

# BELIMO

[www.belimo.com](http://www.belimo.com)

- **ACTUATORS**
- **ACCESSORIES**





**BELIMO CONTROLS**

Price List: Section 7  
Effective Date: April 2004  
Replaces: February 2003

**INDEX**

	<b>PAGE</b>
AF SERIES .....	6 – 7
AM SERIES .....	8 – 9
DAMPER ACTUATORS — FEATURES AND BENEFITS .....	4
ELECTRONIC ACCESSORIES .....	20
GENERAL WIRING/INSTALLATION HINTS/MOUNTING INSTRUCTIONS .....	5
GM SERIES .....	10 – 11
LF SERIES .....	12 – 13
LM SERIES .....	14 – 15
MECHANICAL ACCESSORIES .....	21 – 23
MODULATOR ACTUATOR APPLICATION CHART .....	1
NF SERIES .....	16 – 17
NM SERIES .....	18 – 19
ON/OFF ACTUATOR APPLICATION CHART .....	2 – 3

**ECCO HEATING PRODUCTS LTD.** is proud to be a member of:



**ASHRAE**

American Society of Heating, Refrigeration, and Air Conditioning Engineers, Inc.



**HRAI**

Heating, Refrigerating and Air Conditioning Institute of Canada



**HARDI**

Heating, Airconditioning & Refrigeration Distributors International



**SMACNA**

Sheet Metal & Air Conditioning Contractors National Association Inc.



**SPIDA**

Spiral Duct Manufacturers Association



**MODULATING ACTUATOR APPLICATION CHART**

Airside Products	Power Supply		Power Consumption	Running Time	Control Input						Control Input Multi-Function		Position Feed-back	Torque						Auxiliary Switches											
	Power	120 VAC ± 10%	230 VAC ± 10%	VA rating Wattage running (holding)	Motor Drive (Default)* (...MFT US adjustable 75 to 300 sec.)	Spring Return	On/Off	Floating Point	2-10 VDC (Default) 4-20 mA* (w/500 resistor)	6-9 VDC, 20 VDC output voltage Honeywell Series 90, 0-135	LonTalk	On/Off*	Floating Point*	Start and Span adj., Start 0.5 to 30 VDC, Span 2.5 to 32 VDC*	PWM adj., 0.02 to 50.0 seconds*	2-10 VDC (Default)	VDC Variable, Start 0 to 8, Span 2 to 10 VDC*	35 in-lb (4 Nm), Approx. 8 sq. ft.	60 in-lb (7 Nm), Approx. 15 sq. ft.	70 in-lb (8 Nm), Approx. 18 sq. ft.	133 in-lb (15 Nm), Approx. 33 sq. ft.	160 in-lb (18 Nm), Approx. 40 sq. ft.	266 in-lb (30 Nm), Approx. 70 sq. ft.	1 SPDT, 6A (1.5A inductive) @ 250V	1 SPDT, 6A (2.5A inductive) @ 24V	2 SPDT, 7A (2.5A inductive) @ 250V	Add-on				
<b>SPRING RETURN</b>																															
LF24-SR US	•			5	2.5 (1)	150	<25																								
LF24-SR-S US	•			5	2.5 (1)	150	<25																								
LF24-MFT US	•			5	2.5 (1)	150	<25																								
LF24-MFT-S-US	•			5	2.5 (1)	150	<25																								
LF24-MFT-20 US	•			6	3.5 (1.5)	150	<25																								
LF24-MFT-S-20 US	•			6	3.5 (1.5)	150	<25																								
LF24-3 US	•			5	2.5 (1)	150	<25																								
LF24-3-S US	•			5	2.5 (1)	150	<25																								
LFC24-3-R US	•			5	2.5 (1)	90	<25																								
LFC24-3-S US	•			5	2.5 (1)	90	<25																								
NF24-SR US	•			6	3 (1)	150	<60																								
NF24-SR-S US	•			6	3 (1)	150	<60																								
NF24-MFT US	•			10	6 (1.8)	150	<60																								
NF24-MFT-S US	•			10	6 (1.8)	150	<60																								
AF24-MFT US	•			10	6 (1.8)	150	<20																								
AF24-MFT-S US	•			10	6 (1.8)	150	<20																								
AF24-MFT95 US	•			10	6 (2)	150	<20																								
AF24-SR US	•			10	6 (2)	150	<20																								
AFR24-SR US	•			10	6 (2)	150	<20																								
AFR24-3 US	•			10	6 (2)	150	<20																								
AFR24-3-S US	•			10	6 (2)	150	<20																								
AF24LON US	•			10	6 (2)	150	<20																								
<b>NON-SPRING RETURN</b>																															
LM24-3 US	•			3	2	95																									
LM24-3-T US	•			3	2	95																									
LM24-SR-2.0 US	•			4	2	95																									
LM24-SR-T-2.0 US	•			4	2	95																									
LMC24-SR US (fast running)	•			4	2.5	25 - 35																									
LM24-MFT US	•			4	2	150																									
NM24 US	•			4	2	75 - 150																									
NM24-SR US	•			4	1.3	150																									
NM24-MFT US	•			4	1.3	150																									
AM24 US	•			5	2.5	100 - 150																									
AM24-SR US	•			5	2.5	150																									
AM24-MFT US	•			5	2.5	150																									
AM24LON US	•			5	2.5	150																									
SM24-SR94 US	•			4	2	100 - 200																									
GM24 US	•			6	3	135																									
GM24-SR US	•			7	3	135																									
GM24-MFT US	•			7	3	150																									
GM24LON US	•			7	3	150																									

\* Variable † Torque 17 in-lb.

- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -



**ON/OFF ACTUATOR APPLICATION CHART**

	Power Supply			Power Consumption		Running Time		Control Input		Feedback			Torque					Auxiliary Switches					
	24 VAC ± 20%, VDC +/- 15%	120 VAC ± 10%	230 VAC ± 10%	VA rating	Wattage running (holding)	Motor Drive	Spring Return	On/Off	Floating Point	5 K resistive feedback	10 K resistive feedback	Add-on resistive	35 in-lb (4 Nm), Approx. 8 sq. ft.	60 in-lb (7 Nm), Approx. 15 sq. ft.	70 in-lb (8 Nm), Approx. 18 sq. ft.	133 in-lb (15 Nm), Approx. 33 sq. ft.	160 in-lb (18 Nm), Approx. 40 sq. ft.	266 in-lb (30 Nm), Approx. 70 sq. ft.	1 SPDT, 6A (1.5A inductive) @ 250V	1 SPDT, 6A (2.5A inductive) @ 24V	2 SPDT, 7A (2.5A inductive) @ 250V	Add-on	
<b>Airside Products</b>																							
LF24 US	•			7	5 (2.5)	<40 to 75	<25	•				•											
LF24-S US	•			7	5 (2.5)	<40 to 75	<25	•				•											
LF120 US		•		7.5	5.5 (3.5)	<40 to 75	<25	•				•											
LF120-S US		•		7.5	5.5 (3.5)	<40 to 75	<25	•				•											
LF230 US			•	7	5 (3)	<40 to 75	<25	•				•											
LF230-S US			•	7	5 (3)	<40 to 75	<25	•				•											
NF24 US	•			8	5 (2.6)	<75	<60	•					•										
NF24-S US	•			8	5 (2.6)	<75	<60	•					•										
NF24-S2 US	•			8	5 (2.6)	<75	<60	•					•										•
NF120 US		•		7	6 (3.5)	<75	<60	•					•										
NF120-S US		•		7	6 (3.5)	<75	<60	•					•										
NF230 US			•	7	6 (3.5)	<75	<60	•					•										
NF230-S US			•	7	6 (3.5)	<75	<60	•					•										
AF24 US	•			10	5 (1.5)	150	<20	•					•										
AF24-S US	•			10	5 (1.5)	150	<20	•					•										
AF120 US		•		10	6 (2.3)	150	<20	•						•									
AF120-S US		•		10	6 (2.3)	150	<20	•						•									
AF230 US				11	6.5 (2.5)	150	<20	•							•								
AF230-S US				11	6.5 (2.5)	150	<20	•							•								
AFR24 US	•			10	5 (1.5)	150	<20	•															
AFR24-S US	•			10	5 (1.5)	150	<20	•															
AFR120 US		•		10	6 (2.3)	150	<20	•															
AFR120-S US		•		10	6 (2.3)	150	<20	•															
LM24 US	•			3	2	85 - 110		•					•										
LM24-T US	•			3	2	85 - 110		•					•										
LM24-S US	•			3	2	85 - 110		•					•										
LMC24 US																							
(fast running)	•			3	2	25 - 35		•					•										
LMC24-10P US	•			3	2	85 - 110		•	•		•		•										
LM24-5PO-T US	•			3	2	85 - 110		•	•	•			•										
NM24 US				3.5	2	75 - 150		•						•									
AM24 US	•			4.5	2.5	100 - 150		•	•				•										
AM24-S US	•			4.5	2.5	100 - 150		•					•										
SM24-S US																							
(fast running)	•			12	9.5 (1.2)	16 - 19		•							•								•
GM24 US	•			6	3	135		•					•										•

Note: New AFR...series: No manual override, 1 SPDT auxiliary switch (-S).

