

Rhumb Runner J/29 Mh OB 32217

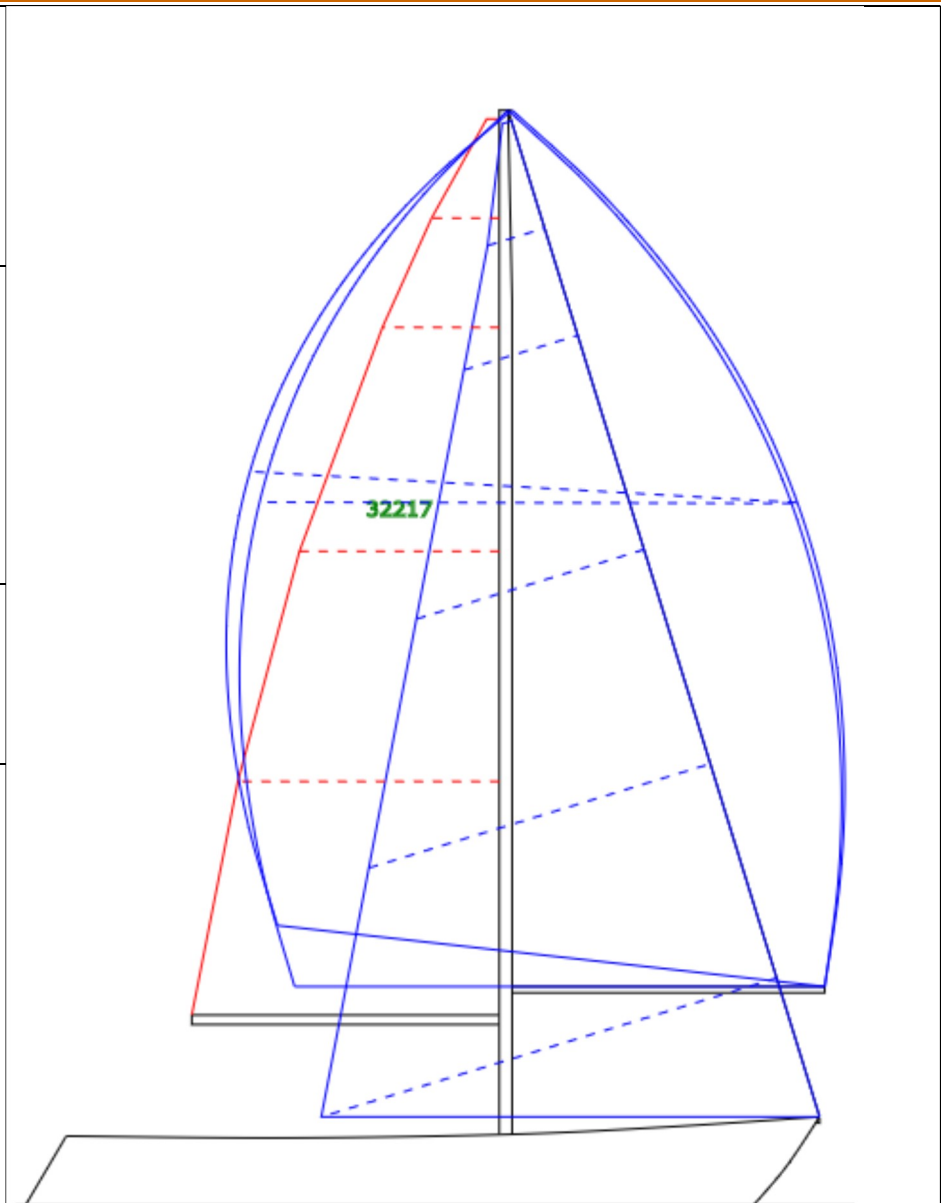
| | | | |
|------------------|---------------------------|---------------------------|-----------------------|
| Spinnaker | GPH: 0.807 / 656.5 | IR#: 0.820 / 654.2 | PHRF BM: 118.0 |
| Non-Spin | GPH: 0.771 / 687.0 | IR#: 0.804 / 667.2 | PHRF BM: 131.0 |

Class: J/29 Mh OB
 Configuration: MH OB
 Sail Number: 32217
 Year Built: 1982
 Builder: TILLOTSON-PEARSON
 Owner(s): Bowers, Chuck

Certificate #: EZ11153
 Valid Year: 2024
 Type: Renew Cert
 Issue Date: 2024-03-21
 Exp.Date: 2024-12-31
 Offsets_file: US17305.OFF
 Cert Group: ORR-Ez SOCAL
 Comment:

