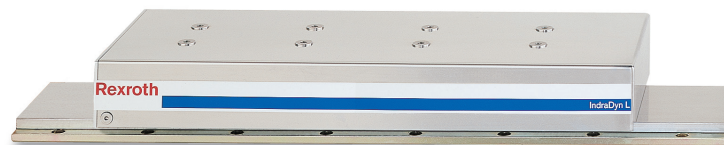


Motors and Gearboxes

## Linear motors

# IndraDyn L - for maximum dynamics



**Linear motors ■ IndraDyn L - for maximum dynamics****Documentation**

- Project Planning Manual

**High dynamics and precision**

- Maximum force of up to 21,500 N
- Maximum velocity up to 600m/min
- Compact dimensions
- Low force ripple
- Heat dissipation minimized by thermal encapsulation

Compact construction, high dynamics and maximum forces of up to 21,500 N – these are the challenges to which our IndraDyn L synchronous linear motors are admirably equipped to meet. Given their exceptionally low force ripple, these motors are particularly suitable for applications with maximum demands in terms of acceleration and accuracy.

There is a choice of sizes geared to typical requirements supplied in standard encapsulation or thermal encapsulation for maximum temperature stability. The combination of several linear motors – whether in series or parallel – gives rise to completely new machine concepts with greatly enhanced machining force.

**Technical data****Electric data**

| Type         | Continous nominal force | Maximum force | Nominal velocity | Max. velocity with F Max | Rated current | Maximum current |
|--------------|-------------------------|---------------|------------------|--------------------------|---------------|-----------------|
|              | $F_N$                   | $F_{Max}$     | $V_N$            | $V_{F Max}$              | $I_N$         | $I_{Max}$       |
|              | [N]                     | [N]           | [m/min]          | [m/min]                  | [A]           | [A]             |
| MLP040A-0300 | 250                     | 800           | 500              | 300                      | 4.2           | 20              |
| MLP040B-0150 | 370                     | 1150          | 300              | 150                      |               |                 |
| MLP040B-0250 |                         |               | 400              | 250                      | 5.3           | 27              |
| MLP040B-0300 |                         |               | 500              | 300                      | 6             | 35              |
| MLP070A-0150 | 550                     | 2000          | 200              | 150                      | 5.5           | 36              |
| MLP070A-0220 |                         |               | 360              | 220                      | 6.3           | 42              |
| MLP070A-0300 |                         |               | 450              | 300                      | 10.5          | 55              |
| MLP070B-0100 | 820                     | 2600          | 200              | 100                      | 5.5           | 28              |
| MLP070B-0120 |                         |               | 220              | 120                      | 5.8           | 42              |
| MLP070B-0150 |                         |               | 260              | 150                      | 6.2           | 48              |
| MLP070B-0250 |                         |               | 400              | 250                      | 10            | 55              |
| MLP070B-0300 |                         |               | 450              | 300                      | 12            | 70              |
| MLP070C-0120 | 1200                    | 3800          | 180              | 120                      | 8.9           | 55              |
| MLP070C-0150 |                         |               | 250              | 150                      | 11.7          | 70              |
| MLP070C-0240 |                         |               | 350              | 240                      | 13            | 90              |
| MLP070C-0300 |                         |               | 450              | 300                      | 19            | 110             |

Motors and Gearboxes

**Linear motors ■ IndraDyn L - for maximum dynamics****Electric data**

| Type         | Continous nominal force | Maximum force | Nominal velocity | Max. velocity with F Max | Rated current | Maximum current |
|--------------|-------------------------|---------------|------------------|--------------------------|---------------|-----------------|
|              | $F_N$                   | $F_{Max}$     | $V_N$            | $V_{F Max}$              | $I_N$         | $I_{Max}$       |
|              | [N]                     | [N]           | [m/min]          | [m/min]                  | [A]           | [A]             |
| MLP100A-0090 | 1180                    | 3750          | 150              | 90                       | 6.6           | 38              |
| MLP100A-0120 |                         |               | 190              | 120                      | 8             | 44              |
| MLP100A-0150 |                         |               | 220              | 150                      | 10            | 55              |
| MLP100A-0190 |                         |               | 290              | 190                      | 12            | 70              |
| MLP100B-0120 | 1785                    | 5600          | 190              | 120                      | 22            | 130             |
| MLP100B-0250 |                         |               | 350              | 250                      |               |                 |
| MLP100C-0090 | 2310                    | 7150          | 170              | 90                       | 13            | 90              |
| MLP100C-0120 |                         |               | 190              | 120                      | 15            | 85              |
| MLP100C-0190 |                         |               | 290              | 190                      | 23            | 140             |
| MLP140A-0120 | 1680                    | 5200          | 190              | 120                      | 12            | 70              |
| MLP140B-0090 | 2415                    | 7650          | 160              | 90                       | 15            | 85              |
| MLP140B-0120 |                         |               | 190              | 120                      | 18            | 105             |
| MLP140C-0050 | 3150                    | 10000         | 110              | 50                       | 13            | 70              |
| MLP140C-0120 |                         |               | 190              | 120                      | 21            | 125             |
| MLP140C-0170 |                         |               | 250              | 170                      | 29            | 140             |
| MLP140C-0350 |                         |               | 400              | 350                      | 53            | 260             |
| MLP200A-0090 | 2415                    | 7450          | 170              | 90                       | 13            | 70              |
| MLP200A-0120 |                         |               | 190              | 120                      | 16            | 88              |
| MLP200B-0040 | 3465                    | 10900         | 100              | 40                       | 13            | 70              |
| MLP200B-0120 |                         |               | 190              | 120                      | 22            | 130             |
| MLP200C-0090 | 4460                    | 14250         | 170              | 90                       | 23.3          | 120             |
| MLP200C-0120 |                         |               | 190              | 120                      | 30            | 175             |
| MLP200C-0170 |                         |               | 220              | 170                      | 46            | 210             |
| MLP200D-0060 | 5560                    | 17750         | 140              | 60                       | 28            | 140             |
| MLP200D-0100 |                         |               | 180              | 100                      | 46            | 210             |
| MLP200D-0120 |                         |               | 190              | 120                      | 53            | 225             |
| MLP300A-0090 | 3350                    | 11000         | 160              | 90                       | 19            | 110             |
| MLP300A-0120 |                         |               | 190              | 120                      | 23            | 138             |
| MLP300B-0070 | 5150                    | 16300         | 140              | 70                       | 28            | 140             |
| MLP300B-0120 |                         |               | 190              | 120                      | 35            | 205             |
| MLP300C-0060 | 6720                    | 21500         | 110              | 60                       | 29            | 140             |
| MLP300C-0090 |                         |               | 150              | 90                       | 37            | 212             |

