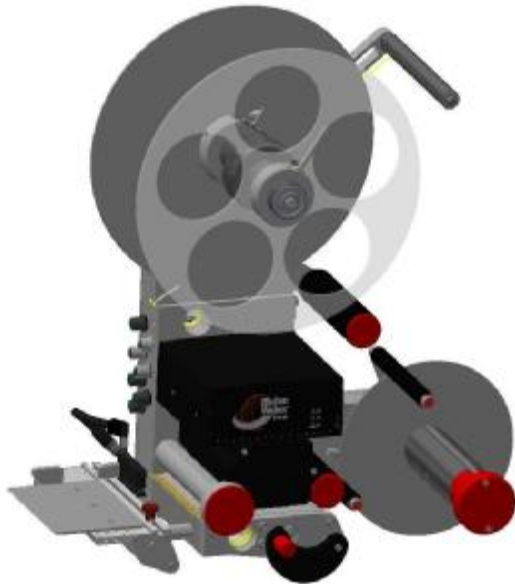


Alpha HSM



Technical Specifications

| | |
|------------------------------------|---|
| Label size: | Min. 10 x 10 mm (W x H) Max. 320 x 2000 mm (W x H) also higher label lengths can be used at a reduced speed or cycle rate Minimum label gap 3mm |
| Label rolls, outside diameter: | Maximum roll Ø = 500 mm; maximum running length = 1200 running metres (for label material 3105) Core Ø= 76 mm (3 ") for other core Ø see the individual modules |
| Maximum application rate: | Up to 2000 cycles/min (depending on label size and configuration) |
| Maximum throughput width: | = Labeler width + 4mm (Example: Alpha HSM 135 = max. 139mm throughput width) |
| Application accuracy | +/- 0.3 mm (relative to the repetition accuracy at the peeler bar) |
| Maximum application speed: | 150 m/min (higher speeds on request), depending on label format and configuration |
| Max. dimensions: (H x W x D in mm) | Dimensions see configurations |
| Weight: | 16-48kg depending on configuration (without label roll) |
| Power connection: | 90 ~ 240 V / 47 ~ 63 Hz |
| Power consumption: | 300-900 watts depending on the configuration |
| Ambient temperature: | 0 – 42 °C |
| Ambient conditions: | 10 - 95% relative humidity (non-condensing) |
| Protection class: | IP 65 |
| Enclosure: | Aluminium |

Special features:

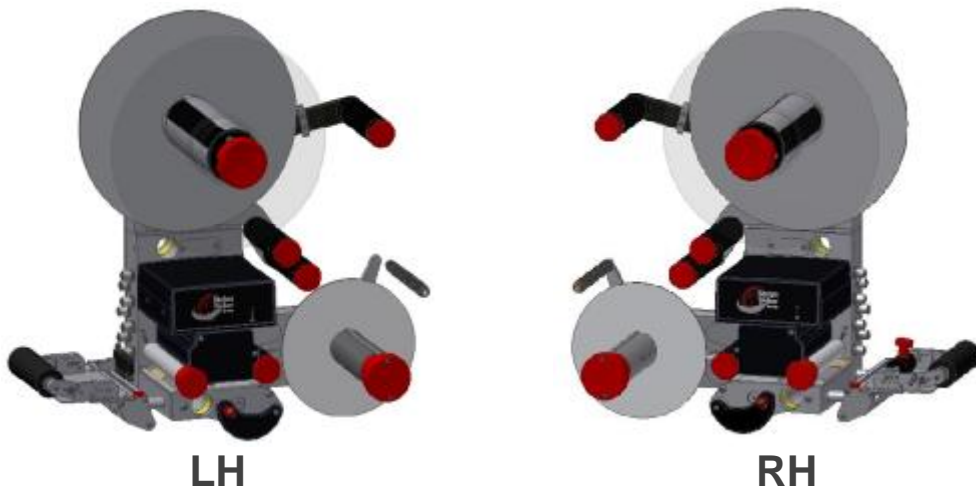
- Belt speeds up to 150m/min (depending on the configuration)
- Cycle performance up to 2000 labels/min (depending on configuration)
- Label length up to 2000mm (depending on configuration)
- IP65
- Modular construction kit (widths from 135 to 320mm)
- Label roll outside diameter up to 500mm (depending on configuration)
- Three different user interfaces:
 - OLED Display
 - External control (PLC customer)
 - § PLC module for Siemens
 - Web-based control
 - § Direct access to service portal
 - § Direct access to help videos
 - § Production statistics
- Simple parameterization
 - Up to 10,000 different product parameters can be stored
- Integrated roll end and web end function depending on configuration
- High rigidity over all working widths
- Combination with other printing technologies (MOP, Linx, TTO)
- Integrated Zero Down Time function or the alternating operation
- Optionally all setting options are reproducible

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Naming

- Left and right version as the print and apply systems



- Notation:

[Alpha Name System]-[label width in mm]-[alignment]-[tech. characteristic, for example, drive type]-[CE conformity]

Example: Alpha HSM-135-LH-SE-U30M-R30M-CC

Module overview

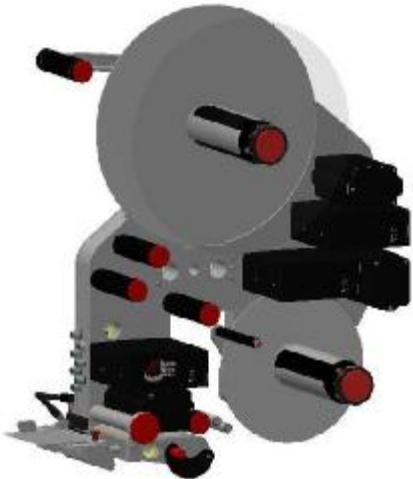
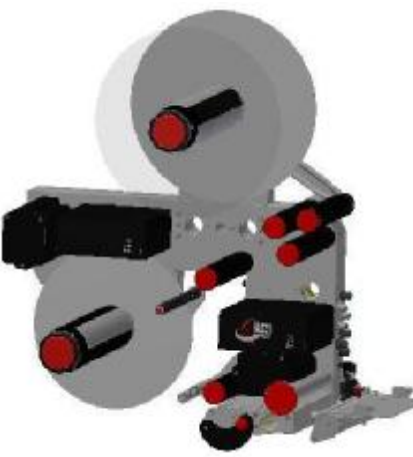
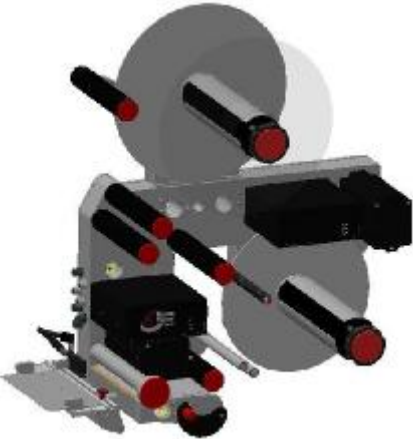
| Module | | Label width | | | |
|-------------------------------|-------------------------------|-------------|--------|--------|--------|
| | | 135 mm | 200 mm | 250 mm | 320 mm |
| Drive unit | | | | | |
| | Servo drive | ü | ü | *(ü) | ü |
| Unwinder | | | | | |
| | 300mm Mechanical | ü | ü | ü | ü |
| | 300mm Mechanical Performance | ü | ü | *(ü) | ü |
| | 400mm Mechanical Performance | ü | ü | ü | ü |
| | 300mm Motorised (servo) | ü | ü | *(ü) | ü |
| | 400mm Motorised (servo) | ü | ü | ü | ü |
| | 500mm Motorised (servo) | ü | ü | ü | ü |
| Lose loop pre-unwinder | | | | | |
| | Shuttle | *(ü) | ü | ü | ü |
| | Air Loop | *(ü) | ü | ü | ü |
| Rewinder | | | | | |
| | 300mm Mechanical | ü | ü | ü | ü |
| | 400mm Motorised (servo) | ü | ü | *(ü) | ü |
| | 500mm Motorised (servo) | ü | ü | ü | ü |
| Adapter | | | | | |
| | Adapter | ü | ü | *(ü) | ü |
| Application | | | | | |
| | Fixed peeler plate | ü | ü | *(ü) | ü |
| | Swivelling peeler plate | *(ü) | *(ü) | *(ü) | *(ü) |
| | Pneum. peeler plate | *(ü) | *(ü) | *(ü) | ü |
| | Fixed peeler plate adjustable | *(ü) | *(ü) | *(ü) | *(ü) |
| Label detection | | | | | |
| | Standard labels | ü | ü | *(ü) | ü |
| | Transparent labels | ü | ü | *(ü) | ü |

*Modules in brackets are currently not yet available

Pre-configured Alpha HSM variants

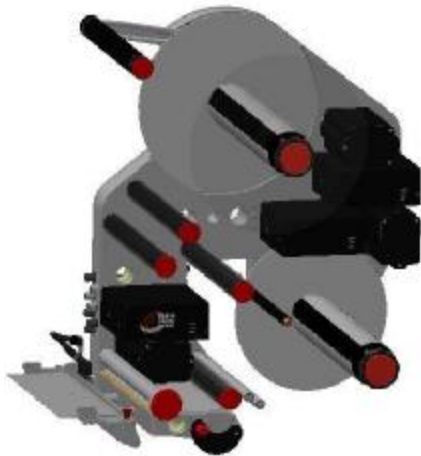
The following preconfigured dispensers are included in the price list. Here, you can also select the label recognition.

| Version | Mat.-No. | Description |
|---------|----------|--|
| | 40057980 | Alpha HSM-135-RH-SE-U30M-R30M-CC <ul style="list-style-type: none"> - Working width 135mm - Right version - speed 0-50m/min (without restriction), up to 70m/min on request - Wipe On peeler plate, 160mm long, rigid - Mechanical unwinding for label rolls up to Ø 300mm - Mechanical winding for label rolls up to Ø 300mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Low label warning Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
| | 40057979 | Alpha HSM-135-LH-SE-U30M-R30M-CC <ul style="list-style-type: none"> - Working width 135mm - Left version - speed 0-50m/min (without restriction), up to 70m/min on request - Wipe On peeler plate, 160mm long, rigid - Mechanical unwinding for label rolls up to Ø 300mm - Mechanical winding for label rolls up to Ø 300mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Low label warning Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
| | 40058058 | Alpha-HSM-135-RH-SE-U40SE-R40SE-CC <ul style="list-style-type: none"> - Working width 135mm - Right version - Speed 0-80m/min (without restriction), up to 100m/min on request - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 400mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |

| Version | Mat.-No. | Description |
|---|----------|--|
|  | 40058057 | <p>Alpha-HSM-135-LH-SE-U40SE-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 135mm - Left version - Speed 0-80m/min (without restriction), up to 100m/min on request - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 400mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
|  | 40058120 | <p>Alpha-HSM-200-RH-SE-U30MP-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 200mm - Right version - Speed 0-60m/min (without restriction) - Wipe On peeler plate, 160mm long, rigid - Unwinding mechanically for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
|  | 40058119 | <p>Alpha-HSM-200-LH-SE-U30MP-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 200mm - Left version - Speed 0-60m/min (without restriction) - Wipe On peeler plate, 160mm long, rigid - Unwinding mechanically for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |

| Version | Mat.-No. | Description |
|---------|----------|--|
| | 40058155 | <p>Alpha-HSM-200-RH-SE-U30SE-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 200mm - Right version - Speed 0-60m/min (without restriction), up to 80m/min on request - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
| | 40058154 | <p>Alpha-HSM-200-LH-SE-U30SE-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 200mm - Left version - Speed 0-60m/min (without restriction), up to 80m/min on request - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
| | 40058162 | <p>Alpha-HSM-320-RH-SE-U30SE-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 320mm - Right version - Speed 0-40m/min (without restriction) - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |

| Version | Mat.-No. | Description |
|---------|----------|---|
| | 40058161 | <p>Alpha-HSM-320-LH-SE-U30SE-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 320mm - Left version - Speed 0-40m/min (without restriction) - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |



Modular design Alpha HSM

In modular design, the Alpha HSM is disassembled into its individual modules depending on the width. Depending on the customer's requirements, it can then be assembled according to customer specifications using the configurator.

The basic modules consist of:

- Drive module
- Label detection
- Dispensing
- Unwinder
- Rewinder
- Adapter

In addition to these basic modules, it is of course still possible to select the appropriate retrofit (field installable) or factory installable options.

The Alpha HSM configured from the modules is then assembled, tested and shipped in the factory according to customer specifications.

The rules that govern which modules are combinable in what manner, can be found on the individual modules.

Here are some examples of combinations:

- 1) Customer requests an Alpha HSM, 135mm width, LH, Wipe On rigid dispensing, optical label detection, roll diameter 500mm
 - ☐ The modular design must be selected here, as there is no standard labeler from the price list.
 - ☐ You therefore select from the module drive module 135mm width LH (40053566), from the module label detection the optical sensor LH (40046880), from the module unwinder Servo LH in 135mm width (40053160), from the module dispensing rigid 135mm width LH (40053547), from the module rewinder Servo LH (40053224) and from the module adapter U50SE/R50SE LH (40053455).
 - ☐ In the options the possible additions such as power cable, HMI display and other options must also be selected.


-----IMAGE-----

- 2) Customer requests an Alpha HSM, 200mm width, LH, Wipe On rigid dispensing, optical label detection, roll diameter 400mm
 - ☐ The modular design must be selected here, as there is no standard labeler from the price list.
 - ☐ You would therefore select from the module drive module 200mm width LH (40053567), the optical sensor LH (40046880) from the module label detection, from the module mechanical unwinder Performance LH in 200mm width (40051007), from the rigid dispense module 200mm wide LH (40053548), rewinder Servo LH (40053399), and from the module adapter U40MP/R40SE LH (40051104).
 - ☐ In the options the possible additions such as power cable, HMI display and other options must also be selected.

