## (4lus

JOB NAME:
LOCATION:
ARCHITECT:
ENGINEER: $\qquad$
CONTRACTOR:
SUBMITTED BY: $\qquad$ DATE:

| TAG/ITEM | QTY. | CATALOG NUMBER | HEATER |  |  | AMPS | LENGTH | NUMBER OF ELEMENTS | BUILT-IN CONTROLS |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | KW | VOLTS | $\varnothing$ |  |  |  |  |
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| $*$ <br> ACCESSORIES <br> AND <br> CONTROLS | TAG/ITEM | QTY. | CATALOG NUMBER |  |
| :---: | :---: | :---: | :---: | :---: |
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| SUBMITTED BY: | DATE |
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## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS*

Furnish and install, where indicated on plans, ASL Series Series convector type heaters, suitable for continuous operation, as manufactured by Berko, A Division of Marley Engineered Products®, Bennettsville, SC.

ENCLOSURE: Shall be 12-gauge (.080" min.) aluminum extrusion (ASL3) or 10-gauge (. $095^{\prime \prime}$ min.) aluminum extrusion (ASL5). The one-piece top and bottom shall join to the one-piece top and front utilizing Berko's SnapLock design. Both inlet and outlet air grilles shall be punched pencil-proof slots negating the need for mesh under the grille.

SIZE: Heaters shall be low profile ( $358^{\prime \prime} \times 6^{\prime \prime}$ or $53 / 8^{\prime \prime} \times 7{ }^{\prime \prime}$ ) and available in standard lengths from 28 inches through 12 feet. Additionally, custom length cabinets available with single or multiple heat decks shall be furnished as specified.
HEATING LENGTHS AND VOLTAGES: Heater lengths, voltages and wattage capacities shall be as indicated on the plans.
FINISH: The top and front shall be finished with a baked enamel paint or anodized. Finished backs are available upon request.

HEATING ELEMENTS: The nickel-chromium heating element wire shall be encased in a steel sheath for maximum, troublefree element life. Aluminum fins shall be pressure bonded to the steel sheath. Elements shall be centered, anchored and shall float freely at each end through high-temperature Noryl bushings. The ASL5 shall utilize Berko's "Stair-Step" element arrangement.
CONTROL SECTIONS: Control sections, finished to match heaters, shall be furnished as an optional accessory for field installation of controls, or shall be used to house factoryinstalled controls as specified.

OPTION BUILT-IN CONTROLS: Thermostats, power relay, low-voltage control relays, and power on/off switches, singly or in combination, may be specified for factory installation in heaters. Thermostats and power on/off switches are accessible through the grille.
PEDESTALS: The heater shall be convertible for use as a selfstanding unit with pedestal conversion kit. Pedestals shall be painted steel or anodized aluminum. Pedestals can either be mounted on or embedded in the floor surface, and wiring or conduit brought through the pedestal during installation.
*Berko reserves the right to change specifications without prior notice.

## Dimensions and Clearances:



|  | Dimensions |  |  |
| :--- | :---: | :---: | :---: |
| Cat. No. | $H$ | $W$ | $L$ |
| ASL3 | $6^{\prime \prime}$ | $35 / 8^{\prime \prime}$ | $28^{\prime \prime}-12^{\prime}$ |
| ASL5 | $7 \prime \prime$ | $55 / 8^{\prime \prime}$ | $28^{\prime \prime}-12^{\prime}$ |


| Minimum Mounting Height <br> Above Floor |  |
| :--- | :---: |
| ASL3 \& ASL5 Front Inlet | $0^{\prime \prime}$ |
| ASL3 \& ASL5 Bottom Inlet <br> (100W/Ft.-250W/Ftr.) | $1-3 / 4^{\prime \prime}$ |
| ASL5 Bottom Inlet <br> (375W/Ft.-750W/Ft.) | $3^{\prime \prime}$ |

## Knockouts:



## Pedestal Placement:



|  | Standard Pedestal Placement |  |  |
| :--- | :---: | :---: | :---: |
|  | A | B | L |
| ASL3 | $2^{\prime \prime}$ | $21 / 4^{\prime \prime}$ | $28-12^{\prime \prime}$ |
| ASL5 | $213 / 16^{\prime \prime}$ | $21 / 4^{\prime \prime}$ | $28-12^{\prime \prime}$ |

NOTE: On units longer than 12', three pedestals are required. Consult factory for placement.

