

| | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BOAT Name EX OFFICIO Sail Nr GRE-45 | GPH 535.0 | HULL Length Overall 13.829m Maximum Beam 3.888m Displacement 9,981kg Draft 2.839m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.000% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder Yes Crew Arm Extension |
| GENERAL Class SWAN 45 OD Designer FRERS Builder NAUTOR Series 11/2001 Age 11/2001 Age Allowance 0.487% Offset File SWAN45.OD.off - 16/04/2018 10:41:32 Measurement by - 26/04/2003 | | IMSL 12.654m VCGD -0.263m Sink 26.92kg/mm RL 11.724m VCGM -0.323m WS 36.81m² LSM0 12.466m Displacement/Length ratio 5.1522 |



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| SCORING OPTIONS | | | | | | |
|------------------|-------------------------|---------------|---------------|--------------------|---------------|---------------|
| | COASTAL / LONG DISTANCE | | | WINDWARD / LEEWARD | | |
| Time on Distance | 522.3 | | | 581.8 | | |
| Time on Time | 1.1487 | | | 1.1602 | | |
| Triple Number | Low | Medium | High | Low | Medium | High |
| Time on Distance | 601.1 | 477.9 | 428.8 | 776.3 | 585.9 | 511.0 |
| Time on Time | 1.1229 | 1.4125 | 1.5743 | 0.8695 | 1.1520 | 1.3209 |

| TIME ALLOWANCES | | | | | | | |
|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Wind Velocity | 6 kt | 8 kt | 10 kt | 12 kt | 14 kt | 16 kt | 20 kt |
| Beat VMG | 851.9 | 710.7 | 644.0 | 616.7 | 603.2 | 592.3 | 579.4 |
| 52° | 564.4 | 480.9 | 450.6 | 439.9 | 434.4 | 431.3 | 423.4 |
| 60° | 535.2 | 464.3 | 439.8 | 428.9 | 423.3 | 419.8 | 412.4 |
| 75° | 512.7 | 453.6 | 431.0 | 417.1 | 406.9 | 400.5 | 393.7 |
| 90° | 516.1 | 454.0 | 429.5 | 413.1 | 398.3 | 385.2 | 368.6 |
| 110° | 538.0 | 454.7 | 423.9 | 404.2 | 391.5 | 379.4 | 359.6 |
| 120° | 555.6 | 463.0 | 428.5 | 405.8 | 383.2 | 366.2 | 343.8 |
| 135° | 621.0 | 504.7 | 448.3 | 422.3 | 400.0 | 376.4 | 329.8 |
| 150° | 740.6 | 595.3 | 504.3 | 451.4 | 425.3 | 404.4 | 360.3 |
| Run VMG | 855.2 | 687.4 | 582.3 | 515.9 | 472.9 | 439.3 | 397.1 |

| Selected Courses | | | | | | | |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Windward / Leeward | 853.5 | 699.1 | 613.1 | 566.3 | 538.1 | 515.8 | 488.2 |
| Circular Random | 725.7 | 590.9 | 519.9 | 479.2 | 453.8 | 436.4 | 412.1 |
| Coastal / Long Distance | 853.7 | 658.1 | 555.0 | 496.6 | 464.6 | 438.0 | 396.4 |
| Non Spinnaker | 773.1 | 624.4 | 544.7 | 498.1 | 468.8 | 449.1 | 422.7 |

| Velocity Prediction in Knots for True Wind Speeds | | | | | | | |
|---------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Wind Velocity | 6 kt | 8 kt | 10 kt | 12 kt | 14 kt | 16 kt | 20 kt |
| Beat Angles | 41.8° | 40.4° | 39.1° | 37.7° | 37.0° | 36.3° | 36.3° |
| Beat VMG | 4.23 | 5.07 | 5.59 | 5.84 | 5.97 | 6.08 | 6.21 |
| 52° | 6.38 | 7.49 | 7.99 | 8.18 | 8.29 | 8.35 | 8.50 |
| 60° | 6.73 | 7.75 | 8.19 | 8.39 | 8.51 | 8.58 | 8.73 |
| 75° | 7.02 | 7.94 | 8.35 | 8.63 | 8.85 | 8.99 | 9.14 |
| 90° | 6.98 | 7.93 | 8.38 | 8.71 | 9.04 | 9.35 | 9.77 |
| 110° | 6.69 | 7.92 | 8.49 | 8.91 | 9.20 | 9.49 | 10.01 |
| 120° | 6.48 | 7.78 | 8.40 | 8.87 | 9.39 | 9.83 | 10.47 |
| 135° | 5.80 | 7.13 | 8.03 | 8.53 | 9.00 | 9.56 | 10.92 |
| 150° | 4.86 | 6.05 | 7.14 | 7.97 | 8.46 | 8.90 | 9.99 |
| Run VMG | 4.21 | 5.24 | 6.18 | 6.98 | 7.61 | 8.20 | 9.07 |
| Gybe Angles | 141.7° | 145.8° | 148.8° | 155.3° | 165.8° | 180.0° | 180.0° |

