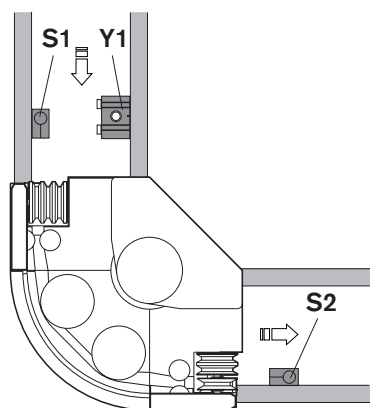


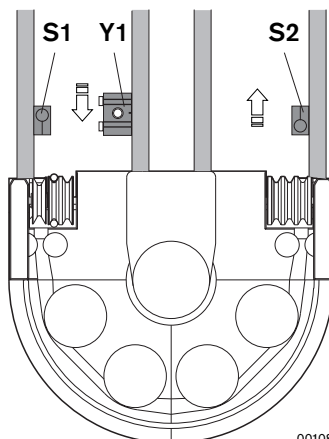
Funktionspläne  
Circuit diagrams  
Schémas de fonctionnement

**Kurve (Vereinzelung)**  
**Curve (separating)**  
**Courbe (séparation)**



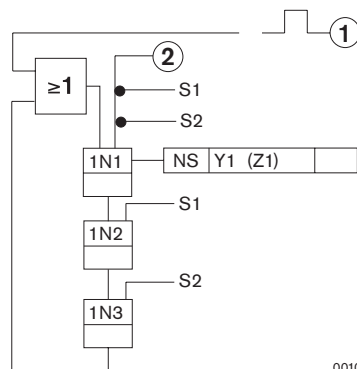
00108320

KE 1/90-O



00108321

KE 1/180-O



00108428

- WT = Werkstückträger
- VE = Vereinzeler
- ① = Startimpuls nach Anlaufende
- ② = Freigabe zyklischer Ablauf
- A1 = Freigabe Werkstück bearbeiten
- A2 = Quittieren Werkstück bearbeitet
- S1 = WT hat VE 1 (Z1) passiert
- S2 = Freigabe Kurve
- Y1 = VE 1 öffnen

- WT = Workpiece pallet
- VE = Stop gate
- ① = Start pulse after end of approach
- ② = Enable cyclical sequence
- A1 = Enable workpiece processing
- A2 = Acknowledge workpiece processed
- S1 = WT has passed VE 1 (Z1)
- S2 = Release curve
- Y1 = Open VE 1

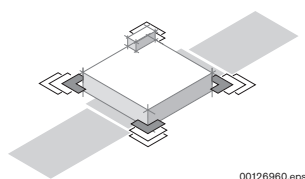
- WT = Palette porte-pièces
- VE = Séparateur
- ① = Impulsion de démarrage après la fin de l'approche
- ② = Autorisation opération cyclique
- A1 = Autorisation traitement de la pièce
- A2 = Confirmation traitement de la pièce
- S1 = Palette a passé VE 1 (Z1)
- S2 = Autorisation courbe
- Y1 = Ouvrir VE 1

Technische Daten · Technical data · Données techniques

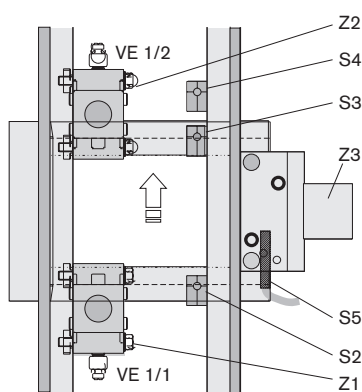
# Positionierung PE 1/P (Vereinzelung/Bearbeitung)

## Positioning (separating/processing)

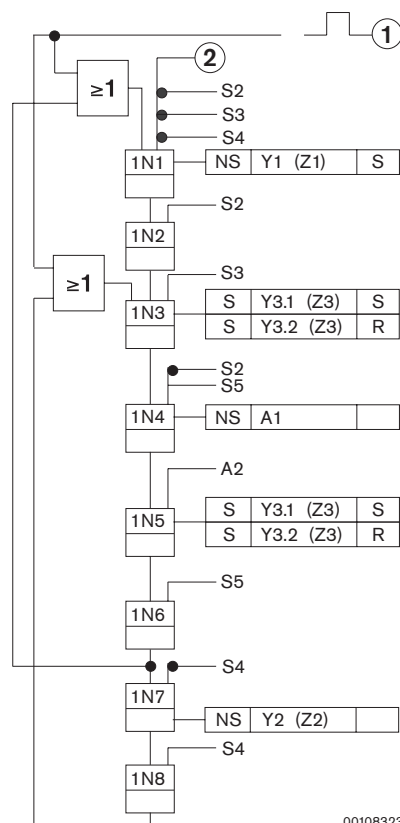
### Positionnement (séparation / traitement)