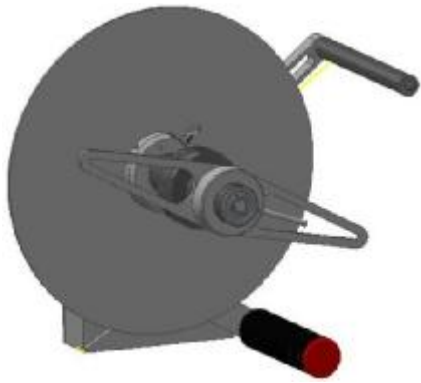
-----IMAGE-----

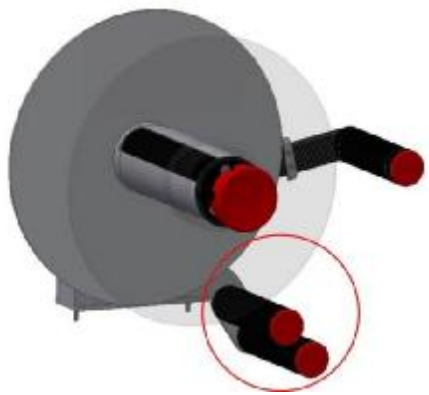
Module

Drive unit module


| Module: | | Drive unit servo | | | |
|--|--|------------------------------|------------------------------|------------------------------|------------------------------|
| Image: |  | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive] Example: Drive module HSM-135-RH-SE</p> | | | | |
| Function group abbreviation: | SE | | | | |
| Basic data text: | Servo drive module Module width: 135 mm/ 200mm/ 250mm/ 320mm Alignment: Left/right version Connection socket Power Connection socket HMI Connection socket Label recognition Connection socket Product detector Connection socket Rotary encoder Connection socket Alarm lamp Connection socket I/O signal interface Connection socket Network connection (Ethernet 10/100) Connection socket Aux Out for: Pneumatic dispensing, marco print printer Connection socket Aux In for: Product detector 2, strip breakage sensor | | | | |
| | | 135 mm | 200 mm | 250 mm | 320 mm |
| Material number: | | LH: 40053566 RH: 40053565 | LH: 40053567 RH: 40052696 | LH: 99999999 RH: 99999999 | LH: 40053568 RH: 40052697 |
| Performance data: | Max. Label width: | 135 mm | 200 mm | 250 mm | 320 mm |
| | Max. Label length: | --- | --- | ??? | --- |
| | Max. application speed: | 200 m/min | 80 m/min | ??? | 40 m/min |
| | Max. Cycle performance | 2000 cycles/min | 1400 cycles/min | ??? | 930 cycles/min |
| Special features/application criteria: | <ul style="list-style-type: none"> • Reproducible adjustment of the band brake • A power cord must be added | | | | |

Module unwinder

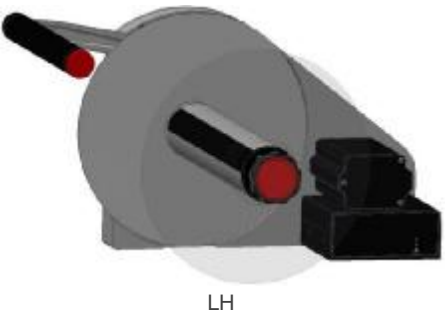
| Module: Unwinding mechanical | | | | | |
|--|--|----------------|--|--|--|
| Image: |  | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</p> <p>Example: Unwinder-HSM-135-30-RH-M</p> | | | | |
| Function group abbreviation: | U30M | | | | |
| Basic data text: | <p>Module unwinder mechanical</p> <p>Module width: 135 mm</p> <p>Alignment: Left/right version</p> <p>Max. label roll diameter: 300mm</p> <p>Core diameter: 76mm</p> | | | | |
| | Width: 135mm Ø: 300 mm | | | | |
| Material number: | <p>LH: 40050602</p> <p>RH: 40052907</p> | | | | |
| Performance data: | Max. Label width: | 135 mm | | | |
| | Min. Label width: | 10 mm | | | |
| | Max. Label length: | 300mm | | | |
| | Max. application speed | 50-70 m/min | | | |
| | Max. Cycle performance | 600 cycles/min | | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Roller transport by metal blades • Label roll core Ø 40mm/ 50mm/ 76.2mm possible • Low label warning is an option • Can be combined with the following rewinder: <ul style="list-style-type: none"> ○ R30M rewinder mechanical (LH 40051527/ RH 40051750) | | | | |

| Module: Unwinder Mechanical Performance | | | | | |
|---|---|--------|--|--|--|
| Image: |  | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</p> <p>Example: Unwinding-HSM-135-30-RH-MP Unwinding-HSM-135-30-LH-MP</p> | | | | |
| Function group abbreviation: | U30MP | | | | |
| Basic data text: | <p>Module unwinder mechanical performance</p> <p>Module width: 135 mm</p> <p>Alignment: Left/right version</p> <p>Max. label roll diameter: 300mm</p> <p>Core diameter: 76mm</p> | | | | |
| | Width: 135mm Ø: 300 mm | | | | |
| Material number: | <p>LH: 40053181</p> <p>RH: 40053169</p> | | | | |
| Performance data: | Max. Label width: | 135 mm | | | |
| | Min. Label width: | 20 mm | | | |
| | Max. Label length: | 450 mm | | | |
| | Max. application speed | ??? | | | |
| | Max. Cycle performance | ??? | | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Roller drive through mechanical core clamping • Integrated low label warning and web end function • Label roll core Ø 76.2mm • Can be mounted directly on the drive module <ul style="list-style-type: none"> ◦ additional deflection rollers available • Can be combined with the following rewinder: <ul style="list-style-type: none"> ◦ R30M rewinder mechanical (LH 40051527/ RH 40051750) | | | | |

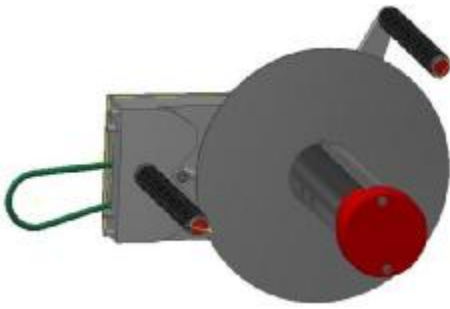
Module: Unwinder Mechanical Performance

| | | | | | |
|--|--|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Image: |  | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive] Example: Unwinder-HSM-135-30-RH-MP Unwinder-HSM-135-40-LH-MP</p> | | | | |
| Function group abbreviation: | U30MP U40MP | | | | |
| Basic data text: | Module unwinder mechanical performance Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version Max. label roll diameter: 300mm/ 400 mm Core diameter: 76mm | | | | |
| | | Width:135mm Ø: 300 mm | Width:200mm Ø: 300 mm | Width:250mm Ø: 300 mm | Width:320mm Ø: 300 mm |
| Material number: | | LH: 40053420 RH: 40053421 | LH: 40053428 RH: 40053431 | LH: 99999999 RH: 99999999 | LH: 40052965 RH: 40052965 |
| Performance data: | Max. Label width: | 135 mm | 200 mm | 250 mm | 320 mm |
| | Min. Label width: | 20 mm | 20 mm | 20 mm | 20 mm |
| | Max. Label length: | 450 mm | 450 mm | 450 mm | 450 mm |
| | Max. application speed | ??? | 60-80m/min | ??? | ??? |
| | Max. Cycle performance | ??? | 1350 cycles/min | ??? | ??? |
| | | Width:135mm Ø: 400 mm | Width:200mm Ø: 400 mm | | |
| Material number: | | LH: 40053062 RH: 40053063 | LH: 40051007 RH: 40051685 | | |
| Performance data: | Max. Label width: | 135 mm | 200 mm | | |
| | Min. Label width: | 20 mm | 20 mm | | |
| | Max. Label length: | 450 mm | 450 mm | | |
| | Max. application speed | ??? | ??? | | |
| | Max. Cycle performance | ??? | ??? | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Roller drive through mechanical core clamping • Integrated low label warning and web end function • Label roll core Ø 76.2mm • can only be used in connection with the adapter module • Can be combined with the following rewinder: <ul style="list-style-type: none"> ○ R40SE rewinder servo motorized | | | | |


Module: Unwinder servo motorized

| | | | | | |
|--|---|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Image: |  <p style="text-align: center;">LH</p> | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive] Example: Unwinder-HSM-135-30-RH-SE</p> | | | | |
| Function group abbreviation: | U30SE U40SE U50SE | | | | |
| Basic data text: | Module Unwinder Motorized Servo Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version Max. label roll diameter: 300mm/ 400mm/ 500 mm Core diameter: 76mm | | | | |
| | | Width:135mm Ø: 300 mm | Width:200mm Ø: 300 mm | Width:250mm Ø: 300 mm | Width:320mm Ø: 300 mm |
| Material number: | | LH: 40053409 RH: 40053411 | LH: 40053412 RH: 40053413 | LH: 99999999 RH: 99999999 | LH: 40053081 RH: 40048685 |
| Performance data: | Max. Label width: | 135 mm | 200 mm | 250 mm | 320 mm |
| | Min. Label width: | 20 mm | 20 mm | 20 mm | 20 mm |
| | Max. Label length: | 2000 mm | 2000 mm | 2000 mm | 2000 mm |
| | Max. application speed | 80-100 m/min | 60-80 m/min | ??? | 40-60 m/min |
| | Max. Cycle performance | 2000 cycles/min | 1400 cycles/min | ??? | 930 cycles/min |
| Special features/application criteria: | <ul style="list-style-type: none"> • Roller drive through mechanical core clamping • Integrated low label warning and web end function • Label roll core Ø 76.2mm • can only be used in connection with the adapter module • Can be combined with the following rewinder: <ul style="list-style-type: none"> ○ R40SE rewinder servo motorized | | | | |
| | | Width:135mm Ø: 400 mm | Width:200mm Ø: 400 mm | Width:135mm Ø: 500 mm | |
| Material number: | | LH: 40052394 RH: 40053102 | LH: 40053417 RH: 40053418 | LH: 40053160 RH: 40053327 | |
| Performance data: | Max. Label width: | 135 mm | 200 mm | 135 mm | |
| | Min. Label width: | 20 mm | 20 mm | 20 mm | |
| | Max. Label length: | 2000 mm | 2000 mm | 2000 mm | |
| | Max. application speed | 80-100 m/min | ??? | ??? | |
| | Max. Cycle performance | 2000 cycles/min | ??? | ??? | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Roller drive through mechanical core clamping • Integrated low label warning and web end function • Label roll core Ø 76.2mm • can only be used in connection with the adapter module • Can be combined with the following rewinder: <ul style="list-style-type: none"> ○ R40SE or R50SE rewinder Motorized Servo | | | | |

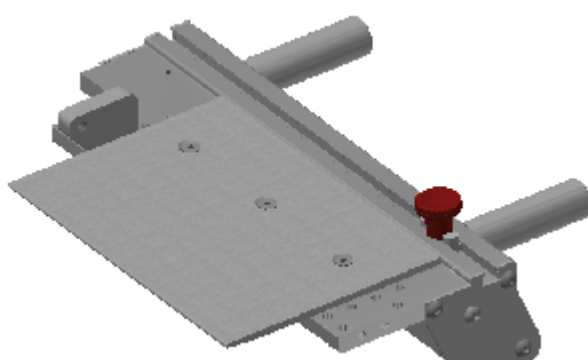
Module rewinder

| Module: Rewinder mechanical | | | | | |
|--|---|----------------|--|--|--|
| Image: |  | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</p> <p>Example: Rewinder-HSM-135-30-LH-M</p> | | | | |
| Function group abbreviation: | R30M | | | | |
| Basic data text: | <p>Module rewinder mechanical</p> <p>Module width: 135 mm</p> <p>Alignment: Left/right version</p> <p>Max. label roll diameter: 300mm or 450 running metres carrier material</p> | | | | |
| | Width: 135mm Ø: 300 mm | | | | |
| Material number: | <p>LH: 40051527</p> <p>RH: 40051750</p> | | | | |
| Performance data: | Max. Label width: | 135 mm | | | |
| | Max. Label length: | 300mm | | | |
| | Max. application speed | 50-70 m/min | | | |
| | Max. Cycle performance | 600 cycles/min | | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • No cardboard core necessary • Can be combined with the following unwinder: <ul style="list-style-type: none"> ○ U30M unwinding mechanical or U30MP unwinder mechanical performance | | | | |

Module: Rewinder servo motorized

| | | | | | |
|--|---|------------------------------|------------------------------|------------------------------|------------------------------|
| Image: |  | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive] Example: Rewinder-HSM-200-40-RH-SE Rewinder-HSM-135-50-RH-SE</p> | | | | |
| Function group abbreviation: | <p>R40SE R50SE</p> | | | | |
| Basic data text: | <p>Module Rewinder Motorized Servo Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version Max. label roll diameter: 400mm or 800 running metre carrier material / 500mm or 1200 running metre carrier material</p> | | | | |
| | | Width:135mm Ø: 400 mm | Width:200mm Ø: 400 mm | Width:250mm Ø: 400 mm | Width:320mm Ø: 400 mm |
| Material number: | | LH: 40053380 RH: 40053393 | LH: 40053399 RH: 40053405 | LH: 99999999 RH: 99999999 | LH: 40052770 RH: 40052771 |
| Performance data: | Max. Label width: | 135 mm | 200 mm | 250 mm | 320 mm |
| | Min. Label width: | 20 mm | 20 mm | 20 mm | 20 mm |
| | Max. Label length: | 1000 mm | 1000 mm | 400 mm | 400 mm |
| | Max. application speed | 80-100 m/min | 60-80 m/min | ??? | 40-60 m/min |
| | Max. Cycle performance | 2000 cycles/min | 1400 cycles/min | ??? | 930 cycles/min |
| Special features/application criteria: | <ul style="list-style-type: none"> • Rewinder with and without cardboard core possible • can only be used in connection with the adapter module • Can be combined with the following unwinding: U30MP/U40MP unwinder mechanical performance or U30SE/U40SE unwinder motorized servo | | | | |
| | | Width:135mm Ø: 500 mm | | | |
| Material number: | | LH: 40053224 RH: 40053233 | | | |
| Performance data: | Max. Label width: | 135 mm | | | |
| | Min. Label width: | 20 mm | | | |
| | Max. Label length: | 400 mm | | | |
| | Max. application speed | ??? | | | |
| | Max. Cycle performance | ??? | | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Rewinder with and without cardboard core possible • can only be used in connection with the adapter module • Can be combined with the following unwinder: U50SE motorized unwinder servo | | | | |

Module application


| Module: | | Application fixed | | | |
|--|--|------------------------------|------------------------------|------------------------------|------------------------------|
| Image: |  | | | | |
| Material designation: | <p><i>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</i></p> <p>Example: Application-WO-fixed-160-135-LH-BG</p> | | | | |
| Function group abbreviation: | | | | | |
| Basic data text: | <p>Fixed application module</p> <p>Module width: 135mm/ 200mm/ 250mm/ 320 mm</p> <p>Standard length 160mm (from housing to dispensing edge)</p> <p>Alignment: Left/right version</p> | | | | |
| | | Width:135mm | Width:200mm | Width:250mm | Width:320mm |
| Material number: | | LH: 40053547 RH: 40053552 | LH: 40053548 RH: 40053553 | LH: 99999999 RH: 99999999 | LH: 40053549 RH: 40053554 |
| Special features/application criteria: | <ul style="list-style-type: none"> The length of the dispensing is very easy to adapt to customer-specific requirements via the axes | | | | |

| Module: Application swivelling | | | | | |
|--|--|--------------|--------------|--------------|--------------|
| Image: | | | | | |
| Material designation: | <i>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</i> Example: | | | | |
| Function group abbreviation: | | | | | |
| Basic data text: | Module application swivelling Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version | | | | |
| | | Width:135mm | Width:200mm | Width:250mm | Width:320mm |
| Material number: | | LH: 99999999 | LH: 99999999 | LH: 99999999 | LH: 99999999 |
| | | RH: 99999999 | RH: 99999999 | RH: 99999999 | RH: 99999999 |
| Special features/application criteria: | <ul style="list-style-type: none"> Compensates product height differences of 0-... | | | | |



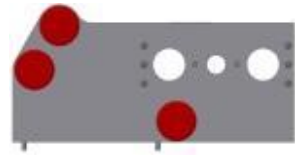
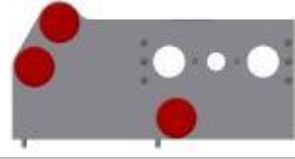
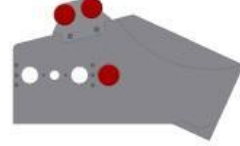
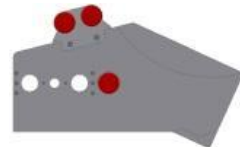
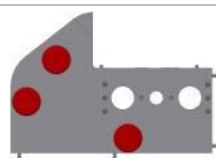
| Module: Application Pneumatic | | | | | |
|--|--|--------------|--------------|--------------|--------------|
| Image: | | | | | |
| Material designation: | <i>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</i> Example: | | | | |
| Function group abbreviation: | | | | | |
| Basic data text: | Module application pneumatic Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version | | | | |
| | | Width:135mm | Width:200mm | Width:250mm | Width:320mm |
| Material number: | | LH: 99999999 | LH: 99999999 | LH: 99999999 | LH: 99999999 |
| | | RH: 99999999 | RH: 99999999 | RH: 99999999 | RH: 99999999 |
| Special features/application criteria: | • | | | | |

