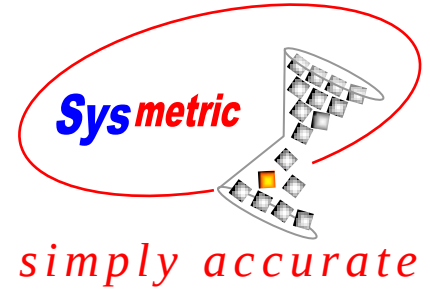


Line Control



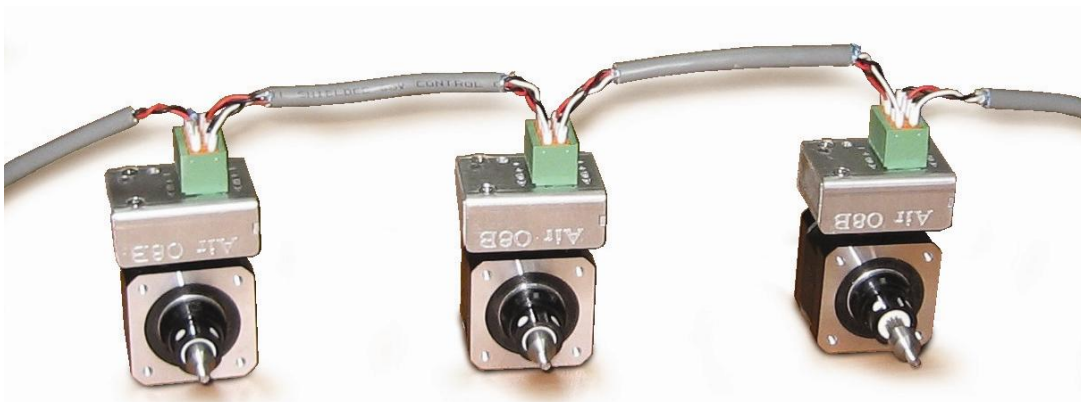
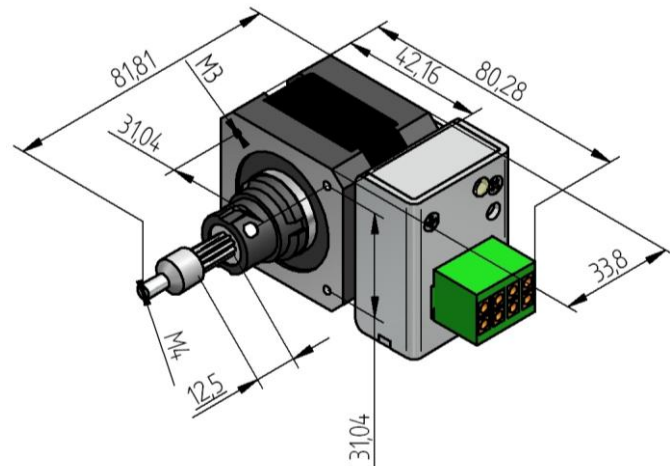
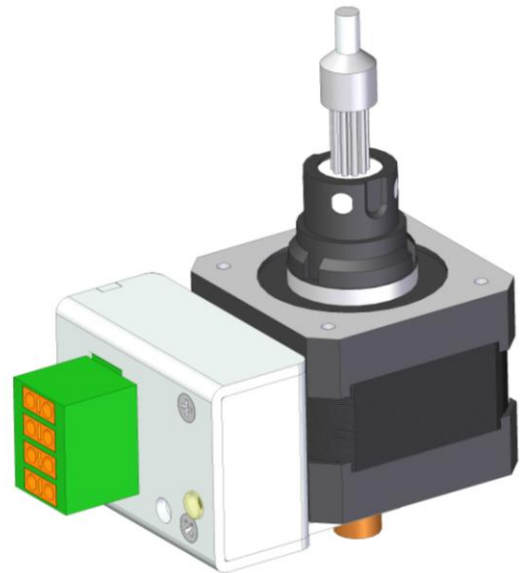
Air Motors

Linear Actuators for Air Flow Regulation Profile Control

The Air Motors are linear step motor actuators for positioning valves that regulate the air flow in profile control systems for **Blown Film Production Lines**. These unique units were designed in order to simplify the installation and operation of profile control rings.

