



FlowSeries

SHEET WAVE ATTRACTION



FLOWRIDER™

POWERED BY WAVELOCH

What is the FlowRider™?

The FlowRider™ generates a thin sheet of water that flows over a stationary wave form. The resulting “wave-like” shape permits riders to slide down, carve a turn, and ride up the wave surface, emulating the maneuvers of other board sports.

How does it work?

Pumps located in the pool below inject a 3 inch sheet of water over the engineered ride surface creating a surfable wave.

What is the electrical cost to operate?

Assuming the electricity charge is US10¢ per kilowatt hour a FlowRider™ Single will cost US\$8.50 per hour.

How many lifeguards do I need?

Only one lifeguard is needed for a single, two guards are needed for a double if the divider is in place.

What is the life expectancy of the FlowRider™?

The first wave was built in 1991 and it is still going strong!

Is the FlowRider™ safe?

Yes. A FlowRider™ is safe because the participant is moving over a soft padded surface. Gary Larson, President of Water Mania in Kissimmee, Florida, notes, “The FlowRider™ is one of the safest rides at our park. It is really unbelievable.”

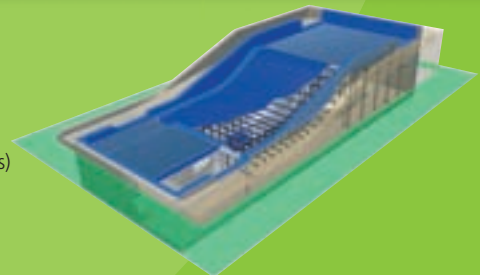


TECH SPECS

FlowRider™ Single

- Attraction footprint: width 6.7 m (22') x length 16.2 m (53')
- Adjacent walkways: 1 m (3'3") minimum
- System elevation: Grade elevation is adjustable based on site Assumes front nozzle deck 0 (at grade) Height at back deck ≈ +1.2 m (+4') Tank depth ≈ -1.5 m (-5')

