

# Fluid TECHNOLOGY

Exceptional  
performance  
at any level



Evolution Series

FIRST  DEGREE  
FITNESS



## The Heart of the Matter

First Degree Fitness has developed Fluid Technology to create Variable Fluid Resistance to allow fingertip control of adjustment from "feather light" to "Olympic sprint".

This patented Fluid Technology is at the heart of every piece of First Degree Fitness equipment, delivering silky smooth resistance to the user's effort and instantaneous response to input with no "flat spots".

Apply the effort and the correct resistance is there instantly - every time.

*Only Fluid Technology can do this.*

## How it works

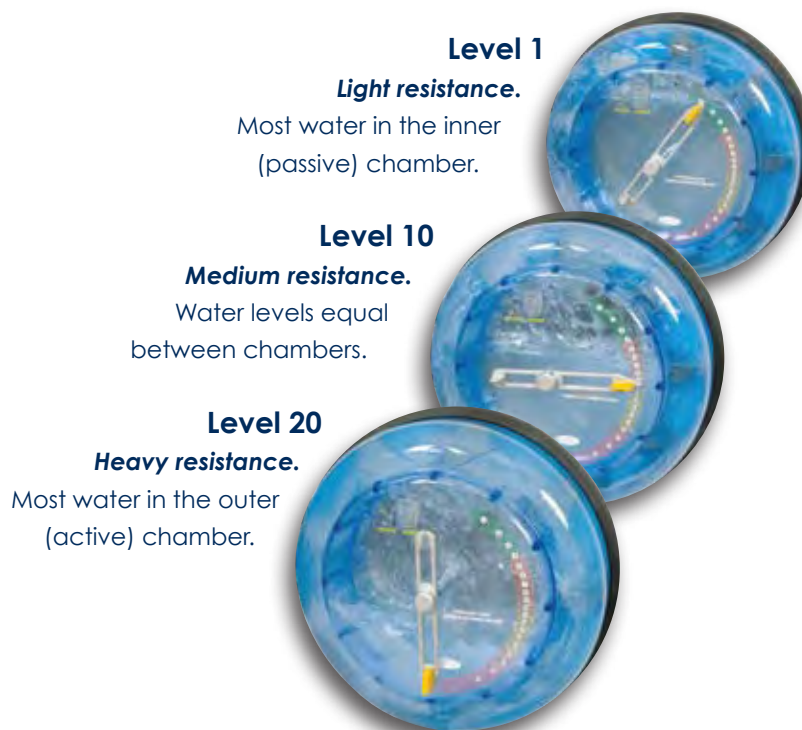
Two chambers are contained within one tank.

The inner (passive) chamber stores water.

Resistance is created by impeller blades churning water in the outer (active) chamber.

Moving the level indicator varies the level of water in each chamber.

Maximum resistance occurs when the greatest volume of water is in the outer (active) chamber.



### Level 1

#### Light resistance.

Most water in the inner (passive) chamber.

### Level 10

#### Medium resistance.

Water levels equal between chambers.

### Level 20

#### Heavy resistance.

Most water in the outer (active) chamber.

## Why it works

Water has a unique "cube rule" - this means that to go twice as fast requires 8 times the effort! Any increase in the user's exercise intensity is instantly met by a corresponding increase in resistance. At a given water level this provides a range of resistance.

Patented Fluid Technology further enhances this, providing infinite variation of that range by varying the volume of water against which the user works. Fluid Technology also supplies the most consistent linear resistance system available. There are no "flat spots", common

to other designs of water and wind resistance mechanisms.

Why settle for second best? Experience the difference that Variable Fluid Resistance makes to your exercise.

## Evolution in fitness equipment

Right from the start, we have seen how people are captivated by the sight, sound and feel of a resistance system using water as its heart. To understand what we mean, just try one of our unique products, close your eyes and experience the difference. We blend the essence of indoor and outdoor exercise in a manner that no other apparatus can offer.

