

# ACTUATOR LA28

## Features and options:

- Thrust up to 3500 N (with strong motor)
- Protection class IP51
- 2.3 m straight cable with 6.3 mm jack-plug, (for actuators with reed-switch 2.3 m straight or 0.4 m coiled cable only).  
For 12V versions 1.5 m straight cable without plug
- Storage temperature -40°C to 70°C
- Available with extra powerful motor (strong motor), increases speed and strength
- Brake - increases self-locking ability for LA28 actuators with 6 or 9 mm pitch with or without strong motor
- Protection class: IPX5 or IPX6
- Reed-switch (LA28 = 8 pulses/spindle rev. and LA28 with strong motor = 6 pulses/spindle rev.)
- Splines function (the actuator can only push)
- Mounting bracket for CB8-TIA control boxes (order number 914078 (grey) and 914054 (black))
- Safety nut for LA28 with 3, 6 or 9 mm pitch/spindle rev. (push direction)
- 0.2 m and 0.4 m coiled cable
- Built-in CS print ensures electronic overload protection

## Usage:

- Duty cycle: Max 10 % or 2 min. continuous use followed by 18 min. not in use
- Ambient temperatures: +5° to +40°C
- Should LA28 be used with a non LINAK control unit, please ask the nearest LINAK representative for further details
- Compatibility: CB8, CB12, CB14 and CBJ
- Approvals: IEC 60601-1:2005, 3<sup>rd</sup> edition, ANSI / AAMI ES60601-1:2005, 3<sup>rd</sup> edition and CAN / CSA-22.2 No 60601-1:2008 approved



MEDLINE®  
IMPROVING EFFICIENCY  
CARELINE®  
IMPROVING EFFICIENCY  
TECHLINE®  
IMPROVING FLEXIBILITY

LA28 is primarily a system actuator. The actuator is very quiet and powerful, designed for use in the CARELINE®, MEDLINE® and TECHLINE® areas of business.

The actuator is also ideal for use in agricultural machinery and for a wide range of industrial applications.

## Technical specifications:

### LA28 with standard motor

| Order number    | Push Max. (N) | Pull Max. (N) | *Self-lock max. (N) Push | *Self-lock max. (N) Pull | Pitch (mm/spindle rev.) | Typical speed (mm/s) Load |      | Standard stroke lengths (mm) In steps of 50 mm | Typical amp. |      |
|-----------------|---------------|---------------|--------------------------|--------------------------|-------------------------|---------------------------|------|------------------------------------------------|--------------|------|
|                 |               |               |                          |                          |                         | no                        | full |                                                | 12 V         | 24 V |
| 286XXX-XXXXX0XX | 2500          | 2000          | 2000                     | 2000                     | 2                       | 4,2                       | 3,0  | 100 – 400                                      | -            | 1,5  |
| 285XXX-XXXXX0XX | 2000          | 2000          | 2000                     | 2000                     | 2,5                     | 5,3                       | 4,0  | 100 – 400                                      | -            | 1,6  |
| 281XXX-XXXXX0XX | 2000          | 2000          | 2000                     | 2000                     | 3                       | 7,0                       | 4,8  | 100 – 400                                      | -            | 1,5  |
| 284XXX-XXXXX0XX | 1500          | 1500          | 1500                     | 1500                     | 4                       | 9,5                       | 6,7  | 100 – 400                                      | -            | 1,6  |
| 284XXX-4XXXX0XX | 1500          | 1500          | 1500                     | 1500                     | 4                       | 9,5                       | 6,7  | 100 – 400                                      | -            | 1,6  |
| 282XXX-XXXXX0XX | 1000          | 1000          | 500                      | 500                      | 6                       | 14,3                      | 9,6  | 100 – 400                                      | -            | 1,5  |
| 282XXX-4XXXX0XX | 1000          | 1000          | 1000                     | 1000                     | 6                       | 12,7                      | 9,6  | 100 – 400                                      | -            | 1,5  |
| 283XXX-XXXXX0XX | 800           | 800           | 200                      | 200                      | 9                       | 21,1                      | 14,5 | 100 – 600                                      | -            | 1,5  |
| 283XXX-4XXXX0XX | 800           | 800           | 800                      | 800                      | 9                       | 20,9                      | 10,7 | 100 – 600                                      | -            | 2,4  |
| 287XXX-XXXXX0XX | 800           | 800           | 0                        | 0                        | 12                      | 25,8                      | 17,1 | 100 – 600                                      | -            | 1,9  |
| 287XXX-4XXXX0XX | 800           | 800           | 300                      | 300                      | 12                      | 24,8                      | 15,1 | 100 – 600                                      | -            | 1,9  |