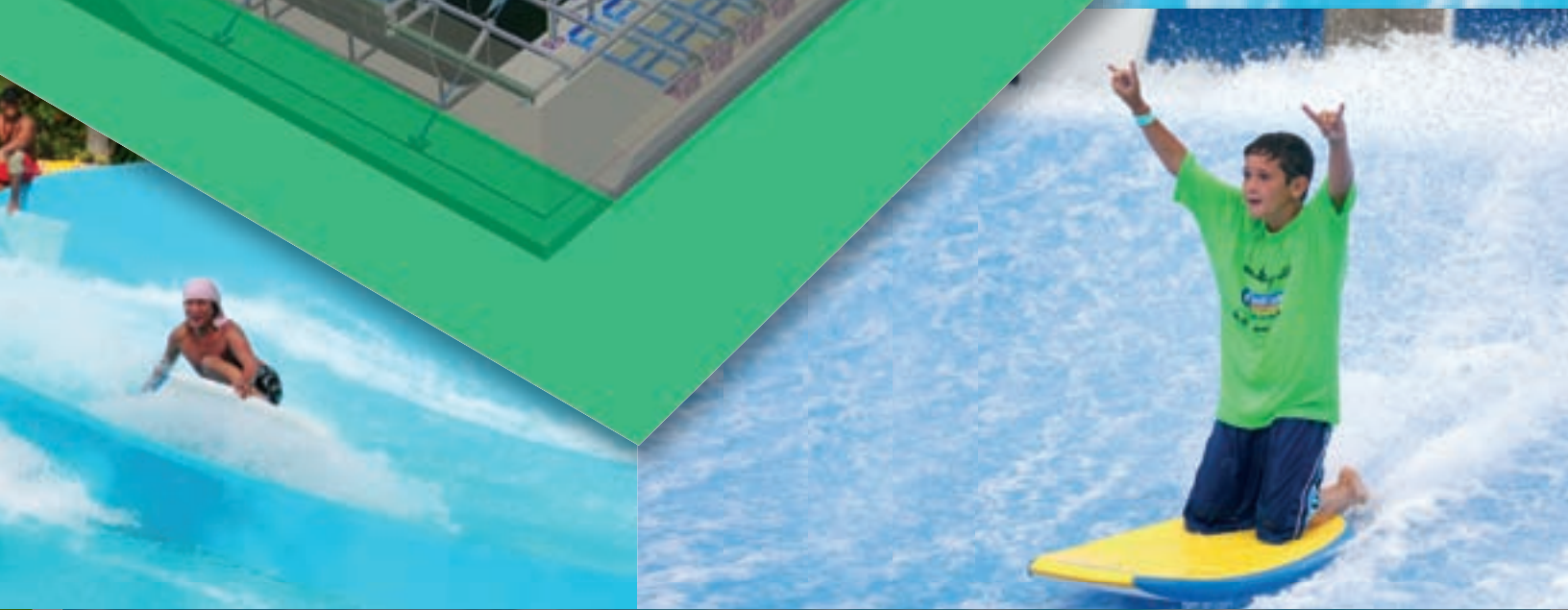
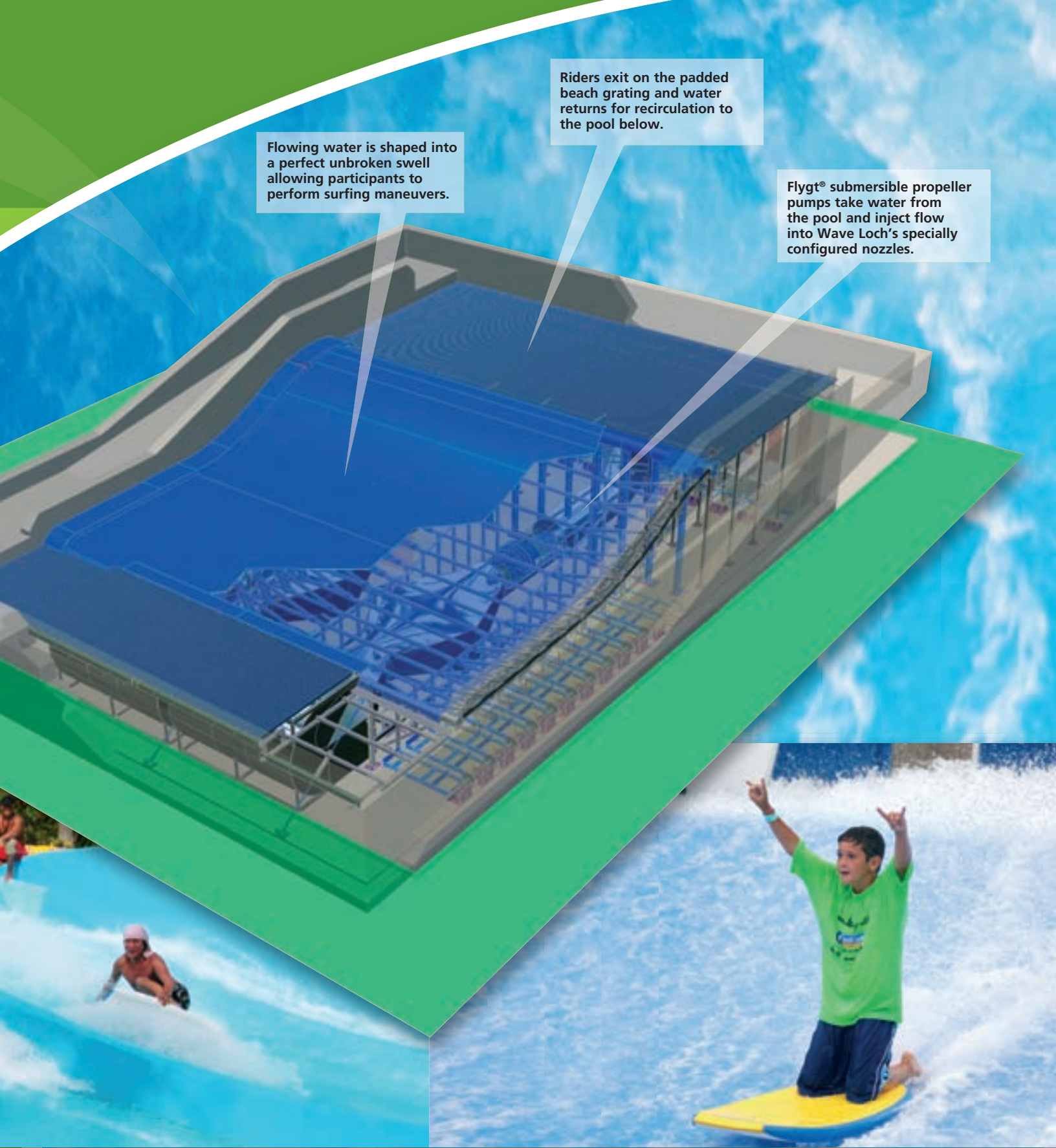
- Capacity ≈ 240 - 160 rides per hour
- Weight ≈ 1500 kg per sq. m (300 lbs per sq/ft)
- Electrical consumption 85 kW @ 115 hp
- Electrical rating 104 kW @ 140 hp
- Tank volume ≈ 150,000 liters (40,000 US gallons)
- Riding Vehicle – Flowboards and Bodyboards



