

# Asynchron-Elan types 4-pole

30/04/2025

## Power

Continuous power for efficient water cooling

The peak power is considerably higher.

## Rotor

material of squirrel cage: normal aluminium or copper for a bigger rotorbore (up to about 100 m/s). For higher speeds copper-rotors with steel reinforcement are available. Alternatively for higher speeds with reduced power, rotors in aluminium alloy are available.

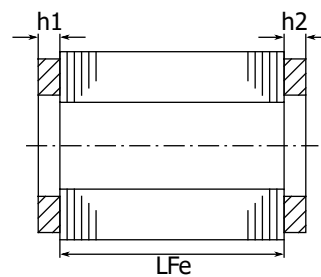
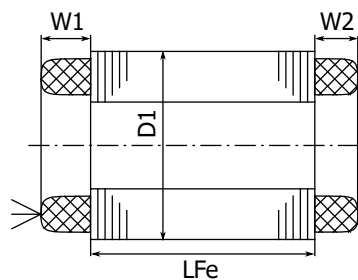
| Speed                | in krpm | 3           | 6    | 9    | 12   | 15   | 18   | 21   | 24   | 27   | 30   | 33   | 36   | 39   | 42   | 45   |
|----------------------|---------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Frequency            | in Hz   | 100         | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| Types (D1/LFe in cm) |         | Power in kW |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| mW 7/2.5-4-s2r..     |         | 0.24        | 0.48 | 0.72 | 0.97 | 1.2  | 1.4  | 1.7  | 1.9  | 2.2  | 2.4  | 2.7  | 2.9  | 2.8  | 2.7  | 2.7  |
| mW 7/5-4-s2r..       |         | 0.53        | 1.1  | 1.6  | 2.1  | 2.7  | 3.2  | 3.7  | 4.3  | 4.8  | 5.3  | 5.9  | 6.4  | 6.3  | 6.2  | 6    |
| mW 7/6-4-s2r..       |         | 0.64        | 1.3  | 1.9  | 2.6  | 3.2  | 3.8  | 4.5  | 5.1  | 5.8  | 6.4  | 7.1  | 7.7  | 7.5  | 7.2  | 7    |
| mW 7/7-4-s2r..       |         | 0.75        | 1.5  | 2.2  | 3    | 3.8  | 4.5  | 5.2  | 6    | 6.8  | 7.5  | 8.2  | 9    | 8.8  | 8.6  | 8.4  |
| mW 7/10-4-s2r..      |         | 1           | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 11.7 | 11.5 | 11.2 |
| mW 9/4-4-s1r..       |         | 0.64        | 1.3  | 1.9  | 2.6  | 3.2  | 3.9  | 4.5  | 5.1  | 5.8  | 6.4  | 7.1  | 7.7  | 8.4  | 9    | 9    |
| mW 9/6-4-s1r..       |         | 1.1         | 2.1  | 3.2  | 4.3  | 5.4  | 6.4  | 7.5  | 8.6  | 9.6  | 10.7 | 11.8 | 12.9 | 13.9 | 15   | 15   |
| mW 9/8-4-s1r..       |         | 1.5         | 3    | 4.5  | 6    | 7.5  | 9    | 10.5 | 12   | 13.5 | 15   | 16.5 | 18   | 19.5 | 21   | 21   |
| mW 9/10-4-s1r..      |         | 1.9         | 3.9  | 5.8  | 7.7  | 9.6  | 11.6 | 13.5 | 15.4 | 17.4 | 19.3 | 21   | 23   | 25   | 27   | 27   |
| mW 9/14-4-s1r..      |         | 2.5         | 5    | 7.5  | 10   | 12.5 | 15   | 17.5 | 20   | 22   | 25   | 28   | 30   | 32   | 35   | 35   |
| mW 10.6/4-4-s1r..    |         | 1           | 2.1  | 3.1  | 4.2  | 5.2  | 6.2  | 7.3  | 8.3  | 9.4  | 10.4 | 11.5 | 12.5 |      |      |      |
| mW 10.6/6-4-s1r..    |         | 1.7         | 3.3  | 5    | 6.7  | 8.3  | 10   | 11.7 | 13.3 | 15   | 16.7 | 18.3 | 20   | 20   |      |      |
| mW 10.6/8-4-s1r..    |         | 2.4         | 4.8  | 7.2  | 9.7  | 12.1 | 14.5 | 16.9 | 19.3 | 22   | 24   | 27   | 29   | 29   |      |      |
| mW 10.6/10-4-s1r..   |         | 3.2         | 6.3  | 9.5  | 12.7 | 15.8 | 19   | 22   | 25   | 28   | 32   | 35   | 38   | 38   |      |      |
| mW 10.6/11-4-s1r..   |         | 3.4         | 6.8  | 10.2 | 13.7 | 17.1 | 20   | 24   | 27   | 31   | 34   | 38   | 41   | 41   |      |      |
| mW 10.6/12-4-s1r..   |         | 3.8         | 7.5  | 11.2 | 15   | 18.8 | 22   | 26   | 30   | 34   | 38   | 41   | 45   | 45   |      |      |
| mW 10.6/15-4-s1r..   |         | 4.7         | 9.3  | 14   | 18.7 | 23   | 28   | 33   | 37   | 42   | 47   | 51   | 56   | 56   |      |      |
| mW 12/4-4-s2r..      |         | 1.1         | 2.2  | 3.4  | 4.5  | 5.6  | 6.8  | 7.9  | 9    | 10.1 | 11.2 | 12.4 | 13.5 | 13.5 |      |      |