Rig Type: Sloop
 Forestay: Masthead
 Keel Type: Fin
 Prop Type: None

LOA: 29.49 ft
 LWL: 25.00 ft
 Rated Length: 25.81 ft
 Beam Max: 11.12 ft
 Draft: 5.77 ft
 Disp Empty: 6001 lbs
 Disp Sailing: 7128 lbs
 Crew: 1043 lbs
 Water Ballast: 0 lbs
 Wetted Area: 196.1 ft²
 LPS: 105.7 °
 RM20: 453.6 ft·lbs
 Stab Index: 96 °



Spinnaker: Both Symmetrical & Asymmetrical flown with spin pole
 Genoa/Jib Leech: Has Roach or Hollow
 Large Roach Headsail: No
 Jib Furler: No
 Main Roller Furling: No

| Rig Dimensions | Mainsail Meas. | Jib/Genoa Meas. | Asymmetric Spin. Meas. | Symmetric Spin. Meas. |
|----------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| IG: 40.00 ft | HB: 0.49 ft | LP: 18.60 ft | ASLU: 43.00 ft | SL: 39.79 ft |
| ISP: 40.00 ft | MGT: 0.00 ft | LPG %: 155.0 % | ASLE: 40.00 ft | SMW: 20.76 ft |
| J: 12.00 ft | MGU: 4.56 ft | J Luff: 40.72 ft | AMG: 21.36 ft | SF: 20.69 ft |
| P: 35.00 ft | MGM: 7.80 ft | J Leech: 0.00 ft | ASF: 21.36 ft | Area: 687.8 ft ² |
| E: 12.00 ft | MGL: 10.20 ft | JH: 0.00 ft | Area: 738.6 ft ² | |
| SPL: 12.20 ft | Area: 257.7 ft ² | JMGT: 2.33 ft | | |
| | | JMGU: 4.65 ft | | |
| | | JMGM: 9.30 ft | | |
| | | JMGL: 13.95 ft | | |
| | | Area: 379.4 ft ² | | |

Spinnaker

Polar Time Allowances

| True Wind Speed | 4 kts | 6 kts | 8 kts | 10 kts | 12 kts | 16 kts | 20 kts | 24 kts |
|-----------------|----------|----------|--------|--------|--------|--------|--------|--------|
| Opt Beat Angle | 45.8 | 44.8 | 43.4 | 40.2 | 38.0 | 36.1 | 35.3 | 35.8 |
| Beat VMG | 1,507.10 | 1,090.38 | 893.99 | 809.33 | 767.44 | 728.91 | 715.42 | 715.19 |
| 52° | 940.91 | 700.18 | 594.22 | 560.10 | 543.22 | 526.56 | 519.80 | 517.49 |
| 60° | 847.62 | 648.99 | 571.63 | 541.00 | 526.06 | 510.31 | 503.31 | 497.66 |
| 75° | 785.96 | 611.80 | 551.24 | 520.31 | 503.59 | 481.17 | 467.75 | 458.81 |
| 90° | 769.74 | 595.05 | 531.04 | 500.32 | 481.57 | 454.63 | 436.83 | 424.95 |
| 110° | 768.87 | 597.26 | 536.60 | 501.78 | 473.82 | 430.14 | 402.10 | 381.23 |
| 120° | 802.89 | 620.70 | 553.94 | 518.21 | 489.84 | 437.39 | 386.73 | 362.64 |
| 135° | 1,087.76 | 762.02 | 608.53 | 556.23 | 521.94 | 468.80 | 417.17 | 356.04 |
| 150° | 1,332.23 | 930.71 | 733.14 | 614.92 | 560.36 | 497.66 | 448.81 | 397.30 |
| 165° | 1,485.91 | 1,038.07 | 817.71 | 684.39 | 600.03 | 521.39 | 471.50 | 425.65 |
| Run VMG | 1,538.33 | 1,074.69 | 846.56 | 708.54 | 620.93 | 535.33 | 483.92 | 438.77 |
| Opt Run Angle | 134.9 | 137.2 | 140.0 | 152.7 | 166.8 | 173.4 | 173.7 | 171.4 |

Benchmark Ratings

| | TOT (Spin) | TOD (Spin) |
|-----|------------|------------|
| GPH | 0.807 | 656.5 |
| IR# | 0.820 | 654.2 |

Performance Metrics

| | |
|---------------------|--------|
| SA/D Dnwind: | 43.050 |
| SA/D Average: | 35.28 |
| SA/D Upwind: | 27.500 |
| D/Length: | 185.0 |
| Ave Perf Screen: | 19.100 |
| DnWind Perf Screen: | 23.3 |