### LA28 with "S" motor

| Order number    | Push Max. (N) | Pull Max. (N) | *Self-lock max. (N) Push | *Self-lock max. (N) Pull | Pitch (mm/spindle rev.) | Typical speed (mm/s) Load |      | Standard stroke lengths (mm) In steps of 50 mm | Typical amp. |      |
|-----------------|---------------|---------------|--------------------------|--------------------------|-------------------------|---------------------------|------|------------------------------------------------|--------------|------|
|                 |               |               |                          |                          |                         | no                        | full |                                                | 12 V         | 24 V |
| 286XXX-XXXXX1XX | 3500          | 2000          | 3500                     | 2000                     | 2                       | 6,7                       | 4,7  | 100 – 400                                      | -            | 3,9  |
| 285XXX-XXXXX1XX | 3000          | 2000          | 3000                     | 2000                     | 2,5                     | 8,6                       | 6,1  | 100 – 400                                      | -            | 3,6  |
| 281XXX-XXXXX1XX | 2000          | 2000          | 2000                     | 2000                     | 3                       | 10,8                      | 8,4  | 100 – 400                                      | -            | 2,9  |
| 284XXX-XXXXX1XX | 2000          | 2000          | 1200                     | 1200                     | 4                       | 14,6                      | 10,3 | 100 – 400                                      | -            | 3,6  |
| 284XXX-4XXXX1XX | 2000          | 2000          | 2000                     | 2000                     | 4                       | 14,3                      | 10,3 | 100 – 400                                      | -            | 3,4  |
| 282XXX-XXXXX1XX | 2000          | 2000          | 500                      | 500                      | 6                       | 22,0                      | 13,8 | 100 – 400                                      | -            | 4,1  |
| 282XXX-4XXXX1XX | 2000          | 2000          | 2000                     | 2000                     | 6                       | 22,0                      | 12,7 | 100 – 400                                      | -            | 4,6  |
| 283XXX-XXXXX1XX | 1500          | 1500          | 500                      | 500                      | 9                       | 34,2                      | 16,5 | 100 – 600                                      | -            | 4,9  |
| 283XXX-4XXXX1XX | 1500          | 1500          | 1500                     | 1500                     | 9                       | 33,0                      | 10,9 | 100 – 600                                      | -            | 5,5  |
| 287XXX-XXXXX1XX | 800           | 800           | 0                        | 0                        | 12                      | 46,0                      | 33,5 | 100 – 600                                      | -            | 3,1  |
| 287XXX-4XXXX1XX | 800           | 800           | 800                      | 800                      | 12                      | 45,9                      | 33,5 | 100 – 600                                      | -            | 3,1  |

### LA28 with 12V motor

| Order number    | Push Max. (N) | Pull Max. (N) | *Self-lock max. (N) Push | *Self-lock max. (N) Pull | Pitch (mm/spindle rev.) | Typical speed (mm/s) Load |      | Standard stroke lengths (mm) In steps of 50 mm | Typical amp. |      |
|-----------------|---------------|---------------|--------------------------|--------------------------|-------------------------|---------------------------|------|------------------------------------------------|--------------|------|
|                 |               |               |                          |                          |                         | No                        | Full |                                                | 12 V         | 24 V |
| 286XXX-XXXXX2XX | 3500          | 2000          | 2000                     | 2000                     | 2                       | 7,0                       | 3,2  | 100 – 400                                      | 6,9          | -    |
| 285XXX-XXXXX2XX | 3000          | 2000          | 3000                     | 2000                     | 2,5                     | 8,6                       | 3,6  | 100 – 400                                      | 6,6          | -    |
| 281XXX-XXXXX2XX | 2000          | 2000          | 2000                     | 2000                     | 3                       | 10,2                      | 6,2  | 100 – 400                                      | 6,9          | -    |
| 284XXX-XXXXX2XX | 2000          | 2000          | 1500                     | 1500                     | 4                       | 13,5                      | 6,8  | 100 – 400                                      | 6,5          | -    |
| 284XXX-4XXXX2XX | 2000          | 2000          | 2000                     | 2000                     | 4                       | 13,3                      | 7,5  | 100 – 400                                      | 6,5          | -    |
| 282XXX-XXXXX2XX | 2000          | 2000          | 500                      | 500                      | 6                       | 19,9                      | 7,5  | 100 – 400                                      | 7,7          | -    |
| 282XXX-4XXXX2XX | 2000          | 2000          | 2000                     | 2000                     | 6                       | 19,8                      | 7,0  | 100 – 400                                      | 8,5          | -    |
| 283XXX-XXXXX2XX | 1500          | 1500          | 0                        | 0                        | 9                       | 28,9                      | 11,7 | 100 – 600                                      | 7,9          | -    |
| 283XXX-4XXXX2XX | 1500          | 1500          | 1500                     | 1500                     | 9                       | 28,9                      | 11,7 | 100 – 600                                      | 7,9          | -    |
| 287XXX-XXXXX2XX | 800           | 800           | 0                        | 0                        | 12                      | 32,0                      | 16,0 | 100 – 600                                      | 5,9          | -    |
| 287XXX-4XXXX2XX | 800           | 800           | 800                      | 800                      | 12                      | 32,0                      | 16,0 | 100 – 600                                      | 5,9          | -    |