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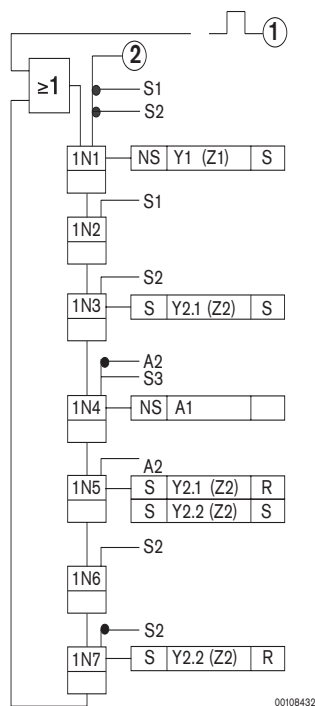
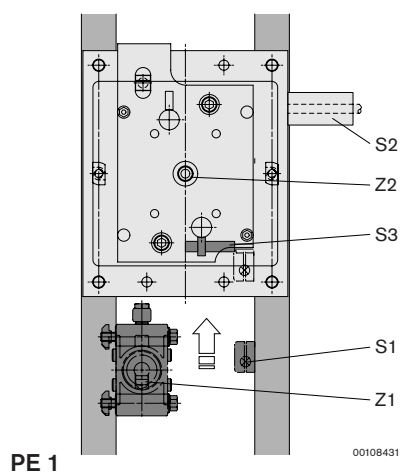
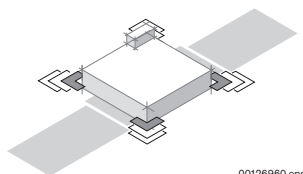
00108323

- WT = Werkstückträger
- VE = Vereinzeler
- ① = Startimpuls nach Anlaufende
- ② = Freigabe zyklischer Ablauf
- A1 = Freigabe Werkstück bearbeiten
- A2 = Quittieren Werkstück bearbeitet
- S2 = WT arrival, WT nach VE 1/1
- S3 = WT in Station, WT vor VE 1/2  
einschaltverzögert 150 – 200 ms
- S4 = Station wird frei
- S5 = WT fixiert
- Y1 = VE 1/1 öffnen
- Y2 = VE 1/2 öffnen
- Y3 = WT-Fixierung

- WT = Workpiece pallet
- VE = Stop gate
- ① = Start pulse after end of approach
- ② = Enable cyclical sequence
- A1 = Enable workpiece processing
- A2 = Acknowledge workpiece processed
- S2 = WT arrival, WT after VE 1/1
- S3 = WT in station, WT before VE 1/2  
switch-on delay 150 – 200 ms
- S4 = Station is freed
- S5 = WT fixed
- Y1 = Open VE 1/1
- Y2 = Open VE 1/2
- Y3 = WT fixation

- WT = Palette porte-pièces
- VE = Séparateur
- ① = Impulsion de démarrage après la fin de l'approche
- ② = Autorisation opération cyclique
- A1 = Autorisation traitement de la pièce
- A2 = Confirmation traitement de la pièce
- S2 = Arrivée WT, WT après VE 1/1
- S3 = WT en poste, palette avant VE 1/2  
allumage retardé de 150 – 200 ms
- S4 = Poste libre
- S5 = WT fixé
- Y1 = Ouvrir VE 1/1
- Y2 = Ouvrir VE 1/2
- Y3 = Fixation palette porte-pièces

**Positionierung HP 1/P (Vereinzelung/Bearbeitung)**  
**Positioning (separating/processing)**  
**Positionnement (séparation / traitement)**



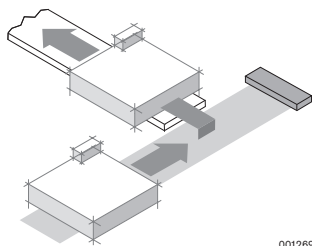
- WT = Werkstückträger
- VE = Vereinzeler
- ① = Startimpuls nach Anlaufende
- ② = Freigabe zyklischer Ablauf
- A1 = Freigabe Werkstück bearbeiten
- A2 = Quittieren Werkstück bearbeitet
- S1 = WT nach VE 1/1
- S2 = WT in Station
- S3 = Hub-Endlage
- Y1 = VE 1/1 öffnen
- Y2 = WT-Hub

