

# eDART InfoSheet

## Actuator Naming Convention

eDART actuators are given a unique alphanumeric part number in the form:

**{Type} {Size} - {Cylinder Length} - {Spring Option} - {Stem Sex}**  
**[ - {Internal Feedback}] [ - {Stroke} [ - B{Bottom Stroke Limit}]] [ - {Material}]**



### 1. Actuator {Type}

The first part of the code designates the type of actuator, whether the cover plate is positioned with capscrews or straps:

Code	Description	Notes
ESA	Bolted Cover Tube	Capscrews are used to retain the end plates.
EDA	Rolled Cover Tube	The cover tube is bead rolled and specially designed straps are used to retain the actuator end plates for superior strength and ease of maintenance.

### 2. Actuator {Size}

eDART names the actuators according to the Internal Diameter of the pneumatic cylinder:

Code	Description	Thread Size on stem	Notes
100	Pneumatic Diameter: 100 mm	M12	Special
160	Pneumatic Diameter: 160 mm	M16	Standard Size
200	Pneumatic Diameter: 200 mm	M20	Standard Size
250	Pneumatic Diameter: 250 mm	M24	Standard Size
300	Pneumatic Diameter: 300 mm	M24	Standard Size
400	Pneumatic Diameter: 400 mm	M30	Standard Size
550	Pneumatic Diameter: 551 mm	M36	Special
750	Pneumatic Diameter: 750 mm	~	Special



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### 3. {Cylinder Length}

Each size of cylinder has a standard nominal length corresponding to the maximum stroke possible:

Size	Code (maximum stroke [mm])	Notes
100	80	
160	105; 165	Spring Pack is only available in 105mm stroke
200	175; 250	Spring Pack is only available in 175mm stroke
250	280	Spring Pack is only available in 280mm stroke
300	350; 450	There are two standard strokes on this model
400	450	
550	550	
750	750	

The cylinder stroke may be changed, which effects the overall size of the actuator, or the stroke may be limited using hard stops within the cylinder (see §7)

### 4. {Spring Option}

The following options for springs are offered:

Code	Description	Notes
DA	Double Acting	Air from the positioner is piped to both sides of the piston.
BE	Bias Fail Extended	The actuator is still piped double acting for superior control but the spring is used to create a fail action normally assisted by the flow direction over the plug.
BR	Bias Fail Retracted	
HE	Heavy Duty Fail Extended	The Actuator is piped single acting and a spring with enough force to overcome valve forces is used.
HR	Heavy Duty Fail Retracted	

### 5. {Stem Sex}

The Actuator stem may be configured with either a male or female thread:

Code	Description	Notes
M	Male	Standard
F	Female	Non-Standard; historical, mainly used for spares.

### 6. {Internal Feedback}

The internal feedback option uses a linear pot that runs down the centre of the actuator shaft.



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### 7. {Stroke}

The stroke may be limited by any amount by placing hard stops within the actuator. The number stated here is the actual stroke of the actuator and it is assumed that the stop is on the top of the piston. This means that the actuator stem all extend to the same distance but retract to different distances according to the stroke limiter. These limiters are called Top Stroke Limiters and all actuators have one. Even if the stroke is not limited then the stroke limiter prevents the shaft from engaging the top plate and is long enough to account for the Nylok Nut holding the piston together.

### 8. -B {Bottom Stroke Limit}

A bottom stroke limiter may also be added and is designated with a "-B". This number corresponds directly with the amount by which the stem in the extended position is reduced. If there is only a B and no number associated with it then it means that the stroke is entirely limited by the bottom stroke limiter only. Actuators may have both Top and Bottom Stroke Limiters.

### 9. {Material}

Should the material not be stated then the Standard (STD) is assumed. All options have Buna-N O-Rings and PTFE wear strips.

Code	Pneumatic Barrel	Top and Bottom Plates	Actuator Stem	Cover	Piston
STD	Glass reinforced Plastic	Mild Steel and Electrogalvanised	StSt 304	StSt 304	Aluminium
304		StSt 304	StSt 304	StSt 304	Aluminium
316		StSt 316	StSt 316	StSt 316	Aluminium

### 10. Examples

Actuator Code	Description
ESA160-105-BE-75	Capscrew type; 160mm bore; 105mm max stroke; Bias spring, Fail Extended; 75mm actual stroke; standard material construction.
ESA200-500-DA-304	Capscrew type; 200mm bore; 500mm max stroke (non standard); Double Acting; 500mm actual stroke, Stainless Steel 304 material construction.
EDA160-105-DA-53-B-316	Rolled type; 160mm bore; 105mm max stroke; Double Acting; 53mm actual stroke; stroke limiting at the bottom; Full 316 Stainless Steel material construction.
ESA250-280-DA-175-B50	Capscrew type; 250mm bore; 280mm max stroke; Double Acting; 175mm actual stroke; 50mm stroke limiting at the bottom; 55mm (280-175-50) stroke limiting at the top; Standard Material Construction