

Bron: <http://www.hmbc.nl/emotoren.html>



GRAUPNER - Motoren

| Speed-motoren | Bestelnr Order Nr | Spannings- bereik Voltage range | Toerental onbelast Rev./min unloaded | Stroomopname onbelast - belast Current unloaded - loaded | Max.wer- kingsgraad Efficiency | Afmeting (L x Dia) Dimension motor (mm) | Asmaten (L x Dia) Dimension shaft (mm) | Gewicht motor Weight motor |
|-----------------------------------|----------------------|--|---|---|--------------------------------------|---|--|-------------------------------------|
| Speed 280 | 6328 | 4.5 - 6 V | 14000 | 0.275 - 1.58 A | 58.2% | 30.5 x 28.8 | 11 x 2 | 42 g |
| Speed 300 | 3306 | 1.2 - 6 V | 29000 | 0.7 - 5 A | 65 % | 30.8 x 24.4 | 7 x 2 | 50 g |
| Speed 400 Race | 3320 | 1.2 - 6 V | 22000 | 1 - 7 A | 66% | 37.8 x 27.7 | 13.8 x 2.3 | 73 g |
| Speed 400 - 6V | 3321 | 2.4 - 7.2 V | 18000 | 0.7 - 4 A | 70% | 37.8 x 27.7 | 13.8 x 2.3 | 73 g |
| Speed 400 - 7.2V | 1794 | 3.6 - 8.4 V | 16400 | 0.5 - 3.3 A | 72% | 37.8 x 27.7 | 13.8 x 2.3 | 73 g |
| Speed 480 | 6304 | 7.2 - 9.6 V | 17000 | 1.1 - 5 A | 82% | 47.3 x 29.3 | 14 x 3.17 | 105 g |
| Speed 500 - 7.2V | 1799 | 3.6 - 8.4 V | 17600 | 1.5 - 9 A | 66% | 50 x 35.8 | 8.5 x 3.17 | 162 g |
| Speed 500 Race | 1789 | 3.6 - 8.4 V | 21200 | 2 - 14 A | 76% | 50 x 35.8 | 8.5 x 3.17 | 164 g |
| Speed 500 BB Race VS | 3305 | 4.8 - 8.4 V | 24500 | 1.6 - 17 A | 82% | 50 x 35.8 | 12.5 x 3.17 | 166 g |
| Speed 500 BB Buggy Race 2wd | 6301 | 4.8 - 8.4 V | 34000 | 4.2 - 18 A | 78% | 52 x 36 | 11 x 3.17 | 174 g |
| Speed 500 - 8.4V | 3322 | 6 - 9.6 V | 17000 | 1.2 - 9 A | 69% | 50 x 35.8 | 8.5 x 3.17 | 160 g |
| Speed 500 BB Race | 6303 | 7.2 - 9.6 V | 20000 | 1.6 - 19 A | 72% | 64 x 38 | 8.5 x 3.17 | 233 g |
| Speed 500 E | 1788 | 6 - 12 V | 12000 | 0.4 - 2 A | 67% | 50 x 35.8 | 8.5 x 3.17 | 158 g |
| Speed 500 SP | 6308 | 6 - 9.6 V | 17000 | 1 - 7 A | 78% | 50 x 35.7 | 10.5 x 3.17 | 160 g |