ASL3 \& ASL5 (1 Element) Lengths

## ASL3 \& ASL5 SERIES

| Length | $28^{\prime \prime}$ | $3^{\prime}$ | $4^{\prime}$ | $5^{\prime}$ | $6^{\prime}$ | $7^{\prime}$ | $8^{\prime}$ | $9^{\prime}$ | $10^{\prime}$ |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Shipping Weight | 8 lbs | 10 lbs | 13 lbs | 17 lbs | 20 lbs | 24 lbs | 27 lbs | 30 lbs | 33 lbs |

 on back omitted by request only. All models are NON-STOCK made-to-order. When ordering, specify quantity, catalog number, voltage, wattage, optional controls, and color. Consult sales representative for lead times.

Watts per Ft. *

| 100 | 125 | 150 |
| :---: | :---: | :---: |
| 188 | 250 |  |

Voltages*

| 120 | 208 | 240 | 277 |
| :--- | :--- | :--- | :--- |
| 480 | 347 | 600 |  |

ASL5 (Multiple Elements) Lengths

| Length | $28^{\prime \prime}$ | $3^{\prime}$ | $4^{\prime}$ | $5^{\prime}$ | $6^{\prime}$ | $7^{\prime}$ | $8^{\prime}$ | $9^{\prime}$ | $10^{\prime}$ |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Shipping Weight | 12 lbs | 15.5 lbs | 20 lbs | 25.5 lbs | 30 lbs | 35 lbs | 40 lbs | 45 lbs | 50 lbs |

 on back omitted by request only. All models are NON-STOCK made-to-order. When ordering, specify quantity, catalog number, voltage, wattage, optional controls, and color. Consult sales representative for lead times.

## Watts per Ft. - 2 Elements*

| 375 | 500 |
| :--- | :--- |


\section*{Watts per Ft. - 3 Elements * <br> | 600 | 750 |
| :--- | :--- |}

Voltages - Single Phase*

| 208 | 240 | 277 | 347 | 600 |
| :--- | :--- | :--- | :--- | :--- |

Voltages - Three Phase*

| 208 | 240 | 600 |
| :--- | :--- | :--- |

Optional Built-In Controls:

| SUFFIX* | OPTIONAL BUILT-IN CONTROL | RATINGS \& DESCRIPTION |
| :---: | :---: | :---: |
| T | Single-Pole Thermostat | Rated $25 \mathrm{amps} @ 120-240$ VAC and $22 \mathrm{amps} @ 277$ VAC. Pilot duty rating of 125 VA (all voltages). $60-120^{\circ} \mathrm{F}$ temperature range; adjustable through outlet grille-tamper-resistant. (See Note B) Not available on three-phase heaters. |
| 2T | Double-Pole Thermostat | Rated 25 amps @ 120-240 VAC and 22 amps @ 277 VAC. Pilot duty rating of 125 VA (all voltages). $60-120^{\circ} \mathrm{F}$ temperature range; adjustable through outlet grille-tamper-resistant. (See Note B for amperage restrictions.) |
| DS | Power On/Off Switch | Double-pole, rated 20 amp @ 120-277 VAC. (See Note A) For three-phase heaters and single-phase heaters over 20 amps specify two. |
| TR | Transformer Relay | Single-pole, low voltage relay with built-in transformer ( 24 VAC control), rated $22 \mathrm{amps} @ 120-240$ VAC and $22 \mathrm{amps} @ 277$ VAC. (See note E) 17 amps @ 347V. Not available on three-phase heaters. |
| PR | Power Relay | Single-pole thermal time delay relay, rated 25 amps @ 120-600 VAC. (See Notes E \& F). Specify control voltage. |
| 2ST | 2-Stage Thermostat | Rated 24 amps @ 120-240 VAC and 22 amps @ 277 VAC. Pilot duty rating of 125 VA (all voltages). $60-120^{\circ} \mathrm{F}$ temperature range, adjustable through outlet grille-tamper-resistant. Available on 2 - or 3 -element, single-phase heaters only. |
| PDT | Single-Pole Thermostat | Same as -T except Pilot Duty. (See Note C) |
| 2TPD | Double-Pole Thermostat | Same as -2T except Pilot Duty. (See Note C \& D) |
| M | Outlet Mesh | Price per foot |

