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FIN REVIEW, P. 60

FEATURES	OPEN-HEELS										FULL-FOOTS					
	PRICE	MADE IN	WARRANTY	FIN STYLE	FOOT POCKET	BUOYANCY	WEIGHT (per fin size)	SIZES	PRICE	MADE IN	WARRANTY	FIN STYLE	FOOT POCKET	BUOYANCY	WEIGHT (per fin size)	SIZES
	\$260	Japan	1-yr. ltd.	Split	Open toe	Negative	3 lbs., 1 oz. (M)	5	\$99.95	Italy	1-yr. ltd.	Split	Closed toe	Slightly positive	1 lb., 14 ozs. (ML)	4
	\$185	USA	1-yr. ltd.	Unique	Open toe	Slightly negative	1 lb., 14 ozs. (M)	2	\$150	USA	Ltd. lifetime	Modified paddle	Closed toe	Negative	1 lb., 14 ozs. (ML)	3
	\$80	USA	Ltd. lifetime	Traditional paddle	Closed toe	Negative	2 lbs., 11 ozs. (M)	3	\$129.95	Italy	2-yr. ltd.	Modified paddle	Closed toe	Slightly positive	1 lb., 14 ozs. (M)	3
	\$149.95	Italy	2-yr. ltd.	Modified paddle	Closed toe	Slightly positive	1 lb., 14 ozs. (M)	3	\$89	Italy	2-yr. ltd.	Modified paddle	Closed toe	Negative	2 lbs., 2 ozs. (M)	3
	\$139	—	1-yr. ltd.	Traditional paddle	Closed toe	Negative	1 lb., 10 ozs. (M)	4	\$119	Taiwan	1 year	Split	Closed toe	Positive	1 lb., 10 ozs. (M)	3
	\$89	Taiwan	1 year	Split	Open toe	Positive	1 lb., 10 ozs. (9-10)	6	\$75	Italy	2-yr. ltd.	Modified paddle	Open toe	Slightly positive	2 lbs., 0 oz. (9.5-10.5)	6
	\$130	Japan	1-yr. ltd.	Split	Open toe	Slightly positive	2 lbs., 6 ozs. (ML)	4	\$44.95	Italy	1 year	Modified paddle	Open toe	Negative	1 lb., 1 oz. (9-10)	7
	\$35	Taiwan	1 year	Split	Open toe	Positive	1 lb., 0 oz. (9-10)	4	\$49	Italy	2 years	Modified paddle	Open toe	Negative	2 lbs., 3 ozs. (10-11)	6

ERGO TESTS																
	MODERATELY IMPORTANT															
		POWER VS. STRESS	5	4	4	4	3	3	3	3	3	3	4	4	4	4
STABILITY	4	4	3	4	4	4	4	3	3	4	4	4	4	4	4	3
MANEUVERABILITY	4	4	4	4	3	3	3	3	3	3	4	4	4	4	4	3
ACCELERATION	5	4	4	3	3	3	3	3	3	3	5	4	4	4	4	4
FIT & COMFORT	5	3	3	4	4	3	3	4	3	4	4	4	3	3	3	4
ALTERNATE KICKS	5	4	3	4	4	3	3	3	3	3	4	4	4	4	4	4
SURFACE SWIM	4	4	3	3	3	4	4	3	3	3	4	4	4	4	3	3
DONNING/DOFFING	5	4	4	4	3	4	4	4	4	4	4	4	4	4	4	3
ADJUSTING FOR FIT	5	4	4	3	2	4	4	4	5	3	N/A	N/A	N/A	N/A	N/A	N/A
NONSKID	4	4	2	2	3	3	3	4	3	3	4	4	4	3	3	3
ADJUSTED ERGO TOTAL	96	82	73	76	69	70	70	68	66	69	83	80	78	77	72	67

OBJECTIVE TESTS																
SPEED TEST	4	3	4	3	4	3	3	4	4	3	5	4	4	5	4	4
THRUST TEST	5	4	4	3	5	2	2	4	4	3	5	4	4	4	3	4
SLALOM COURSE	5	3	4	2	2	3	3	2	3	2	5	5	5	4	4	3
EFFICIENCY COURSE	5	3	4	4	4	4	4	3	4	3	5	5	5	5	4	4
OBJECTIVE TOTAL	19	13	16	12	15	12	12	13	15	11	20	18	18	18	15	15
TOTAL SCORE	115	95	89	88	84	82	82	81	81	80	103	98	96	95	87	82

5=Excellent, 4=Very Good, 3=Good, 2=Fair, 1=Poor

*HOW WE DETERMINE TESTERS' CHOICES ScubaLab Testers' Choices are based on the adjusted scores for ergonomic performance (actual scores x 3 for "Most Important" categories, actual scores x 2 for "Moderately Important" categories, and actual scores x 1 for "Convenience Elements"), plus numerical scores for speed, thrust, slalom and efficiency course runs.

MOST IMPORTANT > Power vs. Stress: The perception of power produced vs. effort required. Stability: How much the fins wobble, slice from side to side or hit each other during the kick cycle. Maneuverability: The ease of turning, as well as getting in and out of tight places using fin power; i.e., backing up, changing or reversing directions, using small fin movements. Acceleration: During an underwater swim, the ability to pick up speed quickly.

MODERATELY IMPORTANT > Fit & Comfort: Of foot pocket. Alternate Kicks: Ease and effectiveness of frog and dolphin kicks. Surface Swim: Both face-down and while on the back. **CONVENIENCE ELEMENTS** > Donning/doffing: Prior to dive, after the dive. Adjusting for fit: Ease of using buckles and straps, both in and out of the water. Nonskid: The sense of security on a wet boat deck geared up while wearing fins.