| | | | | | | | | |
|----------------------------|------|--------------|-------|----------------|------|-----------|-------------|-------|
| Speed 600 Eco | 3323 | 6 - 9.6 V | 11000 | 1 - 7.5 A | 72% | 57 x 37 | 8.7 x 3.17 | 220 g |
| Speed 600 - 7.2V | 1793 | 3.6 - 8.4 V | 18200 | 2 - 12 A | 69% | 57 x 35.8 | 8.7 x 3.17 | 195 g |
| Speed 600 BB - 7.2V | 1787 | 3.6 - 8.4 V | 18800 | 1.8 - 12 A | 72% | 57 x 35.8 | 8.7 x 3.17 | 195 g |
| Speed 600 - 8.4V | 3301 | 4.8 - 9.6 V | 15500 | 1.8 - 11 A | 75% | 57 x 37 | 8.7 x 3.17 | 220 g |
| Speed 600 BB - 8.4V | 3316 | 4.8 - 9.6 V | 16000 | 1.8 - 11 A | 77% | 57 x 37 | 8.7 x 3.17 | 220 g |
| Speed 600 - 9.6V | 1786 | 7.2 - 10 V | 14500 | 1 - 7 A | 75% | 57 x 35.8 | 8.7 x 3.17 | 195 g |
| Speed 600 BB - 9.6V | 1780 | 7.2 - 10 V | 14900 | 0.9 - 7 A | 77% | 57 x 35.8 | 8.7 x 3.17 | 195 g |
| Speed 600 BB SP - 7.2V | 6311 | 6 - 9.6 V | 21200 | 1.8 - 12.7 A | 76% | 57 x 35.7 | 11.9 x 3.17 | 194 g |
| Speed 600 BB SP - 8.4V | 6309 | 6 - 9.6 V | 17000 | 1.2 - 9.5 A | 76% | 57 x 36 | 11.8 x 3.17 | 205 g |
| Speed 600 BB SP - 9.6V | 6310 | 7.2 - 12 V | 17000 | 0.8 - 6.6 A | 75% | 57 x 35.7 | 11.9 x 3.17 | 194 g |
| Speed 600 Race 8.4V | 6312 | 6 - 9.6 V | 21000 | 12 A | 76% | 57 x 36 | 11.9 x 3.17 | 195 g |
| Speed 650 BB Race | 6305 | 7.2 - 14.4 V | 19665 | 1.63 - 12.04 A | 77% | 65 x 38 | 9.3 x 3.17 | 258 g |
| Speed 360 PT | 1796 | 7.2 - 12 V | 17200 | 0.9 - 8 A | 77% | 57 x 35.5 | 12 x 3.17 | 192 g |
| Speed 600 BB Turbo - 12V | 3302 | 4.8 - 14.4 V | 17200 | 1 - 7 A | 77% | 57 x 37 | 8.7 x 3.17 | 220 g |
| Speed 600 BB Turbo - 14.4V | 6314 | 9.6 - 14.4 V | 14500 | 0.9 - 5 A | 74% | 57 x 37 | 8.7 x 3.17 | 220 g |
| Speed 700 BB Turbo - 8.4V | 6316 | 4.8 - 12 V | 14700 | 2.5 - 15 A | 72% | 67 x 44 | 14 x 5 | 350 g |
| Speed 700 Turbo | 3308 | 4.8 - 14.4 V | 15000 | 2 - 12.5 A | 75% | 67 x 42.2 | 14 x 5 | 320 g |
| Speed 700 BB Turbo - 9.6V | 3307 | 4.8 - 16.8 V | 13000 | 2 - 15 A | 75% | 67 x 42.2 | 14 x 5 | 350 g |
| Speed 700 BB Turbo Neodym | 6306 | 7.2 - 19.2 V | 15750 | 2.17 - 15.93 A | 77% | 66 x 45 | 14.5 x 5 | 353 g |
| Speed 700 BB Race - 9.6V | 6318 | 7.2 - 9.6 V | 19000 | 3.3 - 17.5 A | 69% | 66 x 44.5 | 10.5 x 5 | 362 g |
| Speed 700 BB Turbo - 12V | 6317 | 7.2 - 19.2 V | 11600 | 2 - 12.5 A | 75% | 67 x 44 | 14 x 5 | 350 g |
| Speed 720 BB Torque | 6372 | 6 - 13 V | 4100 | 0.75 - 3 A | 75% | 72 x 44.5 | 6.5 x 5 | 380 g |
| Speed 820 BB Turbo Race | 6375 | 16 - 24 V | 24000 | 2.5 - 21.3 A | 82% | 68 x 48 | 13 x 5 | 450 g |
| Speed 900 BB Torque - 12V | 6373 | 6 - 40 V | 6500 | 1.1 - 8 A | 71 % | 85 x 51.5 | 15 x 6 | 645 g |
| Speed 500 BB Competition | 3315 | 4.8 - 8.4 V | 25000 | 1.7 - 13 A | 89 % | 50 x 35.8 | 11 x 3.17 | 196 g |