NOTE: *Addition To Basic Catalog No. (See Note D)



 element heaters only.

## Control Combinations:

|  |  | or Power ON/OFF Switch | 1-Pole $(-T)$ | $\begin{aligned} & \text { 2-Pole } \\ & (-2 S T) \end{aligned}$ | $\begin{gathered} \text { 2-Stage } \\ (-2 S T) \end{gathered}$ | $\begin{aligned} & \text { Pilot Duty } \\ & (-P D T)^{2} \end{aligned}$ | 2-Stage Pilot Duty $(-2 S P D)^{2}$ | ON/OFF $(-D S)^{4}$ | 1-Pole | 2-Pole | 2-Stage | Pilot Duty | 2-Stage Pilot Duty |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { M } \\ & \text { B } \end{aligned}$ | No Power Controls | x | x | x |  |  |  | x | X | x |  |  |  |
|  | Power Relay (-PR) | X | x | x |  | x |  | X | x | x |  | x |  |
|  | Transformer Relay (-TR) | x | x | x |  | x |  | x | x | $\times$ |  | $\times$ |  |
| $\begin{aligned} & \stackrel{u}{4} \\ & \stackrel{1}{2} \end{aligned}$ | No Power controls | x | x | x | $x$ | x | x | x | x | x | x |  |  |
|  | Power Relay (-PR) | x | x | x | x | x | x | x | x | x | x | x |  |
|  | 2 Power Relays (2-PR) | X |  | x | x | x | x | x |  | x | x | x | x |
|  | 3 Power Relays (-3PR) | x |  | x | X | X | x | x |  | X | x | x | x |
|  | Transformer Relay (-TR) | x | x | X | X | x |  | x | x | X | X | x |  |
|  | 2 Transformer Relays (-2TR) | $\times$ |  | $\mathrm{x}^{3}$ | $x^{3}$ | $x^{3}$ | $x^{3}$ | $x^{3}$ |  | $x^{3}$ | $x^{3}$ | $x^{3}$ |  |


 with any additional controls (built-in thermostat or Power ON/OFF), please consult factory. 4. For three-phase units, specify two Power ON/OFF.

Blank Sections \& Accessories - ASL3 Series:

| CATALOG NO. | DIMENSIONS ( $\mathbf{~ + ~ x ~} \mathrm{H} \times \mathrm{L}$ ) | INLET | SHIP WT. | CATALOG NO. | DESCRIPTION | ADDITIONAL SPACE REQUIRED | SHIP WT. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASL3BS1F |  | Front |  | ASL3ECLS | End Cap w/Screws - Left |  |  |
| ASL3BS1B |  | Bottom | 4 | ASL3ECRS | End Cap w/Screws - Right |  |  |
| ASL3BS2F |  | Front |  | ASL3ICF | Inside Corner-Front In | $81 / 2^{\prime \prime}$ | 5 lbs |
| ASL3BS2B | 3 | Bottom | 7 lbs | ASL3ICB | Inside Corner-Bottom In | $81 / 2^{\prime \prime}$ | 5 lbs |
| ASL3BS3F |  | Front |  | ASL3OCF | Outside Corner-Front In | 5" | 4 lbs |
| ASL3BS3B |  | Bottom | 9 lbs | ASL3OCB | Outside Corner-Bottom In | 5" | 4 lbs |
| ASL3BS4F |  | Front | 2 lbs | ASL3135ICF | $135^{\circ}$ Inside Corner-Front In | $81 / 2^{\prime \prime}$ | 5 lbs |
| ASL3BS4B | $35 / 8 \times 6 \times 4$ | Bottom | 12 lb | ASL3135ICB | $135^{\circ}$ Inside Corner-Bottom In | $81 / 2^{\prime \prime}$ | 5 lbs |
| ASL3BS5F | $35 /{ }^{\prime \prime}$ | Front | 16 lbs | ASL31350CF | $135^{\circ}$ Outside Corner-Front In | 5" | 4 lbs |
| ASL3BS5B | 3 5/8 $\times 6$ | Bottom | 16 lbs | ASL3135OCB | $135^{\circ}$ Outside Corner-Bottom In | 5" | 4 lbs |
| ASL3BS6F | $35 / 1 \prime \times 6^{\prime \prime} \times 6^{\prime}$ | Front | 19 | ASL3DESBL | Dec. End Section-Bottom In, Left |  | 5 lbs |
| ASL3BS6B | $8{ }^{\prime \prime} \times 6 \times 6$ | Bottom | 19 lbs | ASL3DESBR | Dec. End Section-Bottom In, Right | " | 5 lbs |
| ASL3BS7F |  | Front |  | ASL3DESFL | Dec. End Section-Front In, Left | \%4 | 4 lbs |
| ASL3BS7B | $35 / 8^{\prime \prime} \times 6^{\prime \prime} \times 7^{\prime}$ | Bottom | 22 lbs | ASL3DESFR | Dec. End Section-Front In, Right |  | 4 lbs |
| ASL3BS8F |  | Front | 24 Ibs | ASL3SP | Splice Plate | $0-1 / 4^{\prime \prime}$ | 1 lbs |
| ASL3BS8B | $35 / 8 \times 6 \times 8$ | Bottom | 24 lbs | ASL3FL3 | Filler Section 3 in. | $0-3 "$ | 1 lbs |
| ASL3BS9F | $35 / \prime \prime \times 6^{\prime \prime} \times 9^{\prime}$ | Front | 27 | ASL3FL6 | Filler Section 6 in. | 3-6" | 1 lbs |
| ASL3BS9B | 3 5/8 $\times 6 \times 9$ | Bottom | 27 lbs | ASL3FL9 | Filler Section 9 in. | 6-9" | 1 lbs |
| ASL3BS10F |  | Front |  | ASL3FL12 | Filler Section 12 in . | 9-12" | 1 lbs |
| ASL3BS10B | $35 / 8^{\prime \prime} \times 6^{\prime \prime} \times 10^{\prime}$ | Bottom | 30 lbs | ASL3-FL18 | Filler Section 18 in. | 15-18" | 1.5 lbs |
| NOTE: Blank section grilles are not punched unless requested. |  |  |  | ASL3DRF | Receptacle Section-Front In | $41 / 2^{\prime \prime}$ | 1.5 lbs |
|  |  |  |  | ASL3DRB | Receptacle Section-Bottom In |  |  |
|  |  |  |  | ASL3PEF | Pneu/Ele Sw-Fnt. In | $4^{1 / 2}{ }^{\prime \prime}$ | 2 lbs |
|  |  |  |  | ASL3PEB | Pneu/Ele Sw-Bot. In |  |  |
|  |  |  |  | PK3S* | Standard Pedestal $27 / 8 \mathrm{in}$. (H) | - | 2 lbs |
|  |  |  |  | PK3A* | Architectural Pedestal $27 / 8 \mathrm{in}$. (H) | - | 2 lbs |
|  |  |  |  | SO1A*** | Stand-Off Bracket | - | 1 lbs |

*One pedestal. Two required on units up to 10 ft ., three required on units over 10 ft .
** Add suffix -P for painted followed by the color code (i.e. W for White, B for Black, etc.), -C for clear anodized, -B for bronze anodized (excludes PK3S-Black only).
${ }^{* * *}$ All Stand-off Brackets come standard as Beige.