- WT = Workpiece pallet
- VE = Stop gate
- ① = Start pulse after end of approach
- ② = Enable cyclical sequence
- A1 = Enable workpiece processing
- A2 = Acknowledge workpiece processed
- S1 = WT after VE 1/1
- S2 = WT in station
- S3 = End position of lift
- Y1 = Open VE 1/1
- Y2 = WT lift

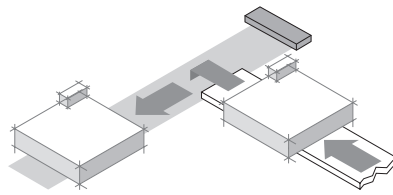
- WT = Palette porte-pièces
- VE = Séparateur
- ① = Impulsion de démarrage après la fin de l'approche
- ② = Autorisation opération cyclique
- A1 = Autorisation traitement de la pièce
- A2 = Confirmation traitement de la pièce
- S1 = WT après VE 1/1
- S2 = WT en poste
- S3 = Position de fin de course
- Y1 = Ouvrir VE 1/1
- Y2 = Course de la WT

Technische Daten · Technical data · Données techniques

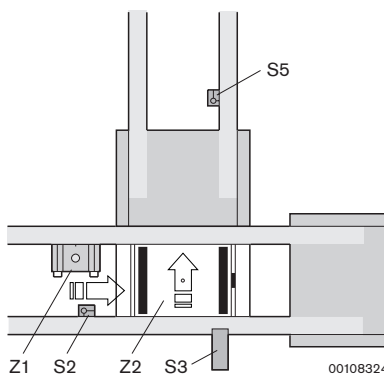
# **Quertransport (Vereinzelung)** **Transverse conveyor (separating)** **Transport transversal (séparation)**