Speed Serie

- BB = met kogellagers - with ballbearings
 Turbo = 5 polig anker - 5 turn armature
 Race = voor race doeleinden (kortstondig gebruik) - for race purposes (short period use)

| ULTRA Brushless | BRUSHLESS 220 / Pylon | BRUSHLESS 220 / 20-3 | BRUSHLESS 220 / 20-2 G 7.1 | BRUSHLESS 300 / 30-3 |
|--|--------------------------|-------------------------|-------------------------------|-------------------------|
| Bestel nr. / Order Nr | 6377 | 6381 | 6383 | 6385 |
| Nominale spanning Nominal Voltage | 7 V | 8 V | 14 V | 16 V |
| Spanningsbereik Voltage range | 6 - 8 V | 7 - 10 V | 10 - 16 V | 10 - 24 V |
| Toerental onbelast Rev./min. unloaded | 38800 omw/min | 12900 omw/min | 8900 omw/min | 9600 omw/min |
| Stroomopname onbelast Current, unloaded | 4 A | 1.2 A | 6.5 A | 1.2 A |
| Belast bij max. rendement Current, loaded efficiently | 38 A | 16 A | 44 A | 16 A |
| Max.werkingsgraad Efficiency | 83% | 85% | 78% | 88% |
| Afmeting motor (LxDia) Dimension motor | 49 x 36.5 mm | 49 x 36.5 mm | 75 x 36.5 mm | 60 x 44 mm |
| Afmeting as (L x Dia) Dimension shaft | 17 x 5 mm | 17 x 5 mm | 17 x 6 mm | 21 x 5 mm |
| Gewicht motor - ca. Weight motor | 180 g | 175 g | 235 g | 295 g |



De watergekoelde ULTRA 920 - 6M met zijn grotere broer de ULTRA 3300 (voor heli-toepassing).
 The watercooled ULTRA 920- 6M with his big brother the ULTRA 3300 (for Heli use)

| ULTRA Motoren +waterkoeling watercooled | Bestel nr. Order Nr. | Nominale spanning Nominal Voltage | Spanningsbereik Voltage range | Toerental onbelast Rev./min unloaded | Stroomopname bij max. werkingsgraad Current when loaded efficiently | Werkingsgraad Efficiency | Afmeting (L x Dia) Dimension motor (mm) | Asmaten (L x Dia) Dimension shaft (mm) | Gewicht motor Weight motor |
|--|-------------------------|--------------------------------------|----------------------------------|---|--|-----------------------------|--|---|-------------------------------|
| 900 M (out of production) | 3319 | 9.6 V | 6 - 15 V | 20000 | 17 A | 72% | 67 x 44 | 20 x 5 | 315 g |
| 920-6M | 6336 | 10 V | 8 - 14.4 V | 27500 | 28 A | 80% | 62 x 44 | 14 x 5 | 235 g |
| 920-8M | 6338 | 10 V | 7 - 14.4 V | 20040 | 22 A | 82% | 62 x 44 | 14 x 5 | 266 g |

| | | | | | | | | | |
|-----------------------------------|------|------|-----------|-------|------|-----|----------|--------|-------|
| 1300-9M | 6337 | 16 V | 12 - 24 V | 16000 | 27 A | 81% | 72 x 50 | 19 x 5 | 418 g |
| 1600 M (out of production) | 3318 | 16 V | 12 - 24 V | 16000 | 20 A | 81% | 78 x 52 | 26 x 5 | 420 g |
| 1800 M Neodym (out of production) | 6334 | 18 V | 16 - 24 V | 13500 | 21 A | 83% | 90 x 52 | 25 x 5 | 570 g |
| 3500-6M | 6361 | 28 V | 20 - 30 V | 12200 | 30 A | 86% | 100 x 70 | 27 x 5 | 760 g |