† Torque 17 in-lb.

(cont'd on next page)

- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -



**ON/OFF ACTUATOR APPLICATION CHART (cont'd)**

**Selection**

Contact the damper manufacturer and the system engineer for:

- Rated damper torque load
- Design face velocity
- Static pressure
- Is fail safe required?
- What is supply voltage (24V, 120V or 230V)?
- What is the control signal (on/off, floating point, proportional)?

Damper Area (8 ft <sup>2</sup> )	x	Rated Torque Loading of Damper (4 in-lb/ft <sup>2</sup> )	=	Total in-lb required (32 in-lb) <i>Belimo LF/LM 35 in-lb</i>
-------------------------------------	---	--	---	---

Damper Blade	Torque Loading in-lb/ft <sup>2</sup>		
	< 1000 FPM 2 inch water column	FPM 1000-2500	FPM 2500-3500
Parallel blade/edge seals	7	10.5	14
Opposed blade/edge seals	5	7.5	10
Parallel blade/no edge seals	4	6	8
Opposed blade/no edge seals	3	4.5	6
Round	10	14	20

- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -

## FEATURE/BENEFIT DAMPER ACTUATORS

### Feature/Benefit:

- Direct coupling with universal V clamp/*Fast, easy installation – No linkage adjustments*
- 3-foot cable/*Allows easy connections at junction box*
- Conduit connector/*Allows connecting standard coupling for Greenfield or Sealtight flexible conduit*
- Push-button manual override (non-spring return models)/*Speeds installation and function check – Button is large and easy to access*
- Manual override crank (AF Series)/*Integral position fixing adds to override functionality*
- Reverse actuator to change spring return direction/*Simplifies commissioning*
- Visual position indicators/*Quick damper position check*
- Reverse control with switch on housing/*Simplifies commissioning*
- Toothed V clamp/*Secure cold weld shaft attachment*
- Rated torque output is at minimum (not best case)/*You know what you're getting*
- Constant running time (Proportional models)/*Aids control loop tuning*
- Full-stroke overload protection/*Jammed dampers will not cause costly actuator replacement*
- Electronic non-symmetrical dead-band (Proportional models)/*Ensures long-term reliability, even in unstable control loops*
- Set actuator to compensate for damper seal wear and compression (Proportional models)/*Maintain tight close-off of worn dampers*
- Built in or add-on auxiliary switches, mechanical stops/*Easy to operate, adds functionality*
- High voltage actuators and auxiliary switches are double insulated/*No need for separate ground*
- Universal control with Multi-Function Technology®/*Increased flexibility, reduced inventory, reduce cost – complete product offering for your control functionality (PWM, SRS, Floating)*



AM ...



GM ...



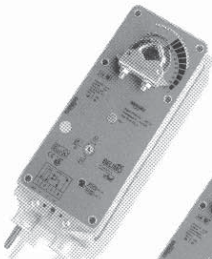
NM ...



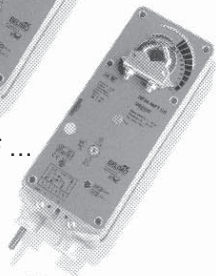
LM ...



LF ...

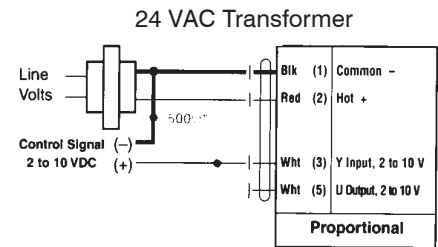
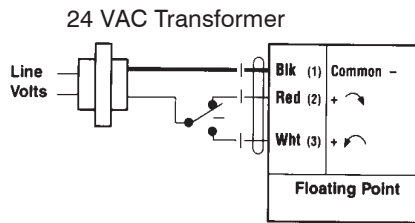
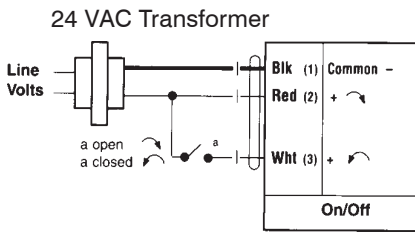


AF ...



NF ...

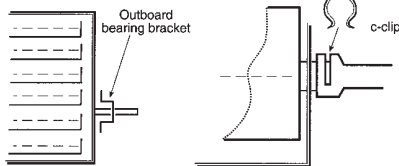
– All Prices F.O.B. Our Warehouse – Subject to Change Without Notice – All Taxes Extra –

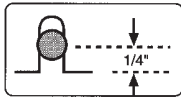
**General Wiring**


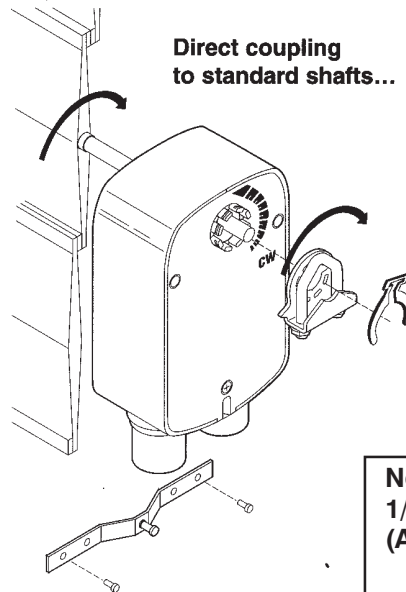
**Note:** Ask your ECCO sales representative for specific wiring diagrams.

**Installation hints**

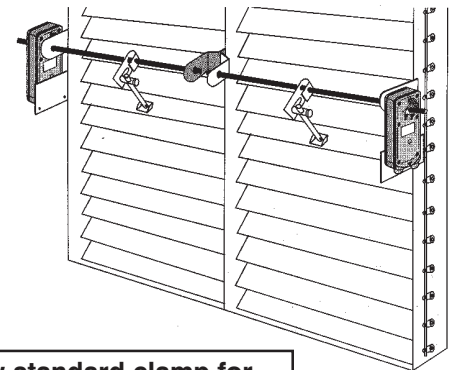
- Make sure damper blades and linkage move freely. A damaged or poorly operating damper cannot be controlled properly.
- On push-on type control shafts make sure c-clip and outboard bearing bracket are in place.



- Belimo actuators are designed to "float" slightly on the anti-rotation bracket. Position the bracket knob in the middle of the notch at the bottom of the actuator. 
- Watch out for control loops that pulse actuators without allowing movement. This can cause premature wear of all the devices in a system.
- Be sure to compensate for the increase or decrease in torque that can result when using linkage.
- Use a separate transformer unless you know that a half-wave rectifier is used in the controller.
- The VA rating of the transformer must be as large as the combined VA rating of the actuators connected to it (see local code).

**Mounting**


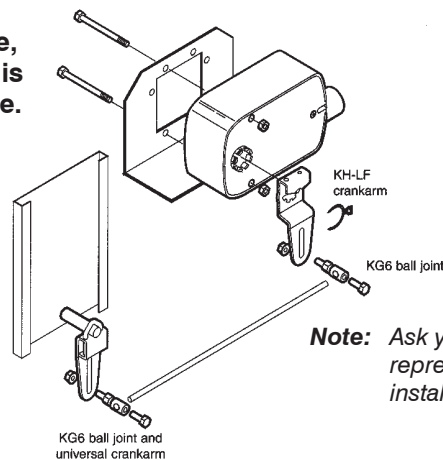
...and jackshafts (AF, NF)



**New standard clamp for 1/2" to 1.05" shafts (AF, NF, AM) K4-2 US**



**If direct coupling is not possible, linkage is available.**



**Note:** Ask your ECCO sales representative for specific installation information.

- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -

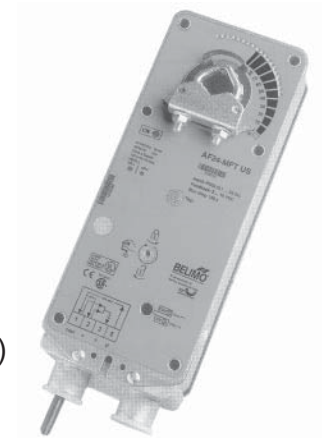


## AF SERIES

### Direct Coupled Spring Return Actuator/133 in-lb minimum torque

Torque:	133 in-lb minimum
Running time:*	150 seconds constant <20 sec. spring return fail safe position
Overload protection:	Electronic throughout rotation
Angle of rotation:*	95° (adjustable)
Fits shaft diameter:	1/2" to 1.05" (1/2" and 1.05" shafts centered)
Position indication:	Visual indicator
Manual override:	3 mm crank (supplied) (N/A w/AFR...)
Direction of rotation:*	CW/CCW external switch (Proportional models)
Spring return reversible:*	CW/CCW mounting
Dimensions:	10.59" × 3.86" × 3.10"
Electrical connection:	3 ft., 18 GA appliance cable, 1/2" conduit fitting
Built-in auxiliary switches:	2 × SPDT. One set at +5°, one adjustable 25° to 85° (AFR...1 × SPDT.)
Housing:	NEMA 2