Features:

- Compact design
- Step motor actuators with 0.003mm linear resolution
- Operation and control over RS485 communication
- Installation in series minimizes and eases wiring (*Twin Bus* connector)
- Plug connector simplifies motor replacement
- Single 4 wire cable for power and communication
- Dedicated Air driver electronic circuit
- Status indicator LED
- Galvanic isolation
- Up to 255 motors on one ring
- Temperature measurement
- Phase time monitoring detects motor stuck and short strokes
- Motor stroke of 12.5 mm
- Low power standby mode prevents heating the air ring



Series Wiring Minimizes and Simplifies Installation

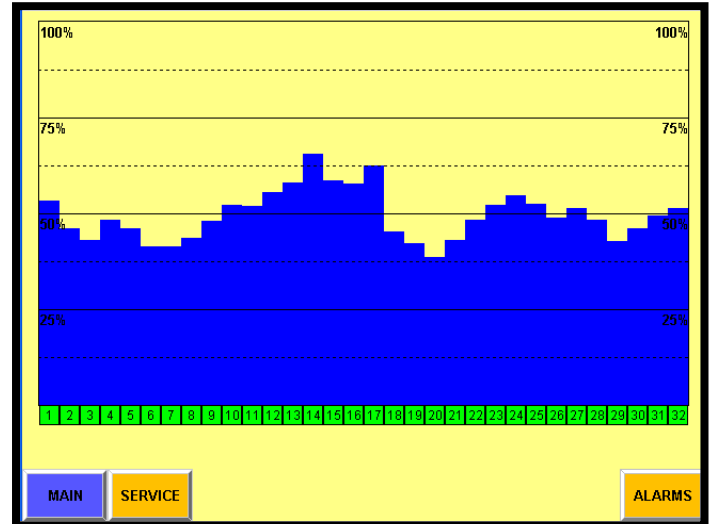
The Air Motors Control System

The **Air Motors Control System** allows programming and continuous monitoring of the Air Motors. The dedicated software enables easy set up of the air motors including ID programming and homing procedure. It is used for sending each motor to its required position and shows the actual position. In addition the software provides full supervision of the motors.

Main Screen

The main screen of the Air Motors control system shows via a bar graph the current position of each motor.

Note: the example shown is of a 32 motor system. The software is adjustable in accordance with the required number of motors in the air ring.



Monitor Screens

The Monitor screens show detailed status and data of each motor including: the required position of the motor, the actual position of the motor, the temperature in the motor's driver, the full stroke length of the motor and phase time monitoring. Error flags indicate specific errors in the motor such as: motor stuck, small stroke, communication error, driver errors and more

	NEXT	C	SET	ACT	PHASE TIME			STRK	°C	ERROR FLAGS	1 - 8
					MIN	MAX	AVG				
1	53.2%	B	53.2%	53.2%	700	2300	1613	4349	43	0 1 2 3 4 5 6 7 8 9 A B C D E F	9 - 16
2	46.1%	B	46.1%	46.1%	700	2300	1660	4358	44	0 1 2 3 4 5 6 7 8 9 A B C D E F	17 - 24
3	42.8%	B	42.8%	42.8%	700	2300	1645	4341	45	0 1 2 3 4 5 6 7 8 9 A B C D E F	25 - 32
4	48.1%	B	48.1%	48.1%	700	2300	1583	4318	44	0 1 2 3 4 5 6 7 8 9 A B C D E F	
5	46.1%	B	46.1%	46.1%	700	2300	1612	4341	46	0 1 2 3 4 5 6 7 8 9 A B C D E F	
6	41.3%	B	41.3%	41.3%	700	2300	1620	4413	45	0 1 2 3 4 5 6 7 8 9 A B C D E F	
7	41.2%	B	41.2%	41.2%	700	2300	1591	4373	44	0 1 2 3 4 5 6 7 8 9 A B C D E F	
8	43.6%	B	43.6%	43.6%	700	2300	1585	4365	44	0 1 2 3 4 5 6 7 8 9 A B C D E F	
999.9%					9999			0			

Setup Screen

The Air Motors are connected in series and therefore each motor in the system receives a unique ID number that is used for communicating with the main PLC. The Setup screen enables easy and fast programming of ID numbers to each motor in the system. After a motor receives an ID number a homing procedure runs in order to check its stroke. This procedure can be executed manually from this screen in order to check each motor in the case of errors.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
PROGRAM ID CLEAR ID HOMING AUTO/ALL SKIP							
MAIN	SERVICE	MONITOR	SETUP	EXIT SETUP	ALARMS		