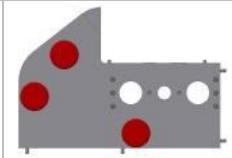
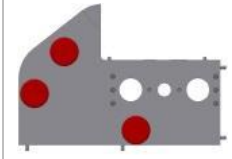
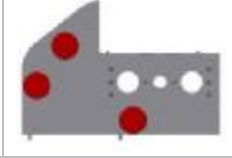
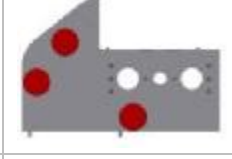
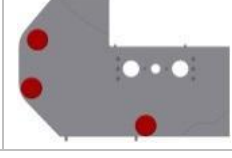
Module label detection

| Module: Label detection optical | | | | | |
|--|--|-----|--|--|--|
| Image: |  | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</p> <p>Example: Sensor-label gap-optical-LH-BG</p> | | | | |
| Function group abbreviation: | | | | | |
| Basic data text: | <p>Module Label detection optical</p> <p>Alignment: Left/right version</p> | | | | |
| | | | | | |
| Material number: | <p>LH: 40046880</p> <p>RH: 40046888</p> | | | | |
| Performance data: | Max. Label width: | ??? | | | |
| | Min. Label width: | ??? | | | |
| | Max. Label length: | ??? | | | |
| | Max. Product speed: | ??? | | | |
| | Max. Cycle performance | ??? | | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Fork width 5mm • Leg length 50mm • for non-transparent or transparent labels with print marks | | | | |

| Module: Ultrasonic label detection | |
|--|---|
| Image: |  |
| Material designation: | <p><i>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</i></p> <p>Example: Sensor-label gap-ultrasonic-LH-BG</p> |
| Function group abbreviation: | |
| Basic data text: | <p>Ultrasonic label detection module</p> <p>Alignment: Left/right version</p> |
| | |
| Material number: | <p>LH: 40055726</p> <p>RH: 40055729</p> |
| Performance data: | Max. Label width: ??? |
| | Min. Label width: ??? |
| | Max. Label length: ??? |
| | Max. Product speed: 80 m/min |
| | Max. Cycle performance: ??? |
| Special features/application criteria: | <ul style="list-style-type: none"> • Fork width 6mm • Leg length 67mm • Required for transparent labels |

Module adapter






| Module: | | Adapter | |
|--|---|------------------------------|--|
| Image: |  | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm*3]-[Alignment]-[Consecutive numbering] Example: Adapter module-HSM-200-40-RH-01</p> | | |
| Basic data text: | <p>Module Adapter Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version</p> | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Customized version possible | | |
| List of existing adapters | Combination/ Width | Material number | Image |
| | U30MP-R40SE/ 135 mm | LH: 40053029 RH: 40053193 |  |
| | U30MP-R40SE/ 200 mm | LH: 40053440 RH: 40053441 |  |
| | U30MP-R40SE/ 320 mm | LH: 40053021 RH: 40053182 |  |
| | U40MP-R40SE/ 135 mm | LH: 40053434 RH: 40053436 |  |
| | U40MP-R40SE/ 200 mm | LH: 40051104 RH: 40051131 |  |
| | U30SE-R40SE/ 135 mm | LH: 40053037 RH: 40053195 |  |

| | | |
|---------------------|------------------------------|---|
| U30SE-R40SE/ 200 mm | LH: 40053425 RH: 40053429 |  |
| U30SE-R40SE/ 320 mm | LH: 40053020 RH: 40053173 |  |
| U40SE-R40SE/ 135 mm | LH: 40053543 RH: 40053578 |  |
| U40SE-R40SE/ 200 mm | LH: 40053590 RH: 40053591 |  |
| U50SE-R50SE/ 135 mm | LH: 40053455 RH: 40053495 |  |








Field installable options

Field installable options are simple assemblies that are pre-configured and available from stock. With the enclosed installation instructions, the options can be easily adapted and installed by the customer himself.


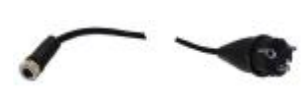





Depending on the customer's requirements, it is also possible to complete the labeler with retrofit (field installable) options in the control centre.

| Field installable options | Mat.-No. | Description | Figure |
|---|----------|---|---|
| Start impulse control light barrier adjustable | 32700070 | With bracket, mirror and T-rail (PNP) |  |
| Start impulse control reflex push-button adjustable | 32700071 | With holder and T-rail (PNP) |  |
| Start impulse output cable for external start | 35001812 | 5m cable with plug for connection to customer PLC. Open cable end |  |
| Low label warning | 40055882 | For connection to Alpha HSM unwinding mechanical. Axial scanning of the label roll. Signal available via alarm lamp and I/O interface. RH and LH compatible |  |
| 3-colored alarm lamp | 22702287 | Green, yellow, red light incl. cable. Lamp diameter 71mm, height 172mm, IP65, LED |  |



Technical information

| | | | |
|---------------------------------|----------|--|---|
| HMI display | 40035961 | Cable length: 1.9 m |  |
| Pusher roller 135 mm width | 40057146 | PU-roll diameter 40mm, length 140mm. For pushing the labels onto even product surfaces. |  |
| Pusher brush LH 135 mm width | 40057113 | Brush with bristle length 25mm, 140mm width. For pressing the labels onto uneven product surfaces. |  |
| Pusher brush RH 135 mm width | 40057227 | Brush with bristle length 25mm, 140mm width. For pressing the labels onto uneven product surfaces. |  |
| Pusher roller 200 mm width | 40057148 | PU-roll diameter 40mm, length 205mm. For pushing the labels onto even product surfaces. |  |
| Pusher brush 200 mm width | 40057121 | Brush with bristle length 25mm, 220mm width. For pushing the labels onto uneven product surfaces. |  |
| Pusher roller 250 mm width | 99999999 | PU-roll diameter 40mm, length xxxmm. For pushing the labels onto even product surfaces. | |
| Pusher brush 250 mm width | 99999999 | Brush with bristle length 25mm, xxxmm width. For pushing the labels onto uneven product surfaces. | |
| Pusher roller 320 mm width | 40057149 | PU-roll diameter 40mm, length 330mm. For pushing the labels onto even product surfaces. |  |

Technical information





| | | | |
|--|----------|--|---|
| Pusher brush 320 mm width | 40057127 | Brush with bristle length 25mm, 340mm width. For pushing the labels onto uneven product surfaces. |  |
| Power cord EU | 40056195 | Power cord for connection to Alpha HSM. Power cord length 3m. |  |
| Power cord USA | 40056196 | | |
| Power cord Switzerland | 40056197 | | |
| Mains cord open cable end | 40054680 | Power cord for connection between Alpha HSM and switching cabinet. Power cord length 10m |  |
| Operating instructions German | 99999999 | Operating instructions Alpha HSM. |  |
| Operating instructions English | 99999999 | | |
| Operating instructions French | 99999999 | | |
| Operating instructions Swedish | 99999999 | | |
| Operating instructions Dutch | 99999999 | | |
| Other languages on request | 99999999 | | |
| Connection cable to IO socket | 35002078 | 5m cable length, open cable end, 8-pole |  |
| Connection cable to IO socket | 35002080 | 10m cable length, open cable end, 8-pole |  |
| Terminal box for IO interface and product sensor | 32800034 | <p>Universal I/O terminal for Alpha Compact Rittal Box 200 x 150 x 80 according to circuit diagram</p> <ul style="list-style-type: none"> -M12, 8 pol. Cable, 5m, for I/O Interface X9 -M12, 4 pol. Cable, 5m, for product sensor connection X2 -3x screw connection M16,1x M25 |  |

Technical information

| | | | |
|--|----------|---|---|
| Filter control unit | 22800604 | It is also used with each pneumatic unit to filter the air and protect the pneumatics against impurities. |  |
| Bus system cable, PROFINET CAT5,4-pin, straight M12 plug, to straight M12 plug, cable length: 10 m | 40016740 | Network cable for Zero Down Time Function Alpha HSM, cable length 10m |  |
| cable M12, 4-pin 5m Profibus cable Socket/plug | 40038283 | Extension cable 5m for Alpha HSM Display | |

Factory installable options

Factory installable options are assemblies that must be combined and tested directly with the dispenser in the control center. They can also be retrofitted on site, but only by an experienced technician.

| Factory installable options | Mat. No. | Description | Figure |
|--|---------------------------------|---|---|
| Rotary encoder Rigid | 22702443 | Incl. holder, friction wheel, connection socket and cable. Rotary encoder with 1024ppr, cable length 2m |  |
| Rotary encoder Spring mounted bearing | 22702444 | Incl. holder, friction wheel, connection socket and cable. Rotary encoder with 1024ppr, cable length 2m |  |
| Additional cable lengths for rotary encoder | 40043035(5 m) 40043036(10 m) | Connection cable rotary encoder connector straight M12, 4-pin, to straight socket, M12, 4-pin, A-COD The standard cable of the encoder can be replaced by this cable here. |  |
| Connecting cable, PUR/PVC grey M12 coupling straight, 5-pin M12 plug straight Cable length 2m, shielded | 29802528 | Extension cable 2m for rotary encoder | |
| Splitter box rotary encoder | 40008094 | For connection of three Alpha HSM to a rotary encoder |  |

| | | |
|----------------------------|----------|---|
| Adapter cable start X1 Jet | 40048741 | Cable to start the X1 Jet over an Alpha HSM. Cable length 5m With power supply unit for the X1 Jet. Cable length 1.5m Connection: M12 5-pin to Aux Out Connection X1 Jet: Sub D 15 pin Power supply unit: Model: PA1015-120IB125 Input: 100-240V 50-60HZ 0,4A Output: 12V 1.25A 15W Max |
|----------------------------|----------|---|

Technical Specifications

HMI display

- Versatile four-line display (aluminium milled):
- Font height 5mm
- OLED display
- Multilingual
 - German
 - English
 - French
 - Spanish
 - Swedish
 - Polish
 - Czech
 - Portuguese
 - Dutch
- Full access to all configuration parameters
- Up to 10000 label formats can be stored
- Status display
- Current configuration data set
- Label counter
- "Countdown" counter
- Dimensions: 90x120x20mm (with rotary knob 35mm) (HxWxD)
- Weight: 430g
- Cable length: 1.9 m
- Turnable holder



External control PLC

The Bluhm Weber Group's HSM and Alpha Compact Plus labeling systems are equipped with an Ethernet interface. Via this interface it is possible to communicate with the labeling systems from a PLC.

It is therefore also possible to operate several labeling systems from a central operating panel, and to visualise the error messages of the labeling systems centrally.

Since the data assignment is identical for both labeling systems, the modules used can be used for each of the systems (HSM / Alpha Compact Plus). The data transfer is performed using the PUT/GET method.

The provided example is based on a CPU1214 from Siemens and was created with the TIA portal. In the example, two labeling systems are controlled. It is easily possible to integrate further labeling systems.

Function:

A function block is called up in the PLC program which controls the communication to a labeling system. Communication is performed via the PUT/GET procedure from Siemens. The function block which is utilized and provided by Bluhm Systeme is connected to an instance data block. This function module must be called up for each labeling system with which communication is to be carried out. The number of the instance data module is different for each call up. In addition, a send and a receive data block is required for each labeling system.

The data to be sent and the data to be received is stored in these blocks. These blocks can simply be copied and assigned a different DB number. The numbers of these data blocks must be stored in the corresponding labeling system.

Since it does not seem sensible to access all parameters of a labeling system, only the following settings are accessible:

- MAC-ID: Read MAC ID from system
- FW version: Read firmware version from the system
- Labeler RUN: Switching on the labeling system
- Labeler STOP: Switching off the labeling system
- Feed: Applying a label in the manual mode
- Calibrate: Performing a calibration procedure
- Speed offset: Influencing the speed of the labeling system
- Calibration offset: How far does the label extend beyond the peeler plate?
- Calibration length: Entry of the distance between gap sensor and peeler plate
- Distance double label: in preparation

Furthermore, the warnings and alarms of the labeling system are transmitted so that they can be visualised.

I/O Interface

The I/O signal interface provides inputs and outputs to a higher-level controller (e.g. PLC). The connection is established as a 8-pin M12 socket.

Pin assignment:

1. Output signal: **Ready**, (n.o.) max:100mA, max. 30V
2. Output signal: **Label end warning**, (n.o.) max. 100mA, max. 30V
3. Output signal: **Sync**, (n.o.) max:100mA, max. 30V
4. Input signal: **Start** max. 10mA, Low < 3VDC, High > 15VDC
5. Com input signal
6. Com output signal
7. +24V
8. GND (ground)



*All outputs supplied via 24V may consume a max. of 250mA together.

Ramp setting

Currently 10mm is set, if necessary a change to the respective application is possible.

Skip function

The skip function allows a maximum of three labels in a row to be missing on the carrier material. The gap created is compensated by the control system, so that the application process is not affected by the gap. The number of missing labels can be set in the configuration. If more labels are missing in a row than are set in the configuration parameters, this can no longer be compensated for and the system will switch to the failure mode. Several gaps may also exist between the peel bar and the label detection sensor.

Rotary encoder

For optimum labeling results, the application speed must correspond to the product transport speed. If the products are always fed to the Alpha Compact Plus labeler at the same speed, a fixed setting of the application speed is sufficient. If the product transport speed varies, the label application speed must be synchronized by means of a rotary encoder.



Devices with HTL interface are suitable as rotary encoders for the Alpha Compact Plus. (24V DC, Push Pull Output)

Not suitable are TTL outputs (5V logic).

The rotary encoder must be parameterized either from the HMI display or via PC software. Therefore, it is imperative that the customer owns at least one HMI display or the software.

Product sensor

Product sensor 1 is set to PNP. To change over to NPN, only the setting of the machine parameters must be changed from PNP to NPN.

Dispenser function

A HMI is required to set the labeler for the first time. The labeler can then also be operated without HMI. The parameters are stored in the controller, so that an HMI is only required to change these parameters.

For example, a customer can control his 5 labelers with a single HMI. Once he has set up a labeler using HMI, he simply disconnects it and the system will continue to run without HMI. This can then be repeated with the other 4 labelers. If he wants to change the settings of a labeler, he must simply connect the HMI to this labeler and can then perform the parameterization.

Calibration

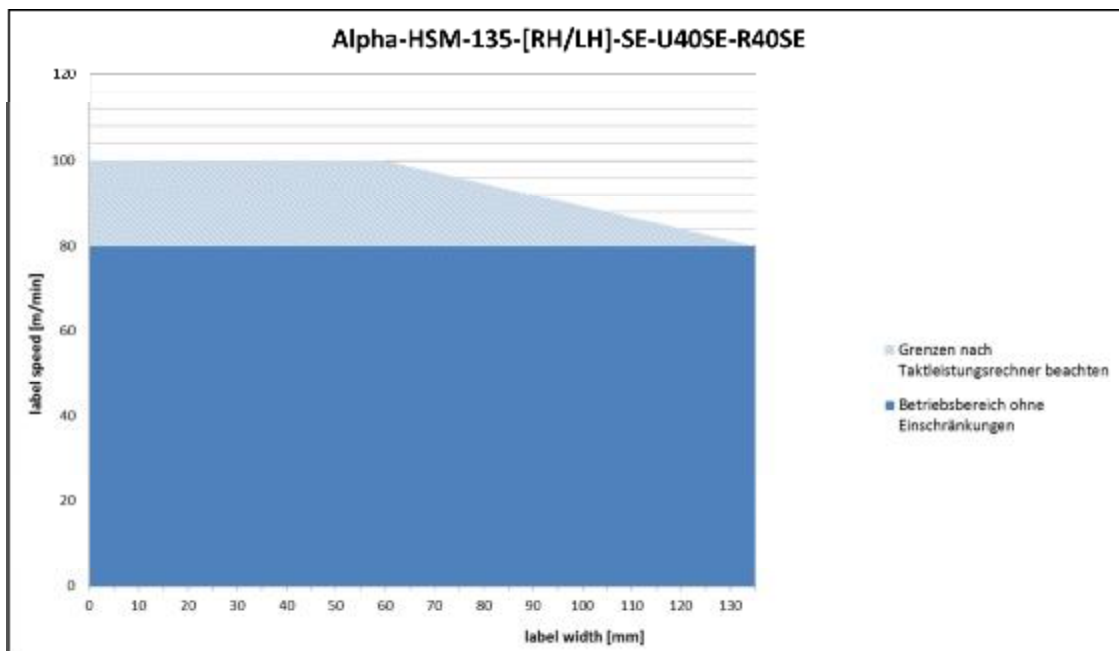
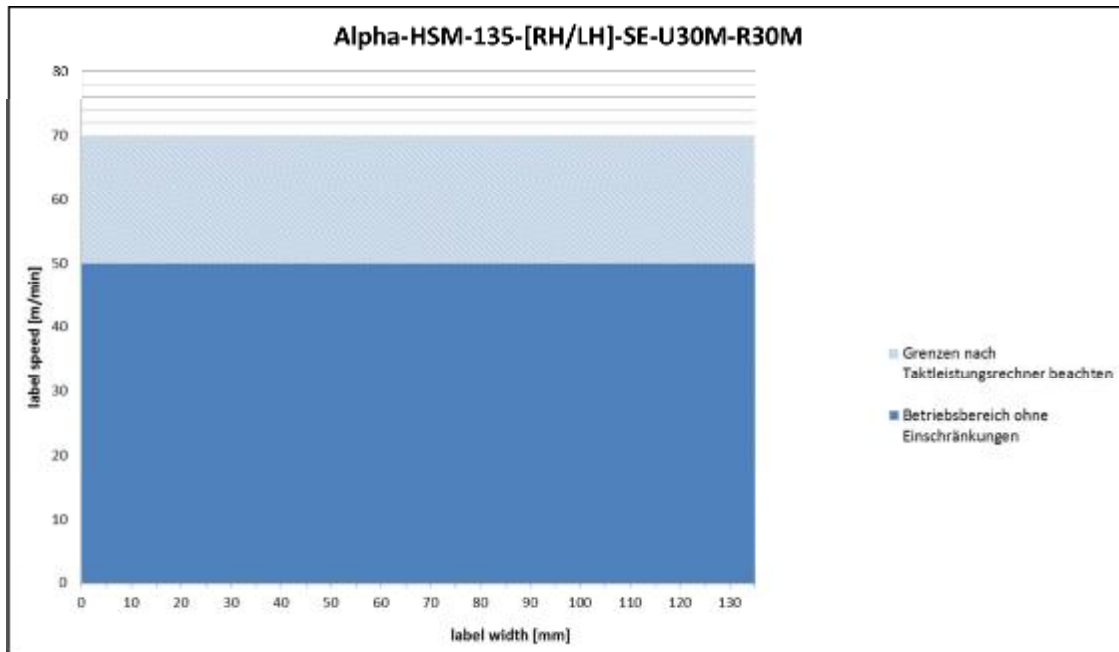
When changing the label size, a label calibration is necessary. By simply pressing a button, several labels are automatically advanced and all the necessary parameters are stored safely and quickly.