\*Variable



**AF24-MFT US**

	MFT=2-10 VDC Default, or Set, Modify, Read:		All AF Actuators have BDCM
	<ul style="list-style-type: none"> <li>• Control (PWM, VDC range, floating point)</li> <li>• Feedback (0-10, 0-5 VDC)</li> <li>• Motion (run time)</li> <li>• Diagnostics (alarm messages)</li> </ul>		



(cont'd on next page)

– E.&O.E. –

– All Prices F.O.B. Our Warehouse – Subject to Change Without Notice – All Taxes Extra –





**BELIMO CONTROLS**

Price List: Section 7  
 Effective Date: April 2004  
 Replaces: February 2003

**AF SERIES (cont'd)**

STOCK #	MODEL	POWER SUPPLY	VA RATING	CONTROL INPUT	RUNNING TIME		FEED-BACK	BUILT-IN AUX. SWITCH	WEIGHT/LBS.	PRICE
					M	⊙				
761001	AFR24-SR US	24 VAC/DC	10	2-10 VDC (4-20 mA*)	150	<20	2-10 VDC		6	\$736.00
761005	AF24-SR US	24 VAC/DC	10	2-10 VDC (4-20 mA*)	150	<20	2-10 VDC		6	846.00
761002	AF24 US	24 VAC/DC	10	On/Off	150	<20			6	652.00
761004	AF24-S US	24 VAC/DC	10	On/Off	150	<20		•	6	752.00
761010	AF120 US	120 VAC	10	On/Off	150	<20			6.9	736.00
761012	AF120-S US	120 VAC	10	On/Off	150	<20		•	6.9	836.00
761000	AF230 US	230 VAC	11	On/Off	150	<20			6.9	P.O.A.
761000	AF230-S US	230 VAC	11	On/Off	150	<20		•	6.9	P.O.A.
761000	AFR24 US	24 VAC/DC	10	On/Off	150	<20			6	P.O.A.
761000	AFR24-S US	24 VAC/DC	10	On/Off	150	<20		•	6	P.O.A.
761000	AFR120 US	120 VAC	10	On/Off	150	<20			6.9	P.O.A.
761000	AFR120-S US	120 VAC	10	On/Off	150	<20		•	6.9	P.O.A.
761000	AFR24-3 US	24 VAC/DC	10	Floating Point	150	<20			6	P.O.A.
761000	AFR24-3-S US	24 VAC/DC	10	Floating Point	150	<20		•	6	P.O.A.
761000	AF24-MFT US	24 VAC/DC	10	2-10 VDC (Default)	150	<20	2-10 VDC (Default)		6	P.O.A.
761006	AF24-MFT-S US	24 VAC/DC	10	2-10 VDC (Default)	150	<20	2-10 VDC (Default)	•	6	946.00
761007	AF24-MFT95 US	24 VAC/DC	10	Honeywell Series 90, 0-135Ω	150	<20	2-10 VDC (Default)		6	949.00
761000	P-10002	24 VAC/DC		0-10 VDC	150		0-10 VDC			P.O.A.
761000	P-10003	24 VAC/DC		2-10 VDC	150		0-5 VDC			P.O.A.
761000	P-10004	24 VAC/DC		4-7 VDC	150		2-10 VDC			P.O.A.
761000	P-10005	24 VAC/DC		6-9 VDC	150		2-10 VDC			P.O.A.
761000	P-10006	24 VAC/DC		10.5-13.5 VDC	150		2-10 VDC			P.O.A.
761000	P-10012	24 VAC/DC		0-5 VDC	150		0-2.5 VDC			P.O.A.
761000	P-20001	24 VAC/DC		0.59-2.93 sec. PWM	150		2-10 VDC			P.O.A.
761000	P-20002	24 VAC/DC		0.02-5.00 sec. PWM	150		2-10 VDC			P.O.A.
761000	P-20003	24 VAC/DC		0.10-25.5 sec. PWM	150		2-10 VDC			P.O.A.
761000	P-30001	24 VAC/DC		Floating Point	150		2-10 VDC			P.O.A.

\* With 500Ω resistor, ZG-R01

AF24-MFT US is the basic model. Add the P... pre-set MFT configuration number and list price to the actuator when ordering, (ie: AF24-MFT US + P-10002).

AF24-SR US was phased out in December 2002.

**NEW! AFR... series. AFR indicates: NO manual override and only 1 auxiliary switch.  
 1 × SPDT**

- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -

## AM SERIES

### Direct Coupled Non-Spring Return, 160 in-lb minimum torque

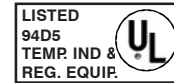
Torque:*	160 in-lb minimum (SM...133 in-lb)
Running time:*	*150 seconds constant 110 to 150 seconds depending on load (AM24(-S) US)
Overload protection:	Electronic throughout rotation
Angle of rotation:*	95° (adjustable)
Fits shaft diameter:	1/2" to 1.05" (1/2" and 1.05" shafts centered)
Position indication:	Visual indicator
Manual override:	Push-button
Direction of rotation:*	CW/CCW external switch
Dimensions:	8.75" × 3.0" × 3.62"
Electrical connection:	3 ft., 18 GA plenum rated cable, 1/2" conduit fitting
Built-in auxiliary switches:	2 × SPDT. Adjustable 0-95° (AM24-S US)
Housing:	NEMA 2



**AM24-MFT US**

\*Variable

	MFT=2-10 VDC Default, or Set, Modify, Read:		Actuators in bold have BDCM
	• Control (PWM, VDC range, floating point)		
	• Feedback (0-10, 0-5 VDC)		
	• Motion (run time)		
	• Diagnostics (alarm messages)		



(cont'd on next page)

– E.&O.E. –

– All Prices F.O.B. Our Warehouse – Subject to Change Without Notice – All Taxes Extra –



# BELIMO CONTROLS

Price List:  
Effective Date:  
Replaces:

Section 7  
April 2004  
February 2003

## AM SERIES (cont'd)

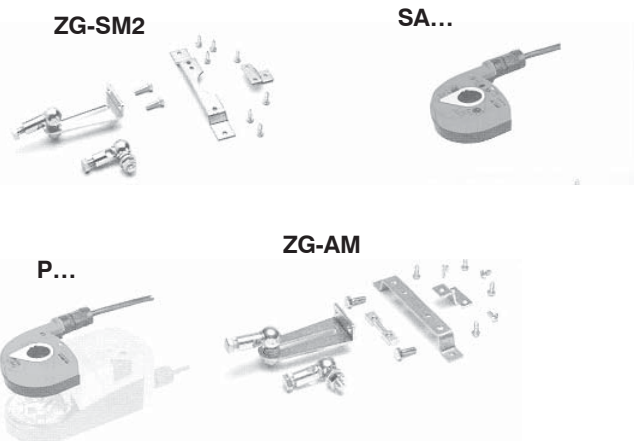
STOCK #	MODEL	POWER SUPPLY	VA RATING	CONTROL INPUT	RUNNING TIME	FEEDBACK	BUILT-IN AUX. SWITCH	WEIGHT/ LBS.	PRICE
761000	AM24-SR US	24 VAC/DC	5	2-10 VDC (4-20 mA*)	150	2-10 VDC		2.8	P.O.A.
761120	AM24 US	24 VAC/DC	4.5	On/Off, Floating Point	100 – 150	•		2.8	\$388.75
761126	AM24-S US	24 VAC/DC	4.5	On/Off, Floating Point	100 – 150	•	•	2.8	497.60
761000	SM24-S (Fast acting)	24 VAC	12	On/Off	16 – 19		•	3.3	P.O.A.
761000	SM24-SR94 US	24 VAC	4.2	0-135Ω or electronic series 90	100 – 200			3.2	P.O.A.
761122	AM24-MFT US	24 VAC/DC	5	2-10 VDC (Default)	150	2-10 VDC (Default)		2.8	622.00
761000	P-10002	24 VAC/DC		0-5 VDC	150	0-10 VDC			P.O.A.
761000	P-10003	24 VAC/DC		2-10 VDC	150	0-5 VDC			P.O.A.
761000	P-10004	24 VAC/DC		4-7 VDC	150	2-10 VDC			P.O.A.
761000	P-10005	24 VAC/DC		6-9 VDC	150	2-10 VDC			P.O.A.
761000	P-10006	24 VAC/DC		10.5-13.5 VDC	150	2-10 VDC			P.O.A.
761000	P-10012	24 VAC/DC		0-5 VDC	150	0-2.5 VDC			P.O.A.
761000	P-20001	24 VAC/DC		0.59-2.93 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-20002	24 VAC/DC		0.02-5.00 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-20003	24 VAC/DC		0.10-25.5 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-30001	24 VAC/DC		Floating Point	150	2-10 VDC			P.O.A.

\* With 500Ω resistor, ZG-R01

AM24-MFT US is the basic model. Add the P... pre-set MFT configuration number and list price to the actuator when ordering, (ie: AM24-MFT US + P-10002).