Mabuchi - Motoren

| Mabuchi | Nominale Spanning Nominal Voltage | Spannings- bereik Voltage range | Toerental onbelast Rev./min. unloaded | Werkings- graad Efficiency | Afmeting (L x Dia) Dimensions motor (mm) | Asmaten (L x Dia) Dimensions shaft (mm) | Gewicht Weight |
|-----------------------|--------------------------------------|---------------------------------------|--|----------------------------------|---|--|-------------------|
| RE 140 | 3 V | 1.5 - 3 V | 14150 | 42% | 29 x 21 | 10 x 2 | 23 g |
| RE 280 | 4.5 V | 1.5 - 4.5 V | 12500 | 62% | 34 x 24 | 10 x 2 | 48 g |
| RS 380 | 6 V | 6 - 9.6 V | 11000 | 62% | 38 x 28 | 13.8 x 2.3 | 70 g |
| RS 540 S | 6 V | 6 - 9.6 V | 14400 | 65% | 50 x 36 | 8 x 3.2 | 145 g |
| RS 550 S | 9 V | 6 - 12 V | 14400 | 67% | 63 x 36 | 8.7 x 3.2 | 186 g |
| RS 540 SD Race | 6 V | 4.8 - 7.2 V | 19000 | 75% | 50 x 36 | 8 x 3.2 | 145 g |
| RS 540 S with gearbox | 6 V | 6 - 9.6 V | --- | 65% | 98 x 40 | 12 x 4 | 195 g |

MARX - Motoren

| PERM-serie | Bestelnr. Order Nr. | Spanning Voltage | Vermogen Power | Toerental onbelast Rev./min. unloaded | Afmetingen (L x Dia) Dimensions motor | Gewicht Weight |
|------------------|------------------------|---------------------|-------------------|--|--|-------------------|
| Milliperm | 02010 | 6 V | 1.2 W | 10000 omw/min | 32 X 21 mm | 26 g |
| Milliperm | 02020 | 12 V | 1.2 W | 10000 omw/min | 32 x 21 mm | 26 g |
| Monoperm | 24010 | 6 V | 4.0 W | 9000 omw/min | 40 x 30 mm | 75 g |
| Monoperm | 24020 | 12 V | 4.0 W | 9000 omw/min | 40 x 30 mm | 75 g |
| Monoperm-Super | 25010 | 6 V | 8.0 W | 8000 omw/min | 52 x 30 mm | 120 g |
| Monoperm-Super | 25020 | 12 V | 8.0 W | 8000 omw/min | 52 x 30 mm | 120 g |
| Decaperm 1: 2.75 | 68010 | 6 V | 20.0 W | 8250 omw/min | 94 x 45 mm | 250 g |
| Decaperm 1: 2.75 | 68020 | 12 V | 20.0 W | 8250 omw/min | 94 x 45 mm | 250 g |
| Hectoperm 1: 2 | 69010 | 6 V | 30.0 W | 6000 omw/min | 120 x 55 mm | 550 g |
| Hectoperm 1: 2 | 69020 | 12 V | 30.0 W | 6000 omw/min | 120 x 55 mm | 550 g |

| GT-serie | Bestelnr. Order Nr. | Spanning Voltage | Vermogen Power | Toerental onbelast Rev./min. unloaded | Afmeting (L x Dia) Dimensions | Gewicht Weight |
|----------------|------------------------|---------------------|-------------------|--|-------------------------------------|-------------------|
| MARX GT-300/05 | 16050 | 9.6 V | 300 W | 14000 omw/min | 88 x 40 mm | 340 g |
| MARX GT-300/07 | 16070 | 12 V | 300 W | 14000 omw/min | 88 x 40 mm | 340 g |
| MARX GT-300/09 | 16090 | 16.8 V | 300 W | 14000 omw/min | 88 x 40 mm | 340 g |
| MARX GT-300/10 | 16100 | 19.2 V | 300 W | 14000 omw/min | 88 x 40 mm | 340 g |
| MARX GT-300/14 | 16140 | 28 V | 300 W | 14000 omw/min | 88 x 40 mm | 340 g |
| MARX GT-500/05 | 18050 | 8.4 V | 500 W | 11000 omw/min | 100 X 56 mm | 460g |
| MARX GT-500/07 | 18070 | 12 V | 500 W | 11000 omw/min | 100 X 56 mm | 460g |
| MARX GT-500/11 | 18110 | 24 V | 500 W | 11000 omw/min | 100 X 56 mm | 460g |
| MARX GT-500/16 | 18160 | 33.6 V | 500 W | 11000 omw/min | 100 X 56 mm | 460 g |