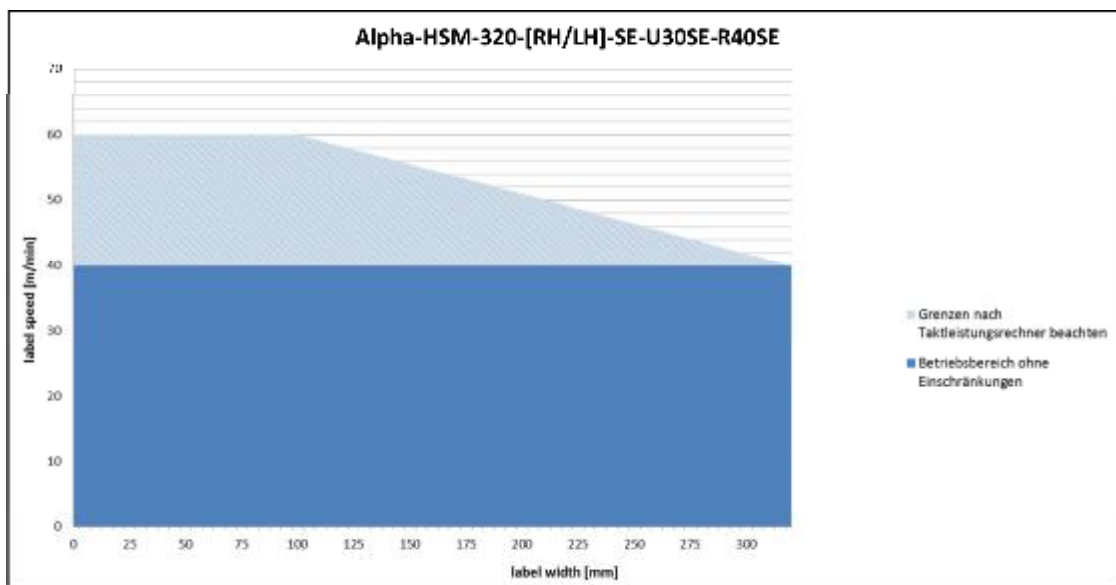
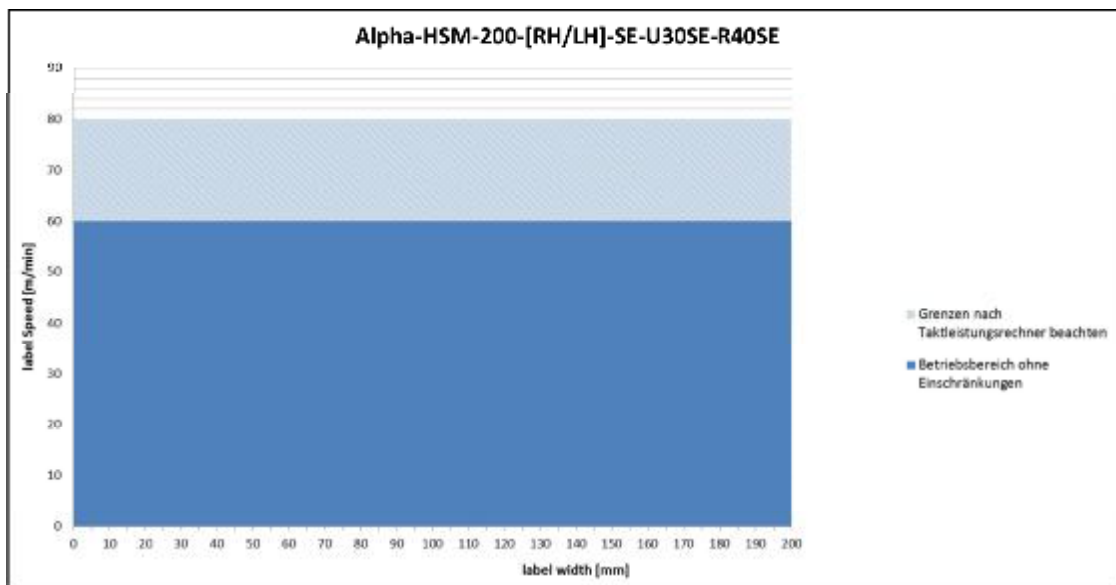
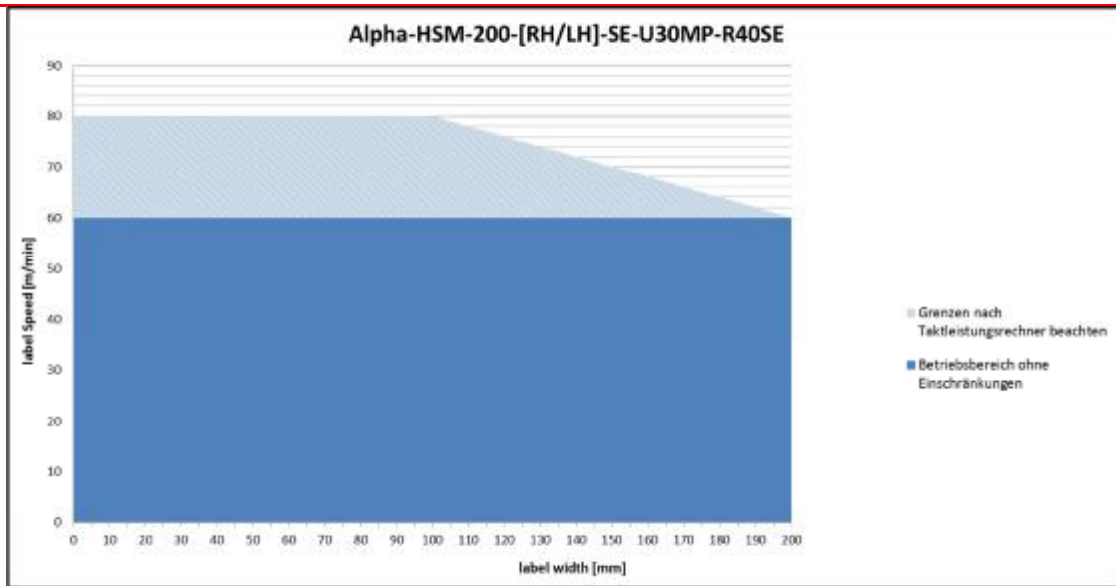
If a label roll of the same size is changed, a calibration will no longer be necessary. Here, it is sufficient to manually dispense a few labels so that the position of the labels corresponds to the default setting.



Performance diagram

The performance diagrams refer to the five pre-configured labelers in the price list. In the case of the limited operating range, there will be performance data restrictions depending on the label size. Here, please observe the limits pursuant to the cycle performance calculator or request a practical test by the development department. Labeler adaptations such as offset applications lead to a reduction in performance.





Minimum label distance on the product

The minimum label distance on the product is the predefined label gap.

Zero Down Time and alternating operation

For these two operating modes, there are two labelers in the production line in succession, which are connected to each other via their network connection.

The Zero Down Time function guarantees continuous labeling of all products in the event of a system failure, such as the end of a label roll.

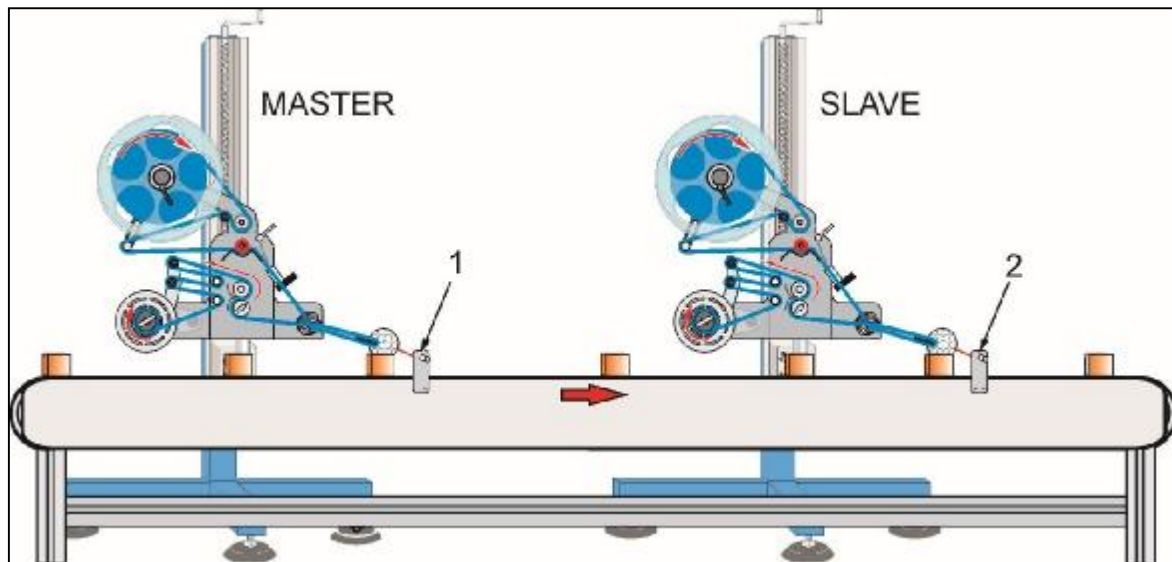
The alternating operation guarantees a fast system set-up time with a uniform loading of both labelers. In the event of a system failure, however, not all products will be labelled, i.e. zero down time mode is not possible in the alternating operation.

Description:

In the production direction, the front labeler is the Master System and the rear labeler is the Slave System.

The master system permanently reports the status of the products detected by the first product sensor to the slave system. The products are thereby not only counted, but the slave system also receives information as to whether a product has already been labelled by the master system or not. The position of each product is tracked by the rotary encoder attached to the conveyor system.

If the master system stops while production is running (e.g. end of roll), it is automatically switched over to the slave system and thus prevents labeling disruptions.



| No. | Designations |
|--------|---------------------------------------|
| MASTER | ACTIVE LABELER |
| SLAVE | STANDBY LABELER |
| 1 | PRODUCT SENSOR 1 TO THE MASTER SYSTEM |

2 PRODUCT SENSOR 2 TO THE SLAVE SYSTEM

Function:

Product sensor 1 detects the product which is then labelled by the master system. The slave system receives a corresponding information and ignores the already labeled product if this is detected by the product sensor 2.

or

Product sensor 1 detects a product that is not labelled by the master system (e.g. end of roll). The slave system receives the corresponding information and expects the product sensor 2 to detect the product after a certain distance; the slave system then labels the product.

When controlled by a PLC, both labelers also require a start signal for each product, as it is normally provided by the product sensors. This means that if a product is at the dispensing edge of the master system, the master system receives a start signal. If the same product reaches the dispensing edge of the slave system, the slave labeler also receives a start signal.

An unlabeled product can be introduced into the conveyor system not only before the master system but also before the slave system (between the labelers). The slave system then labels this product because no information has been sent from the master system.

The individual operating states of the labelers can be displayed via a 3-colour signal lamp.

Prerequisites:

- Two labelers.
- Both labelers receive their start signal via their own product sensor or via the PLC (connection of the labelers with the PLC is performed via the respective product sensor input).
- Connection of the labelers via network connection (X20 Ethernet).
- A rotary encoder that is connected to both labelers by means of a splitter box or... one separately connected rotary encoder per labeler.

Twin label mode

In the Twin-Label mode, two labels of different lengths can be applied one after the other on the label liner with a trigger signal (e.g. on the front and back of a product). This arrangement (short-long label or long-short label) must be repeated continuously. The Twin Label mode can also be used with two labels of the same length.

IMAGE

Limiting disc for 40mm core diameter

Optionally, it is also possible to process label rolls with a mechanical unwinding with a core diameter of 40 mm. For this purpose there is a 99999999 assembly, which can be purchased in addition to the actual unwinder. This assembly is the inner limiter disc of the unwinder unit, which is provided with a mandrel so that label rolls with cardboard core can be clamped. The mandrel is 25mm long, so the cardboard core must also be at least 25mm wide.

The outer limiter disc does not change.

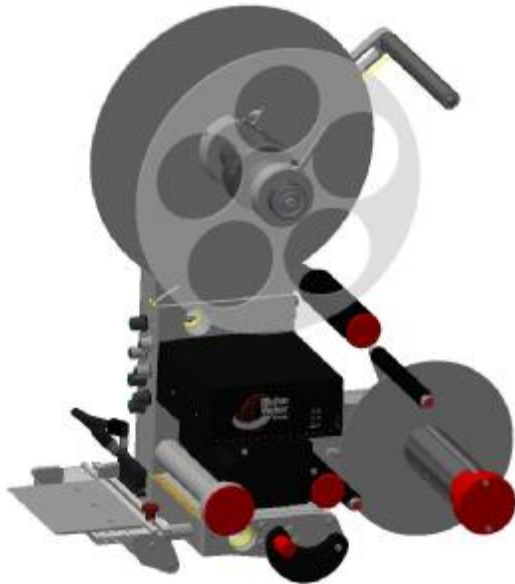
Instructions for processing label rolls with a 40mm core:

The full performance of the Alpha may not be achieved.

Especially at the end of the label roll, the labels can have a strong pre-curvature. This can cause problems both in the wipe on process and in combination with an applicator. The label may not be advanced correctly on the tamp, or the vacuum is not sufficient to hold the curved label on the tamp.