| mW 12/6-4-s2r..      |         | 2.2         | 4.3  | 6.5  | 8.7  | 10.8 | 13   | 15.2 | 17.3 | 19.5 | 22   | 24   | 26   | 26   |      |      |
| mW 12/9-4-s2r..      |         | 3.8         | 7.5  | 11.2 | 15   | 18.8 | 22   | 26   | 30   | 34   | 38   | 41   | 45   | 45   |      |      |
| mW 12/12-4-s2r..     |         | 5           | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   | 55   | 60   | 60   |      |      |
| mW 12/15-4-s2r..     |         | 6.2         | 12.5 | 18.8 | 25   | 31   | 38   | 44   | 50   | 56   | 62   | 69   | 75   | 75   |      |      |
| mW 13/5-4-s1r..      |         | 1.8         | 3.6  | 5.4  | 7.2  | 9    | 10.8 | 12.6 | 14.4 | 16.2 | 18   | 18   | 18   | 18   |      |      |
| mW 13/9-4-s1r..      |         | 4           | 8    | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   | 40   | 40   | 40   |      |      |
| mW 13/10-4-s1r..     |         | 4.5         | 9    | 13.5 | 18   | 22   | 27   | 31   | 36   | 40   | 45   | 45   | 45   | 45   |      |      |
| mW 13/12.5-4-s1r..   |         | 5.6         | 11.2 | 16.8 | 22   | 28   | 34   | 39   | 45   | 50   | 56   | 56   | 56   | 56   |      |      |
| mW 13/15.5-4-s1r..   |         | 7           | 14   | 21   | 28   | 35   | 42   | 49   | 56   | 63   | 70   | 70   | 70   | 70   |      |      |
| mW 13/17.5-4-s1r..   |         | 8           | 16   | 24   | 32   | 40   | 48   | 56   | 64   | 72   | 80   | 80   | 80   | 80   |      |      |
| mW 13/25-4-s1r..     |         | 11          | 22   | 33   | 44   | 55   | 66   | 77   | 88   | 99   | 110  | 110  | 110  | 110  |      |      |
| mW 13.5/5-4-s1r..    |         | 2.4         | 4.8  | 7.2  | 9.6  | 12   | 14.4 | 16.8 | 19.2 | 22   | 24   | 24   | 24   | 24   |      |      |
| mW 13.5/7-4-s1r..    |         | 3.7         | 7.4  | 11.1 | 14.8 | 18.5 | 22   | 26   | 30   | 33   | 37   | 37   | 37   | 37   |      |      |
| mW 13.5/9-4-s1r..    |         | 5.2         | 10.4 | 15.6 | 21   | 26   | 31   | 36   | 42   | 47   | 52   | 52   | 52   | 52   |      |      |
| mW 13.5/10-4-s1r..   |         | 5.8         | 11.6 | 17.4 | 23   | 29   | 35   | 41   | 46   | 52   | 58   | 58   | 58   | 58   |      |      |
| mW 13.5/11-4-s1r..   |         | 6.4         | 12.8 | 19.2 | 26   | 32   | 38   | 45   | 51   | 58   | 64   | 64   | 64   | 64   |      |      |
| mW 13.5/12.5-4-s1r.. |         | 7.3         | 14.6 | 22   | 29   | 36   | 44   | 51   | 58   | 66   | 73   | 73   | 73   | 73   |      |      |
| mW 13.5/15.5-4-s1r.. |         | 9           | 18   | 27   | 36   | 45   | 54   | 63   | 72   | 81   | 90   | 90   | 89   | 89   |      |      |
| mW 13.5/17.5-4-s1r.. |         | 9.9         | 19.9 | 30   | 40   | 50   | 60   | 70   | 79   | 89   | 99   | 99   | 99   | 99   |      |      |
| mW 13.5/20-4-s1r..   |         | 10.6        | 21   | 32   | 42   | 53   | 64   | 74   | 85   | 95   | 106  | 105  | 105  | 104  |      |      |
| mW 13.5/25-4-s1r..   |         | 11.9        | 24   | 36   | 48   | 60   | 71   | 83   | 95   | 107  | 119  | 117  | 116  | 114  |      |      |
| mW 15/10-4-s2r..     |         | 7           | 14   | 21   | 28   | 35   | 42   | 49   | 56   | 63   | 70   |      |      |      |      |      |
| mW 15/12-4-s2r..     |         | 8.6         | 17.2 | 26   | 34   | 43   | 52   | 60   | 69   | 77   | 86   |      |      |      |      |      |
| mW 15/15-4-s2r..     |         | 10.5        | 21   | 32   | 42   | 52   | 63   | 74   | 84   | 94   | 105  |      |      |      |      |      |
| mW 15/22-4-s2r..     |         | 17          | 33   | 49   | 65   | 82   | 98   | 114  | 130  | 130  | 129  |      |      |      |      |      |