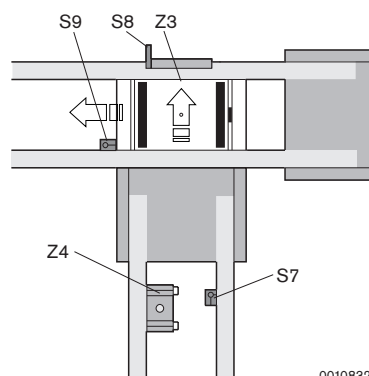
00126961.eps



00126962.eps

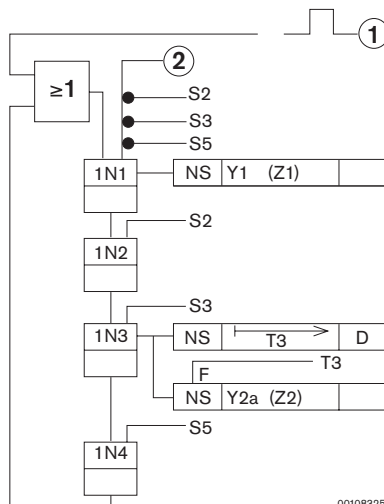


00108324

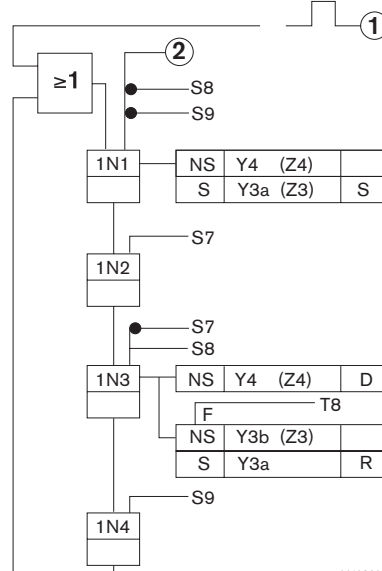


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## **HQ 1**



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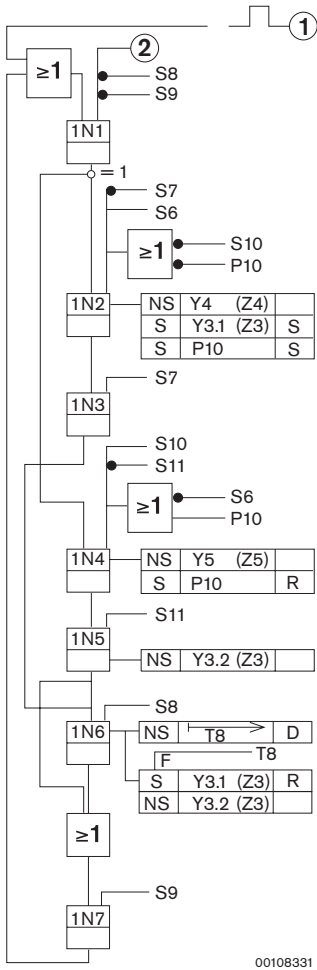
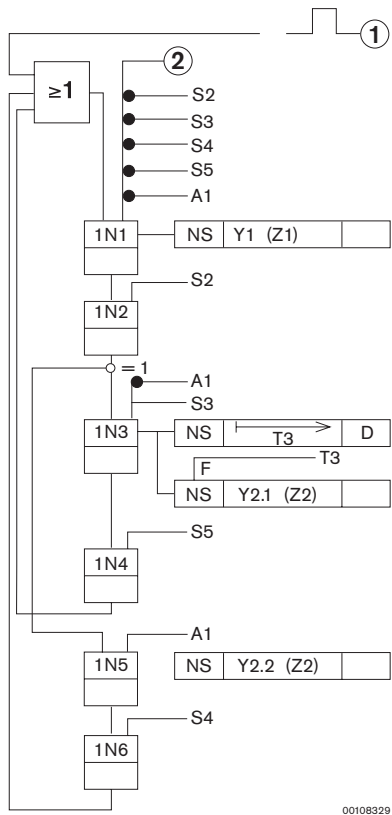
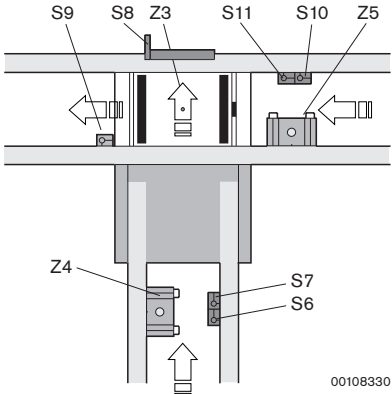
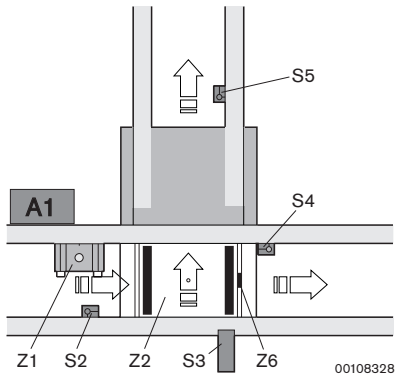
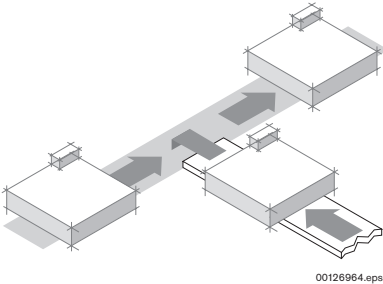
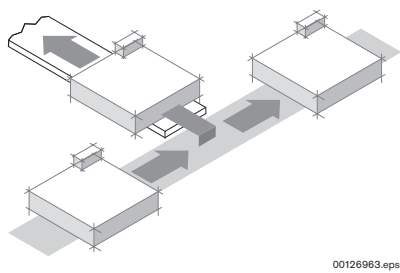
- WT = Werkstückträger
- VE = Vereinzeler
- S ... = Signalgeber
- Y ... = Ventil
- Z ... = Zylinder
- NS = nicht speichern
- ① = Startimpuls nach Anlaufende
- ② = Freigabe zyklischer Ablauf
- S2 = WT nach VE 1/1 (Z 1)
- S3 = WT in Pos. auf EQ1  
einschaltverzögert 100...200 ms
- S5 = Freigabe Nebestrecke
- S7 = WT nach VE 4
- S8 = WT auf EQ 2
- S9 = Freigabe Hauptstrecke 2
- Y1 = VE Hauptstrecke (Z 1)
- Y2 = Hub-Zylinder EQ (Z 2)
- Y3 = Hub-Zylinder EQ (Z 3)
- Y4 = VE Nebestrecke (Z 4)

- WT = Workpiece pallet
- VE = Stop gate
- S ... = Signalling device
- Y ... = Valve
- Z ... = Cylinder
- NS = Do not save
- ① = Start pulse after end of approach
- ② = Enable cyclical sequence
- S2 = WT after VE 1/1 (Z 1)
- S3 = WT in position on EQ 1  
switch-on delay 100 – 200 ms
- S5 = Enable branch section
- S7 = WT after VE 4
- S8 = WT on EQ 2
- S9 = Enable main section 2
- Y1 = VE main section (Z 1)
- Y2 = Lift cylinder EQ (Z 2)
- Y3 = Lift cylinder EQ (Z 3)
- Y4 = VE branch section (Z 4)