Alpha HSM



Technical Specifications

| | |
|------------------------------------|---|
| Label size: | Min. 10 x 10 mm (W x H) Max. 320 x 2000 mm (W x H) also higher label lengths can be used at a reduced speed or cycle rate Minimum label gap 3mm |
| Label rolls, outside diameter: | Maximum roll Ø = 500 mm; maximum running length = 1200 running metres (for label material 3105) Core Ø= 76 mm (3 ") for other core Ø see the individual modules |
| Maximum application rate: | Up to 2000 cycles/min (depending on label size and configuration) |
| Maximum throughput width: | = Labeler width + 4mm (Example: Alpha HSM 135 = max. 139mm throughput width) |
| Application accuracy | +/- 0.3 mm (relative to the repetition accuracy at the peeler bar) |
| Maximum application speed: | 150 m/min (higher speeds on request), depending on label format and configuration |
| Max. dimensions: (H x W x D in mm) | Dimensions see configurations |
| Weight: | 16-48kg depending on configuration (without label roll) |
| Power connection: | 90 ~ 240 V / 47 ~ 63 Hz |
| Power consumption: | 300-900 watts depending on the configuration |
| Ambient temperature: | 0 – 42 °C |
| Ambient conditions: | 10 - 95% relative humidity (non-condensing) |
| Protection class: | IP 65 |
| Enclosure: | Aluminium |

Special features:

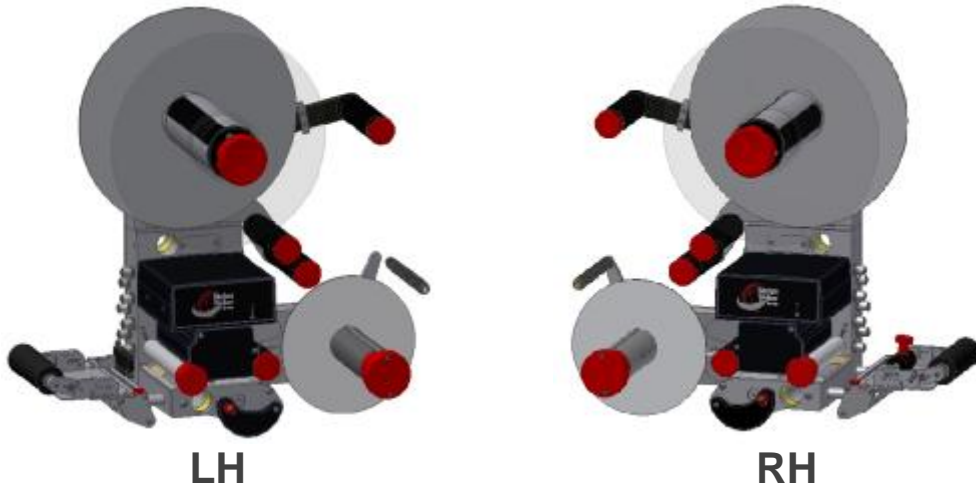
- Belt speeds up to 150m/min (depending on the configuration)
- Cycle performance up to 2000 labels/min (depending on configuration)
- Label length up to 2000mm (depending on configuration)
- IP65
- Modular construction kit (widths from 135 to 320mm)
- Label roll outside diameter up to 500mm (depending on configuration)
- Three different user interfaces:
 - OLED Display
 - External control (PLC customer)
 - § PLC module for Siemens
 - Web-based control
 - § Direct access to service portal
 - § Direct access to help videos
 - § Production statistics
- Simple parameterization
 - Up to 10,000 different product parameters can be stored
- Integrated roll end and web end function depending on configuration
- High rigidity over all working widths
- Combination with other printing technologies (MOP, Linx, TTO)
- Integrated Zero Down Time function or the alternating operation
- Optionally all setting options are reproducible

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Naming

- Left and right version as the print and apply systems



- Notation:

[Alpha Name System]-[label width in mm]-[alignment]-[tech. characteristic, for example, drive type]-[CE conformity]

Example: Alpha HSM-135-LH-SE-U30M-R30M-CC

Module overview

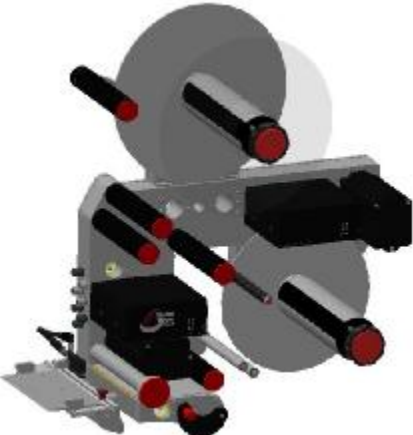
| Module | | Label width | | | |
|-------------------------------|-------------------------------|-------------|--------|--------|--------|
| | | 135 mm | 200 mm | 250 mm | 320 mm |
| Drive unit | | | | | |
| | Servo drive | ü | ü | *(ü) | ü |
| Unwinder | | | | | |
| | 300mm Mechanical | ü | ü | ü | ü |
| | 300mm Mechanical Performance | ü | ü | *(ü) | ü |
| | 400mm Mechanical Performance | ü | ü | ü | ü |
| | 300mm Motorised (servo) | ü | ü | *(ü) | ü |
| | 400mm Motorised (servo) | ü | ü | ü | ü |
| | 500mm Motorised (servo) | ü | ü | ü | ü |
| Lose loop pre-unwinder | | | | | |
| | Shuttle | *(ü) | ü | ü | ü |
| | Air Loop | *(ü) | ü | ü | ü |
| Rewinder | | | | | |
| | 300mm Mechanical | ü | ü | ü | ü |
| | 400mm Motorised (servo) | ü | ü | *(ü) | ü |
| | 500mm Motorised (servo) | ü | ü | ü | ü |
| Adapter | | | | | |
| | Adapter | ü | ü | *(ü) | ü |
| Application | | | | | |
| | Fixed peeler plate | ü | ü | *(ü) | ü |
| | Swivelling peeler plate | *(ü) | *(ü) | *(ü) | *(ü) |
| | Pneum. peeler plate | *(ü) | *(ü) | *(ü) | ü |
| | Fixed peeler plate adjustable | *(ü) | *(ü) | *(ü) | *(ü) |
| Label detection | | | | | |
| | Standard labels | ü | ü | *(ü) | ü |
| | Transparent labels | ü | ü | *(ü) | ü |

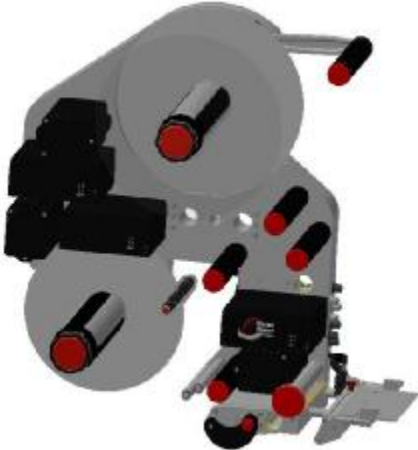
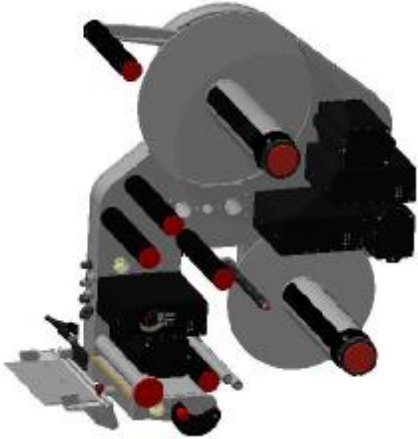

*Modules in brackets are currently not yet available

Pre-configured Alpha HSM variants

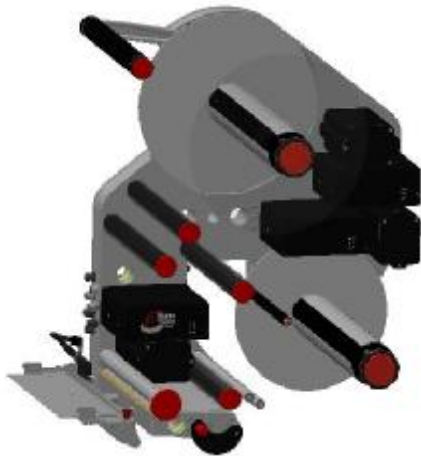
The following preconfigured dispensers are included in the price list. Here, you can also select the label recognition.

| Version | Mat.-No. | Description |
|---------|----------|--|
| | 40057980 | Alpha HSM-135-RH-SE-U30M-R30M-CC <ul style="list-style-type: none"> - Working width 135mm - Right version - speed 0-50m/min (without restriction), up to 70m/min on request - Wipe On peeler plate, 160mm long, rigid - Mechanical unwinding for label rolls up to Ø 300mm - Mechanical winding for label rolls up to Ø 300mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Low label warning Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
| | 40057979 | Alpha HSM-135-LH-SE-U30M-R30M-CC <ul style="list-style-type: none"> - Working width 135mm - Left version - speed 0-50m/min (without restriction), up to 70m/min on request - Wipe On peeler plate, 160mm long, rigid - Mechanical unwinding for label rolls up to Ø 300mm - Mechanical winding for label rolls up to Ø 300mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Low label warning Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
| | 40058058 | Alpha-HSM-135-RH-SE-U40SE-R40SE-CC <ul style="list-style-type: none"> - Working width 135mm - Right version - Speed 0-80m/min (without restriction), up to 100m/min on request - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 400mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |

| Version | Mat.-No. | Description |
|---|----------|--|
|  | 40058057 | <p>Alpha-HSM-135-LH-SE-U40SE-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 135mm - Left version - Speed 0-80m/min (without restriction), up to 100m/min on request - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 400mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
|  | 40058120 | <p>Alpha-HSM-200-RH-SE-U30MP-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 200mm - Right version - Speed 0-60m/min (without restriction) - Wipe On peeler plate, 160mm long, rigid - Unwinding mechanically for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
|  | 40058119 | <p>Alpha-HSM-200-LH-SE-U30MP-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 200mm - Left version - Speed 0-60m/min (without restriction) - Wipe On peeler plate, 160mm long, rigid - Unwinding mechanically for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |

| Version | Mat.-No. | Description |
|---|----------|--|
|  | 40058155 | <p>Alpha-HSM-200-RH-SE-U30SE-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 200mm - Right version - Speed 0-60m/min (without restriction), up to 80m/min on request - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
|  | 40058154 | <p>Alpha-HSM-200-LH-SE-U30SE-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 200mm - Left version - Speed 0-60m/min (without restriction), up to 80m/min on request - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |
|  | 40058162 | <p>Alpha-HSM-320-RH-SE-U30SE-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 320mm - Right version - Speed 0-40m/min (without restriction) - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |

| Version | Mat.-No. | Description |
|---------|----------|---|
| | 40058161 | <p>Alpha-HSM-320-LH-SE-U30SE-R40SE-CC</p> <ul style="list-style-type: none"> - Working width 320mm - Left version - Speed 0-40m/min (without restriction) - Wipe On peeler plate, 160mm long, rigid - Unwinding by servo motor for label rolls up to Ø 300mm incl. low label warning and web end function - Rewinding by servo motor for label rolls up to Ø 400mm - Connection option for: <ul style="list-style-type: none"> HMI display Product detector (PNP o. NPN easy to set) Alarm lamp Rotary encoder I/O signal interface Network connection (Ethernet) Aux Out for: Pneumatic dispensing, marco print printer Aux In for: Product detector 2, strip breakage sensor |



Modular design Alpha HSM

In modular design, the Alpha HSM is disassembled into its individual modules depending on the width. Depending on the customer's requirements, it can then be assembled according to customer specifications using the configurator.

The basic modules consist of:

- Drive module
- Label detection
- Dispensing
- Unwinder
- Rewinder
- Adapter

In addition to these basic modules, it is of course still possible to select the appropriate retrofit (field installable) or factory installable options.

The Alpha HSM configured from the modules is then assembled, tested and shipped in the factory according to customer specifications.

The rules that govern which modules are combinable in what manner, can be found on the individual modules.

Here are some examples of combinations:

- 1) Customer requests an Alpha HSM, 135mm width, LH, Wipe On rigid dispensing, optical label detection, roll diameter 500mm
 - ☐ The modular design must be selected here, as there is no standard labeler from the price list.
 - ☐ You therefore select from the module drive module 135mm width LH (40053566), from the module label detection the optical sensor LH (40046880), from the module unwinder Servo LH in 135mm width (40053160), from the module dispensing rigid 135mm width LH (40053547), from the module rewinder Servo LH (40053224) and from the module adapter U50SE/R50SE LH (40053455).
 - ☐ In the options the possible additions such as power cable, HMI display and other options must also be selected.

-----IMAGE-----

- 2) Customer requests an Alpha HSM, 200mm width, LH, Wipe On rigid dispensing, optical label detection, roll diameter 400mm
 - ☐ The modular design must be selected here, as there is no standard labeler from the price list.
 - ☐ You would therefore select from the module drive module 200mm width LH (40053567), the optical sensor LH (40046880) from the module label detection, from the module mechanical unwinder Performance LH in 200mm width (40051007), from the rigid dispense module 200mm wide LH (40053548), rewinder Servo LH (40053399), and from the module adapter U40MP/R40SE LH (40051104).
 - ☐ In the options the possible additions such as power cable, HMI display and other options must also be selected.

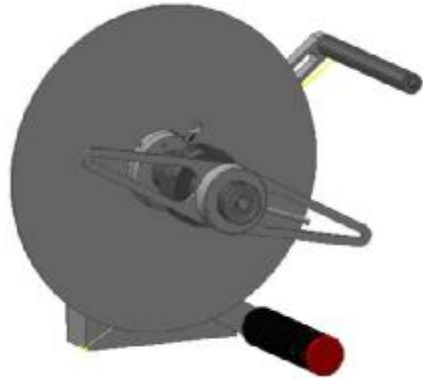
-----IMAGE-----

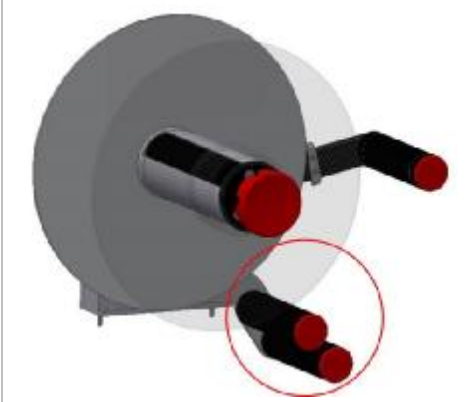
Module

Drive unit module


| Module: | | Drive unit servo | | | |
|--|--|------------------------------|------------------------------|------------------------------|------------------------------|
| Image: | | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive] Example: Drive module HSM-135-RH-SE</p> | | | | |
| Function group abbreviation: | SE | | | | |
| Basic data text: | Servo drive module Module width: 135 mm/ 200mm/ 250mm/ 320mm Alignment: Left/right version Connection socket Power Connection socket HMI Connection socket Label recognition Connection socket Product detector Connection socket Rotary encoder Connection socket Alarm lamp Connection socket I/O signal interface Connection socket Network connection (Ethernet 10/100) Connection socket Aux Out for: Pneumatic dispensing, marco print printer Connection socket Aux In for: Product detector 2, strip breakage sensor | | | | |
| | | 135 mm | 200 mm | 250 mm | 320 mm |
| Material number: | | LH: 40053566 RH: 40053565 | LH: 40053567 RH: 40052696 | LH: 99999999 RH: 99999999 | LH: 40053568 RH: 40052697 |
| Performance data: | Max. Label width: | 135 mm | 200 mm | 250 mm | 320 mm |
| | Max. Label length: | --- | --- | ??? | --- |
| | Max. application speed: | 200 m/min | 80 m/min | ??? | 40 m/min |
| | Max. Cycle performance | 2000 cycles/min | 1400 cycles/min | ??? | 930 cycles/min |
| Special features/application criteria: | <ul style="list-style-type: none"> • Reproducible adjustment of the band brake • A power cord must be added | | | | |

Module unwinder

| Module: | | Unwinding mechanical | | | |
|--|--|----------------------------------|--|--|--|
| Image: |  | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive] Example: Unwinder-HSM-135-30-RH-M</p> | | | | |
| Function group abbreviation: | U30M | | | | |
| Basic data text: | Module unwinder mechanical Module width: 135 mm Alignment: Left/right version Max. label roll diameter: 300mm Core diameter: 76mm | | | | |
| | | Width:135mm Ø: 300 mm | | | |
| Material number: | | LH: 40050602 RH: 40052907 | | | |
| Performance data: | Max. Label width: | 135 mm | | | |
| | Min. Label width: | 10 mm | | | |
| | Max. Label length: | 300mm | | | |
| | Max. application speed | 50-70 m/min | | | |
| | Max. Cycle performance | 600 cycles/min | | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Roller transport by metal blades • Label roll core Ø 40mm/ 50mm/ 76.2mm possible • Low label warning is an option • Can be combined with the following rewinder: <ul style="list-style-type: none"> ○ R30M rewinder mechanical (LH 40051527/ RH 40051750) | | | | |

| Module: Unwinder Mechanical Performance | | | | | |
|---|---|--------|--|--|--|
| Image: |  | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</p> <p>Example: Unwinding-HSM-135-30-RH-MP Unwinding-HSM-135-30-LH-MP</p> | | | | |
| Function group abbreviation: | U30MP | | | | |
| Basic data text: | <p>Module unwinder mechanical performance</p> <p>Module width: 135 mm</p> <p>Alignment: Left/right version</p> <p>Max. label roll diameter: 300mm</p> <p>Core diameter: 76mm</p> | | | | |
| | Width: 135mm Ø: 300 mm | | | | |
| Material number: | <p>LH: 40053181</p> <p>RH: 40053169</p> | | | | |
| Performance data: | Max. Label width: | 135 mm | | | |
| | Min. Label width: | 20 mm | | | |
| | Max. Label length: | 450 mm | | | |
| | Max. application speed | ??? | | | |
| | Max. Cycle performance | ??? | | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Roller drive through mechanical core clamping • Integrated low label warning and web end function • Label roll core Ø 76.2mm • Can be mounted directly on the drive module <ul style="list-style-type: none"> ○ additional deflection rollers available • Can be combined with the following rewinder: <ul style="list-style-type: none"> ○ R30M rewinder mechanical (LH 40051527/ RH 40051750) | | | | |