Certificate

Number **01325P**
ORC Ref **GRE01015787**
Issued On **02/06/2019**
VPP Ver. **2019 1.01**
Valid until **28/02/2020**

Crew Weight

Default **943kg**
Maximum **960kg**
Minimum* **720kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

| | | |
|--------------|--------------|---------------|
| | ToD | ToT |
| Non Spin GPH | 561.3 | 1.0689 |
| Non Spin OSN | 548.5 | 1.0938 |

Sails Limitations

| | |
|-----------|------------|
| Headsails | Spinnakers |
| 7 | 5 |

Class Division Length

CDL = **12.190**

Storm Sails Areas

Heavy Weather Jib **48.01**
Storm Jib (JL=12.26) **17.78**
Storm Trysail **21.70**

Owner

| | | | |
|-------------|------------|---------|------------------|
| BOAT | | | |
| Name | EX OFFICIO | Sail Nr | GRE-45 |
| File | GR45 | Data in | meters/kilograms |

| | | | |
|------------------------------------------|--------|----------------|-----------|
| INCLINING TEST AND FREEBOARDS | | | |
| Inclining Test Current Inclining | | | |
| Flotation date | | 21/05/2019 | SG 1.0270 |
| FFM | 1.483 | FF | 1.485 |
| FAM | 1.184 | FA | 1.184 |
| SFFP | 0.295 | SAFP | 13.301 |
| W1 | 130.2 | PD1 | 514.0 |
| W2 | 130.2 | PD2 | 517.2 |
| W3 | 130.2 | PD3 | 516.9 |
| W4 | 130.2 | PD4 | 513.3 |
| WD | 13.380 | GSA | 1.0 |
| RSA | 1.0 | PLM | 9000.0 |
| LCF from stem on CL / on sheer | | 7.694 / 7.926 | |
| Maximum beam station from stem | | 8.935 | |
| RM Measured | | 266.2kg-m | |
| RM Default | | 270.8kg-m | |
| Limit of positive stability / Stab.Index | | 134.8° / 141.9 | |
| Freeboard at mast at 5.445 | | 1.262 | |



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|----------------------|-------------|------------------|--------|
| RIG | | | |
| Forestay Tension | Aft | Spreaders | 2 |
| Inner Stay | None Fitted | Runners | 0 |
| Carbon Mast | Yes | Jumper Struts | None |
| Taper Hollows | No | Jib Furler | No |
| Fiber Rigging | No | Main Furler | No |
| Lenticular Rigging | No | Without Backstay | No |
| Articulated Bowsprit | No | | |
| P | 18.660 | E | 6.645 |
| IG | 18.735 | J | 5.410 |
| ISP | 18.870 | SFJ | 0.035 |
| BAS | 1.840 | SPL | 5.370 |
| FSP | 0.074 | TPS | |
| MDT1 | 0.133 | MW | 0.260 |
| MDL1 | 0.272 | GO | 0.295 |
| MDT2 | 0.106 | BD | 0.300 |
| MDL2 | 0.142 | MWT | 285.00 |
| TL | 1.500 | MCG | 6.800 |

| | |
|-----------------------------|--|
| MIZZEN RIG AND SAILS | |
| N/A | |

| | | | |
|------------------|------------------|------|--------|
| PROPELLER | | | |
| Installation | Strut | PRD | 0.425 |
| Type | Folding 2 blades | PBW | 0.108 |
| Twin Screw | No | PIPA | 0.0033 |
| ST1 | 0.048 | ST3 | 0.170 |
| ST2 | 0.170 | ST4 | 0.098 |
| ST5 | 0.330 | EDL | 2.770 |

| | |
|--------------------|-------------|
| Certificate | |
| Number | 01325P |
| ORC Ref | GRE01015787 |
| Issued On | 02/06/2019 |
| VPP Ver. | 2019 1.01 |
| Valid until | 28/02/2020 |