† Technical data, 133 in-lb

STOCK #	MODEL	DESCRIPTION	PRICE
761000	SA1 US	1 × SPDT auxiliary switch	P.O.A.
761000	SA2 US	2 × SPDT auxiliary switch	P.O.A.
761000	PA500 US	500Ω feedback pot.	P.O.A.
761000	PA1000 US	1000Ω feedback pot.	P.O.A.
761000	PA2800 US	2800Ω feedback pot.	P.O.A.
761000	ZG-AM	Universal mounting kit for AM	P.O.A.
761000	ZG-SM2	Universal mounting kit for SM	P.O.A.
761101	ZG-R01	Resistor (Convert 4-20 mA to 2-10 VDC)	\$17.80



– E.&O.E. –

– All Prices F.O.B. Our Warehouse – Subject to Change Without Notice – All Taxes Extra –

## GM SERIES

### Direct Coupled Non-Spring Return Actuator, 266 in-lb minimum torque

Torque:*	266 in-lb minimum
Running time:*	*150 seconds constant (135 seconds constant for GM24 US) (GM24-MFT US, Running time range 120 – 300 seconds, default 150)
Overload protection:	Electronic throughout rotation
Angle of rotation:*	95° (adjustable)
Fits shaft diameter:	1/2" to 1.05" (1/2" and 1.05" shafts centered)
Position indication:	Visual indicator
Manual override:	Push-button
Direction of rotation:*	CW/CCW external switch
Dimensions:	9.49" × 4.88" × 3.15"
Electrical connection:	3 ft., 18 GA plenum rated cable, 1/2" conduit fitting
Housing:	NEMA 2

\*Variable



**GM24-MFT US**

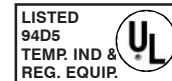


MFT=2-10 VDC Default, or  
Set, Modify, Read:

- Control (PWM, VDC range, floating point)
- Feedback (0-10, 0-5 VDC)
- Motion (run time)
- Diagnostics (alarm messages)



All GM  
Actuators  
have BDCM



(cont'd on next page)

– E.&O.E. –

– All Prices F.O.B. Our Warehouse – Subject to Change Without Notice – All Taxes Extra –



# BELIMO CONTROLS

Price List: Section 7  
 Effective Date: April 2004  
 Replaces: February 2003

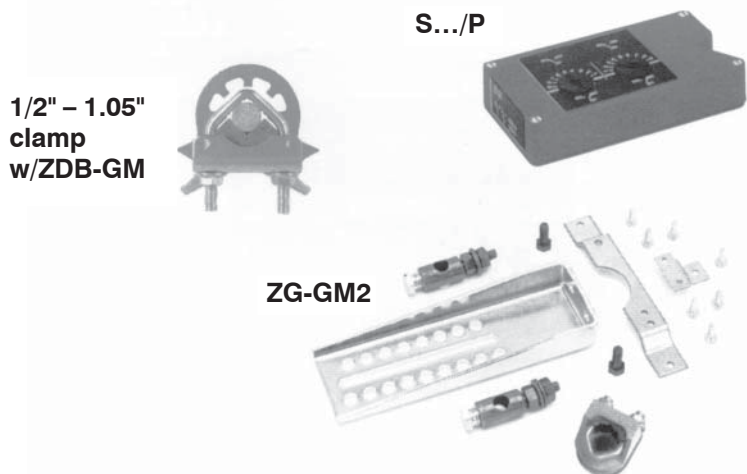
## GM SERIES (cont'd)

STOCK #	MODEL	POWER SUPPLY	VA RATING	CONTROL INPUT	<b>M</b> RUNNING TIME	FEEDBACK	BUILT-IN AUX. SWITCH	WEIGHT/ LBS.	PRICE
761000	GM24-SR US	24 VAC/DC	7	2-10 VDC (4-20 mA*)	135	2-10 VDC	Add-on	4.2	P.O.A.
761000	GM24 US	24 VAC/DC	6	On/Off, Floating Point	135	2-10 VDC (Default)	Add-on	4	P.O.A.
761000	GM24-MFT US	24 VAC/DC	7	2-10 VDC (Default)	150	0-10 VDC	Add-on	4.2	P.O.A.
761000	P-10002	24 VAC/DC		0-10 VDC	150	0-5 VDC			P.O.A.
761000	P-10003	24 VAC/DC		2-10 VDC	150	2-10 VDC			P.O.A.
761000	P-10004	24 VAC/DC		4-7 VDC	150	2-10 VDC			P.O.A.
761000	P-10005	24 VAC/DC		6-9 VDC	150	2-10 VDC			P.O.A.
761000	P-10006	24 VAC/DC		10.5-13.5 VDC	150	2-10 VDC			P.O.A.
761000	P-10012	24 VAC/DC		0-5 VDC	150	2-10 VDC			P.O.A.
761000	P-20001	24 VAC/DC		0.59-2.93 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-20002	24 VAC/DC		0.02-5.00 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-20003	24 VAC/DC		0.10-25.5 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-30001	24 VAC/DC		Floating Point	150	2-10 VDC			P.O.A.

\* With 500Ω resistor, ZG-R01

GM24-MFT US is the basic model. Add the P... pre-set MFT configuration number and list price to the actuator when ordering, (ie: GM24-MFT US + P-10002).

STOCK #	MODEL	DESCRIPTION	PRICE
761130	S1	1 × SPDT auxiliary switch	\$103.82
761131	S2	2 × SPDT auxiliary switch	130.52
761000	P500	Add-on feedback pot. 500Ω	P.O.A.
761000	P1000	Add-on feedback pot. 1000Ω	P.O.A.
761000	P2800	Add-on feedback pot. 2800Ω	P.O.A.
761000	ZDB-GM	Angle of rotation limiter	P.O.A.
761000	ZG-GM2	Universal mounting kit	P.O.A.
761101	ZG-R01	Resistor (Converts 4-20 mA to 2-10 VAC)	17.80



- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -



# BELIMO CONTROLS

Price List:  
Effective Date:  
Replaces:

Section 7  
April 2004  
February 2003

## LF SERIES

### Direct Coupled Non-Spring Return, 35 in-lb minimum torque

Torque:	35 in-lb minimum
Running time:*	40 to 75 seconds (on/off models) *150 seconds constant (Proportional models) (LFC ...90 seconds) <60 seconds (spring return fail safe position)
Overload protection:	Electronic throughout rotation
Angle of rotation:*	95° (adjustable)
Fits shaft diameter:	3/8" to 1/2" (standard) 1/2"-3/4" (with K6-1 clamp accessory)
Position indication:	Visual indicator
Direction of rotation:*	CW/CCW external switch (Proportional models)
Spring return reversible:*	CW/CCW mounting
Dimensions:	7.67" × 3.15" × 3.23"
Electrical connection:	3 ft. cable, 1/2" conduit fitting, 18 GA plenum rated cable (appliance cable ...-S)
Built-in auxiliary switch:	1 × SPDT. Adjustable 0-95°
Housing:	NEMA 2



**LF24-MFT US**

\*Variable

	MFT=2-10 VDC Default, or Set, Modify, Read:		Actuators in bold have BDCM
	<ul style="list-style-type: none"> <li>• Control (PWM, VDC range, floating point)</li> <li>• Feedback (0-10, 0-5 VDC)</li> <li>• Motion (run time)</li> <li>• Diagnostics (alarm messages)</li> </ul>		



(cont'd on next page)

- E.&O.E. -



- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -



# BELIMO CONTROLS

Price List: Section 7  
 Effective Date: April 2004  
 Replaces: February 2003

## LF SERIES (cont'd)

STOCK #	MODEL	POWER SUPPLY	VA RATING	CONTROL INPUT	RUNNING TIME		FEED-BACK	BUILT-IN AUX. SWITCH	WEIGHT/LBS.	PRICE
										
761018	LF24-SR US	24 VAC/DC	5	2-10 VDC (4-20 mA*)	150	<25	2-10 VDC		3.1	\$578.00
761019	LF24-SR-S US	24 VAC/DC	5	2-10 VDC (4-20 mA*)	150	<25	2-10 VDC	•	3.2	658.00
761014	LF24 US	24 VAC/DC	7	On/Off	<40-75	<25			3.1	421.00
761015	LF24-S US	24 VAC/DC	7	On/Off	<40-75	<25		•	3.2	484.00
761016	LF120 US	120 VAC	7.5	On/Off	<40-75	<25			3.4	445.00
761017	LF120-S US	120 VAC	7.5	On/Off	<40-75	<25		•	3.5	510.00
761000	LF230 US	230 VAC	7	On/Off	<40-75	<25			3.4	P.O.A.
761000	LF230-S US	230 VAC	7	On/Off	<40-75	<25		•	3.5	P.O.A.
761000	LFR24-3 US	24 VAC/DC	5	Floating Point	150	<25			3.1	P.O.A.
761000	LFC24-3-S US	24 VAC/DC	5	Floating Point	150	<25		•	3.6	P.O.A.
761000	LFC24-3-R US	24 VAC/DC	5	Floating Point	90	<25			3.1	P.O.A.
761000	LFC24-3-S US	24 VAC/DC	5	Floating Point	90	<25		•	3.6	P.O.A.
761000	LF24-MFT US	24 VAC/DC	5	2-10 VDC (Default)	150	<25	2-10 VDC (Default)		3.1	P.O.A.
761000	LF24-MFT-S US	24 VAC/DC	5	2-10 VDC (Default)	150	<25	2-10 VDC (Default)	•	3.2	P.O.A.
761000	LF24-MFT-20 US	24 VAC/DC	6	6-9 VDC†	150	<25	2-10 VDC		3.1	P.O.A.
761000	LF24-MFT-S-20 US	24 VAC/DC	6	6-9 VDC†	150	<25	2-10 VDC	•	3.2	P.O.A.
761000	P-10002	24 VAC/DC		0-10 VDC	150		0-10 VDC			P.O.A.
761000	P-10003	24 VAC/DC		2-10 VDC	150		0-5 VDC			P.O.A.
761000	P-10004	24 VAC/DC		4-7 VDC	150		2-10 VDC			P.O.A.
761000	P-10005	24 VAC/DC		6-9 VDC	150		2-10 VDC			P.O.A.
761000	P-10006	24 VAC/DC		10.5-13.5 VDC	150		2-10 VDC			P.O.A.
761000	P-10012	24 VAC/DC		0-5 VDC	150		0-2.5 VDC			P.O.A.
761000	P-20001	24 VAC/DC		0.59-2.93 sec. PWM	150		2-10 VDC			P.O.A.
761000	P-20002	24 VAC/DC		0.02-5.00 sec. PWM	150		2-10 VDC			P.O.A.
761000	P-20003	24 VAC/DC		0.10-25.5 sec. PWM	150		2-10 VDC			P.O.A.
761000	P-30001	24 VAC/DC		Floating Point	150		2-10 VDC			P.O.A.