First Degree Fitness Limited (FDF) was founded in 2001 with a mission to develop a range of unique products for the commercial fitness industry using our patented Fluid Technology as a medium of resistance. Each product is suited to users of all ages, body types and fitness levels, offering the ability to enjoy a perfectly tailored workout, with all the benefits that accrue as a result.

Over the years, our range has been extended to the six products in this brochure and the future will see FDF continue to release new cardiovascular machines, all bringing you the benefits Fluid Technology can offer. We will continue to employ and consult with professionals in each associated field to maximise the function and performance of our products.



## New Evolution Series

The brief for our design engineers was to research all aspects of user interface with all machines in our range. Every potential improvement was identified and incorporated into the new Evolution Series. The results speak for themselves.

### Interactive Performance Monitor

All commercial machines in the Evolution Series (except E-216 Rower) utilise our new Interactive Performance Monitor (IPM).

Incorporating a multi-function display that provides everything you need to monitor, motivate and progress, the IPM give you quick start, manual programs, interval training, six previous workout memories and a unique Pacer system guaranteed to challenge and inspire.

With constant readout of time, distance, heart rate, watts, speed, RPM and calories, the IPM delivers more information. Changes can be made during an exercise program. The resistance level can be set to provide precise results. A level gauge lets you know when to change the batteries

Bigger, better, smarter - the IPM gives you improved functionality and superior data display while still being simple and intuitive to use.



### Direct Drive System (E-216 & 316 Rowers)

Our new Direct Drive System (patent applied) puts you in direct contact with the water. No chains or sprockets interrupt the smoothness of the rowing action.

Using Dyneema® cable, the world's strongest fibre™, we have developed a special pulley, attached to the central shaft of our Fluid Tank. As the Dyneema® cable unwraps from one end, the bungee recoil cord winds on from the other end. At the completion of each stroke, the process is reversed. All you feel is the resistance of water. All you hear is the sound of water. Perfect!

Dyneema® is a superstrong, polyethylene fibre that offers maximum strength combined with minimum weight. It is 15 times stronger than quality steel, on a weight for weight basis. Dyneema® is extremely durable and resistant to moisture, UV light and chemicals. It does not stretch, making it ideal for our application and delivering the smoothest, most positive and wear resistant cable available.



### Mobility and storage (E-216, 316, 520 Rowers)

All Evolution Series Rowing Ergometers are designed for ease of mobility and minimal space requirement for storage. The flagship E-520 incorporates large rollers in the design of the front legs. Just pick up the back end, tilt to 45 degrees and wheel away.

The E-316 and E-216 include large transport wheels and have been designed to store in the vertical position, requiring just 55 x 70cm (22" x 30") of floor space. With all the weight in the front end of these machines, picking up and moving requires minimal effort and vertical storage is safe and stable.





# Fluid E-920

## Upper Body Ergometer

20 level patented  
Variable Fluid Resistance

Variable length crank arms –  
ideal for medical / rehab use

Seated, standing or  
wheelchair access

Operates in forward &  
reverse directions

Angle adjustable, self-leveling  
hand grips

Main Arm adjusts from  
horizontal to vertical with  
internal gas-assist mechanism

Interactive Performance Monitor

4 position, horizontal  
seat adjustment

Contoured 'soft-touch' seat  
with lumbar support

Foot rest for added stability

Heart Rate reception built-in

Compact footprint –  
125 x 99cm (49 x 39")



Fully adjustable Upper Body Ergometer

# E-920 Features

Professional Upper Body Ergometer that operates in both forward and reverse directions for maximum muscle engagement

An Upper Body Ergometer (UBE) engages virtually every muscle in the upper body. As a warm-up for resistance training, it provides better activation of the upper torso than traditional alternatives. As a cardio-vascular tool, the results are exceptional.

When used in the standing position, the UBE engages all core muscles of the mid section. It is also used in the rehabilitation of many injuries and as a general exercise apparatus for those in wheelchairs.