| Speed                | in krpm | 3           | 6   | 9   | 12  | 15  | 18  | 21  | 24  | 27  | 30   | 33   | 36   | 39   | 42   | 45   |
|----------------------|---------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| Frequency            | in Hz   | 100         | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| Types (D1/LFe in cm) |         | Power in kW |     |     |     |     |     |     |     |     |      |      |      |      |      |      |
| mW 20/7-4-s2r..      |         | 10.9        | 22  | 33  | 44  | 55  | 62  | 55  | 49  |     |      |      |      |      |      |      |
| mW 20/11-4-s2r..     |         | 17.8        | 36  | 54  | 71  | 89  | 99  | 90  | 81  |     |      |      |      |      |      |      |
| mW 20/16-4-s2r..     |         | 27          | 54  | 80  | 107 | 134 | 149 | 133 | 118 |     |      |      |      |      |      |      |
| mW 20/18-4-s2r..     |         | 30          | 60  | 89  | 119 | 149 | 169 | 149 | 129 |     |      |      |      |      |      |      |

## Dimension sheet

Sketch



| Main dimensions<br>all dimensions in mm<br>Typ<br>(D1/LFe in cm) | Stator               |                        |    | Rotor  |      |        |    |                  |    |      |
|------------------------------------------------------------------|----------------------|------------------------|----|--------|------|--------|----|------------------|----|------|
|                                                                  | Outer diameter<br>D1 | Length of winding head |    | Bore   |      |        |    | Ring length<br>h |    |      |
|                                                                  |                      | W1<br>with PTC         | W2 | d3 min |      | d3 max |    |                  |    |      |
|                                                                  |                      |                        |    | Al     | Cu   | Al     | Cu | Al               | Cu | CuSt |
| mW 7/ .. -4-s2r..                                                | 70.2                 | 19                     | 17 | -      | 21.5 | -      | 24 | -                | 4  | 12   |
| mW 9/ .. -4-s1r..                                                | 90                   | 26                     | 22 | -      | 31.5 | -      | 37 | -                | 4  | 12   |
| mW 10.6/ .. -4-s1r..                                             | 106.5                | 34                     | 26 | -      | 44.5 | -      | 46 | -                | 4  | 12   |
| mW 12/ .. -4-s2r..                                               | 120                  | 36                     | 28 | -      | 42.5 | -      | 50 | -                | -  | 14   |
| mW 13/ .. -4-s1r..                                               | 130                  | 38                     | 30 | -      | 47   | -      | 58 | -                | 6  | 14   |
| mW 13.5/ .. -4-s1r..                                             | 135                  | 34                     | 24 | -      | 47   | -      | 56 | -                | 6  | 14   |
| mW 15/ .. -4-s2r..                                               | 150                  | 40                     | 34 | -      | 63.5 | -      | 65 | -                | 8  | 16   |
| mW 20/ .. -4-s2r..                                               | 200                  | 50                     | 34 | -      | 80   | -      | 85 | -                | 10 | 18   |