- WT = Palette porte-pièces
- VE = Séparateur
- S ... = Transmetteur de signal
- Y ... = Valve
- Z ... = Vérin
- NS = Ne pas enregistrer
- ① = Impulsion de démarrage après la fin de l'approche
- ② = Autorisation opération cyclique
- S2 = WT après VE 1/1 (Z 1)
- S3 = WT en position sur EQ 1  
allumage retardé de 100 – 200 ms
- S5 = Autorisation section secondaire
- S7 = WT après VE 4
- S8 = WT sur EQ 2
- S9 = Autorisation section principale 2
- Y1 = Section principale VE (Z 1)
- Y2 = Vérin de levage EQ (Z 2)
- Y3 = Vérin de levage EQ (Z 3)
- Y4 = Section secondaire VE (Z 4)

Technische Daten · Technical data · Données techniques

**Quertransport (Vereinzelung, Ausschleusen, Einschleusen)**  
**Transverse conveyor (separating, discharging, feeding)**  
**Transport transversal (séparation, éjecter, injecter)**



■  
 WT = Werkstückträger  
 VE = Vereinzeler  
 S ... = Signalgeber  
 Y ... = Ventil  
 Z ... = Zylinder  
 HS = Hauptstrecke  
 NS = Nebenstrecke  
 ① = Startimpuls nach Anlaufende

② = Freigabe zyklischer Ablauf  
 S1 = WT in Pos. an VE 1/1 (Z 1)  
 S2 = WT nach VE 1/1 (Z 1)  
 S3 = WT in Pos. auf EQ 1  
 einschaltverzögert 100...200 ms  
 S4 = Freigabe Hauptstrecke 1  
 S5 = Freigabe Nebenstrecke  
 S6 = WT vor VE 4 (Z 4)  
 S7 = WT nach VE 4  
 S8 = WT auf EQ 2  
 S9 = Freigabe Hauptstrecke 2  
 S10 = WT vor VE 5 (Z 5)  
 S11 = WT nach VE 5 (Z 5)  
 Y1 = VE Hauptstrecke (Z 1)  
 Y2 = Hub-Zylinder EQ (Z 2)  
 Y3 = Hub-Zylinder EQ (Z 2)  
 Y4 = VE Nebenstrecke (Z 4)  
 Y5 = VE Hauptstrecke (Z 5)  
 Y6 = VE in EQ (Z 6)  
 P10 = Priorität  
 A1 = Geradeausignal