PCS Ratings

| | 4 kts | 6 kts | 8 kts | 10 kts | 12 kts | 16 kts | 20 kts | 24 kts |
|--------------|---------|---------|-------|--------|--------|--------|--------|--------|
| RANDOM LEG | 1,239.5 | 891.5 | 725.9 | 638.5 | 588.2 | 535.3 | 505.6 | 484.0 |
| W50/L50 | 1,552.1 | 1,103.0 | 885.6 | 770.3 | 703.8 | 638.7 | 605.5 | 582.5 |
| W60/L40 | 1,549.3 | 1,105.2 | 891.3 | 780.8 | 718.5 | 658.3 | 628.9 | 610.5 |
| MOSTLY WW | 1,597.9 | 1,144.8 | 928.0 | 815.6 | 752.9 | 695.7 | 674.3 | 667.8 |
| MOSTLY LW | 1,371.1 | 972.2 | 778.6 | 670.1 | 602.6 | 523.2 | 475.2 | 442.8 |
| MOSTLY REACH | 1,134.6 | 821.9 | 674.9 | 599.1 | 555.6 | 508.8 | 480.0 | 456.1 |

Non-Spinnaker

Polar Time Allowances

| True Wind Speed | 4 kts | 6 kts | 8 kts | 10 kts | 12 kts | 16 kts | 20 kts | 24 kts |
|-----------------|----------|----------|--------|--------|--------|--------|--------|--------|
| Opt Beat Angle | 45.8 | 44.8 | 43.4 | 40.2 | 38.0 | 36.1 | 35.3 | 35.8 |
| Beat VMG | 1,507.10 | 1,090.38 | 893.99 | 809.33 | 767.44 | 728.91 | 715.42 | 715.19 |
| 52° | 940.91 | 700.18 | 594.22 | 560.10 | 543.22 | 526.56 | 519.80 | 517.49 |
| 60° | 847.62 | 648.99 | 571.63 | 541.00 | 526.06 | 510.31 | 503.31 | 500.38 |
| 75° | 785.25 | 611.80 | 551.94 | 520.31 | 504.17 | 486.81 | 477.94 | 472.85 |
| 90° | 778.04 | 607.41 | 549.54 | 517.25 | 493.67 | 468.57 | 456.49 | 448.28 |
| 110° | 855.64 | 656.89 | 580.67 | 544.82 | 517.96 | 475.05 | 438.62 | 425.03 |
| 120° | 1,001.95 | 737.28 | 616.98 | 569.96 | 538.59 | 491.73 | 451.33 | 418.41 |
| 135° | 1,357.31 | 942.04 | 736.78 | 628.00 | 575.06 | 513.86 | 469.38 | 427.76 |
| 150° | 1,660.21 | 1,111.69 | 837.46 | 695.20 | 607.59 | 529.49 | 481.10 | 438.18 |
| 165° | 1,740.56 | 1,170.35 | 885.37 | 726.08 | 624.79 | 533.14 | 480.03 | 433.82 |
| Run VMG | 1,761.77 | 1,183.90 | 895.05 | 733.51 | 630.95 | 538.48 | 485.58 | 439.79 |
| Opt Run Angle | 172.0 | 172.1 | 172.1 | 172.2 | 172.3 | 173.2 | 173.0 | 172.0 |

Benchmark Ratings

| | TOT (Non-Spin) | TOD (Non-Spin) |
|-----|----------------|----------------|
| GPH | 0.771 | 687.0 |
| IR# | 0.804 | 667.2 |

Performance Metrics

| | |
|--------------|-------|
| SA/D: | 27.50 |
| D/Length: | 185.0 |
| Perf Screen: | 14.9 |

PCS Ratings

| | 4 kts | 6 kts | 8 kts | 10 kts | 12 kts | 16 kts | 20 kts | 24 kts |
|--------------|---------|---------|-------|--------|--------|--------|--------|--------|
| RANDOM LEG | 1,328.2 | 947.6 | 764.3 | 667.1 | 610.6 | 553.3 | 524.5 | 506.4 |
| W50/L50 | 1,652.7 | 1,155.6 | 911.1 | 782.9 | 709.4 | 640.3 | 606.3 | 583.1 |
| W60/L40 | 1,629.3 | 1,147.3 | 911.8 | 790.9 | 723.0 | 659.6 | 629.6 | 610.9 |
| MOSTLY WW | 1,616.0 | 1,155.7 | 934.8 | 820.2 | 756.0 | 697.7 | 676.4 | 670.3 |
| MOSTLY LW | 1,522.3 | 1,061.3 | 834.2 | 709.4 | 632.4 | 548.3 | 500.0 | 463.3 |
| MOSTLY REACH | 1,220.6 | 878.3 | 715.4 | 629.7 | 580.8 | 530.2 | 503.1 | 486.1 |