Flowing water is shaped into a perfect unbroken swell allowing participants to perform surfing maneuvers.

Riders exit on the padded beach grating and water returns for recirculation to the pool below.

Flygt® submersible propeller pumps take water from the pool and inject flow into Wave Loch's specially configured nozzles.

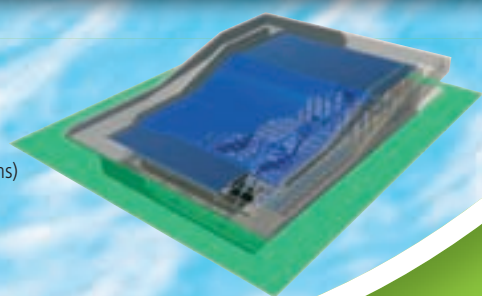


TECH SPECS

FlowRider™ Double

- Attraction footprint: width 12.8 m (42') x length 16.2 m (53')
- Adjacent walkways: 1 m (3'3") minimum
- System elevation: Grade elevation is adjustable based on site
Assumes front nozzle deck 0 (at grade)
Height at back deck ≈ +1.2 m (+4')
- Tank depth ≈ -1.5 m (-5')

- Capacity ≈ 480-320 rides per hour
- Weight ≈ 1500 kg per sq. m (300 lbs per sq/ft)
- Electrical consumption 170 kW @ 230 hp
- Electrical rating 208 kW @ 280 hp
- Tank volume ≈ 200,000 liters (55,000 US gallons)
- Riding Vehicle – Flowboards and Bodyboards
- Divider can be removed with ease.





Success is our proof, now every new Royal Caribbean Cruise Ship comes standard with a FlowRider™



“ I HAD NEVER SURFED BEFORE, WHEN I WIPED OUT I GOT RIGHT BACK ON UNTIL I GOT IT. ”

Sally - age 11



FOR BEGINNERS

The FlowRider™ allows anyone to catch a wave without the fear and hassle of the ocean: no wind, no tides, no critters, just fun.

FOR EXPERTS

'Flowboarding' is not just a ride, it is a sport... a 21st Century alchemy that has the look of surfing, the ride of snowboarding, the tricks of skateboarding and boards derived from wakeboarding. Since the early 90s, the world's best board riders have cross pollinated into flowboarding. This new alternative board sport is taken seriously from the mountains to the sea. Flowboarding will energize your facility with aspiring athletes (and 'wannabes') who will pay again and again to enhance their board-riding skills. Not only does this repeat business enhance revenue and spread word of mouth, but the better a rider gets, the greater the show for your viewing audience.

SAFETY

Thrilling to do, thrilling to watch, our ride is designed to handle any wipeout. The FlowRider™'s waveform is a proprietary composite membrane ride surface that absorbs the energy of impacts. A flowboarder may wipe out, but they'll get back up again and again and again.



Andy Finch
Olympic Snowboarder

NOW ON TOUR



Experience the Flowrider only on **FREEDOM of the SEAS™**

THE WAVE HOUSE™ FLOW TOUR PRESENTED BY ROYAL CARIBBEAN, SHOWCASES THE NEW SPORT OF FLOWBOARDING. RIDERS ARE MOTIVATED TO PRACTICE THEIR SKILLS AND COMPETE FOR PRIZE AND GLORY AT THE LOCAL, NATIONAL AND INTERNATIONAL LEVELS.



THE MEDIA SUCCESS OF THE FLOWRIDER™ AND THE REACTION BY THE PUBLIC HAS COMPLETELY EXCEEDED OUR EXPECTATIONS.