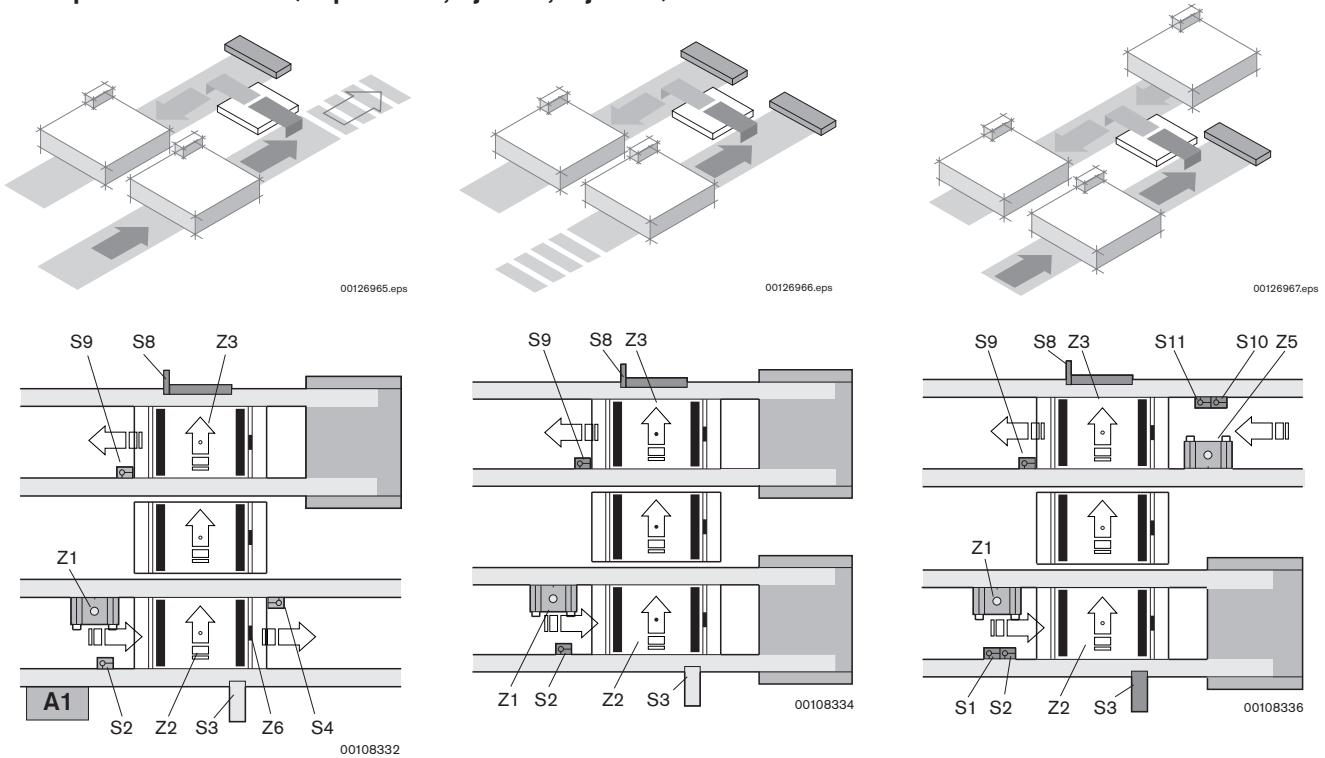
■  
 WT = Workpiece pallet  
 VE = Stop gate  
 S ... = Signalling device  
 Y ... = Valve  
 Z ... = cylinder  
 HS = Main section  
 NS = Branch section  
 ① = Start pulse after end of approach

② = Enable cyclical sequence  
 S1 = WT in position at VE 1/1 (Z 1)  
 S2 = WT after VE 1/1 (Z 1)  
 S3 = WT in position on EQ 1  
 switch-on delay 100 – 200 ms  
 S4 = Enable main section 1  
 S5 = Enable branch section  
 S6 = WT before VE 4 (Z 4)  
 S7 = WT after VE 4  
 S8 = WT on EQ 2  
 S9 = Enable main section 2  
 S10 = WT before VE 5 (Z 5)  
 S11 = WT after VE 5 (Z 5)  
 Y1 = VE main section (Z 1)  
 Y2 = Lift cylinder EQ (Z 2)  
 Y3 = Lift cylinder EQ (Z 2)  
 Y4 = VE branch section (Z 4)  
 Y5 = VE main section (Z 5)  
 Y6 = VE in EQ (Z 6)  
 P10 = Priority  
 A1 = Straight-ahead signal