Fully adjustable self-levelling hand grips  
Optimum muscle utilisation  
Maximum user comfort



Crank length can be varied from 12 to 24 cm (5 to 10")  
Positive L-pin adjusters  
Engraved graduations on crank arms



Main arm adjusts from horizontal to vertical  
Allows for users of any height  
Allows for standing use  
Internal gas cylinder provides effortless adjustment



Interactive Performance Monitor displays:

time; speed; distance; revolutions per minute; calories per hour; watts; level; heart rate receiver built in

See page 1 for IPM programs and functions



Seat removes for standing use and wheelchair access

Large non-slip platform stabilises machine during use



Seat adjusts horizontally to suit user  
4 positions available

Foot rest for added stability  
Contoured soft-touch seat with lumbar support

## E-820 Fixed crank option



Designed for facilities where adjustable length crank arms are not required.

Perfect in circuits or general health club use. All other features are the same as the E-920.



# Fluid

## E-720

### Cycle Cross Trainer

20 level patented  
Variable Fluid Resistance

Dual function, upper & lower  
body ergometer

Dual use Pedal / Hand Grip  
(patent applied)

Operates in forward & reverse  
directions

Counter-balanced Main Arm  
rotates through 360 degrees

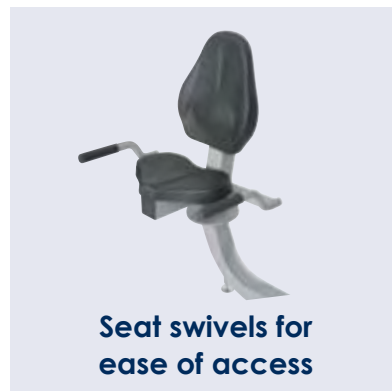
Low seat height – 54cm (21")  
swivels for ease of access

Interactive Performance Monitor

Contoured 'soft-touch' seat with  
lumbar support

Heart Rate reception built-in

Compact footprint –  
130 x 99cm (51 x 39")



Seat swivels for  
ease of access

*Supremely versatile - perfect for every facility*

# E-720 Features

*Multi-function Cycle Cross Trainer operates in both forward and reverse directions for maximum muscle engagement and allows for isolation of core muscle groups*

**Total body conditioning with this combination Recumbent Cycle, Seated and Standing Upper Body Ergometer. Instantly adaptable between these three functions. For the professional facility where maximum versatility of equipment is essential. Ideal for group classes and rehabilitation applications.**



- Main Arm rotates 360 degrees
- Instantly adapts for three functions
- Recumbent, seated, or standing
- Permits correct adjustment for any height
- Precise adjustment in 5 degree increments
- Counter-balanced for ease of rotation



- Dual use Pedal / Hand Grip (patent applied)
- Angled hand grip to minimise joint stress
- Full toe cage and strap for cycling



- Interactive Performance Monitor displays:
  - time; speed; distance; revolutions per minute; calories per hour; watts; level; heart rate receiver built in
- See page 1 for IPM programs and functions



Standing Upper Body Ergometer



Seated Upper Body Ergometer



Recumbent Cycle Ergometer



# Fluid

## E-520

### Fluid Rower

20 level patented  
Variable Fluid Resistance

Absolute comfort, stability &  
performance

Interactive Performance Monitor

Widest range of  
resistance available

Ergonomic handle

Belt drive – no chains,  
no lubrication

World's most comfortable seat

Seat at "office chair" height  
for ease of entry & exit

Air-glide seat rollers

Dual anodized aluminum seat rail

Concealed roller design –  
cleaner, safer & smoother

Unique Heel Support assembly  
(reg. design)

Instant adjustment for foot size

"Easy-roll" transport wheels

Compact footprint –  
190 x 71cm (75 x 28")

Stands for storage

Optional Back Support



*Experience the world's finest rowing ergometer*



# E-520 Features

## Professional Health Club Rower

The closest thing to real, on-water rowing with a natural catch and resistance through the stroke

