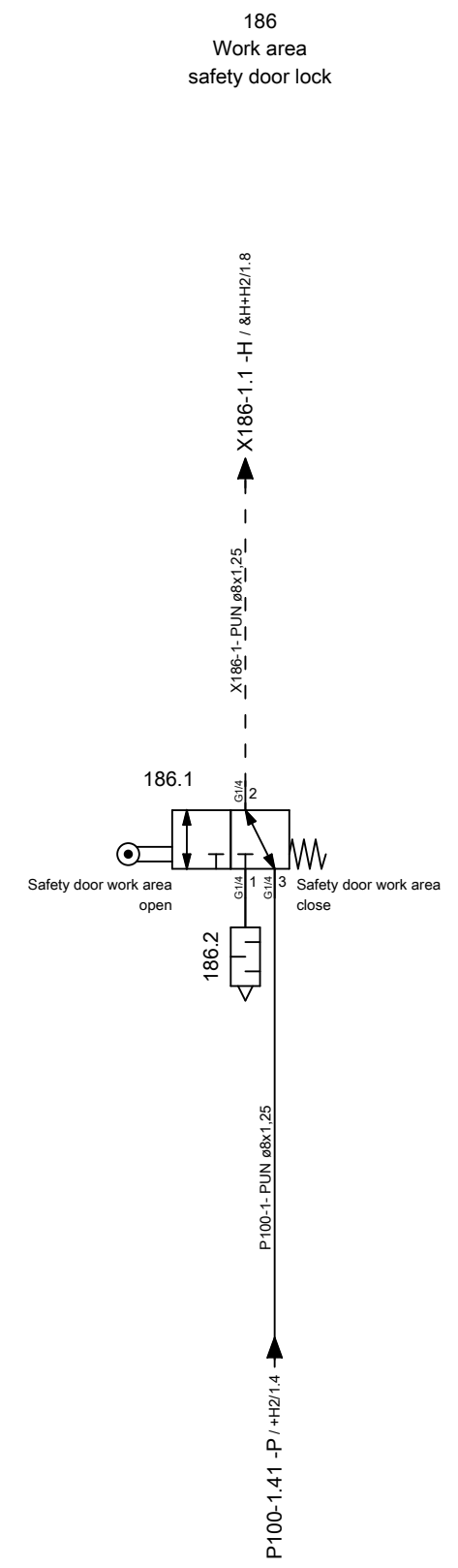
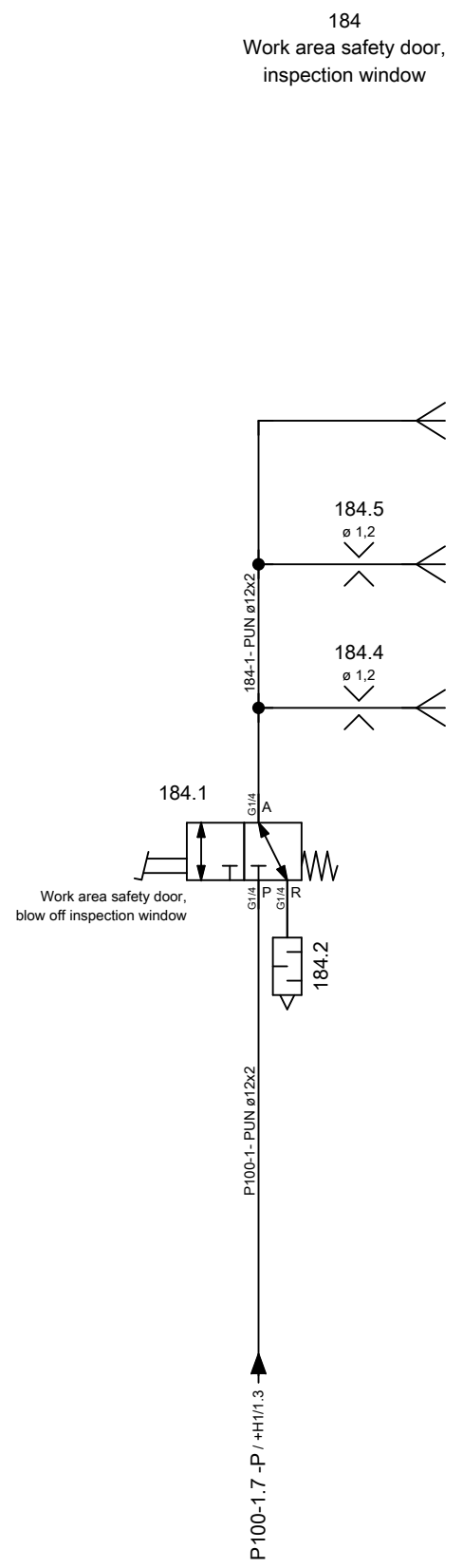
+GOS/1 →