THIS PRODUCT SETS US APART IN THE CRUISE INDUSTRY.

Charly McDonald, Manager Guest Activities, Royal Caribbean International



REVENUE REVENUE

The FlowRider™ draws the most challenging demographic to retain, the 13-21 year olds. "If you can get the teen, you can get the entire family." As recognized by Jessica Correa, Director Brand Innovation and Alliance Marketing for Royal Caribbean International, "Kids drive 70% of our guest's vacation planning decisions. In that the FlowRider™ appeals to kids, it is money in the bank."

The sport of Flowboarding creates a lifestyle following, enhancing your revenue through board sports retail and FlowRider™ brand merchandise thereby enhancing your revenue earning potential.



FOOD AND BEVERAGE

The FlowRider's Liquid Stage captivates an audience boosting F & B sales!

SPONSORSHIP OPPORTUNITIES

The media-friendly and youth-oriented FlowRider™ is a sponsor's dream.

RENTALS AND PARTIES

The FlowRider™ gives you operational flexibility for all kinds of group activities.





WE HIT A HOME RUN WITH THE FLOWRIDER™. OUR HOTEL GUESTS LOVE IT. WE LOVE IT. ORDER ME ANOTHER ONE.

Todd Nelson,
President Kalahari Resort



The FlowRider™ at The Wave Waterpark in Vista, California.

VERSATILE APPLICATIONS

The FlowRider™ fits comfortably in a variety of different applications such as indoor waterparks, outdoor waterparks, municipalities, restaurant/retail, ski resorts, and malls.

Ideal for Indoor: Endless summer = endless fun!

Do you wish your facility was summer busy year round? With a compact footprint, the FlowRider™ is perfect inside a building for year-round revenue generation.

The Municipal Solution

Traditional municipal competition swimming pools are money losing operations. However, a FlowRider™ enhanced aquatic facility can subsidize the cost of a traditional competition pool, as well as provide additional aquatic recreational services to the local community.



Full bar, with a view to the FlowBarrel™ Bruticus Maximus at Wave House San Diego.



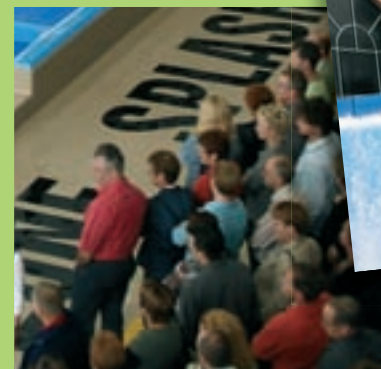
Aerial vista of the FlowRider™ at The Wave Waterpark in Vista, California.



The first of many indoor FlowRider's at the Adrenalina Extreme Store in Orlando, Florida.



Dutch flowboarders score a triple double with three FlowRider™ doubles, no waiting at Dutch Water Dreams, the Netherlands.





A bodyboarder flips out over how much fun the FlowRider™ is.



Dropping in on the FlowRider™ at Wave House San Diego.

FLOW WORLD

The FlowRider™ community is a living network that links the young and young at heart around the world.



“THE FLOWRIDER™ IS THE MOST POPULAR RIDE AT OUR PARK. BUYING THE FLOWRIDER™ WAS THE BEST MOVE WE MADE.”