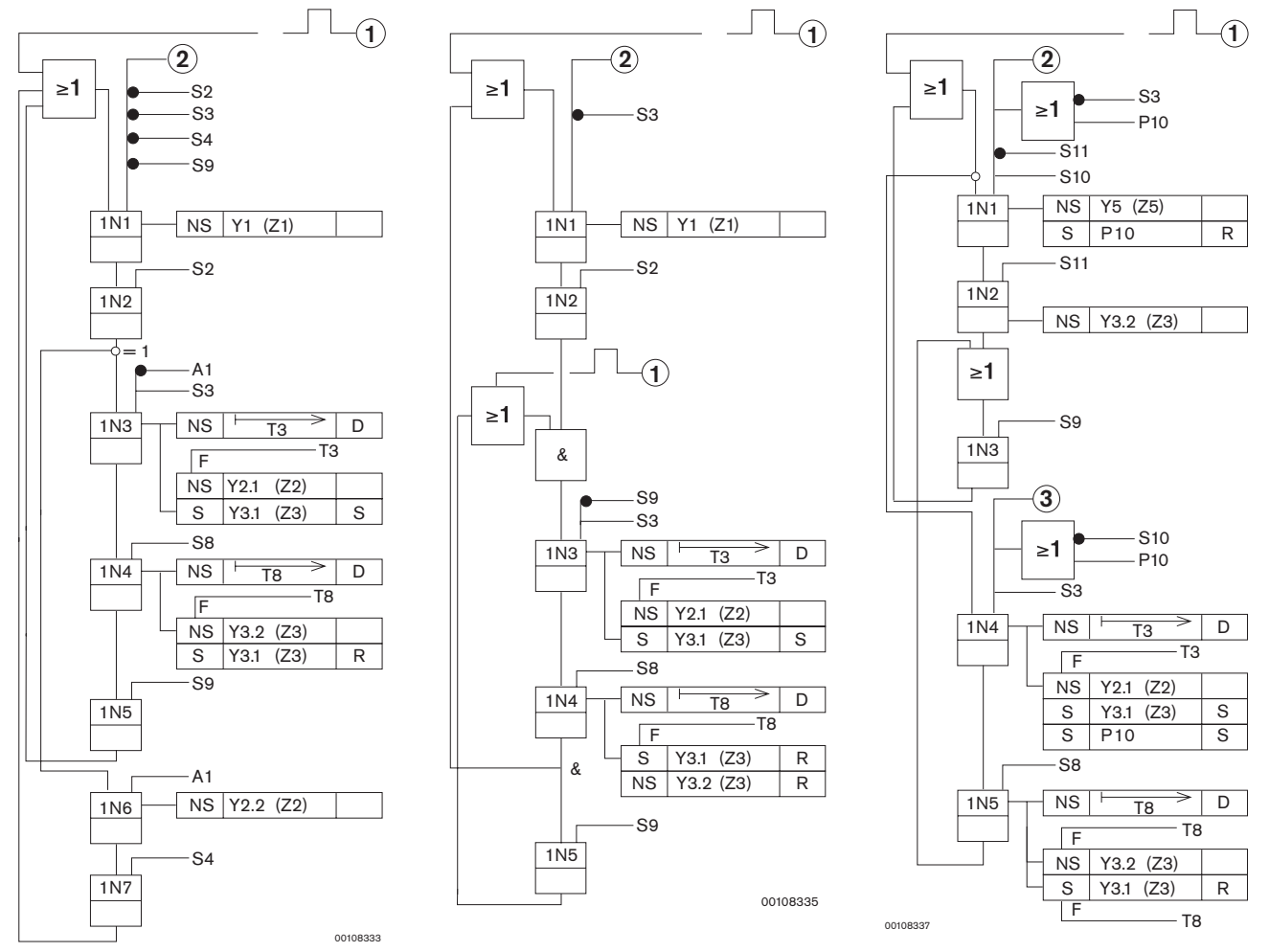
■  
 WT = Palette porte-pièces  
 VE = Séparateur  
 S ... = Transmetteur de signal  
 Y ... = Valve  
 Z ... = Vérin  
 HS = Section principale  
 NS = Section secondaire  
 ① = Impulsion de démarrage après la fin de l'approche  
 ② = Autorisation opération cyclique  
 S1 = Palette en position sur VE 1/1 (Z 1)  
 S2 = WT après VE 1/1 (Z 1)  
 S3 = WT en position sur EQ 1  
 allumage retardé de 100 – 200 ms  
 S4 = Autorisation section principale 1  
 S5 = Autorisation section secondaire  
 S6 = WT avant VE 4 (Z 4)  
 S7 = WT après VE 4  
 S8 = WT sur EQ 2  
 S9 = Autorisation section principale 2  
 S10 = WT avant VE 5 (Z 5)  
 S11 = WT après VE 5 (Z 5)  
 Y1 = Section principale VE (Z 1)  
 Y2 = Vérin de levage EQ (Z 2)  
 Y3 = Vérin de levage EQ (Z 2)  
 Y4 = Section secondaire VE (Z 4)  
 Y5 = Section principale VE (Z 5)  
 Y6 = VE en EQ (Z 6)  
 P10 = Priorité  
 A1 = Signal directionnel

Technische Daten · Technical data · Données techniques

Quertransport EQ 1/TR (Vereinzelung, Ausschleusen, Einschleusen)  
Transverse conveyor (separating, discharging, feeding)  
Transport transversal (séparation, éjecter, injecter)