| | |
|-----------------|--|
| COMMENTS | |
| | |

| | |
|------------------------|--|
| MOVABLE BALLAST | |
| N/A | |

| | |
|--------------------|--|
| CENTERBOARD | |
| N/A | |

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|------------------------------|-------|------|------|------|------|--------|----------|----------------------------------------------------|--|
| SAILS (Maximum Areas) | | | | | | | | | |
| Mainsail | MHB | MUW | MTW | MHW | MQW | Area | Area (r) | Formula | |
| | 0.270 | 1.63 | 2.76 | 4.47 | 5.68 | 76.62 | 78.63 | P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB) | |
| Symmetric | SLU | SLE | SL | SHW | SFL | 154.10 | | SL · (SFL + 4·SHW) / 6 | |
| Asymmetric | SLU | SLE | SL | SHW | SFL | 153.49 | | AS · (SFL + 4·SHW) / 6 | |

| | | | | | | | | | | | | |
|---------------------------------------------------------------------------|------|------|------|------|------|-------|-------|-----|-----|------------|----------|---------|
| HEADSAILS | | | | | | | | | | | | |
| Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB) | | | | | | | | | | | | |
| HHB | HUW | HTW | HHW | HQW | HLP | HLU | Area | Btn | Fly | Meas.Date | Material | Comment |
| 0.16 | 0.85 | 1.55 | 2.88 | 4.25 | 5.71 | 18.90 | 54.78 | Y | | 21/05/2019 | Carbon | LIGHT |
| 0.15 | 0.85 | 1.55 | 2.89 | 4.25 | 5.67 | 18.64 | 53.94 | Y | | 21/05/2019 | Carbon | MEDIUM |

| | | | | |
|------------------------------|------------|--------------------|----------|-----------------|
| MEASUREMENT INVENTORY | | | | |
| Measurer | GRE-21 | | | |
| Date | 21/05/2019 | | | |
| Comment | | | | |
| Id | Item | Weight | Distance | VCG Description |
| Id | Item | Maker | Model | |
| 1 | Engine | VOLVO | D2 55 | |
| Id | Item | Weight Description | | |

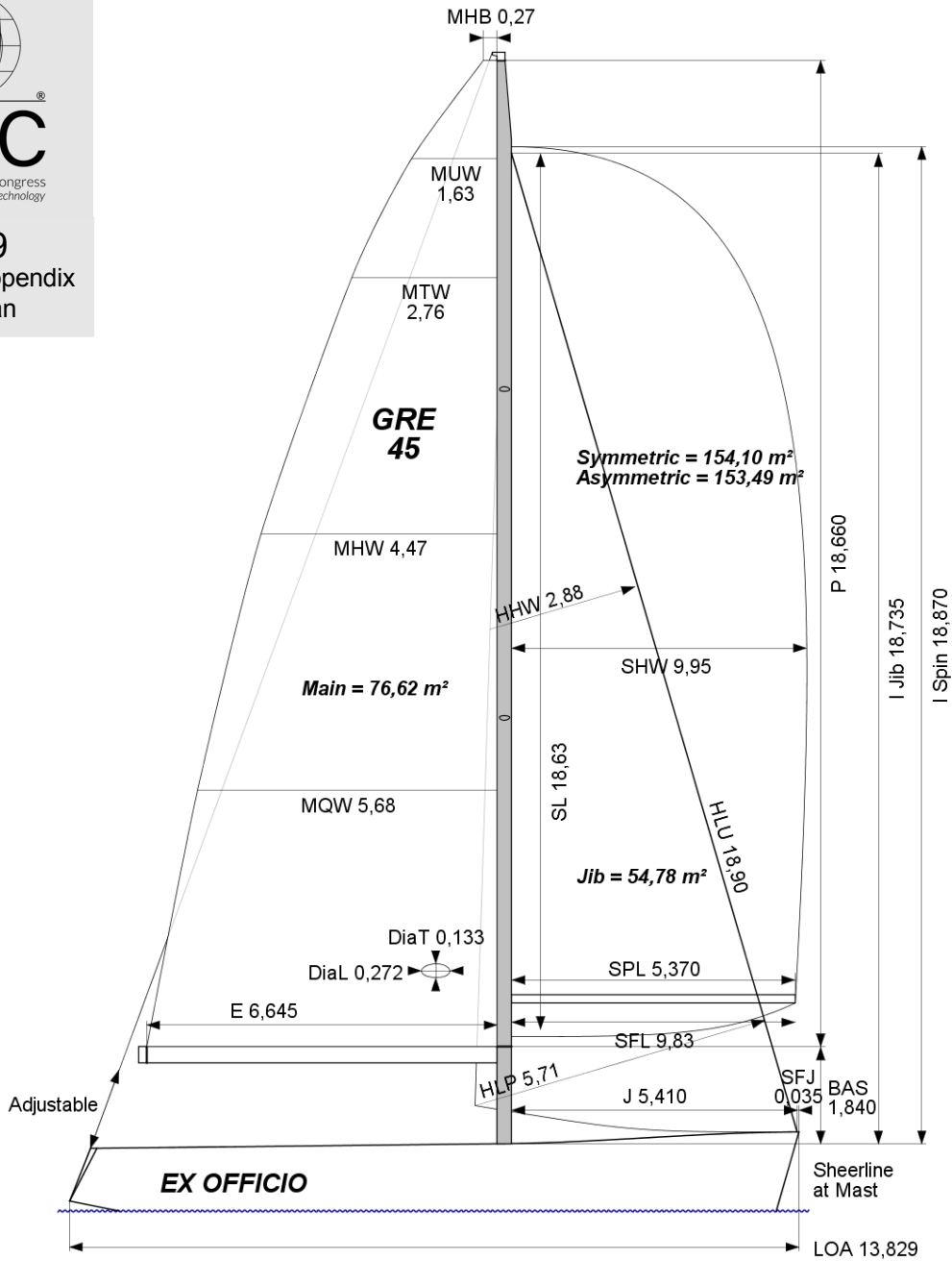
| | | | | | | | |
|------------------------------|---------|----------|-----------|---------------------|-------|-----|--------------------|
| MEASUREMENT INVENTORY | | | | | | | |
| Id | Item | Tank Use | Tank Type | Capcty | Dist. | VCG | Condtn Description |
| 1 | Tank | FUEL | INOX | 150.0 | 6.70 | | 40-0 |
| 2 | Tank | WATER | PVC hard | 320.0 | 6.50 | | 0-0 |
| 3 | Tank | HOLDING | PVC hard | 60.0 | 5.80 | | 0-0 |
| Id | Item | Weight | Distance | VCG Description | | | |
| 1 | Battery | | 6.50 | 3 x big & 1 x small | | | |
| 1 | Misc | | 10.60 | BOILER | | | |
| 2 | Misc | | | FULL TEAK DECK | | | |