Module: Unwinder Mechanical Performance

| | | | | | |
|---|--|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Image: |  | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive] Example: Unwinder-HSM-135-30-RH-MP Unwinder-HSM-135-40-LH-MP</p> | | | | |
| Function group abbreviation: | U30MP U40MP | | | | |
| Basic data text: | Module unwinder mechanical performance Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version Max. label roll diameter: 300mm/ 400 mm Core diameter: 76mm | | | | |
| | | Width:135mm Ø: 300 mm | Width:200mm Ø: 300 mm | Width:250mm Ø: 300 mm | Width:320mm Ø: 300 mm |
| Material number: | | LH: 40053420 RH: 40053421 | LH: 40053428 RH: 40053431 | LH: 99999999 RH: 99999999 | LH: 40052965 RH: 40052965 |
| Performance data: | Max. Label width: | 135 mm | 200 mm | 250 mm | 320 mm |
| | Min. Label width: | 20 mm | 20 mm | 20 mm | 20 mm |
| | Max. Label length: | 450 mm | 450 mm | 450 mm | 450 mm |
| | Max. application speed | ??? | 60-80m/min | ??? | ??? |
| | Max. Cycle performance | ??? | 1350 cycles/min | ??? | ??? |
| | | Width:135mm Ø: 400 mm | Width:200mm Ø: 400 mm | | |
| Material number: | | LH: 40053062 RH: 40053063 | LH: 40051007 RH: 40051685 | | |
| Performance data: | Max. Label width: | 135 mm | 200 mm | | |
| | Min. Label width: | 20 mm | 20 mm | | |
| | Max. Label length: | 450 mm | 450 mm | | |
| | Max. application speed | ??? | ??? | | |
| | Max. Cycle performance | ??? | ??? | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Roller drive through mechanical core clamping • Integrated low label warning and web end function • Label roll core Ø 76.2mm • can only be used in connection with the adapter module • Can be combined with the following rewinder: <ul style="list-style-type: none"> ○ R40SE rewinder servo motorized | | | | |

Module: Unwinder servo motorized


| | |
|------------------------------|---|
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive] Example: Unwinder-HSM-135-30-RH-SE</p> |
|------------------------------|---|

| | |
|-------------------------------------|-------------------------|
| Function group abbreviation: | U30SE U40SE U50SE |
|-------------------------------------|-------------------------|

| | |
|-------------------------|--|
| Basic data text: | Module Unwinder Motorized Servo Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version Max. label roll diameter: 300mm/ 400mm/ 500 mm Core diameter: 76mm |
|-------------------------|--|

| | | | | | |
|--|--|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | | Width:135mm Ø: 300 mm | Width:200mm Ø: 300 mm | Width:250mm Ø: 300 mm | Width:320mm Ø: 300 mm |
|--|--|----------------------------------|----------------------------------|----------------------------------|----------------------------------|

| | | | | | |
|-------------------------|--|------------------------------|------------------------------|------------------------------|------------------------------|
| Material number: | | LH: 40053409 RH: 40053411 | LH: 40053412 RH: 40053413 | LH: 99999999 RH: 99999999 | LH: 40053081 RH: 40048685 |
|-------------------------|--|------------------------------|------------------------------|------------------------------|------------------------------|

| | | | | | |
|--------------------------|------------------------|-----------------|-----------------|---------|----------------|
| Performance data: | Max. Label width: | 135 mm | 200 mm | 250 mm | 320 mm |
| | Min. Label width: | 20 mm | 20 mm | 20 mm | 20 mm |
| | Max. Label length: | 2000 mm | 2000 mm | 2000 mm | 2000 mm |
| | Max. application speed | 80-100 m/min | 60-80 m/min | ??? | 40-60 m/min |
| | Max. Cycle performance | 2000 cycles/min | 1400 cycles/min | ??? | 930 cycles/min |

| | |
|---|--|
| Special features/application criteria: | <ul style="list-style-type: none"> • Roller drive through mechanical core clamping • Integrated low label warning and web end function • Label roll core Ø 76.2mm • can only be used in connection with the adapter module • Can be combined with the following rewinder: <ul style="list-style-type: none"> ○ R40SE rewinder servo motorized |
|---|--|

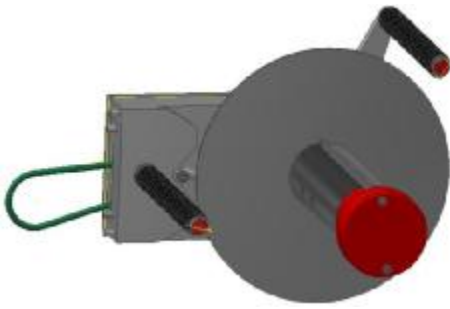
| | | | | | |
|--|--|----------------------------------|----------------------------------|----------------------------------|--|
| | | Width:135mm Ø: 400 mm | Width:200mm Ø: 400 mm | Width:135mm Ø: 500 mm | |
|--|--|----------------------------------|----------------------------------|----------------------------------|--|


| | | | | | |
|-------------------------|--|------------------------------|------------------------------|------------------------------|--|
| Material number: | | LH: 40052394 RH: 40053102 | LH: 40053417 RH: 40053418 | LH: 40053160 RH: 40053327 | |
|-------------------------|--|------------------------------|------------------------------|------------------------------|--|

| | | | | | |
|--------------------------|------------------------|-----------------|---------|---------|--|
| Performance data: | Max. Label width: | 135 mm | 200 mm | 135 mm | |
| | Min. Label width: | 20 mm | 20 mm | 20 mm | |
| | Max. Label length: | 2000 mm | 2000 mm | 2000 mm | |
| | Max. application speed | 80-100 m/min | ??? | ??? | |
| | Max. Cycle performance | 2000 cycles/min | ??? | ??? | |

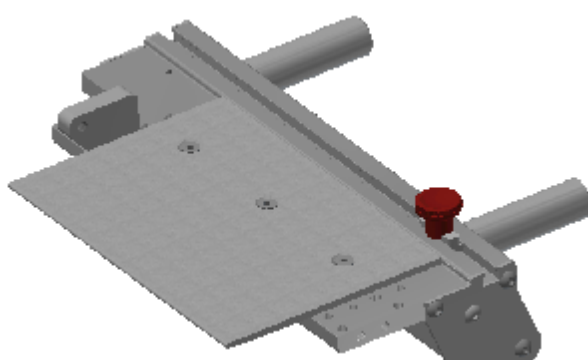
| | |
|---|---|
| Special features/application criteria: | <ul style="list-style-type: none"> • Roller drive through mechanical core clamping • Integrated low label warning and web end function • Label roll core Ø 76.2mm • can only be used in connection with the adapter module • Can be combined with the following rewinder: <ul style="list-style-type: none"> ○ R40SE or R50SE rewinder Motorized Servo |
|---|---|

Module rewinder

| Module: Rewinder mechanical | | | | | |
|--|---|----------------|--|--|--|
| Image: |  | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</p> <p>Example: Rewinder-HSM-135-30-LH-M</p> | | | | |
| Function group abbreviation: | R30M | | | | |
| Basic data text: | <p>Module rewinder mechanical</p> <p>Module width: 135 mm</p> <p>Alignment: Left/right version</p> <p>Max. label roll diameter: 300mm or 450 running metres carrier material</p> | | | | |
| | Width: 135mm Ø: 300 mm | | | | |
| Material number: | <p>LH: 40051527</p> <p>RH: 40051750</p> | | | | |
| Performance data: | Max. Label width: | 135 mm | | | |
| | Max. Label length: | 300mm | | | |
| | Max. application speed | 50-70 m/min | | | |
| | Max. Cycle performance | 600 cycles/min | | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • No cardboard core necessary • Can be combined with the following unwinder: <ul style="list-style-type: none"> ○ U30M unwinding mechanical or U30MP unwinder mechanical performance | | | | |

| Module: Rewinder servo motorized | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------|--------------|--------------|--------------------|--------|--------------------|---------|------------------------|--------|--------|------------------------|------------------------|-------------|-----|-------------|------------------------|-----------------|-----------------|-----|----------------|
| Image: |  | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</p> <p>Example: Rewinder-HSM-200-40-RH-SE Rewinder-HSM-135-50-RH-SE</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
| Function group abbreviation: | <p>R40SE R50SE</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basic data text: | <p>Module Rewinder Motorized Servo Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version Max. label roll diameter: 400mm or 800 running metre carrier material / 500mm or 1200 running metre carrier material</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th></th> <th>Width:135mm Ø: 400 mm</th> <th>Width:200mm Ø: 400 mm</th> <th>Width:250mm Ø: 400 mm</th> <th>Width:320mm Ø: 400 mm</th> </tr> </thead> </table> | | Width:135mm Ø: 400 mm | Width:200mm Ø: 400 mm | Width:250mm Ø: 400 mm | Width:320mm Ø: 400 mm | | | | | | | | | | | | | | | | | | | | |
| | Width:135mm Ø: 400 mm | Width:200mm Ø: 400 mm | Width:250mm Ø: 400 mm | Width:320mm Ø: 400 mm | | | | | | | | | | | | | | | | | | | | | | |
| Material number: | <table border="1"> <tbody> <tr> <td>LH: 40053380</td> <td>LH: 40053399</td> <td>LH: 99999999</td> <td>LH: 40052770</td> </tr> <tr> <td>RH: 40053393</td> <td>RH: 40053405</td> <td>RH: 99999999</td> <td>RH: 40052771</td> </tr> </tbody> </table> | LH: 40053380 | LH: 40053399 | LH: 99999999 | LH: 40052770 | RH: 40053393 | RH: 40053405 | RH: 99999999 | RH: 40052771 | | | | | | | | | | | | | | | | | |
| LH: 40053380 | LH: 40053399 | LH: 99999999 | LH: 40052770 | | | | | | | | | | | | | | | | | | | | | | | |
| RH: 40053393 | RH: 40053405 | RH: 99999999 | RH: 40052771 | | | | | | | | | | | | | | | | | | | | | | | |
| Performance data: | <table border="1"> <tbody> <tr> <td>Max. Label width:</td> <td>135 mm</td> <td>200 mm</td> <td>250 mm</td> <td>320 mm</td> </tr> <tr> <td>Min. Label width:</td> <td>20 mm</td> <td>20 mm</td> <td>20 mm</td> <td>20 mm</td> </tr> <tr> <td>Max. Label length:</td> <td>1000 mm</td> <td>1000 mm</td> <td>400 mm</td> <td>400 mm</td> </tr> <tr> <td>Max. application speed</td> <td>80-100 m/min</td> <td>60-80 m/min</td> <td>???</td> <td>40-60 m/min</td> </tr> <tr> <td>Max. Cycle performance</td> <td>2000 cycles/min</td> <td>1400 cycles/min</td> <td>???</td> <td>930 cycles/min</td> </tr> </tbody> </table> | Max. Label width: | 135 mm | 200 mm | 250 mm | 320 mm | Min. Label width: | 20 mm | 20 mm | 20 mm | 20 mm | Max. Label length: | 1000 mm | 1000 mm | 400 mm | 400 mm | Max. application speed | 80-100 m/min | 60-80 m/min | ??? | 40-60 m/min | Max. Cycle performance | 2000 cycles/min | 1400 cycles/min | ??? | 930 cycles/min |
| Max. Label width: | 135 mm | 200 mm | 250 mm | 320 mm | | | | | | | | | | | | | | | | | | | | | | |
| Min. Label width: | 20 mm | 20 mm | 20 mm | 20 mm | | | | | | | | | | | | | | | | | | | | | | |
| Max. Label length: | 1000 mm | 1000 mm | 400 mm | 400 mm | | | | | | | | | | | | | | | | | | | | | | |
| Max. application speed | 80-100 m/min | 60-80 m/min | ??? | 40-60 m/min | | | | | | | | | | | | | | | | | | | | | | |
| Max. Cycle performance | 2000 cycles/min | 1400 cycles/min | ??? | 930 cycles/min | | | | | | | | | | | | | | | | | | | | | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Rewinder with and without cardboard core possible • can only be used in connection with the adapter module • Can be combined with the following unwinding: U30MP/U40MP unwinder mechanical performance or U30SE/U40SE unwinder motorized servo | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th></th> <th>Width:135mm Ø: 500 mm</th> <th></th> <th></th> <th></th> </tr> </thead> </table> | | Width:135mm Ø: 500 mm | | | | | | | | | | | | | | | | | | | | | | | |
| | Width:135mm Ø: 500 mm | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material number: | <table border="1"> <tbody> <tr> <td>LH: 40053224</td> <td></td> <td></td> <td></td> </tr> <tr> <td>RH: 40053233</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> | LH: 40053224 | | | | RH: 40053233 | | | | | | | | | | | | | | | | | | | | |
| LH: 40053224 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RH: 40053233 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Performance data: | <table border="1"> <tbody> <tr> <td>Max. Label width:</td> <td>135 mm</td> <td></td> <td></td> </tr> <tr> <td>Min. Label width:</td> <td>20 mm</td> <td></td> <td></td> </tr> <tr> <td>Max. Label length:</td> <td>400 mm</td> <td></td> <td></td> </tr> <tr> <td>Max. application speed</td> <td>???</td> <td></td> <td></td> </tr> <tr> <td>Max. Cycle performance</td> <td>???</td> <td></td> <td></td> </tr> </tbody> </table> | Max. Label width: | 135 mm | | | Min. Label width: | 20 mm | | | Max. Label length: | 400 mm | | | Max. application speed | ??? | | | Max. Cycle performance | ??? | | | | | | | |
| Max. Label width: | 135 mm | | | | | | | | | | | | | | | | | | | | | | | | | |
| Min. Label width: | 20 mm | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. Label length: | 400 mm | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. application speed | ??? | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. Cycle performance | ??? | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Rewinder with and without cardboard core possible • can only be used in connection with the adapter module • Can be combined with the following unwinder: U50SE motorized unwinder servo | | | | | | | | | | | | | | | | | | | | | | | | | |


Module application


| Module: | | Application fixed | | | |
|--|--|------------------------------|------------------------------|------------------------------|------------------------------|
| Image: |  | | | | |
| Material designation: | <p><i>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</i></p> <p>Example: Application-WO-fixed-160-135-LH-BG</p> | | | | |
| Function group abbreviation: | | | | | |
| Basic data text: | <p>Fixed application module</p> <p>Module width: 135mm/ 200mm/ 250mm/ 320 mm</p> <p>Standard length 160mm (from housing to dispensing edge)</p> <p>Alignment: Left/right version</p> | | | | |
| | | Width:135mm | Width:200mm | Width:250mm | Width:320mm |
| Material number: | | LH: 40053547 RH: 40053552 | LH: 40053548 RH: 40053553 | LH: 99999999 RH: 99999999 | LH: 40053549 RH: 40053554 |
| Special features/application criteria: | <ul style="list-style-type: none"> The length of the dispensing is very easy to adapt to customer-specific requirements via the axes | | | | |

| Module: Application swivelling | | | | | |
|--|--|--------------|--------------|--------------|--------------|
| Image: | | | | | |
| Material designation: | <i>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</i> Example: | | | | |
| Function group abbreviation: | | | | | |
| Basic data text: | Module application swivelling Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version | | | | |
| | | Width:135mm | Width:200mm | Width:250mm | Width:320mm |
| Material number: | | LH: 99999999 | LH: 99999999 | LH: 99999999 | LH: 99999999 |
| | | RH: 99999999 | RH: 99999999 | RH: 99999999 | RH: 99999999 |
| Special features/application criteria: | <ul style="list-style-type: none"> Compensates product height differences of 0-... | | | | |

| Module: Application Pneumatic | | | | | |
|--|--|--------------|--------------|--------------|--------------|
| Image: | | | | | |
| Material designation: | <i>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</i> Example: | | | | |
| Function group abbreviation: | | | | | |
| Basic data text: | Module application pneumatic Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version | | | | |
| | | Width:135mm | Width:200mm | Width:250mm | Width:320mm |
| Material number: | | LH: 99999999 | LH: 99999999 | LH: 99999999 | LH: 99999999 |
| | | RH: 99999999 | RH: 99999999 | RH: 99999999 | RH: 99999999 |
| Special features/application criteria: | • | | | | |