CAP(ECR)

(IC) FITO


STANDARD PEDESTAL LEG



ARCHITECTURAL PEDESTAL LEG

DIAGONAL END SECTION
$\qquad$

How to Order - ASL3
Example:
 Control Location must be accounted for. See notes.
*ustom finishes require additional approvals prior to acceptance
${ }^{* *}$ Control Hand / Incoming Power connection is determined by the hand of the DS/ thermostat when facing the heater.
Contact Marley Sales Representative for additional configuration details
$\qquad$

Blank Sections \& Accessories - ASL Series:

| CATALOG NO. | DIMENSIONS (W x H x L) | INLET | SHIP WT. | CATALOG NO. | DESCRIPTION | ADDITIONAL SPACE REQUIRED | SHIP WT. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASL5BS1F |  | Front |  | ASL5ECLS | End Cap w/Screws - Left |  |  |
| ASL5BS1B | $53 / 8$ | Bottom | Ibs | ASL5ECRS | End Cap w/Screws - Right |  |  |
| ASL5BS2F |  | Front |  | ASL5ICF | Inside Corner-Front In | 10" | 11 lbs |
| ASL5BS2B |  | Bottom | 11 lbs | ASL5ICB | Inside Corner-Bottom In | 10" | 11 lbs |
| ASL5BS3F |  | Front | bs | ASL5OCF | Outside Corner-Front In | 5" | 7 lbs |
| ASL5BS3B |  | Bottom | 14 lbs | ASL50CB | Outside Corner-Bottom In | 5" | 7 lbs |
| ASL5BS4F |  | Front | 18 lbs | ASL5135ICF | $135^{\circ}$ Inside Corner-Front In | 10" | 11 lbs |
| ASL5BS4B | $53 / 8 \times 7 \times 4$ | Bottom | 18 lb | ASL5135ICB | $135^{\circ}$ Inside Corner-Bottom In | 10" | 11 lbs |
| ASL5BS5F |  | Front | 22 lbs | ASL5135OCF | $135^{\circ}$ Outside Corner-Front In | 5" | 7 lbs |
| ASL5BS5B |  | Bottom | 22 los | ASL5135OCB | $135^{\circ}$ Outside Corner-Bottom In | 5" | 7 lbs |
| ASL5BS6F |  | Front |  | ASL5DESBL | Dec. End Section-Bot. In, Left |  | 11 lbs |
| ASL5BS6B |  | Bottom | 27 lbs | ASL5DESBR | Dec. End Section-Bot. In, Right | $12{ }^{1 / 2}$ | 11 lbs |
| ASL5BS7F |  | Front |  | ASL5DESFL | Dec. End Section-Front In, Left | 12 1/2 | 7 lbs |
| ASL5BS7B | $5^{3 / 8} \times 7^{\prime \prime} \times 7^{\prime}$ | Bottom | 32 lbs | ASL5DESFR | Dec. End Section-Front In, Right |  | 7 lbs |
| ASL5BS8F | $5^{3 / \prime \prime}$ | Front | 37 lbs | ASL5SP | Splice Plate | $0-1 / 4^{\prime \prime}$ | 1 lbs |
| ASL5BS8B | $53 / 8 \times 7 \times 8$ | Bottom | 37 lbs | ASL5FL3 | Filler Section 3 in. | $0-3 "$ | 1 lbs |
| ASL5BS9F | $53 /{ }^{\prime \prime} \times 7 \prime \prime \times 9^{\prime}$ | Front | 40 lbs | ASL5FL6 | Filler Section 6 in. | 3-6" | 1 lbs |
| ASL5BS9B | $588 \times 7 \times 9$ | Bottom | 40 los | ASL5FL9 | Filler Section 9 in. | 6-9" | 2 lbs |
| ASL5BS10F |  | Front |  | ASL5FL12 | Filler Section 12 in . | 9-12" | 3 lbs |
| ASL5BS10B | $5^{3 / 8^{\prime \prime}} \times 7^{\prime \prime} \times 10^{\prime}$ | Bottom | 44 lbs | ASL5-FL18 | Filler Section 18 in. | 15-18" | 5 lbs |
| NOTE: Blank section grilles are not punched unless requested. |  |  |  | ASL5DRF | Receptacle Section-Front In | $4^{1 ⁄ 2 \prime}$ | 2 lbs |
|  |  |  |  | ASL5DRB | Receptacle Section-Bottom In |  |  |
|  |  |  |  | PK5S* | Standard Pedestal $41 / 8 \mathrm{in}$. (H) | - | 2 lbs |
|  |  |  |  | PK5A* | Architectural Pedestal $41 / 8 \mathrm{in}$. (H) |  |  |
|  |  |  |  | SO1A | Stand-Off Bracket | - | 1 lbs |