Jared Keeling, Parks & Recreation Director, City of Republic, MO



Wave House Santiago, Chile • **Dutch Water Dreams**, Netherlands • **DreamWorld**, Gold Coast, Australia • **Kazan Waterpark**, Kazan, Russia • **Silver Mountain**, Kellogg, ID • **Splash City**, Collinsville, IL • **Split Rock Resort**, Lake Harmony, PA • **Sahara Sam's Indoor Waterpark**, Berlin, NJ, USA • **Pensacola Christian College**, Pensacola, FL, USA • **Camelbeach/Camelback Ski Resort**, Tannersville, PA, USA • **Ogden High Adventure**, Ogden, UT • **Hershey Park**, Hershey, PA • **Center for the Intrepid**, Fort Sam Houston, TX • **Da'Rush Maui**, Kihei, HI • **Spring Hill Resort and Waterpark**, Spring Hill, FL, USA • **Mavericks Club**, Sunriver, OR, USA • **Waterville USA**, Gulf Shores, AL, USA • **City of Moses Lake**, Moses Lake, WA, USA • **Schlitterbahn Waterpark & Resorts**, South Padre, Texas, USA • **Schlitterbahn Waterpark & Resorts**, Galveston, Texas, USA • **Waterpark of America**, Minneapolis, MN, USA • **Adrenalina Orlando**, Orlando, FL, USA • **Adrenalina Miami**, Miami, FL, USA • **Hawaiian Waters Adventure Park**, Kapolei, HI, USA • **Freedom of the Seas**, Belek, Turkey • **Republic Aquatic Center**, Republic, MO, USA • **Wave House San Diego**, San Diego, CA, USA • **Massanutten Indoor/Outdoor Waterpark**, McGaheysville, VA, USA • **Kalahari Resort**, Huron, OH, USA • **Six Flags Great Escape Waterpark/Hotel**, Lake George, NY, USA • **The City**, Cancun, Mexico • **Kalahari Indoor Waterpark**, Wisconsin Dells, Wisconsin, USA • **Cayman Grand Harbor**, Grand Cayman, Cayman Islands • **National Aquatic Centre of Dublin**, Dublin, Ireland • **Yasenevo**, Moscow, Russia • **Aqua Park Zambrone**, Zambrone, Italy • **Center Parcs**, De Eemhof, Netherlands • **Wave House South Africa**, Durban, South Africa • **Electric City Waterpark**, Great Falls, Montana, USA • **Alpamare Waterpark**, Bad Tölz, Germany • **Jumeirah Beach Resort & Aquapark**, Dubai, United Arab Emirates • **Six Flags Hurricane Harbor**, Arlington, Texas, USA • **Jeddah Tourist City Waterpark**, Jeddah, Saudi Arabia • **Paramount's Kings Island**, Kings Island, Cincinnati, Ohio, USA • **Pacific Islands Club**, San Antonio, Saipan, USA • **Tarza Waterpark**, Tumon, Guam, USA • **Lake Lanier Islands Resort**, Lake Lanier Islands, Georgia, USA • **Chunan Sangrok Resort Waterpark**, Seoul, Korea • **Karakami-Kanko**, Chuo-Ku, Osaka, Japan • **Hyland Hills WaterWorld**, Denver, Colorado, USA • **Nagashima Spa Land**, Kuwana-gun, Japan • **Caribbean Bay Waterpark**, Kyonggi-Do, Korea • **Jozankei View Hotel**, Sapporo City, Hokkaido, Japan • **Honey Lake Country Club**, Shenzhen, China • **Pharaoh's Lost Kingdom**, Redlands, California, USA • **El Rollo y Las Olas**, Tlaquiltenango, Morelos, Mexico • **Water Park Orange-One Nishiwaki**, Nishiwaki City, Hyogo, Japan • **The Wave Municipal Waterpark**, Vista, California, USA • **Telemark Sommerland**, Bo, Norway • **WaterMania Water Theme Park**, Kissimmee, Florida, USA • **Schlitterbahn Waterpark & Resorts**, New Braunfels, Texas, USA... and growing by the day!



*Flowboarder ripping it up on the FlowRider™
Single at Wave House San Diego.*



www.flowrider.com

Visit our website for more information, PDF Downloads, photos and video.

For sales in South and Central America, Africa, Asia, Australia, Europe, and the Middle East, contact:



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Powered by ITT Flygt®
 submersible propeller pumps

The FlowRider sheet wave attraction is a proprietary technology covered by one or more of the following U.S. patents: 4,564,190; 4,792,260; 4,905,987; 4,954,014; 5,171,101; 5,213,547; 5,236,280; RE 34,407; 5,271,692; 5,393,170; 5,401,117; 5,421,782; 5,503,597; 5,564,859; 5,628,584; 5,664,910; 5,667,445; 5,738,590; 5,766,082; 5,860,766; 5,899,633; 5,899,634; 5,911,190; 6,105,527; 6,132,317; 6,319,137; 6,460,201; 6,491,589; 6,676,530; 6,716,107; 6,738,992; 6,758,231; 6,928,670; 6,957,662; 7,040,994; RE 39,171.
 Other U.S. patents pending. Global coverage is provided by patents and pending applications in foreign countries.

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