Above data: the measurements are made with the actuators connected to a stable power supply.

A reed-switch has no influence on above mentioned data.

Ordering example:

|    |   |   |   |   |   |   |   |   |   |   |   |   |   |                       |                                                                                                                                                                                                                                                                                                      |
|----|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 28 | 1 | 1 | 0 | 0 | + | 1 | 0 | 2 | 5 | 0 | 0 | 0 | 0 |                       |                                                                                                                                                                                                                                                                                                      |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>Cables:</b>        | <b>Jack cables</b><br>0 = Straight 2.38 m<br>0 = Straight 2.4 m with reed<br>1 = Straight 1.13 m<br>1 = Straight 1.09 m with reed<br>2 = Coiled 0.4<br>3 = Coiled 0.2<br>4 = Cable without plug 1.5 m<br>5 = Cable without plug 1.0 m<br>X = Other cable/Length<br>General cable tolerance ± 0.080 m |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>IP-Degree:</b>     | 0 = IPX1<br>1 = IPX5<br>2 = IPX6                                                                                                                                                                                                                                                                     |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>Motor type:</b>    | 0 = 24V<br>1 = 24V S-motor<br>2 = 12V S-motor (Cable without plug L = 1.5 m)                                                                                                                                                                                                                         |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>Stroke length:</b> | XXX = mm<br>Max 500 mm (for 600 mm contact LINAK A/S)<br>Min 100 mm                                                                                                                                                                                                                                  |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>Inst. Dim.:</b>    | 0 = Standard<br>X = Other inst. dimension                                                                                                                                                                                                                                                            |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>Option:</b>        | 1 = Safety nut RECOMMENDED<br>0 = None<br>2 = Steel Splines<br>3 = Steel Splines with safety nut<br>4 = Brake<br>5 = Brake with safety nut                                                                                                                                                           |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>Colour:</b>        | + = grey<br>- = black                                                                                                                                                                                                                                                                                |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>Option:</b>        | 0 = None                                                                                                                                                                                                                                                                                             |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>Pos./CS:</b>       | 0 = None<br>R = Reed switch<br>Y = CS 28A mount. (Without plug 1.0 m) (not IP65/66)<br>Z = CS 28B mount. (Without plug 1.0 m)<br>Handset cable only in black<br>C = CS 28C mount. (Without plug 1.0 m 5-core)<br>Cable only in black                                                                 |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>Back fixture:</b>  | 1 = Standard<br>2 = Turned 90 degrees                                                                                                                                                                                                                                                                |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>Spindel type:</b>  | 1 = 3 mm (1 threaded) (3 mm pitch)<br>2 = 6 mm (2 threaded) (6 mm pitch)<br>3 = 9 mm (3 threaded) (9 mm pitch)<br>4 = 4 mm (2 threaded) (4 mm pitch)<br>5 = 2,5 mm (1 threaded) (2.5 mm pitch)<br>6 = 2 mm (1 threaded) (2 mm pitch)<br>7 = 12 mm (4 threaded) (12 mm pitch)                         |
|    |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>Actuator type:</b> | 28 = LA28                                                                                                                                                                                                                                                                                            |

LINAK A/S  
 LA28001B

30  
 $\phi 10.1^{+0.1}_{-0.1}$   
 11  
 S  
 18  
 183  
 $\phi 30$   
 45  
 13  
 11  
 28  
 $\phi 10.1^{+0.1}_{-0.1}$   
 $\phi 25.9^{+0}_{-0.2}$   
 20  
 S + 160