* One pedestal. Two required on units up to 10 ft ., three required on units over 10 ft .
** Add suffix -P for painted followed by the color code (i.e. W for White, B for Black, etc.), -C for clear anodized, -B for bronze anodized (excludes PK5S-Black only)
${ }_{* * *}$ All Stand-off Brackets come standard as Beige.

$\qquad$

How to Order - ASL5
Example:


> Watts/ft: 100, 125, 150, 188 , $250,375,500,600,750$

> Air Inlet: F= Front Inlet, B = Bottom Inlet

$$
\begin{aligned}
& \text { Voltage \& Phase: } 121=120 \mathrm{~V}-1 \mathrm{ph}, 201= \\
& 208 \mathrm{~V}-1 \mathrm{ph}, 203=208 \mathrm{~V}-3 \mathrm{ph}, 241=240 \mathrm{~V}-1 \mathrm{ph}, \\
& 243=240 \mathrm{~V}-3 \mathrm{ph}, 271=277 \mathrm{~V}-1 \mathrm{ph}, 341= \\
& 347 \mathrm{~V}-1 \mathrm{ph}, 601=600 \mathrm{~V}-1 \mathrm{ph}, 603=600 \mathrm{~V}-3 \mathrm{ph}
\end{aligned}
$$

Transformer Relay (provides 24VAC power for external wall stat): $\mathbf{0}=$ None, or relay for Pilot Duty, X = Transformer Relay

Power Relay (requires external voltage): $\mathbf{0}=$ None, 1 = 120VAC holding coil, $\mathbf{2}=24 \mathrm{VAC}$ holding coil, $\mathrm{L}=$ Line Voltage (same as Htr)

> | Layout: S = Standard layout units-Heat Deck, |
| :--- |
| and control locations determined by the factory. |
| C = Custom layout units-Heat Deck locations |
| determined by Rep. using custom layout form. |
| Control Location must be accounted for. See notes. |
| $\begin{array}{l}\text { Heater Finish/Color (Front/Back): M = Mill, C = Clear Anodized, } \\ \text { Z = Bronze Anodized, K = Black Anodized, G = Charcoal Grey, } \\ \text { B = Black, A = Aluminum, S = Bronze, N = Beige, W = White, } \\ \text { U = Custom* }\end{array}$ |

Disconnect Switch: O = None, D = (1) two pole Disconnect Switch, 2 = (2) two pole Disconnect Switch Thermostat: $\mathbf{O}=$ None, $\mathbf{T}=$ Single Pole Thermostat, $\mathbf{2 T}$ = Double Pole

Incoming Power Hand**: R = Right hand, L = Left hand
*Custom finishes require additional approvals prior to acceptance
${ }^{* *}$ Control Hand / Incoming Power connection is determined by the hand of the DS/ thermostat when facing the heater.
Contact Marley Sales Representative for additional configuration details

No matter the industry or application, Marley Engineered Products has a robust portfolio of innovative, reliable, high-performance comfort heating and ventilation solutions for all your heating needs.

For more information or assistance on your next project, contact Technical Services at 800-642-4328
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