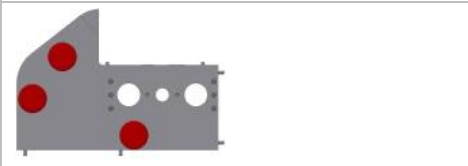


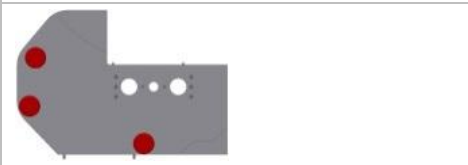
Module label detection

| Module: Label detection optical | | | | |
|--|--|-----|--|--|
| Image: |  | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</p> <p>Example: Sensor-label gap-optical-LH-BG</p> | | | |
| Function group abbreviation: | | | | |
| Basic data text: | <p>Module Label detection optical</p> <p>Alignment: Left/right version</p> | | | |
| | | | | |
| Material number: | <p>LH: 40046880</p> <p>RH: 40046888</p> | | | |
| Performance data: | Max. Label width: | ??? | | |
| | Min. Label width: | ??? | | |
| | Max. Label length: | ??? | | |
| | Max. Product speed: | ??? | | |
| | Max. Cycle performance | ??? | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Fork width 5mm • Leg length 50mm • for non-transparent or transparent labels with print marks | | | |

| Module: Ultrasonic label detection | |
|---|---|
| Image: |  |
| Material designation: | <p><i>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm]-[Alignment]-[tech. feature, e.g. type of drive]</i></p> <p>Example: Sensor-label gap-ultrasonic-LH-BG</p> |
| Function group abbreviation: | |
| Basic data text: | <p>Ultrasonic label detection module</p> <p>Alignment: Left/right version</p> |
| | |
| Material number: | <p>LH: 40055726</p> <p>RH: 40055729</p> |
| Performance data: | Max. Label width: ??? |
| | Min. Label width: ??? |
| | Max. Label length: ??? |
| | Max. Product speed: 80 m/min |
| | Max. Cycle performance: ??? |
| Special features/application criteria: | <ul style="list-style-type: none"> • Fork width 6mm • Leg length 67mm • Required for transparent labels |

Module adapter






| Module: | | Adapter | |
|--|---|------------------------------|--------------|
| Image: | | | |
| Material designation: | <p>[Functional unit]-[System]-[Label width in mm]-[Label Roll Ø in cm*3]-[Alignment]-[Consecutive numbering] Example: Adapter module-HSM-200-40-RH-01</p> | | |
| Basic data text: | <p>Module Adapter Module width: 135mm/ 200mm/ 250mm/ 320 mm Alignment: Left/right version</p> | | |
| Special features/application criteria: | <ul style="list-style-type: none"> • Customized version possible | | |
| List of existing adapters | Combination/ Width | Material number | Image |
| | U30MP-R40SE/ 135 mm | LH: 40053029 RH: 40053193 | |
| | U30MP-R40SE/ 200 mm | LH: 40053440 RH: 40053441 | |
| | U30MP-R40SE/ 320 mm | LH: 40053021 RH: 40053182 | |
| | U40MP-R40SE/ 135 mm | LH: 40053434 RH: 40053436 | |
| | U40MP-R40SE/ 200 mm | LH: 40051104 RH: 40051131 | |
| | U30SE-R40SE/ 135 mm | LH: 40053037 RH: 40053195 | |





| | | |
|----------------------------|--------------------------------------|---|
| <p>U30SE-R40SE/ 200 mm</p> | <p>LH: 40053425 RH: 40053429</p> |  |
| <p>U30SE-R40SE/ 320 mm</p> | <p>LH: 40053020 RH: 40053173</p> |  |
| <p>U40SE-R40SE/ 135 mm</p> | <p>LH: 40053543 RH: 40053578</p> |  |
| <p>U40SE-R40SE/ 200 mm</p> | <p>LH: 40053590 RH: 40053591</p> |  |
| <p>U50SE-R50SE/ 135 mm</p> | <p>LH: 40053455 RH: 40053495</p> |  |

Field installable options

Field installable options are simple assemblies that are pre-configured and available from stock. With the enclosed installation instructions, the options can be easily adapted and installed by the customer himself.


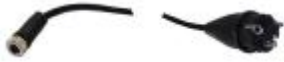





Depending on the customer's requirements, it is also possible to complete the labeler with retrofit (field installable) options in the control centre.

| Field installable options | Mat.-No. | Description | Figure |
|---|----------|---|---|
| Start impulse control light barrier adjustable | 32700070 | With bracket, mirror and T-rail (PNP) |  |
| Start impulse control reflex push-button adjustable | 32700071 | With holder and T-rail (PNP) |  |
| Start impulse output cable for external start | 35001812 | 5m cable with plug for connection to customer PLC. Open cable end |  |
| Low label warning | 40055882 | For connection to Alpha HSM unwinding mechanical. Axial scanning of the label roll. Signal available via alarm lamp and I/O interface. RH and LH compatible |  |
| 3-colored alarm lamp | 22702287 | Green, yellow, red light incl. cable. Lamp diameter 71mm, height 172mm, IP65, LED |  |

| | | | |
|---------------------------------|----------|--|---|
| HMI display | 40035961 | Cable length: 1.9 m |  |
| Pusher roller 135 mm width | 40057146 | PU-roll diameter 40mm, length 140mm. For pushing the labels onto even product surfaces. |  |
| Pusher brush LH 135 mm width | 40057113 | Brush with bristle length 25mm, 140mm width. For pressing the labels onto uneven product surfaces. |  |
| Pusher brush RH 135 mm width | 40057227 | Brush with bristle length 25mm, 140mm width. For pressing the labels onto uneven product surfaces. |  |
| Pusher roller 200 mm width | 40057148 | PU-roll diameter 40mm, length 205mm. For pushing the labels onto even product surfaces. |  |
| Pusher brush 200 mm width | 40057121 | Brush with bristle length 25mm, 220mm width. For pushing the labels onto uneven product surfaces. |  |
| Pusher roller 250 mm width | 99999999 | PU-roll diameter 40mm, length xxxmm. For pushing the labels onto even product surfaces. | |
| Pusher brush 250 mm width | 99999999 | Brush with bristle length 25mm, xxxmm width. For pushing the labels onto uneven product surfaces. | |
| Pusher roller 320 mm width | 40057149 | PU-roll diameter 40mm, length 330mm. For pushing the labels onto even product surfaces. |  |



Technical information



| | | | |
|--|----------|---|---|
| Pusher brush 320 mm width | 40057127 | Brush with bristle length 25mm, 340mm width. For pushing the labels onto uneven product surfaces. |  |
| Power cord EU | 40056195 | Power cord for connection to Alpha HSM. Power cord length 3m. |  |
| Power cord USA | 40056196 | | |
| Power cord Switzerland | 40056197 | | |
| Mains cord open cable end | 40054680 | Power cord for connection between Alpha HSM and switching cabinet. Power cord length 10m |  |
| Operating instructions German | 99999999 | Operating instructions Alpha HSM. |  |
| Operating instructions English | 99999999 | | |
| Operating instructions French | 99999999 | | |
| Operating instructions Swedish | 99999999 | | |
| Operating instructions Dutch | 99999999 | | |
| Other languages on request | 99999999 | | |
| Connection cable to IO socket | 35002078 | 5m cable length, open cable end, 8-pole |  |
| Connection cable to IO socket | 35002080 | 10m cable length, open cable end, 8-pole |  |
| Terminal box for IO interface and product sensor | 32800034 | Universal I/O terminal for Alpha Compact Rittal Box 200 x 150 x 80 according to circuit diagram -M12, 8 pol. Cable, 5m, for I/O Interface X9 -M12, 4 pol. Cable, 5m, for product sensor connection X2 -3x screw connection M16,1x M25 |  |





Technical information



| | | | |
|--|----------|---|---|
| Filter control unit | 22800604 | It is also used with each pneumatic unit to filter the air and protect the pneumatics against impurities. |  |
| Bus system cable, PROFINET CAT5,4-pin, straight M12 plug, to straight M12 plug, cable length: 10 m | 40016740 | Network cable for Zero Down Time Function Alpha HSM, cable length 10m |  |
| cable M12, 4-pin 5m Profibus cable Socket/plug | 40038283 | Extension cable 5m for Alpha HSM Display | |

Factory installable options

Factory installable options are assemblies that must be combined and tested directly with the dispenser in the control center. They can also be retrofitted on site, but only by an experienced technician.

| Factory installable options | Mat. No. | Description | Figure |
|--|---------------------------------|---|---|
| Rotary encoder Rigid | 22702443 | Incl. holder, friction wheel, connection socket and cable. Rotary encoder with 1024ppr, cable length 2m |  |
| Rotary encoder Spring mounted bearing | 22702444 | Incl. holder, friction wheel, connection socket and cable. Rotary encoder with 1024ppr, cable length 2m |  |
| Additional cable lengths for rotary encoder | 40043035(5 m) 40043036(10 m) | Connection cable rotary encoder connector straight M12, 4-pin, to straight socket, M12, 4-pin, A-COD The standard cable of the encoder can be replaced by this cable here. |  |
| Connecting cable, PUR/PVC grey M12 coupling straight, 5-pin M12 plug straight Cable length 2m, shielded | 29802528 | Extension cable 2m for rotary encoder | |
| Splitter box rotary encoder | 40008094 | For connection of three Alpha HSM to a rotary encoder |  |

| | | |
|-------------------------------|----------|--|
| Adapter cable start X1 Jet | 40048741 | Cable to start the X1 Jet over an Alpha HSM. Cable length 5m With power supply unit for the X1 Jet. Cable length 1.5m Connection: M12 5-pin to Aux Out Connection X1 Jet: Sub D 15 pin Power supply unit: Model: PA1015- 120IB125 Input: 100-240V 50-60HZ 0,4A Output: 12V 1.25A 15W Max |
|-------------------------------|----------|--|

Technical Specifications

HMI display

- Versatile four-line display (aluminium milled):
- Font height 5mm
- OLED display
- Multilingual
 - German
 - English
 - French
 - Spanish
 - Swedish
 - Polish
 - Czech
 - Portuguese
 - Dutch
- Full access to all configuration parameters
- Up to 10000 label formats can be stored
- Status display
- Current configuration data set
- Label counter
- "Countdown" counter
- Dimensions: 90x120x20mm (with rotary knob 35mm) (HxWxD)
- Weight: 430g
- Cable length: 1.9 m
- Turnable holder



External control PLC

The Bluhm Weber Group's HSM and Alpha Compact Plus labeling systems are equipped with an Ethernet interface. Via this interface it is possible to communicate with the labeling systems from a PLC.

It is therefore also possible to operate several labeling systems from a central operating panel, and to visualise the error messages of the labeling systems centrally.

Since the data assignment is identical for both labeling systems, the modules used can be used for each of the systems (HSM / Alpha Compact Plus). The data transfer is performed using the PUT/GET method.

The provided example is based on a CPU1214 from Siemens and was created with the TIA portal. In the example, two labeling systems are controlled. It is easily possible to integrate further labeling systems.

Function:

A function block is called up in the PLC program which controls the communication to a labeling system. Communication is performed via the PUT/GET procedure from Siemens. The function block which is utilized and provided by Bluhm Systeme is connected to an instance data block. This function module must be called up for each labeling system with which communication is to be carried out. The number of the instance data module is different for each call up. In addition, a send and a receive data block is required for each labeling system.

The data to be sent and the data to be received is stored in these blocks. These blocks can simply be copied and assigned a different DB number. The numbers of these data blocks must be stored in the corresponding labeling system.

Since it does not seem sensible to access all parameters of a labeling system, only the following settings are accessible:

- MAC-ID: Read MAC ID from system
- FW version: Read firmware version from the system
- Labeler RUN: Switching on the labeling system
- Labeler STOP: Switching off the labeling system
- Feed: Applying a label in the manual mode
- Calibrate: Performing a calibration procedure
- Speed offset: Influencing the speed of the labeling system
- Calibration offset: How far does the label extend beyond the peeler plate?
- Calibration length: Entry of the distance between gap sensor and peeler plate
- Distance double label: in preparation

Furthermore, the warnings and alarms of the labeling system are transmitted so that they can be visualised.

I/O Interface

The I/O signal interface provides inputs and outputs to a higher-level controller (e.g. PLC). The connection is established as a 8-pin M12 socket.

Pin assignment:

1. Output signal: **Ready**, (n.o.) max:100mA, max. 30V
2. Output signal: **Label end warning**, (n.o.) max. 100mA, max. 30V
3. Output signal: **Sync**, (n.o.) max:100mA, max. 30V
4. Input signal: **Start** max. 10mA, Low < 3VDC, High > 15VDC
5. Com input signal
6. Com output signal
7. +24V
8. GND (ground)



*All outputs supplied via 24V may consume a max. of 250mA together.

Ramp setting

Currently 10mm is set, if necessary a change to the respective application is possible.

Skip function

The skip function allows a maximum of three labels in a row to be missing on the carrier material. The gap created is compensated by the control system, so that the application process is not affected by the gap. The number of missing labels can be set in the configuration. If more labels are missing in a row than are set in the configuration parameters, this can no longer be compensated for and the system will switch to the failure mode. Several gaps may also exist between the peel bar and the label detection sensor.

Rotary encoder

For optimum labeling results, the application speed must correspond to the product transport speed. If the products are always fed to the Alpha Compact Plus labeler at the same speed, a fixed setting of the application speed is sufficient. If the product transport speed varies, the label application speed must be synchronized by means of a rotary encoder.



Devices with HTL interface are suitable as rotary encoders for the Alpha Compact Plus. (24V DC, Push Pull Output)

Not suitable are TTL outputs (5V logic).

The rotary encoder must be parameterized either from the HMI display or via PC software. Therefore, it is imperative that the customer owns at least one HMI display or the software.

Product sensor

Product sensor 1 is set to PNP. To change over to NPN, only the setting of the machine parameters must be changed from PNP to NPN.

Dispenser function

A HMI is required to set the labeler for the first time. The labeler can then also be operated without HMI. The parameters are stored in the controller, so that an HMI is only required to change these parameters.

For example, a customer can control his 5 labelers with a single HMI. Once he has set up a labeler using HMI, he simply disconnects it and the system will continue to run without HMI. This can then be repeated with the other 4 labelers. If he wants to change the settings of a labeler, he must simply connect the HMI to this labeler and can then perform the parameterization.