|   |  |  |  |               |                   |            |           |                         |            |                   |                        |                 |               |                   |
|---|--|--|--|---------------|-------------------|------------|-----------|-------------------------|------------|-------------------|------------------------|-----------------|---------------|-------------------|
| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO |  |  |  | Index         | ZONE/ZONA         | DATUM/DATE | NAME/NOME | PROJ./PROJ.<br>PROJ.    | 54793.00   | <b>HELLER</b>     | KUNDE/CUSTOMER/CLIENTE | PLAN/PLAN/PLANO |               |                   |
| CAD-System  |  |  |  | URSPPR./ORIG. | GEPR./CHECK./REG. |            |           | M-NR/M-NO/<br>M-NO      | M54793     |                   | Paccar, Columbus USA   | project         | MP.05479300_F |                   |
| ePLAN 2.2.5                                       |  |  |  | ERS./REP.     | BEARB./CHG./ALT.  | 26.08.2016 | AHFE/ZAJ  | TYP/TYPE/<br>TIPO       | H 10000 PC | pneumatic diagram | INV-NR/INV-NO/NO-INV   | Machine         | =M54793       |                   |
|   |  |  |  | ERS.D./REP.W. | GEZ./DRAWN/DES.   | 09.09.2015 | AHFE/HOP  | WERKSTÜCK/<br>PART/PEÇA |            |                   |                        | Document type   | &P            | pneumatic diagram |
|   |  |  |  |               |                   |            |           |                         |            |                   | Mounting position      | +M              | machine       |                   |
|   |  |  |  |               |                   |            |           |                         |            |                   | Page name              | 1               |               | A3                |