MISSING IN ACTION

ALL MAJOR manufacturers were invited to participate in this year's new fin review. Here is a status report of the major manufacturers who are not represented:

> **OMS** submitted its Slipstream fin for inclusion in this review. However, it was available in only one size (XL) and didn't fit enough of our test divers to get a complete evaluation. For more information, see: "First Look," p. 63.

> **Dacor, Scubapro, Tusa and Zeagle** did not have any new scuba fins listed in their 2005 catalogs, so they were not able to participate in this year's new fin review.

> **Mares'** new Quattro Excel was not available in time for full testing. We did get to try a pair just as this issue went to press. See: "First Look," p. 63.

> **Beuchat** shows a new Activa full-foot fin on its web site, but didn't send it for inclusion in this year's review.

> **Cressi-sub** has a number of fins not previously reviewed listed in its 2005 catalog, but didn't respond to our invitation.



JACK CHALK

SPEED COURSE

Six test divers, using the flutter kick at an average depth of 10 feet, took each fin on three speed runs. The highest sustained speed, as measured by digital underwater speedometers, for each fin, was taken from each diver, then averaged for the following speeds.

When applied to real-world diving, the difference of 1/10th mph is insignificant. Speed data should be used in conjunction with maneuverability, efficiency, thrust and ergonomic results for a complete picture of a fin's performance.

(in MPH)

OPEN-HEELS

2.8	Apollo Bio-Fin Pro Yellow/C-Series
2.7	Dive Rite Fin Mor-Fin Blue VT-300B
2.6	Aqua Lung Caravelle ADJ XS Scuba Power Fin
2.5	Deep Outdoors Six-Gill
2.4	Aeris Velocity Duo IST F-2 Talaria Sherwood Scuba Kinesis Sherwood Scuba Kinesis EX

FULL-FOOTS

3.0	Oceanic Vector
2.9	Atomic Aquatics Full-Foot Splitfin
2.8	Akona Azione Apollo Sports Bio-Fin Uni Blue
2.7	Seac Sub Hyper-X
2.6	IST F-10 Pegasus

THRUST TEST

Six test divers, using the flutter kick at an average depth of 10 feet, grabbed onto a rigid-handled harness that connected to a scale that connected to a pier piling. Holding the handle securely against their bodies, test divers slowly kicked forward, taking the slack out of the harness. Once at the end of the tether, test divers began to kick, slowly at first, then increasing speed to reach their maximum thrust, at which time the test supervisor, on station at the scale, recorded the reading. Test divers would then ease off, rest and repeat the process. Three readings were taken by each diver for each fin, which were averaged.

(in pounds)

OPEN-HEELS

38	Apollo Bio-Fin Pro Yellow/C-Series XS Scuba Power Fin
36	Mor-Fin Blue VT-300B
35	Aeris Velocity Duo Aqua Lung Caravelle ADJ Dive Rite Fin
34	IST F-2 Talaria
33	Deep Outdoors Six-Gill
32	Sherwood Scuba Kinesis EX Sherwood Scuba Kinesis

FULL-FOOTS

39	Atomic Aquatics Full-Foot Splitfin
36	Apollo Sports Bio-Fin Uni Blue Seac Sub Hyper-X
35	Akona Azione Oceanic Vector
34	IST F-10 Pegasus

SLALOM COURSE

Six test divers, using a flutter kick, swam an obstacle course that included a series of 60-degree turns in approximately 10 feet of water. While on the course, divers' hands clutched either weight belts or BC straps to ensure all maneuvering power was generated by the fins. Divers swam two round-trip circuits per fin, timing their runs with digital stopwatches. The fastest time for each fin was taken from each diver, then averaged, to come up with the following course times.

Time (in seconds)

OPEN-HEELS

73	Apollo Bio-Fin Pro Yellow/C-Series
77	Mor-Fin Blue VT-300B
78	Sherwood Scuba Kinesis Dive Rite Fin
80	Sherwood Scuba Kinesis EX Aeris Velocity Duo
81	XS Scuba Power Fin Deep Outdoors Six-Gill IST F-2 Talaria
82	Aqua Lung Caravelle ADJ

FULL-FOOTS

69	Atomic Aquatics Full-Foot Splitfin
72	Apollo Sports Bio-Fin Uni Blue
73	Akona Azione
74	Oceanic Vector
76	IST F-10 Pegasus
78	Seac Sub Hyper-X

EFFICIENCY COURSE

Six test divers, using a flutter kick in approximately 10 feet of water, swam a straight-line course 65 feet long, including a 15-foot "runway" to allow them to achieve their most efficient kicking rhythm before starting their digital stopwatches. Divers completed two runs for each fin. The best runs for each diver for each fin were then averaged.

Course Time (in seconds)

OPEN-HEELS

21	Apollo Bio-Fin Pro Yellow/C-Series
22	Mor-Fin Blue VT-300B XS Scuba Power Fin
23	Deep Outdoors Six-Gill Sherwood Scuba Kinesis Sherwood Scuba Kinesis EX Dive Rite Fin
24	Aeris Velocity Duo IST F-2 Talaria
25	Aqua Lung Caravelle ADJ

FULL-FOOTS

20	Apollo Sports Bio-Fin Uni Blue Atomic Aquatics Full-Foot Splitfin
21	Oceanic Vector Akona Azione
22	IST F-10 Pegasus Seac Sub Hyper-X