\* With 500Ω resistor, ZG-R01

LF24-MFT US is the basic model. Add the P... pre-set MFT configuration number and list price to the actuator when ordering, (ie: LF24-MFT US + P-10002).

- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -

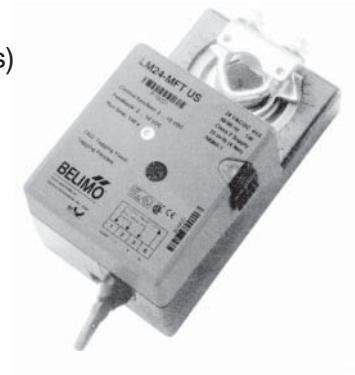


## LM SERIES

### Direct Coupled Non-Spring Actuator, 35 in-lb minimum torque

Torque:*	35 in-lb minimum (17 in-lb on LMC...models)
Running time:*	*95 seconds constant independent of load 150 seconds independent of load 80-110 seconds depending on load (25-35 seconds on LMC...models)
Overload protection:	Electronic throughout rotation
Angle of rotation:*	95° (adjustable)
Fits shaft diameter:	5/16" to 23/32"
Position indication:	Visual indicator
Manual override:	Push-button
Direction of rotation:*	CW/CCW external switch
Dimensions:	4.53" × 2.32" × 2.56"
Electrical connection:	3 ft., 18 GA plenum rated cable (terminal strip on-T models)
Built-in auxiliary switch:	1 × SPDT. Adjustable 0°-90°
Housing:	NEMA 2 (-T models NEMA 1)

\*Variable



**LM24-MFT US**

	MFT=2-10 VDC Default, or Set, Modify, Read:		Actuators in bold have BDCM
	<ul style="list-style-type: none"> <li>• Control (PWM, VDC range, floating point)</li> <li>• Feedback (0-10, 0-5 VDC)</li> <li>• Motion (run time)</li> <li>• Diagnostics (alarm messages)</li> </ul>		



(cont'd on next page)

– E.&O.E. –

– All Prices F.O.B. Our Warehouse – Subject to Change Without Notice – All Taxes Extra –




# BELIMO CONTROLS

Price List:  
Effective Date:  
Replaces:

Section 7  
April 2004  
February 2003

## LM SERIES (cont'd)

STOCK #	MODEL	POWER SUPPLY	VA RATING	CONTROL INPUT	 RUNNING TIME	FEEDBACK	BUILT-IN AUX. SWITCH	WEIGHT/ LBS.	PRICE
761023	LM24-SR-2.0 US	24 VAC/DC	4	2-10 VDC (4-20 mA*)	95	2-10 VDC		1.2	\$ 365.00
761000	LM24-SR-T-2.0 US (Terminal strip)	24 VAC/DC	4	2-10 VDC (4-20 mA*)	95	N/A		1.2	P.O.A.
761020	LM24 US	24 VAC/DC	3	On/Off, Floating Point	85 – 110			1.2	246.00
761000	LM24-T US (Terminal strip)	24 VAC/DC	3	On/Off, Floating Point	85 – 110			1.2	P.O.A.
761022	LM24-S US	24 VAC/DC	3	On/Off, Floating Point	85 – 110		•	1.2	314.00
761000	LM24-3 US	24 VAC/DC	3	On/Off, Floating Point	95			1.2	P.O.A.
761000	LM24-3-T US (Terminal strip)	24 VAC/DC	3	On/Off, Floating Point	95			1.2	P.O.A.
761000	LMC24-SR US (Fast running)	24 VAC/DC	4	2-10 VDC (4-20 mA*)	25 – 35	2-10 VDC		1.2	P.O.A.
761000	LMC24 US (Fast running)	24 VAC/DC	3	On/Off, Floating Point	25 – 35			1.2	P.O.A.
761000	LM24-5P0-T US (Terminal strip)	24 VAC/DC	3	On/Off, Floating Point	85 – 110	5kΩ		1.2	P.O.A.
761000	LM24-10P US	24 VAC/DC	3	On/Off, Floating Point	85 – 110	10kΩ		1.2	P.O.A.
761000	LM24-MFT US	24 VAC/DC	4	2-10 VDC (Default)	150	2-10 VDC (Default)		1.2	P.O.A.
761000	P-10002	24 VAC/DC		0-10 VDC	150	0-10 VDC			P.O.A.
761000	P-10003	24 VAC/DC		2-10 VDC	150	0-5 VDC			P.O.A.
761000	P-10004	24 VAC/DC		4-7 VDC	150	2-10 VDC			P.O.A.
761000	P-10005	24 VAC/DC		6-9 VDC	150	2-10 VDC			P.O.A.
761000	P-10006	24 VAC/DC		10.5-13.5 VDC	150	2-10 VDC			P.O.A.
761000	P-10012	24 VAC/DC		0-5 VDC	150	0-2.5 VDC			P.O.A.
761000	P-20001	24 VAC/DC		0.59-2.93 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-20002	24 VAC/DC		0.02-5.00 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-20003	24 VAC/DC		0.10-25.5 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-30001	24 VAC/DC		Floating Point	150	2-10 VDC			P.O.A.

\* With 500Ω resistor, ZG-R01

LM24-MFT US is the basic model. Add the P... pre-set MFT configuration number and list price to the actuator when ordering, (ie: LM24-MFT US + P-10002).

– E.&O.E. –

– All Prices F.O.B. Our Warehouse – Subject to Change Without Notice – All Taxes Extra –



# BELIMO CONTROLS

Price List:  
Effective Date:  
Replaces:

Section 7  
April 2004  
February 2003

## NF SERIES

### Direct Coupled Spring Return Actuator, 60 in-lb minimum torque

- Torque:\* 60 in-lb minimum
- Running time:\* <75 seconds (on/off)  
\*150 seconds constant (proportional)  
<60 sec. spring return fail safe position
- Overload protection: Electronic throughout rotation
- Angle of rotation:\* 95° (adjustable)
- Fits shaft diameter: 1/2" to 1.05" (1/2" and 1.05" shafts centered)
- Position indication: Visual indicator
- Direction of rotation:\* CW/CCW external switch  
(Proportional models)
- Spring return reversible:\* CW/CCW mounting
- Dimensions: 10.59" x 3.86" x 3.10"
- Electrical connection: 3 ft., 18 GA appliance cable,  
1/2" conduit fitting
- Built-in auxiliary switch: 1 x SPDT. Adjustable 25°-85°  
(NF24-S2: 2 x SPDT)
- Housing: NEMA 2

\*Variable



NF24-MFT US

	MFT=2-10 VDC Default, or Set, Modify, Read:		Actuators in bold have BDCM
	<ul style="list-style-type: none"> <li>• Control (PWM, VDC range, floating point)</li> <li>• Feedback (0-10, 0-5 VDC)</li> <li>• Motion (run time)</li> <li>• Diagnostics (alarm messages)</li> </ul>		



(cont'd on next page)