Unmatched durability - virtually maintenance free



Interactive Performance Monitor displays:  
time; 500m split; distance; strokes per minute; calories per hour; watts; level; intervals; heart rate (optional kit required)

See page 1 for IPM programs and functions



Ergonomic handle for superior comfort

Belt drive - smooth, clean, quiet and durable

No chains, no lubrication, no maintenance



Air-glide seat rollers in concealed tracks

Safer, cleaner, smoother, quieter and longer life

Simply the best seat action available



The most comfortable seat of any rower on the market

Seat at "office chair" height, allows ease of entry and exit for all users

Optional back support (circled) for increased safety and support



Unique Heel Support assembly

Ergonomic heels-together layout for user comfort

Instant one-touch adjustment for foot size

Heels cannot come loose while rowing



Inbuilt transit wheels for ease of movement

Compact footprint - 190 x 71 cm (75 x 28")

Stands upright for storage



# Fluid

## E-316

### Fluid Rower

16 level patented  
Variable Fluid Resistance

Direct Drive System  
(patent applied)

Rigid frame construction for  
maximum stability

Extended transport wheels for  
ease of movement

Dyneema® cable –  
no chains, no lubrication

Interactive Performance Monitor

Ergonomic handle

Seat at "office chair" height for  
ease of entry & exit

Air-glide seat rollers

Dual anodized aluminum seat rail

Concealed roller design –  
cleaner, safer & smoother

Unique Heel Support assembly  
(reg. design)

Instant adjustment for foot size

Compact footprint 190 x 56cm  
(75 x 22") and stands vertical for  
storage in just 55 x 75cm  
(22 x 30")

Optional Back Support



Fully featured compact commercial ergometer



# E-316 Features

## Compact Professional Health Club Rower

Maximum durability - virtually maintenance free

The smallest footprint in its class

Ideal for group classes



Interactive Performance Monitor displays:  
time; 500m split; distance; strokes per minute; calories per hour; watts; level; intervals; heart rate (optional kit required)

See page 1 for IPM programs and functions



Ergonomically angled handle for superior comfort

Dyneema® cable drive - See page 2 for details

Smooth clean operation - no chain, no lubrication



Unique Heel Support assembly

Ergonomic heels-together layout for user comfort

Instant one-touch adjustment for foot size

Heels cannot come loose while rowing



Direct Drive System (patent applied) puts you in direct contact with the water.

Dyneema® cable, the world's strongest fibre™

Extremely durable and resistant to moisture, UV light and chemicals.

It does not stretch, making it ideal for our application and delivering the smoothest, most positive and wear resistant cable available.

See page 2 for full details



The most comfortable seat of any rower on the market

Seat at "office chair" height, allows ease of entry and exit for all users

Optional back support (circled) for increased safety and support

Air-glide seat rollers in concealed tracks

Safer, cleaner, smoother, quieter and longer life

Simply the best seat action available



In-built transit wheels for ease of movement

Compact footprint - 190 x 71 cm (75 x 28")

Stands vertical for storage in just 55 x 75cm (22 x 30")



# Fluid

## E-216

### Fluid Rower

16 level patented  
Variable Fluid Resistance

Direct Drive System  
(patent applied)

Rigid frame construction for  
maximum stability

Extended transport wheels  
for ease of movement

Dyneema® cable –  
no chains, no lubrication

Workout computer with  
multiple readout

Ergonomic handle

Seat at "office chair" height for  
ease of entry & exit

Delrin® low friction seat rollers

Anodized aluminum seat rail

Advanced Heel Cradle  
footboard design (reg. design)

Central adjustment for foot size

Compact footprint 190 x 56cm  
(75 x 22") and stands vertical for  
storage in just 55 x 75cm  
(22 x 30")

Simple assembly



*Outstanding features and function on a budget*



# E-216 Features

## Compact Light Institutional Rower

Variable resistance at the touch of a lever

Small footprint, easy mobility, compact storage



Advanced workout computer displays:  
time; 500m split; distance; strokes per minute; calories per hour; watts; interval training feature; heart rate (optional kit required)



Direct Drive System (patent applied) puts you in direct contact with the water.