EQ 1/TR



## Technische Daten · Technical data · Données techniques

|          |                                                          |
|----------|----------------------------------------------------------|
| ■        |                                                          |
| WT       | = Werkstückträger                                        |
| VE       | = Vereinzeler                                            |
| S ...    | = Signalgeber                                            |
| Y ...    | = Ventil                                                 |
| Z ...    | = Zylinder                                               |
| HS       | = Hauptstrecke                                           |
| NS       | = Nebenzstrecke                                          |
| ①        | = Startimpuls nach Anlaufende                            |
| ②        | = Freigabe zyklischer Ablauf                             |
| S1       | = WT in Pos. an VE 1/1 (Z 1)                             |
| S2       | = WT nach VE 1/1 (Z 1)                                   |
| S3       | = WT in Pos. auf EQ 1<br>einschaltverzögert 100...200 ms |
| S4       | = Freigabe Hauptstrecke 1                                |
| S5       | = Freigabe Nebenzstrecke                                 |
| S6       | = WT vor VE 1/4 (Z 4)                                    |
| S7       | = WT nach VE 1/4                                         |
| S8       | = WT auf EQ2                                             |
| S9       | = Freigabe Hauptstrecke 2                                |
| S10      | = WT vor VE 1/5 (Z 5)                                    |
| S11      | = WT nach VE 1/5 (Z 5)                                   |
| Y1       | = VE Hauptstrecke (Z 1)                                  |
| Y2.1/2.2 | = Hub-Zylinder EQ (Z 2)                                  |
| Y3.1/3.2 | = Hub-Zylinder EQ (Z 3)                                  |
| Y4       | = VE Nebenzstrecke (Z 4)                                 |
| Y5       | = VE Hauptstrecke (Z 5)                                  |
| Y6       | = VE in EQ (Z 6)                                         |
| P10      | = Priorität                                              |
| A1       | = Geradeausignal                                         |

|          |                                                          |
|----------|----------------------------------------------------------|
| ■        |                                                          |
| WT       | = Workpiece pallet                                       |
| VE       | = Stop gate                                              |
| S ...    | = Signalling device                                      |
| Y ...    | = Valve                                                  |
| Z ...    | = Cylinder                                               |
| HS       | = Main section                                           |
| NS       | = Branch section                                         |
| ①        | = Start pulse after end of approach                      |
| ②        | = Enable cyclical sequence                               |
| S1       | = WT in position at VE 1/1 (Z 1)                         |
| S2       | = WT after VE 1/1 (Z 1)                                  |
| S3       | = WT in position on EQ 1<br>switch-on delay 100 – 200 ms |
| S4       | = Enable main section 1                                  |
| S5       | = Enable branch section                                  |
| S6       | = WT before VE 1/4 (Z 4)                                 |
| S7       | = WT after VE 1/4                                        |
| S8       | = WT on EQ 2                                             |
| S9       | = Enable main section 2                                  |
| S10      | = WT before VE 1/5 (Z 5)                                 |
| S11      | = WT after VE 1/5 (Z 5)                                  |
| Y1       | = VE main section (Z 1)                                  |
| Y2.1/2.2 | = Lift cylinder EQ (Z 2)                                 |
| Y3.1/3.2 | = Lift cylinder EQ (Z 3)                                 |
| Y4       | = VE branch section (Z 4)                                |
| Y5       | = VE main section (Z 5)                                  |
| Y6       | = VE in EQ (Z 6)                                         |
| P10      | = Priority                                               |
| A1       | = Straight-ahead signal                                  |

|          |                                                               |
|----------|---------------------------------------------------------------|
| ■        |                                                               |
| WT       | = Palette porte-pièces                                        |
| VE       | = Séparateur                                                  |
| S ...    | = Transmetteur de signal                                      |
| Y ...    | = Valve                                                       |
| Z ...    | = Vérin                                                       |
| HS       | = Section principale                                          |
| NS       | = Section secondaire                                          |
| ①        | = Impulsion de démarrage après la fin de l'approche           |
| ②        | = Autorisation opération cyclique                             |
| S1       | = Palette en position sur VE 1/1 (Z 1)                        |
| S2       | = WT après VE 1/1 (Z 1)                                       |
| S3       | = WT en position sur EQ 1<br>allumage retardé de 100 – 200 ms |
| S4       | = Autorisation section principale 1                           |
| S5       | = Autorisation section secondaire                             |
| S6       | = WT avant VE 1/4 (Z 4)                                       |
| S7       | = WT après VE 1/4                                             |
| S8       | = WT sur EQ 2                                                 |
| S9       | = Autorisation section principale 2                           |
| S10      | = WT avant VE 1/5 (Z 5)                                       |
| S11      | = WT après VE 1/5 (Z 5)                                       |
| Y1       | = Section principale VE (Z 1)                                 |
| Y2.1/2.2 | = Vérin de levage EQ (Z 2)                                    |
| Y3.1/3.2 | = Vérin de levage EQ (Z 3)                                    |
| Y4       | = Section secondaire VE (Z 4)                                 |
| Y5       | = Section principale VE (Z 5)                                 |
| Y6       | = VE en EQ (Z 6)                                              |
| P10      | = Priorité                                                    |
| A1       | = Signal directionnel                                         |