- E.&O.E. -



- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -



# BELIMO CONTROLS

Price List: Section 7  
 Effective Date: April 2004  
 Replaces: February 2003

## NF SERIES (cont'd)

STOCK #	MODEL	POWER SUPPLY	VA RATING	CONTROL INPUT	RUNNING TIME		FEED-BACK	BUILT-IN AUX. SWITCH	WEIGHT/ LBS.	PRICE
										
761036	<b>NF24-SR US</b>	24 VAC/DC	6	2-10 VDC (4-20 mA*)	150	<60	2-10 VDC		6	\$662.00
761000	<b>NF24-SR-S US</b>	24 VAC/DC	6	2-10 VDC (4-20 mA*)	150	<60	2-10 VDC	•	6	P.O.A.
761032	NF24 US	24 VAC/DC	8	On/Off	<75	<60			6.6	489.00
761034	NF24-S US	24 VAC/DC	8	On/Off	<75	<60		•	6.6	575.00
761000	NF24-S2 US	24 VAC/DC	8	On/Off	<75	<60		•	6.6	P.O.A.
761042	NF120 US	120 VAC	7	On/Off	<75	<60			7.3	564.00
761044	NF120-S US	120 VAC	7	On/Off	<75	<60		•	7.3	659.00
761000	NF230 US	230 VAC	7	On/Off	<75	<60			7.3	P.O.A.
761000	NF230-S US	230 VAC	7	On/Off	<75	<60		•	7.3	P.O.A.
761000	<b>NF24-MFT US</b>	24 VAC/DC	10	2-10 VDC (Default)	150	<60	2-10 VDC (Default)		6	P.O.A.
761000	<b>NF24-MFT-S US</b>	24 VAC/DC	10	2-10 VDC (Default)	150	<60	2-10 VDC (Default)	•	6	P.O.A.
761000	P-10002	24 VAC/DC		0-10 VDC	150		0-10 VDC			P.O.A.
761000	P-10003	24 VAC/DC		2-10 VDC	150		0-5 VDC			P.O.A.
761000	P-10004	24 VAC/DC		4-7 VDC	150		2-10 VDC			P.O.A.
761000	P-10005	24 VAC/DC		6-9 VDC	150		2-10 VDC			P.O.A.
761000	P-10006	24 VAC/DC		10.5-13.5 VDC	150		2-10 VDC			P.O.A.
761000	P-10012	24 VAC/DC		0-5 VDC	150		0-2.5 VDC			P.O.A.
761000	P-20001	24 VAC/DC		0.59-2.93 sec. PWM	150		2-10 VDC			P.O.A.
761000	P-20002	24 VAC/DC		0.02-5.00 sec. PWM	150		2-10 VDC			P.O.A.
761000	P-20003	24 VAC/DC		0.10-25.5 sec. PWM	150		2-10 VDC			P.O.A.
761000	P-30001	24 VAC/DC		Floating Point	150		2-10 VDC			P.O.A.

\* With 500Ω resistor, ZG-R01

NF24-MFT US is the basic model. Add the P... pre-set MFT configuration number and list price to the actuator when ordering, (ie: NF24-MFT US + P-10002).

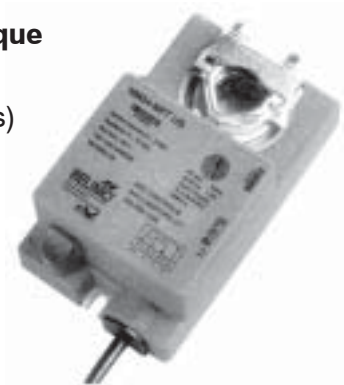
- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -

**NM SERIES**

**Direct Coupled Non-Spring Return Actuator, 70 in-lb minimum torque**

Torque:*	70 in-lb minimum
Running time:*	*150 seconds constant (Proportional models) 75 – 150 seconds depending on load (NM24 US)
Overload protection:	Electronic throughout rotation
Angle of rotation:*	95° (adjustable)
Fits shaft diameter:	3/9" to 3/4"
Position indication:	Visual indicator
Manual override:	Push-button
Rotation direction:*	CW/CCW external switch
Dimensions:	5.41" × 2.09" × 3.19"
Electrical connection:	3 ft., 18 GA plenum rated cable, 1/2" conduit fitting
Housing:	NEMA 2



**NM24-MFT US**

\*Variable

	<p>MFT=2-10 VDC Default, or                  Set, Modify, Read:</p> <ul style="list-style-type: none"> <li>• Control (PWM, VDC range, floating point)</li> <li>• Feedback (0-10, 0-5 VDC)</li> <li>• Motion (run time)</li> <li>• Diagnostics (alarm messages)</li> </ul>		<p>Actuators                  in bold                  have BDCM</p>
--	---	--	--




(cont'd on next page)

– E.&O.E. –

– All Prices F.O.B. Our Warehouse – Subject to Change Without Notice – All Taxes Extra –



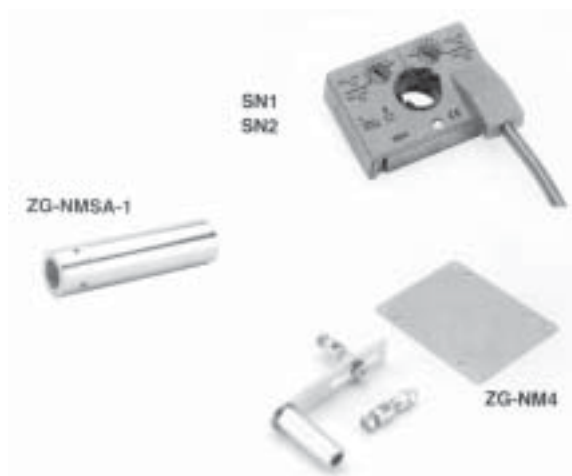
**NM SERIES (cont'd)**

STOCK #	MODEL	POWER SUPPLY	VA RATING	CONTROL INPUT	 RUNNING TIME	FEEDBACK	BUILT-IN AUX. SWITCH	WEIGHT/ LBS.	PRICE
761046	<b>NM24-SR US</b>	24 VAC/DC	3.5	2-10 VDC (4-20 mA*)	150	2-10 VDC	Add-on	1.8	\$459.00
761045	NM24 US	24 VAC/DC	3.5	On/Off, Floating Point	75 – 150	2-10 VDC (Default)	Add-on	1.8	300.00
761047	<b>NM24-MFT US</b>	24 VAC/DC	3.5	2-10 VDC (Default)	150		Add-on	1.8	542.00
761000	P-10002	24 VAC/DC		0-10 VDC	150	0-10 VDC			P.O.A.
761000	P-10003	24 VAC/DC		2-10 VDC	150	0-5 VDC			P.O.A.
761000	P-10004	24 VAC/DC		4-7 VDC	150	2-10 VDC			P.O.A.
761000	P-10005	24 VAC/DC		6-9 VDC	150	2-10 VDC			P.O.A.
761000	P-10006	24 VAC/DC		10.5-13.5 VDC	150	2-10 VDC			P.O.A.
761000	P-10012	24 VAC/DC		0-5 VDC	150	0-2.5 VDC			P.O.A.
761000	P-20001	24 VAC/DC		0.59-2.93 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-20002	24 VAC/DC		0.02-5.00 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-20003	24 VAC/DC		0.10-25.5 sec. PWM	150	2-10 VDC			P.O.A.
761000	P-30001	24 VAC/DC		Floating Point	150	2-10 VDC			P.O.A.

\* With 500Ω resistor, ZG-R01

NM24-MFT US is the basic model. Add the P... pre-set MFT configuration number and list price to the actuator when ordering, (ie: NM24-MFT US + P-10002).

STOCK #	MODEL	DESCRIPTION	PRICE
761130	SN1 US	1 × SPDT auxiliary switch	\$103.82
761131	SN2 US	2 × SPDT auxiliary switch	130.52
761000	ZG-NM3	Universal mounting kit – without mounting bracket	P.O.A.
761000	ZG-NM4	Universal mounting kit	P.O.A.
761000	ZG-NMSA-1	Shaft extension	P.O.A.
761101	ZG-R01	Resistor (Convert 4-20 mA to 2-10 VDC)	17.80



– E.&O.E. –

– All Prices F.O.B. Our Warehouse – Subject to Change Without Notice – All Taxes Extra –



**ELECTRONIC ACCESSORIES**

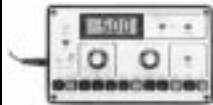
CONTROL, POSITIONING, FEEDBACK										
STOCK #	MODEL	DESCRIPTION	AF	NF	LF	GM	AM	NM	LM	PRICE
761000	IRM-100	Input rescaling module (for proportional actuators)	•	•	•	•	•	•	•	P.O.A.
761000	P1000	Feedback Potentiometer 1000Ω				•				P.O.A.
761000	P2800	Feedback Potentiometer 2800Ω				•				P.O.A.
761000	P500	Feedback Potentiometer 500Ω				•				P.O.A.
761000	PTA-250	Pulse width modulation interface (for proportional actuators)	•	•	•	•	•	•	•	P.O.A.
761049	SGA24	Positioner for remote control (for proportional actuators)	•	•	•	•	•	•	•	\$ 198.75
761050	SGF24	Positioner for remote control (for proportional actuators)	•	•	•	•	•	•	•	166.12
761000	ZG-SGF	Mounting plate for SGF	•	•	•	•	•	•	•	P.O.A.
761101	ZG-R01	4-20 mA adaptor 500Ω 1/2 W resistor with 6" pigtail wires	•	•	•	•	•	•	•	17.80
761102	ZG-R02	50% Voltage divider	•	•	•	•	•	•	•	23.73
761103	ZG-R03	Resistor kit for ...MFT95 and ...SR94 actuators in a 0-135Ω control application	•							17.80
761105	ZG-R05	Resistor kit for ...MFT95 and ...SR94 actuators in a 4-20 mA application	•							17.80
761106	ZG-R06	Resistor kit for ...MFT95 and ...SR94 actuators in Electronic Series 90 application	•							17.80
MISCELLANEOUS										
761000	NSV-24 US	Battery backup module				•	•	•	•	P.O.A.
761000	NSV-BAT	NSV-BAT 12 V 1.2 AH battery				•	•	•	•	P.O.A.
761048	PS-100	Actuator power supply simulator	•	•	•	•	•	•	•	1,391.73
761000	PS-XFMR	Replacement transformer for PS-100								P.O.A.
761000	ZG-HTR	Thermostat/heater kit AF/NF	•	•						P.O.A.
761000	ZG-X40	120 to 24 VAC, 40 VA transformer	•	•	•	•	•	•	•	P.O.A.
761000	ZG-LMCA	LM conduit connector bracket								P.O.A.
761000	P-370	Shaft mount auxiliary switch, 1/2" shaft	•	•	•	•	•	•	•	P.O.A.