Calibration

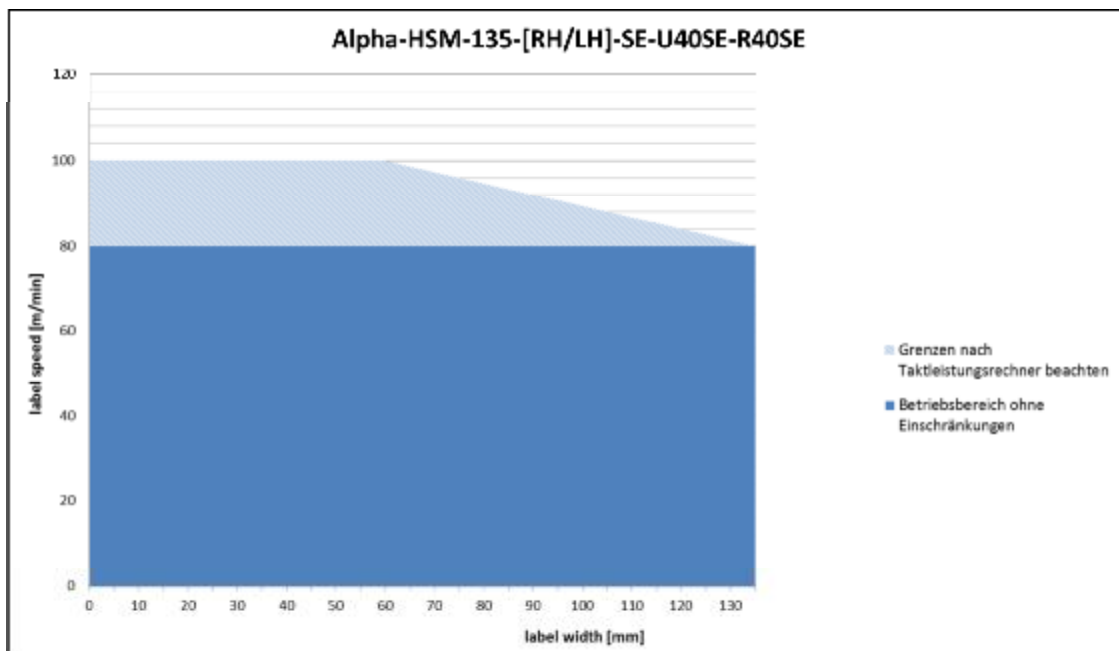
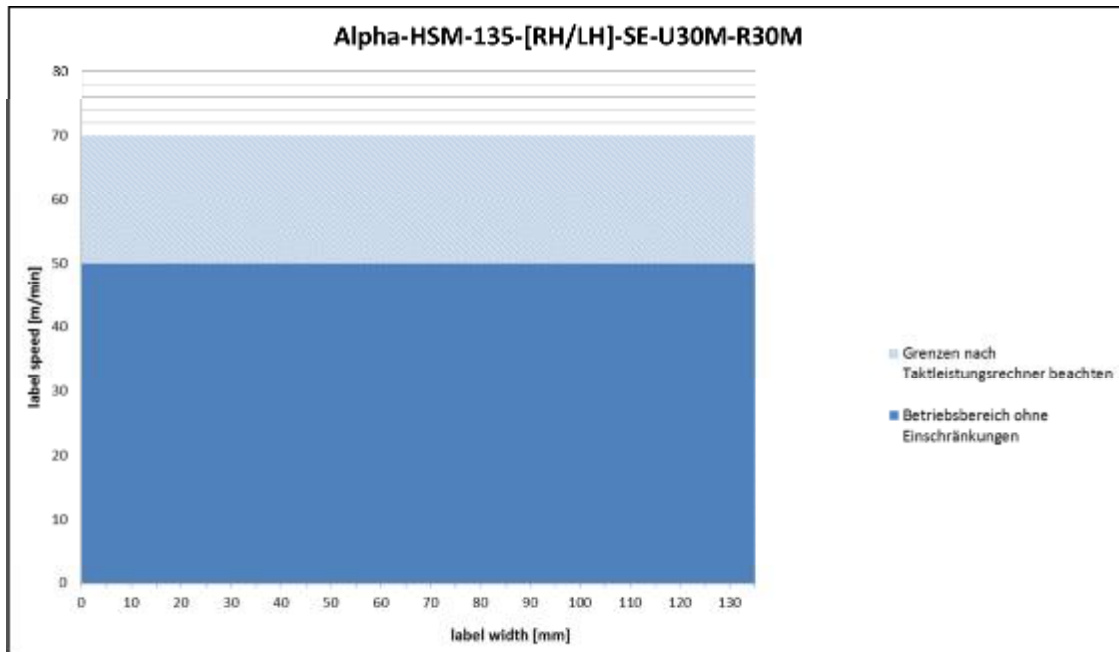
When changing the label size, a label calibration is necessary. By simply pressing a button, several labels are automatically advanced and all the necessary parameters are stored safely and quickly.

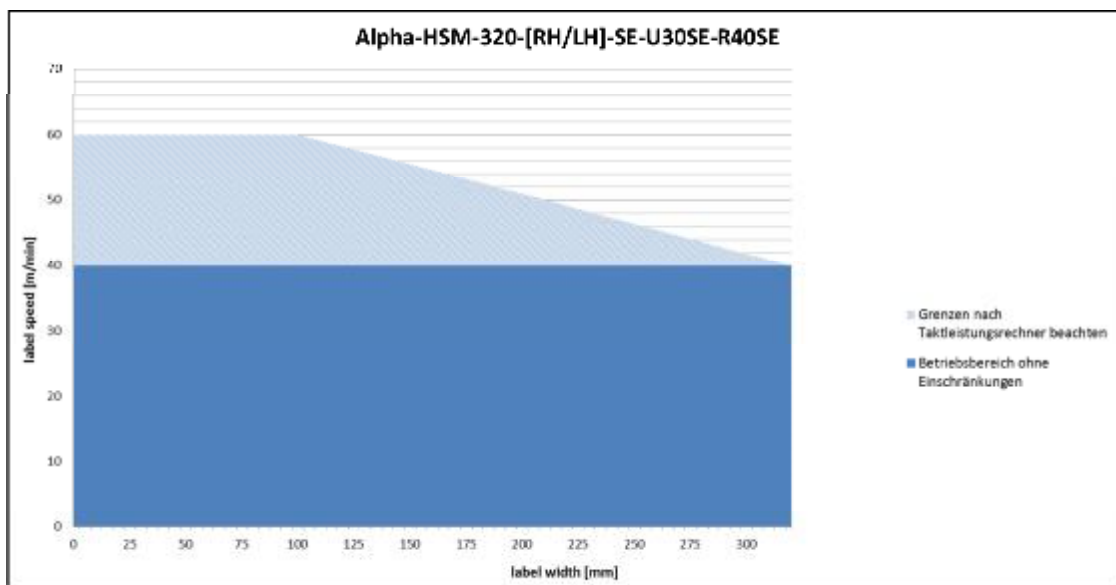
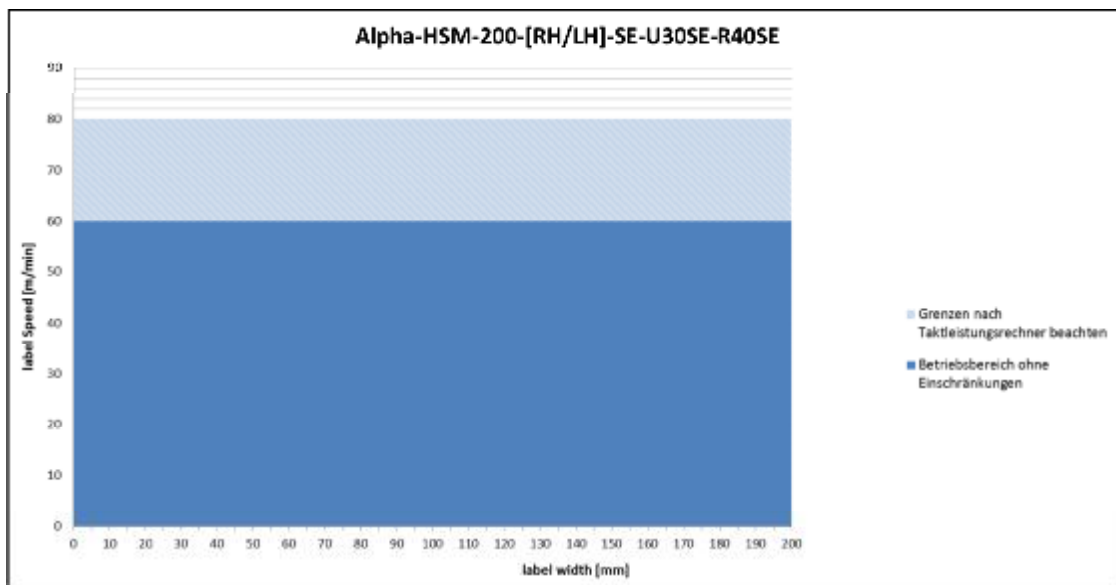
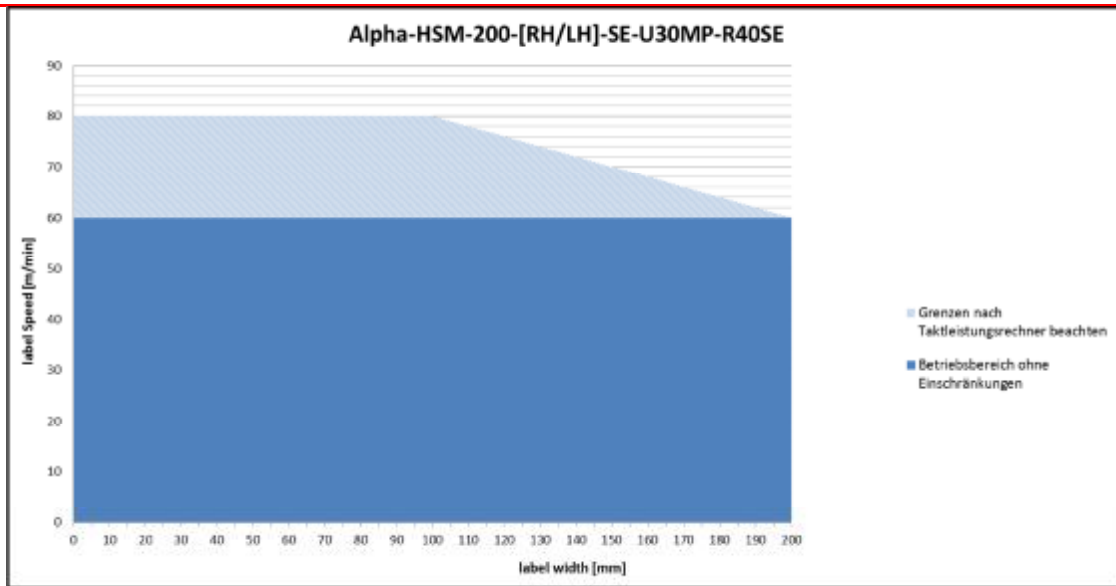
If a label roll of the same size is changed, a calibration will no longer be necessary. Here, it is sufficient to manually dispense a few labels so that the position of the labels corresponds to the default setting.



Performance diagram

The performance diagrams refer to the five pre-configured labelers in the price list. In the case of the limited operating range, there will be performance data restrictions depending on the label size. Here, please observe the limits pursuant to the cycle performance calculator or request a practical test by the development department. Labeler adaptations such as offset applications lead to a reduction in performance.





Minimum label distance on the product

The minimum label distance on the product is the predefined label gap.

Zero Down Time and alternating operation

For these two operating modes, there are two labelers in the production line in succession, which are connected to each other via their network connection.

The Zero Down Time function guarantees continuous labeling of all products in the event of a system failure, such as the end of a label roll.

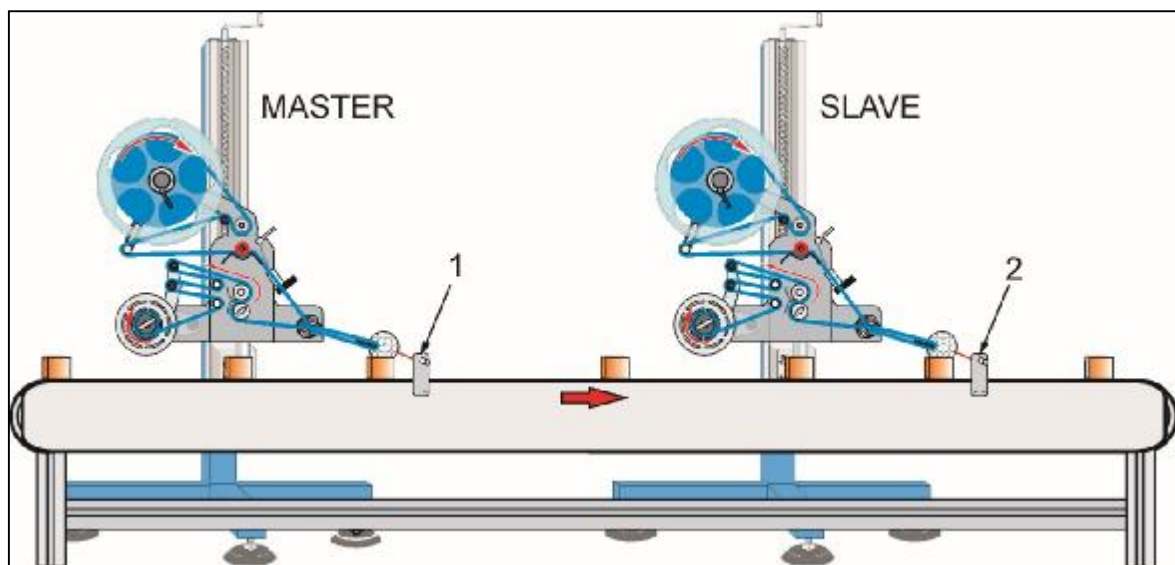
The alternating operation guarantees a fast system set-up time with a uniform loading of both labelers. In the event of a system failure, however, not all products will be labelled, i.e. zero down time mode is not possible in the alternating operation.

Description:

In the production direction, the front labeler is the Master System and the rear labeler is the Slave System.

The master system permanently reports the status of the products detected by the first product sensor to the slave system. The products are thereby not only counted, but the slave system also receives information as to whether a product has already been labelled by the master system or not. The position of each product is tracked by the rotary encoder attached to the conveyor system.

If the master system stops while production is running (e.g. end of roll), it is automatically switched over to the slave system and thus prevents labeling disruptions.



| No. | Designations |
|--------|---------------------------------------|
| MASTER | ACTIVE LABELER |
| SLAVE | STANDBY LABELER |
| 1 | PRODUCT SENSOR 1 TO THE MASTER SYSTEM |

2 PRODUCT SENSOR 2 TO THE SLAVE SYSTEM

Function:

Product sensor 1 detects the product which is then labelled by the master system. The slave system receives a corresponding information and ignores the already labeled product if this is detected by the product sensor 2.

or

Product sensor 1 detects a product that is not labelled by the master system (e.g. end of roll). The slave system receives the corresponding information and expects the product sensor 2 to detect the product after a certain distance; the slave system then labels the product.

When controlled by a PLC, both labelers also require a start signal for each product, as it is normally provided by the product sensors. This means that if a product is at the dispensing edge of the master system, the master system receives a start signal. If the same product reaches the dispensing edge of the slave system, the slave labeler also receives a start signal.

An unlabeled product can be introduced into the conveyor system not only before the master system but also before the slave system (between the labelers). The slave system then labels this product because no information has been sent from the master system.

The individual operating states of the labelers can be displayed via a 3-colour signal lamp.

Prerequisites:

- Two labelers.
- Both labelers receive their start signal via their own product sensor or via the PLC (connection of the labelers with the PLC is performed via the respective product sensor input).
- Connection of the labelers via network connection (X20 Ethernet).
- A rotary encoder that is connected to both labelers by means of a splitter box or... one separately connected rotary encoder per labeler.

Twin label mode

In the Twin-Label mode, two labels of different lengths can be applied one after the other on the label liner with a trigger signal (e.g. on the front and back of a product). This arrangement (short-long label or long-short label) must be repeated continuously. The Twin Label mode can also be used with two labels of the same length.

IMAGE

Limiter disc for 40mm core diameter

Optionally, it is also possible to process label rolls with a mechanical unwinding with a core diameter of 40 mm. For this purpose there is a 99999999 assembly, which can be purchased in addition to the actual unwinder. This assembly is the inner limiter disc of the unwinder unit, which is provided with a mandrel so that label rolls with cardboard core can be clamped. The mandrel is 25mm long, so the cardboard core must also be at least 25mm wide.

The outer limiter disc does not change.

Instructions for processing label rolls with a 40mm core:

The full performance of the Alpha may not be achieved.

Especially at the end of the label roll, the labels can have a strong pre-curvature. This can cause problems both in the wipe on process and in combination with an applicator. The label may not be advanced correctly on the tamp, or the vacuum is not sufficient to hold the curved label on the tamp.