**Dimensions**

Motors and Gearboxes

**Linear motors ■ IndraDyn L - for maximum dynamics**

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Motors and Gearboxes

**Linear motors ■ IndraDyn L - for maximum dynamics**

| Type         | A    | B    | C    | Weight | A <sup>Thermal</sup><br>encapsulation | B <sup>Thermal</sup><br>encapsulation | C <sup>Thermal</sup><br>encapsulation | Weight Ther-<br>mal |      |      |      |      |     |    |
|--------------|------|------|------|--------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------|------|------|------|------|-----|----|
|              | [mm] | [mm] | [mm] | [kg]   | [mm]                                  | [mm]                                  | [mm]                                  | [kg]                |      |      |      |      |     |    |
| MLP040A-0300 | 61.4 | 100  | 210  | 4.7    | 73.9                                  | 108                                   | 235                                   | 6.1                 |      |      |      |      |     |    |
| MLP040B-0150 |      |      | 285  | 6.1    |                                       |                                       |                                       |                     | 8.1  |      |      |      |     |    |
| MLP040B-0250 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP040B-0300 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP070A-0150 |      |      |      |        |                                       |                                       |                                       |                     |      | 10.9 |      |      |     |    |
| MLP070A-0220 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP070A-0300 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP070B-0100 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP070B-0120 |      | 130  | 360  | 10.4   |                                       | 138                                   | 385                                   | 13.4                |      |      |      |      |     |    |
| MLP070B-0150 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP070B-0250 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP070B-0300 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP070C-0120 |      |      |      |        |                                       |                                       |                                       |                     | 510  | 14.3 | 18.4 |      |     |    |
| MLP070C-0150 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP070C-0240 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP070C-0300 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP100A-0090 |      |      |      |        |                                       |                                       |                                       |                     | 160  | 360  | 13.5 | 168  | 385 | 17 |
| MLP100A-0120 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP100A-0150 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP100A-0190 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP100B-0120 |      | 510  | 18.7 | 23.3   |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP100B-0250 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP100C-0090 |      | 660  | 24   | 29.7   |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP100C-0120 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP100C-0190 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP140A-0120 |      | 200  | 360  | 17     |                                       | 208                                   | 385                                   | 21.2                |      |      |      |      |     |    |
| MLP140B-0090 |      |      |      |        |                                       |                                       |                                       |                     | 510  | 24.5 | 30.1 |      |     |    |
| MLP140B-0120 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP140C-0050 |      |      | 660  | 32     |                                       |                                       |                                       |                     | 38.9 |      |      |      |     |    |
| MLP140C-0120 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP140C-0170 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP140C-0350 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP200A-0090 |      |      | 268  | 360    |                                       |                                       |                                       |                     | 23   | 685  | 385  | 28.3 |     |    |
| MLP200A-0120 | 510  |      |      |        | 33                                    |                                       |                                       |                     |      |      |      |      | 40  |    |
| MLP200B-0040 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP200B-0120 | 660  | 42   |      | 50.7   |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP200C-0090 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP200C-0120 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP200C-0170 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP200D-0060 | 810  | 51   |      | 61.3   |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP200D-0100 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |
| MLP200D-0120 |      |      |      |        |                                       |                                       |                                       |                     |      |      |      |      |     |    |

Motors and Gearboxes

**Linear motors ■ IndraDyn L - for maximum dynamics**

| Type         | A    | B    | C    | Weight | A <sup>Thermal</sup><br>encapsulation | B <sup>Thermal</sup><br>encapsulation | C <sup>Thermal</sup><br>encapsulation | Weight <sup>Thermal</sup> |
|--------------|------|------|------|--------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------|
|              | [mm] | [mm] | [mm] | [kg]   | [mm]                                  | [mm]                                  | [mm]                                  | [kg]                      |
| MLP300A-0090 | 0    | 0    | 0    | 0      | 87                                    | 368                                   | 385                                   | 40.8                      |
| MLP300A-0120 |      |      |      |        |                                       |                                       | 535                                   | 58.3                      |
| MLP300B-0070 |      |      |      |        |                                       |                                       |                                       |                           |
| MLP300B-0120 |      |      |      |        |                                       |                                       |                                       |                           |
| MLP300C-0060 |      |      |      |        |                                       |                                       |                                       |                           |
| MLP300C-0090 |      |      |      |        |                                       |                                       | 685                                   | 74.9                      |