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Atenção! Atenção DIN 34



← +M/1

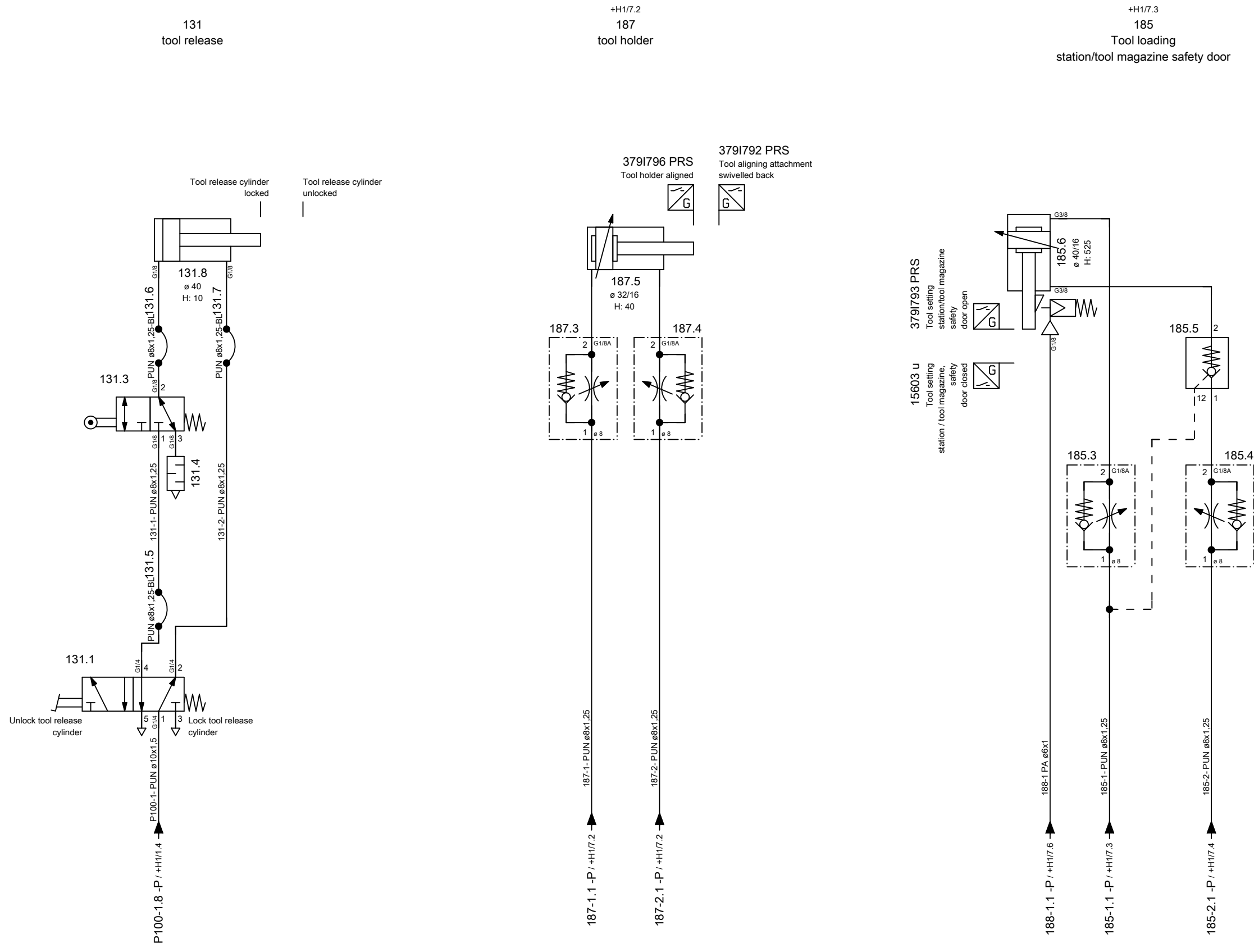
+GMS/1 →

|   |  |               |                   |                  |           |                         |            |                   |                        |                                |
|---|--|---------------|-------------------|------------------|-----------|-------------------------|------------|-------------------|------------------------|--------------------------------|
| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO |  | Index         | ZONE/ZONA         | DATUM/DATE       | NAME/NOME | PROJ./PROJ/<br>PROJ.    | 54793.00   | <b>HELLER</b>     | KUNDE/CUSTOMER/CLIENTE | PLAN/PLAN/PLANO                |
| CAD-System  |  | URSPR./ORIG.  | GEPR./CHECK./REG. | BEARB./CHG./ALT. | AHFE/ZAJ  | M-NR./M-NO/<br>M-NO     | M54793     |                   | Paccar, Columbus USA   | project                        |
| ePLAN 2.2.5                                       |  | ERS./REP.     | GEZ./DRAWN/DES.   | 09.09.2015       | AHFE/HOP  | TYP/TYPE/<br>TIPO       | H 10000 PC | pneumatic diagram | Machine                | =M54793                        |
|   |  | ERS.D./REP.W. |                   |                  |           | WERKSTÜCK/<br>PART/PEÇA |            |                   | INV-NR./INV-NO/NO-INV  | Document type                  |
|   |  |               |                   |                  |           |                         |            |                   | Mounting position      | +GOS guarding - operating side |
|   |  |               |                   |                  |           |                         |            |                   | Page name              | 1                              |
|   |  |               |                   |                  |           |                         |            |                   |                        | A3                             |

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← +GOS/1 +ATC/1 →

|   |  |  |  |                 |                   |            |           |                      |            |               |                        |                            |               |
|---|--|--|--|-----------------|-------------------|------------|-----------|----------------------|------------|---------------|------------------------|----------------------------|---------------|
| ART DER AENDERUNG/REVISION/DESCRIÇÃO DE ALTERAÇÃO |  |  |  | Index           | ZONE/ZONA         | DATUM/DATE | NAME/NOME | PROJ./PROJ/ PROJ.    | 54793.00   | <b>HELLER</b> | KUNDE/CUSTOMER/CLIENTE | PLAN/PLAN/PLANO            |               |
| CAD-System  |  |  |  | URSPPR./ORIG.   | GEPR./CHECK./REG. |            |           | M-NR/M-NO/ M-NO      | M54793     |               | Paccar, Columbus USA   | project                    | MP.05479300_F |
| ePLAN 2.2.5                                       |  |  |  | ERS./REP.       | BEARB./CHG./ALT.  | 26.08.2016 | AHFE/ZAJ  | TYP/TYPER/ TIPO      | H 10000 PC |               | INV-NR/INV-NO/NO-INV   | Machine                    | =M54793       |
| ERS.D./REP.W.                                     |  |  |  | GEZ./DRAWN/DES. |                   | 09.09.2015 | AHFE/HOP  | WERKSTÜCK/ PART/PEÇA |            |               | Document type          | &P pneumatic diagram       |               |
|   |  |  |  |                 |                   |            |           |                      |            |               | Mounting position      | +GMS guarding -            |               |
|   |  |  |  |                 |                   |            |           |                      |            |               | Page name              | 1 magazin/maintenance side |               |

Heller\_2L