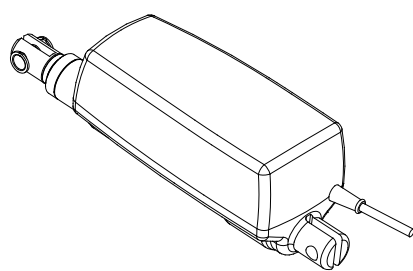
82  
 90  
 22

S+160 LA28 (with or without safety nut)  
 S+171 splines  
 S+185 safety nut and splines  
 S+192 brake

25.9  
 $\phi 21.9^{+0}_{-0.2}$   
 6.1  
 $\phi 6.1^{+0.2}_{-0}$   
 28

2250  
 6.1  
 $\phi 6.1^{+0.2}_{-0}$   
 Brown +  
 Blue -  
**Mono Jack plug**  
 01

Brown +  
 Blue pulse  
 Black -  
**Stereo Jack plug**  
 02

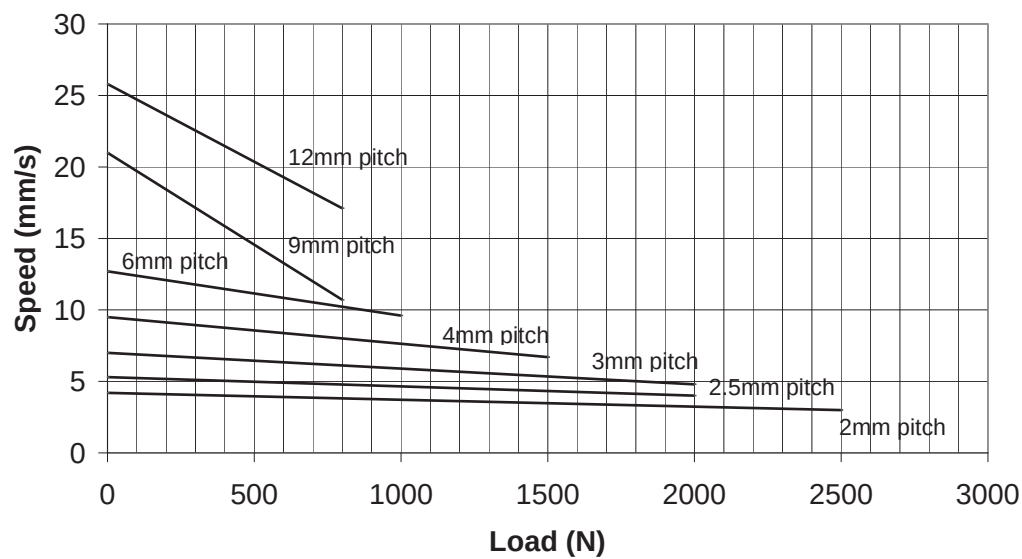


A line drawing of a rectangular power supply unit. On the left side, there is a circular ground connection point. On the right side, a power cord is plugged into a two-pronged AC inlet.

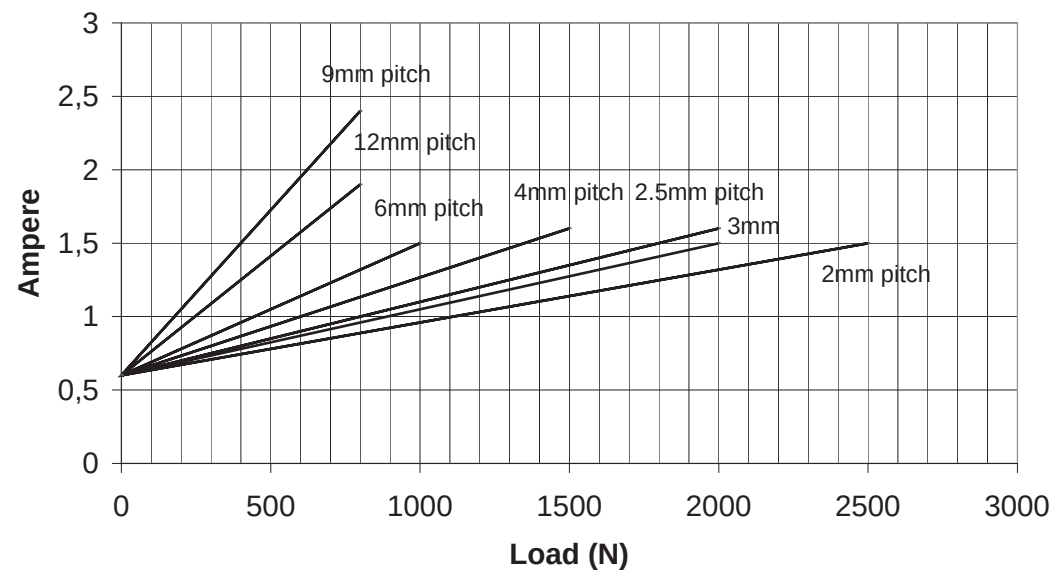
Drawing no. 028745

Curves:

LA28 std motor speed v's load

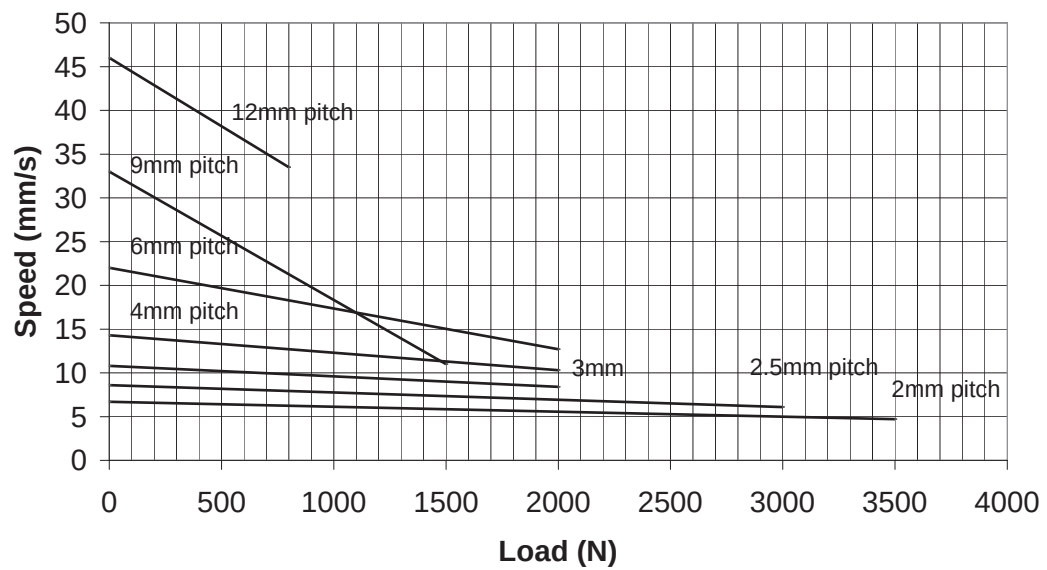


LA28 standard motor current v's load

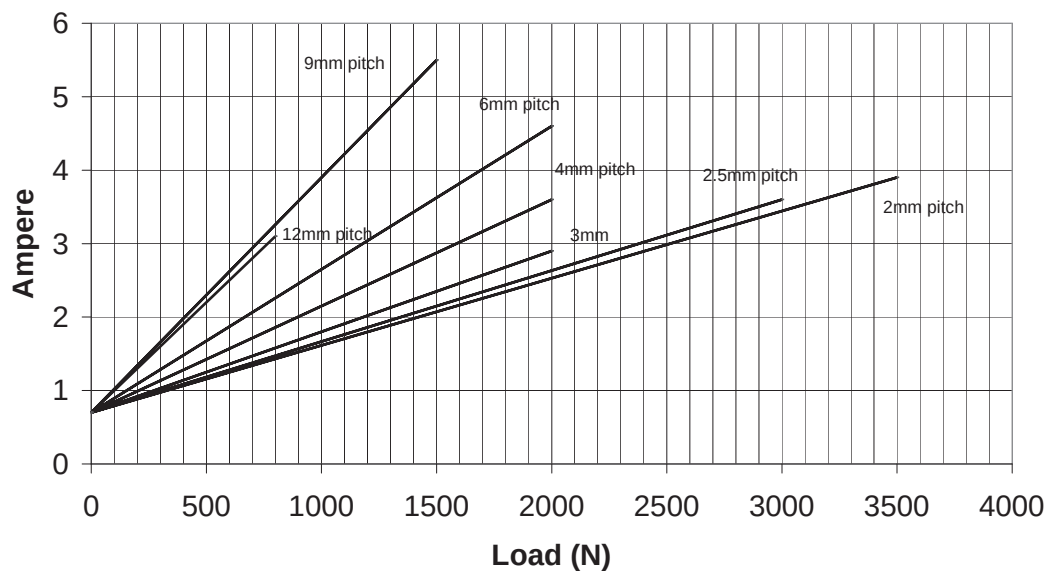


Curves:

**LA28 "S" motor speed v's load**

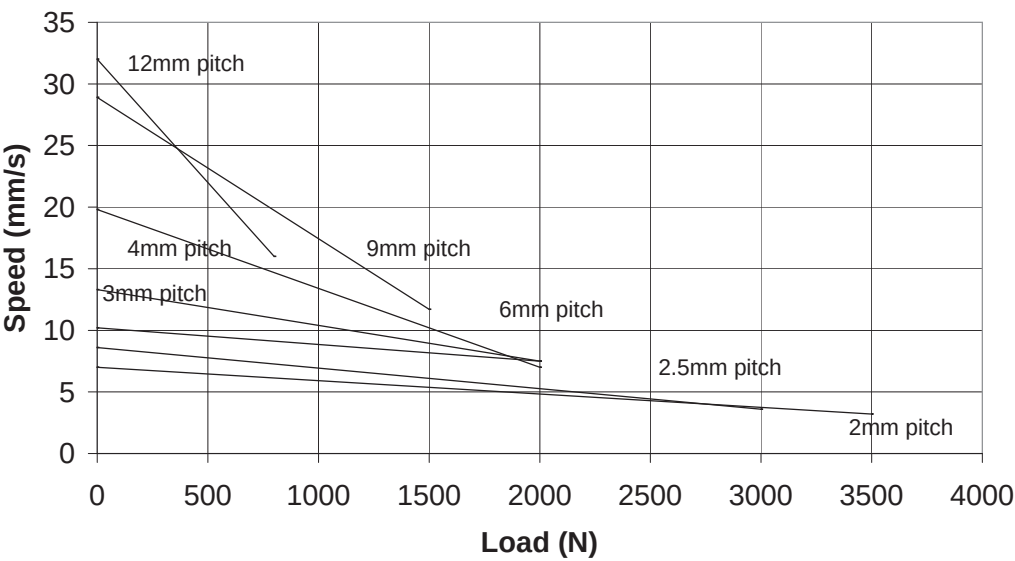


**LA28 "S" motor current v's load**

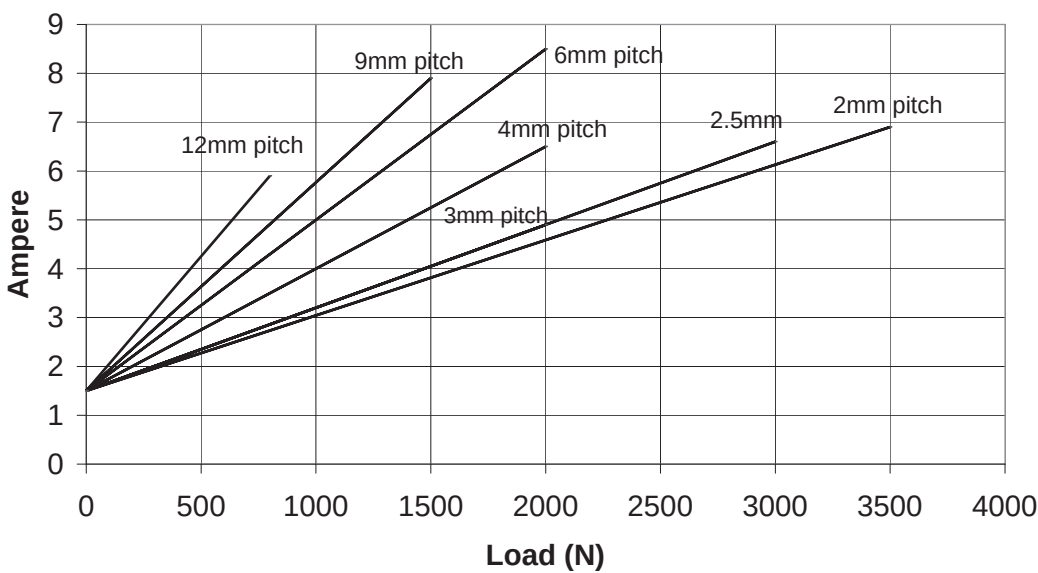


Curves:

LA28 12V motor speed v's load



LA28 12V motor current v's load



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