Dyneema® cable, the world's strongest fibre™

Extremely durable and resistant to moisture, UV light and chemicals.

It does not stretch, making it ideal for our application and delivering the smoothest, most positive and wear resistant cable available.

See page 2 for full details



Ergonomically angled handle for superior comfort

Dyneema® cable drive -  
See page 2 for details

Smooth clean operation - no chain,  
no lubrication



Unique heel cradle footboard design

Feet able to flex in complete  
non-slip security

Suitable for rowing in shoes, socks or  
bare feet



Delrin® seat rollers - lightweight, low  
friction, wear resistant thermoplastic by  
DuPont®

Anodised aluminium seat rail - light, strong,  
durable and maintains appearance



In-built transit wheels for ease of  
movement

Compact footprint -  
190 x 71 cm (75 x 28")

Stands vertical for storage in just  
55 x 75cm (22 x 30")

# FEATURE COMPARISON

## The First Degree Fitness Range of Fluid Rowers

Fluid Rower	E-520	E-316	E-216
All commercial applications	✓	✓	-
Light commercial applications	✓	✓	✓
Fluid Technology 20 levels	✓	-	-
Fluid Technology 16 levels	-	✓	✓
Office Chair seat height	✓	✓	✓
Optional seat back kit	✓	✓	-
Concealed seat rollers	✓	✓	-
Ergonomic angled handle	✓	✓	✓
Interactive Performance Monitor	✓	✓	-
Heart rate display option	✓	✓	✓
Footboard with pivoting heel support	✓	✓	-
Footboard with heel cradles	-	-	✓
Stands vertical to store	-	✓	✓
Compact footprint 190 x 71cm (75" x 28")	✓	-	-
Compact footprint 190 x 56cm (75" x 22")	-	✓	✓

**Direct Drive System**  
(patent applied)

See page 2 for full details

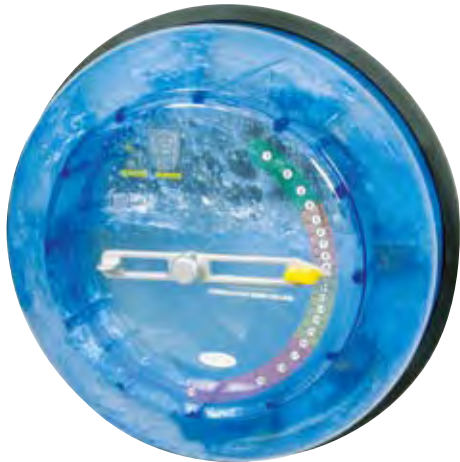


Most manufacturers cover their internal mechanisms. Here at First Degree Fitness we have nothing to hide. As much effort goes into the internal quality of our products as into the external. Original technology, thoughtfully applied and crafted with care.



# FIRST DEGREE FITNESS

## *Fluid* TECHNOLOGY



Patented Fluid Technology is the only system in the world that provides Variable Fluid Resistance. It utilises a specially designed tank, incorporating the latest in material and construction technology. Using a slow release chlorine tablet, the water never requires changing.

Our unique Fluid rower power transmissions are designed to minimise mass and inertia, to faithfully reproduce the feel of real, on-water rowing. Experience the difference. You'll love it!

### First Degree Fitness Manufacturer's Product Warranty

	Rower E-520	Rower E-316	Rower E216	UBE	CXT
Frame	10 years	10 years	5 years	10 years	10 years
Tank & Seals	3 years	3 years	3 years	3 years	3 years
Monitor	2 years	2 years	1 year	2 years	2 years
Wear Items	2 years	2 years	1 year	1 year	1 year

Refer to website or owners manual for details

### Contact:

Visit our website at: [www.firstdegreefitness.com](http://www.firstdegreefitness.com)

Full details of all regional distributors are available on the website.

# Fluid

TECHNOLOGY



*Satisfaction*