MFT-Handy®



SGF-24



PS-100

**Multi-Function Technology®**

STOCK #	MODEL	DESCRIPTION	ONLY FIELD CONFIGURE VIA PC	ONLY FIELD CONFIGURE VIA MFT-HANDY TOOL	CURRENTLY HAVE A MFT-HANDY TOOL, AND WANT TO USE PC-TOOL	RECOMMENDED PRODUCT	PRICE
761000	MFT-H-Set US	MFT-Handy tool, MFT-C, MFT-XFMR		•		•	P.O.A.
761000	MFT-Handy US	MFT-Handy, with carry case					P.O.A.
761000	MFT-P	Belimo MFT configuration software,	•		•	•	P.O.A.
761000	MFT-C	Terminal block for connecting to MFT-Handy					P.O.A.
761000	ZIP-RS232 US	PC Interface and terminal block, for Belimo Actuate	•				P.O.A.
761000	MFT-XFMR	Transformer for MFT products	•				P.O.A.
761000	MFT-ZIP	Cable to connect ZIP-RS232 to MFT-Handy tool	•				P.O.A.
761000	COM Cable 1	RS-232 cable, F/M, connects MFT-Handy to PC			•	•	P.O.A.
761000	COM Cable 2	RS-232 PC cable, F/F	•				P.O.A.
761000	Adaptor 1	PC cable adaptor, F/M, purchase if F/F cable exists					P.O.A.
761000	Adaptor 2	PC cable adaptor, F/F			•	•	P.O.A.

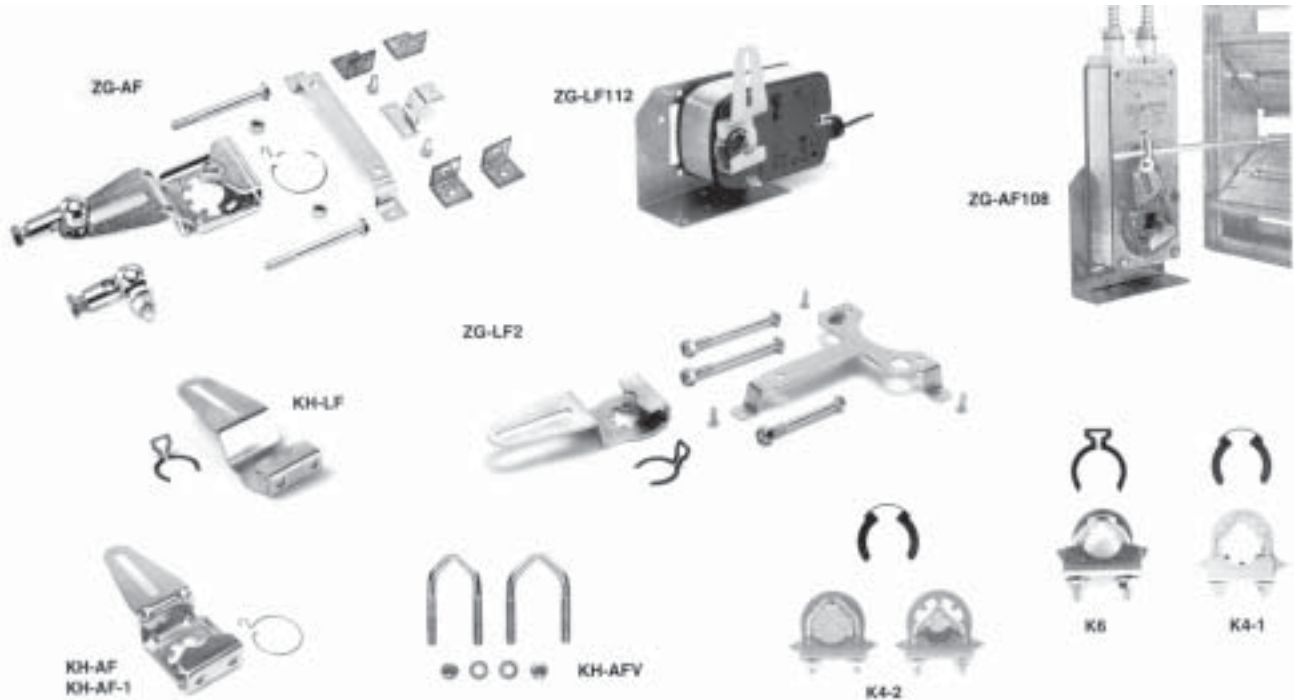
- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -





**MECHANICAL ACCESSORIES**



<b>CRANKARM ADAPTOR KITS (bracket/crankarm/hardware)</b>										
STOCK #	MODEL	DESCRIPTION	AF	NF	LF	GM	AM	NM	LM	PRICE
761080	ZG-AF US	With mounting hardware	•	•						\$ 97.89
761081	ZG-AF108*	With retrofit bracket, ZG-108 and KH-AF US	•	•						97.89
761000	ZG-LF2	With mounting hardware			•					P.O.A.
761000	ZG-LF112*	With retrofit bracket, ZG-112 and KH-LF			•					P.O.A.
761000	ZG-LFC114	With retrofit bracket and installation kit			•					P.O.A.
<b>CLAMPS</b>										
761000	K4-2 US	Standard clamp (1/2" – 1.05")	•	•			•			P.O.A.
761024	K4-1 US	For jackshafts (3/4" – 1.05")	•	•			•			\$ 29.66
761000	K4 US	Clamp (3/8" – 3/4")	•	•			•			P.O.A.
761000	K6 US	Standard clamp (3/8" – 1/2")			•					P.O.A.
761000	K6-1 US	Accessory clamp (1/2" – 3/4")			•					P.O.A.
<b>CRANKARMS</b>										
761026	KH-AF US	Shafts to 3/4"	•	•						\$ 29.66
761000	KH-AFV	V-Bolt Kit for direct coupling with KH-AF	•	•						P.O.A.
761028	KH-AF-1 US	Jackshafts to 1.05"	•	•						50.43
761000	KH-AM	Bolts to K4 clamp					•			P.O.A.
761027	KH-LF	Shafts to 1/2"			•					40.00
761000	KH-LFV	V-Bolt kit for direct coupling with KH-LF			•					P.O.A.
761000	KH6	Universal crankarm (for KG6 ball joint)	•	•	•	•	•	•	•	P.O.A.
761000	KH8	Universal crankarm (for KG8 ball joint)	•	•	•	•	•	•	•	P.O.A.
761150	ZH-LM	Linear stroke adaptor for LM...series								66.74

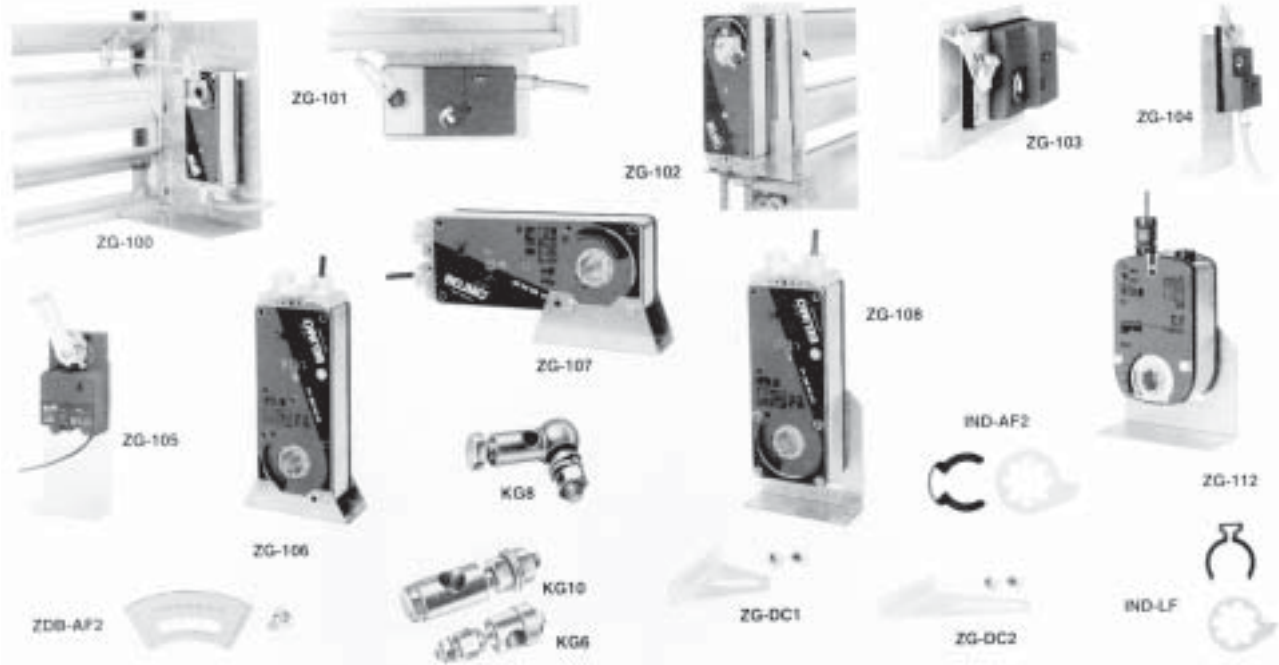
\*Positions crankarm in same relative position as crankarm on electric foot mount-type linkage actuators.

- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -



**MECHANICAL ACCESSORIES (cont'd)**



<b>UNIVERSAL MOUNTING BRACKETS (pre-punched hole)</b>										
STOCK	MODEL	DESCRIPTION	AF	NF	LF	GM	AM	NM	LM	PRICE
761051	ZG-100	Right angle (17" H x 11 1/8" W x 6 1/4" base)	•	•		•	•			\$ 97.89
761052	ZG-101	Right angle (13" H x 11 1/32" W x 6 1/8" base)	•	•	•	•	•	•		97.89
761053	ZG-102	For multiple actuators	•	•	•	•	•			97.89
761054	ZG-103	Right angle (7" H x 11 1/32" W x 2 3/4" base)				•	•			65.26
761055	ZG-104	Right angle (13 11/16" H x 6 1/8" W x 4" base)				•	•			65.26
761056	ZG-105	Right angle (8" H x 4" W x 2" foot)						•		32.63
761060	ZG-106*	Channel (1 1/2" H x 5 1/2" W x 2 1/4" base)*	•	•						50.43
761062	ZG-107*	Channel (2 1/4" H x 5 1/2" W x 2 1/4" base)*	•	•						50.43
761064	ZG-108*	Right angle (5 7/8" H x 5 1/2" W x 2" base)*	•	•						65.26
761000	ZG-111	Adaptor for NM...Series replacement of NEP						•		P.O.A.
761000	ZG-112*	Right angle (4 1/2" H x 5 1/2" W x 2 1/2" base)*			•					P.O.A.
<b>BALL JOINTS, DAMPER CLIPS, PUSH RODS</b>										
761000	KG6	Ball joint (5/16")		•	•			•		P.O.A.
761000	KG8	Ball joint (5/16", 90°)	•	•	•		•	•		P.O.A.
761000	KG10	Ball joint (3/8")	•	•	•	•	•	•		P.O.A.
761082	ZG-DC1	Damper clip	•	•	•	•	•	•		\$ 50.43
761083	ZG-DC2	Damper clip	•	•	•	•	•	•		50.43
761000	SH8	Push rod (35", 5/16" dia.)	•	•	•	•	•	•		P.O.A.
761000	SH10	Push rod (35", 3/8" dia.)	•	•	•	•	•	•		P.O.A.
<b>ROTATION LIMITERS, POSITION INDICATORS</b>										
761000	IND-AF2	Position indicator	•	•						P.O.A.
761000	IND-LF	Position indicator			•					P.O.A.
761142	ZDB-AF2 US	Rotation limiter	•	•						\$ 17.80
761140	ZDB-LF	Rotation limiter			•					17.80

\* Positions crankarm in same relative position as crankarm on electric foot mount-type linkage actuators.

- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -

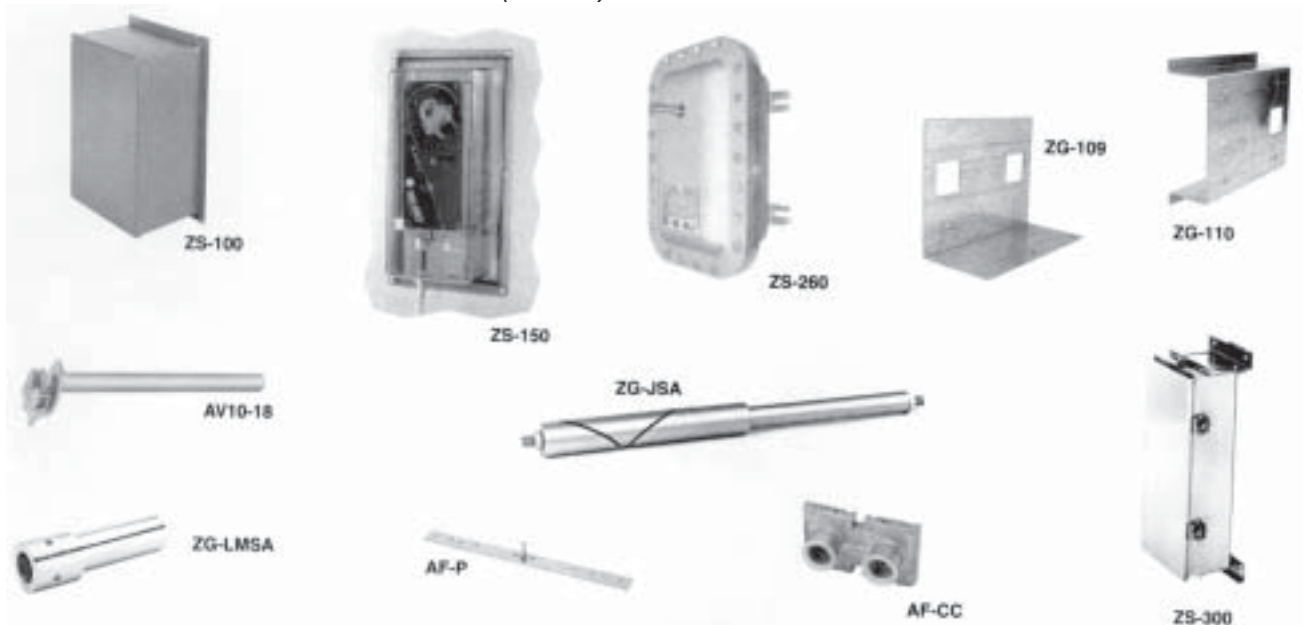


# BELIMO CONTROLS

Price List:  
Effective Date:  
Replaces:

Section 7  
April 2004  
February 2003

## MECHANICAL ACCESSORIES (cont'd)



HOUSINGS										
STOCK #	MODEL	DESCRIPTION	AF	NF	LF	GM	AM	NM	LM	PRICE
761000	ZS-100	Galvanized weather shield	•	•	•	•	•			P.O.A.
761000	ZS-101	Base plate for ZS-100	•	•	•	•	•			P.O.A.
761000	ZS-150	Polycarbonate weather shield	•	•	•	•	•			P.O.A.
761000	ZS-260	Explosion-proof, front or rear mounted shaft	•	•	•	•	•			P.O.A.
761000	ZG-109	Right angle bracket for ZS-260	•	•	•	•	•			P.O.A.
761000	ZG-110	Stand-off bracket for ZS-260	•	•	•	•	•			P.O.A.
761000	ZS-300	NEMA 4X, 304 stainless steel	•	•	•	•	•			P.O.A.
761000	ZS-300-1	ZS-300 without brackets	•	•	•	•	•			P.O.A.
761000	ZS-300-5	NEMA 4X, 316L stainless steel	•	•	•	•	•			P.O.A.
761000	ZS-300-BK	Bracket set for ZS-300-1	•	•	•	•	•			P.O.A.
761000	ZS-300-C1	1/2" shaft adaptor (standard with ZS-300)	•	•	•	•	•			P.O.A.
761000	ZS-300-C2	3/4" shaft adaptor	•	•	•	•	•			P.O.A.
761000	ZS-300-C3	1" shaft adaptor	•	•	•	•	•			P.O.A.
SHAFT ADAPTORS										
761000	AV-1	Shaft extension fits 3/8" to 11/16" Ø					•			P.O.A.
761013	AV10-18	Universal shaft extension, 3/8" to 9/16" □	•	•	•	•	•	•		\$ 59.33
761000	ZG-JSA-1	1" Jack shaft adaptor	•	•		•	•			P.O.A.
761000	ZG-JSA-2	1 5/16" Jack shaft adaptor	•	•		•	•			P.O.A.
761000	ZG-JSA-3	1.05" Jack shaft adaptor	•	•		•	•			P.O.A.
761089	ZG-LMSA	Shaft extension, for 1/2" diameter shafts							•	83.06
761000	ZG-LMSA-1	Shaft extension, for 3/8" diameter shafts			•				•	P.O.A.
MISCELLANEOUS										
761000	AF-CC US	Conduit connector	•	•						P.O.A.
761000	11414	Anti-rotation bracket (AF-P)	•	•						P.O.A.
761000	11695	Anti-rotation bracket (LF-P)			•					P.O.A.
761000	ZA-AM US	SM... to AM... retrofit bracket					•			P.O.A.

- E.&O.E. -

- All Prices F.O.B. Our Warehouse - Subject to Change Without Notice - All Taxes Extra -