ROBBE - Motoren

| Power serie | Navy S 4,8V | 400/35 | 400/45 | PLUS 410/12 | 540S | 500/21 |
|--|---------------------|-------------------|-------------------|------------------------|-------------------------|-------------------|
| Bestelnr. - Order Nr | 4109 | 4467 | 4466 | 4366 | 3425011 | 4465 |
| Bedrijfsspanning Voltage range | 3 - 6 V 5 cellen | 7,2 V 6 cellen | 8,4 V 7 cellen | 12 - 14 V 12 cellen | 3,6 - 7,2 V 6 cellen | 7,2 V 6 cellen |
| Stroomopname bij max.werkingsgraad Current when loaded efficiently | 1 A | 4,5 A | 4 A | 8 A | 6 A | 14 A |
| Maximaal toegelaten stroom Max. Current | 2 A | 9 A | 9 A | 11 A | 12 A | 25 A |
| Max.werkingsgraad Efficiency | 70% | 70% | 67% | 78% | 73% | 76% |
| Toerental bij nom.spanning en max. werkingsgraad Revolutions at nom.voltage and max.efficiency | 9300 omw/min | 17000 omw/min | 15000 omw/min | 24000 omw/min | 17000 omw/min | 18400 omw/min |
| Lengte motorhuis Length motor | 34 mm | 38 mm | 38 mm | 60 mm | 56 mm | 50 mm |
| Diameter Diameter | 24 mm | 28 mm | 28 mm | 30 mm | 35 mm | 36 mm |
| Gewicht ca. - Weight | 42 g | 71 g | 71 g | 118 g | 145 g | 160 g |

| Power serie | 600/19 | 600/24 | EF76/2 | 700/13T | PLUS 710/12 | 1000 |
|---|-----------------------------|-------------------------|-------------------------|------------------------|------------------------|----------|
| Bestelnr. - Order Nr | 4472 | 4471 | 4013/4106 | 4470 | 4367 | 4474 |
| Bedrijfsspanning Voltage range | 7,2 - 8,4 V 6 - 7 cellen | 7,2 - 9,6 V 7 cellen | 7,2 - 9,6 V 7 cellen | 8,4 - 12 V 8 cellen | 12 - 16 V 12 cellen | 6 - 12 V |
| Stroomopname bij max.werkingsgraad Current when loaded efficiently | 12 A | 10 A | 7 A | 13 A | 16 A | 2,5 A |

| | | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|-----------------------|
| Maximaal toegelaten stroom Max. Current | 25 A | 25 A | 20 A | 25 A | 25 A | 10 A |
| Max.werkingsgraad Efficiency | 70% | 74% | 70% | 75% | 79% | 70% |
| Toerental bij nom.spanning en max. werkingsgraad Revolutions at nom.voltage and max. efficiency | 16000 omw/min | 14000 omw/min | 11400 omw/min | 12800 omw/min | 15300 omw/min | 2200 omw/min bij 12 V |
| Lengte motorhuis Length motor | 57 mm | 57 mm | 57 mm | 67 mm | 72 mm | 96 mm |
| Diameter Diameter | 36 mm | 38 mm | 38 mm | 44 mm | 44,5 mm | 63,5 mm |
| Gewicht ca. - Weight | 195 g | 220 g | 210 g | 320 g | 360 g | 1000 g |



Watergekoelde PRO Navy motor voor elektro-speedboten in de FSRE Mono en Hydro-klassen.
Watercooled PRO Navy motor specially for electric speedboats in the Mono and Hydro classes.

| PRO Navy Serie | PRO 325 Navy 7 | PRO 330 Navy 12 | PRO 330 Navy 20 |
|---|--------------------------|-----------------------------|-----------------------------|
| Bestel nr. - Order Nr | 4734 | 4735 | 4736 |
| Scheepsschroef diameter Propeller Diameter | 33 mm | 36 mm | 36 mm |
| Bedrijfsspanning Voltage range | 6 - 8 V 7 NiCd cellen | 10 - 14 V 12 NiCd cellen | 16 - 24 V 20 NiCd cellen |
| Stroomopname bij max.werkingsgraad Current when loaded efficiently | 27 A | 27 A | 26 A |
| Max.werkingsgraad Efficiency | 77% | 77% | 77% |
| Toerental per volt Revolutions per Volt | 2100 omw/min | 1600 omw/min | 1000 omw/min |
| Lengte motorhuis Length motor | 67 mm | 72 mm | 72 mm |
| Diameter met waterkoeling Diameter with watercooling | 38 mm | 48 mm | 72 mm |
| Gewicht ca. - Weight | 260 g | 295 g | 300 g |