Rhumb Runner J/29 Mh OB 32217

Spinnaker

Standard 5 Winds

| | TOT (Spin) | | | | | TOD (Spin) | | | | |
|--------------|---------------|--------------|---------------|----------------|--------------|---------------|--------------|---------------|----------------|--------------|
| | V.Light <5 | Light 5-7 | Lt/Med 7-9 | Medium 9-15 | Heavy >15 | V.Light <5 | Light 5-7 | Lt/Med 7-9 | Medium 9-15 | Heavy >15 |
| RANDOM LEG | 0.420 | 0.547 | 0.692 | 0.828 | 1.024 | 1,239.5 | 952.3 | 752.0 | 628.6 | 508.3 |
| W50/L50 | 0.409 | 0.538 | 0.690 | 0.838 | 1.042 | 1,552.1 | 1,180.2 | 919.6 | 757.8 | 608.9 |
| W60/L40 | 0.418 | 0.548 | 0.700 | 0.842 | 1.024 | 1,549.3 | 1,181.9 | 925.8 | 769.7 | 632.6 |
| MOSTLY WW | 0.430 | 0.562 | 0.714 | 0.853 | 1.011 | 1,597.9 | 1,223.6 | 962.8 | 805.2 | 679.3 |
| MOSTLY LW | 0.386 | 0.508 | 0.655 | 0.809 | 1.101 | 1,371.1 | 1,040.6 | 807.0 | 653.6 | 480.4 |
| MOSTLY REACH | 0.428 | 0.554 | 0.695 | 0.822 | 1.008 | 1,134.6 | 877.1 | 698.6 | 590.5 | 481.7 |

Standard Single Wind

| | TOT (Spin) Single | TOD (Spin) Single |
|--------------|----------------------|----------------------|
| RANDOM LEG | 0.804 | 647.5 |
| W50/L50 | 0.809 | 784.5 |
| W60/L40 | 0.813 | 797.2 |
| MOSTLY WW | 0.823 | 835.2 |
| MOSTLY LW | 0.789 | 670.3 |
| MOSTLY REACH | 0.800 | 606.7 |

Legacy 4 Winds

| | TOT (Spin) | | | | TOD (Spin) | | | |
|--------------|------------|-------|--------|-------|------------|---------|--------|-------|
| | V.Light | Light | Medium | Heavy | V.Light | Light | Medium | Heavy |
| RANDOM LEG | 0.388 | 0.611 | 0.809 | 0.947 | 1,239.5 | 786.9 | 594.2 | 507.6 |
| W50/L50 | 0.379 | 0.609 | 0.826 | 0.967 | 1,552.1 | 965.5 | 712.3 | 608.0 |
| W60/L40 | 0.388 | 0.619 | 0.827 | 0.951 | 1,549.3 | 970.6 | 726.5 | 631.6 |
| MOSTLY WW | 0.394 | 0.624 | 0.827 | 0.928 | 1,597.9 | 1,008.3 | 761.4 | 678.0 |
| MOSTLY LW | 0.355 | 0.573 | 0.797 | 1.015 | 1,371.1 | 848.3 | 609.6 | 479.1 |
| MOSTLY REACH | 0.397 | 0.618 | 0.804 | 0.936 | 1,134.6 | 729.5 | 560.6 | 481.2 |

Non-Spinnaker

Standard 5 Winds

| | TOT (Non-Spin) | | | | | TOD (Non-Spin) | | | | |
|--------------|----------------|--------------|---------------|----------------|--------------|----------------|--------------|---------------|----------------|--------------|
| | V.Light <5 | Light 5-7 | Lt/Med 7-9 | Medium 9-15 | Heavy >15 | V.Light <5 | Light 5-7 | Lt/Med 7-9 | Medium 9-15 | Heavy >15 |
| RANDOM LEG | 0.392 | 0.514 | 0.656 | 0.793 | 0.986 | 1,328.2 | 1,013.4 | 793.0 | 656.0 | 528.0 |
| W50/L50 | 0.384 | 0.512 | 0.668 | 0.825 | 1.041 | 1,652.7 | 1,239.8 | 949.9 | 769.6 | 609.9 |
| W60/L40 | 0.398 | 0.527 | 0.682 | 0.831 | 1.023 | 1,629.3 | 1,229.5 | 950.0 | 779.2 | 633.4 |
| MOSTLY WW | 0.425 | 0.556 | 0.708 | 0.849 | 1.008 | 1,616.0 | 1,235.5 | 970.2 | 809.5 | 681.5 |
| MOSTLY LW | 0.347 | 0.464 | 0.609 | 0.765 | 1.049 | 1,522.3 | 1,139.3 | 868.3 | 691.6 | 503.9 |
| MOSTLY REACH | 0.398 | 0.518 | 0.655 | 0.783 | 0.959 | 1,220.6 | 938.1 | 741.1 | 620.4 | 506.5 |