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)

| Id | MHB | MUW | MTW | MHW | MQW | Area | Measurer | Meas.Date | Manufacture | Material | Comment |
|----|------|------|------|------|------|-------|----------|------------|-------------|----------|---------|
| 1 | 0.27 | 1.63 | 2.76 | 4.47 | 5.68 | 76.63 | | 21/05/2019 | NORTH | Carbon | |

HEADSAILS (2)

| Id | HHB | HUW | HTW | HHW | HQW | HLP | HLU | Ovrlp | Area | Btn | Fly | Measurer | Meas.Date | Manufacture | Material | Comment |
|----|------|------|------|------|------|------|-------|-------|-------|-----|-----|----------|------------|-------------|----------|---------|
| J1 | 0.16 | 0.85 | 1.55 | 2.88 | 4.25 | 5.71 | 18.90 | 106% | 54.78 | Y | | | 21/05/2019 | NORTH | Carbon | LIGHT |
| J2 | 0.15 | 0.85 | 1.55 | 2.89 | 4.25 | 5.67 | 18.64 | 105% | 53.94 | Y | | | 21/05/2019 | NORTH | Carbon | MEDIUM |

SYMMETRIC SPINNAKERS (3)

| Id | SLU | SLE | SL | SHW | SFL | Area | Measurer | Meas.Date | Manufacture | Material | Comment |
|----|-------|-------|-------|------|------|--------|----------|------------|-------------|----------|---------|
| 5 | 18.63 | 18.63 | 18.63 | 9.95 | 9.83 | 154.11 | | 01/06/2019 | NORTH | Unknown | |
| 4 | 18.65 | 18.65 | 18.65 | 9.94 | 9.75 | 153.90 | | 01/06/2019 | NORTH | Unknown | |
| 3 | 18.60 | 18.60 | 18.60 | 9.98 | 9.69 | 153.80 | | 01/06/2019 | NORTH | Unknown | |

ASYMMETRIC SPINNAKERS (2)

| Id | SLU | SLE | SL | SHW | SFL | Area | Kind | Measurer | Meas.Date | Manufacture | Material | Comment |
|----|-------|-------|-------|------|------|--------|------|----------|------------|-------------|----------|---------|
| 1 | 19.30 | 18.00 | 18.65 | 9.92 | 9.70 | 153.49 | asym | | 30/01/2018 | NORTH | Nylon | |
| 3 | 19.62 | 18.10 | 18.86 | 9.68 | 9.96 | 153.02 | asym | | 27/05/2019 | NORTH | Unknown | |