Standard Single Wind

| | TOT (Non-Spin) Single | TOD (Non-Spin) Single |
|--------------|--------------------------|--------------------------|
| RANDOM LEG | 0.768 | 677.9 |
| W50/L50 | 0.792 | 800.9 |
| W60/L40 | 0.799 | 810.3 |
| MOSTLY WW | 0.818 | 840.1 |
| MOSTLY LW | 0.740 | 714.3 |
| MOSTLY REACH | 0.759 | 639.6 |

Legacy 4 Winds

| | TOT (Non-Spin) | | | | TOD (Non-Spin) | | | |
|--------------|----------------|-------|--------|-------|----------------|---------|--------|-------|
| | V.Light | Light | Medium | Heavy | V.Light | Light | Medium | Heavy |
| RANDOM LEG | 0.362 | 0.578 | 0.779 | 0.912 | 1,328.2 | 831.6 | 617.5 | 527.2 |
| W50/L50 | 0.356 | 0.587 | 0.818 | 0.966 | 1,652.7 | 1,001.3 | 719.1 | 609.0 |
| W60/L40 | 0.369 | 0.601 | 0.820 | 0.950 | 1,629.3 | 999.3 | 732.0 | 632.4 |
| MOSTLY WW | 0.389 | 0.619 | 0.823 | 0.925 | 1,616.0 | 1,016.6 | 764.8 | 680.2 |
| MOSTLY LW | 0.319 | 0.530 | 0.758 | 0.967 | 1,522.3 | 916.5 | 641.1 | 502.9 |
| MOSTLY REACH | 0.369 | 0.581 | 0.768 | 0.891 | 1,220.6 | 775.4 | 586.7 | 505.6 |

Spinnaker

PHRF Benchmark

118.0

Aligned Ratings are based on the Farr 40 MH as Scratch Boat.

PHRF Single Wind

| | |
|--------------|-------|
| RANDOM LEG | 127.0 |
| W50/L50 | 149.8 |
| W60/L40 | 149.4 |
| MOSTLY WW | 148.1 |
| MOSTLY LW | 141.5 |
| MOSTLY REACH | 121.2 |

PHRF 5 Winds

| | V.Light <5 | Light 5-7 | Lt/Med 7-9 | Medium 9-15 | Heavy >15 |
|--------------|---------------|--------------|---------------|----------------|--------------|
| RANDOM LEG | 250.6 | 190.1 | 147.3 | 120.9 | 105.2 |
| W50/L50 | 344.6 | 251.6 | 183.2 | 138.2 | 121.0 |
| W60/L40 | 329.8 | 243.4 | 180.3 | 138.8 | 122.5 |
| MOSTLY WW | 291.3 | 221.6 | 172.2 | 141.2 | 125.0 |
| MOSTLY LW | 309.3 | 229.6 | 172.5 | 134.7 | 109.4 |
| MOSTLY REACH | 227.8 | 175.1 | 138.1 | 116.4 | 100.1 |

Non-Spinnaker

PHRF Benchmark

131.0

Aligned Ratings are based on the Farr 40 MH as Scratch Boat.

PHRF Single Wind

| | |
|--------------|-------|
| RANDOM LEG | 157.4 |
| W50/L50 | 166.2 |
| W60/L40 | 162.5 |
| MOSTLY WW | 153.0 |
| MOSTLY LW | 185.5 |
| MOSTLY REACH | 154.1 |

PHRF 5 Winds

| | V.Light <5 | Light 5-7 | Lt/Med 7-9 | Medium 9-15 | Heavy >15 |
|--------------|---------------|--------------|---------------|----------------|--------------|
| RANDOM LEG | 339.3 | 251.2 | 188.3 | 148.3 | 124.9 |
| W50/L50 | 445.2 | 311.2 | 213.5 | 150.0 | 122.0 |
| W60/L40 | 409.8 | 291.0 | 204.5 | 148.3 | 123.3 |
| MOSTLY WW | 309.4 | 233.5 | 179.6 | 145.5 | 127.2 |
| MOSTLY LW | 460.5 | 328.3 | 233.8 | 172.7 | 132.9 |
| MOSTLY REACH | 313.8 | 236.1 | 180.6 | 146.3 | 124.9 |