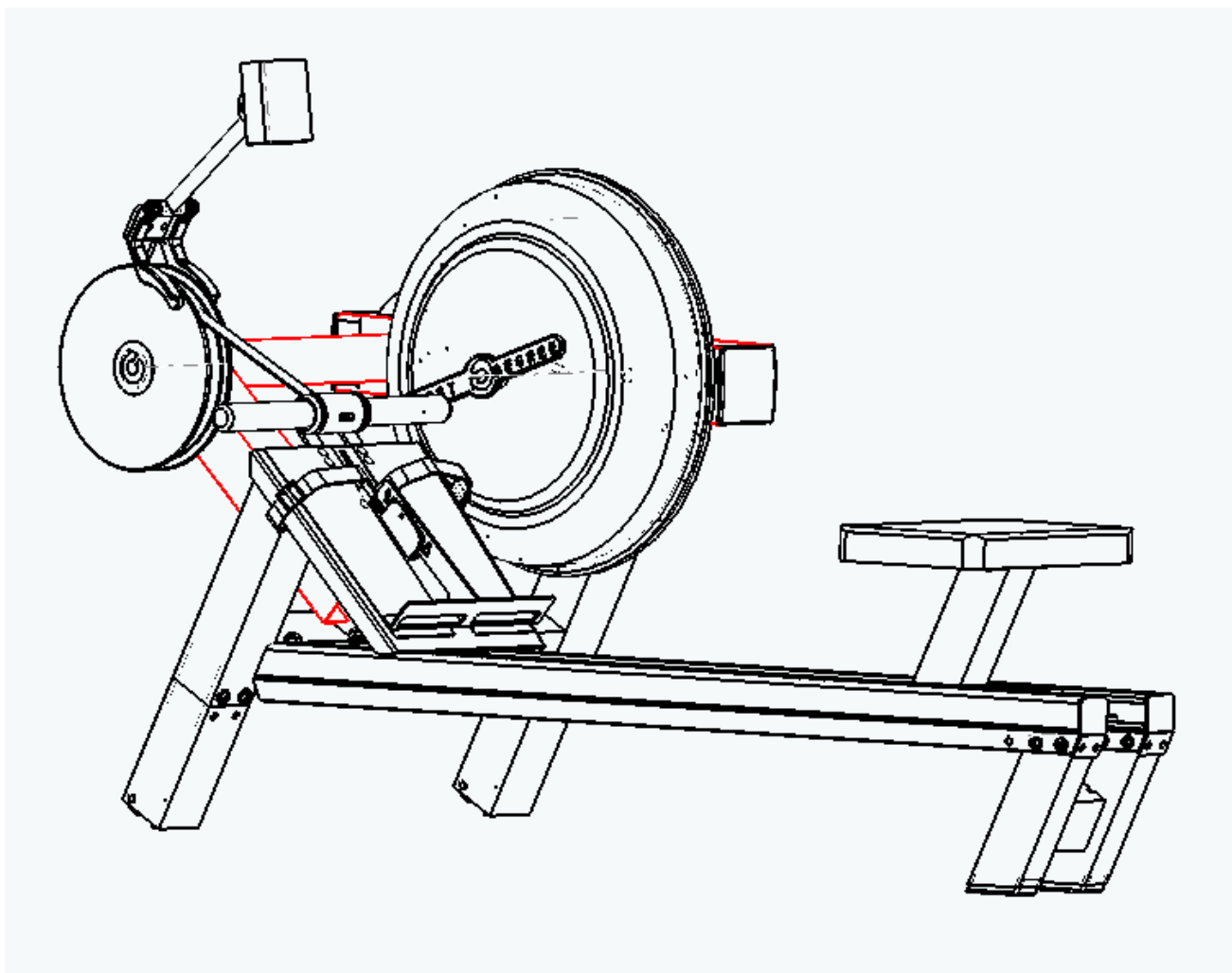


Fluid ROWER

 FIRST DEGREE FITNESS

Model FDR-02 Fluid Rower

Owners Manual



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2.

Training with the Fluid Rower

- Check with your doctor before beginning an exercise program.
- Follow instructions on rower decal for foot position and always fasten straps.
- Begin with no more than 5 minutes of training on the first day and slowly build your training program.
- Have a training partner observe your rowing form and compare to the decal on your rower.

WELCOME TO ROWING

By First Degree Fitness professional rowing coach Nick Suess

ALL ABOUT ROWING

Rowing is a great sport! I realised this pretty soon after I first took it up forty years ago, and that was long before I ever heard the word "aerobic", or came to realise that rowing is just about the best total-body aerobic exercise you can do. All major muscle groups are called into full use and get a thorough workout. Only swimming is even in the same league. And rowing is non-weight-bearing, which makes it especially suitable for those who are no longer young. I'm still rowing after all these years, still competing as a veteran, and I'm just a kid at that level. I know people still active in the sport at close to 90 years of age.

I have been a rowing coach for a great many years, and during the last couple of decades I have specialised in coaching mature-age beginners, anyone who didn't learn in their teens or early 20s, but who reckons it's a good idea to give it a go. And you're never too old to learn. I've had newcomers in their late 70s who have learnt fast and are having a great time in the sport.

FIRST DEGREE FITNESS – THE FLUID ROWER

And that's why the guys at First Degree Fitness have asked me to join their crew and share my expertise with current and potential customers via their website and this owner's manual for the Fluid Rower. And I'm really happy to do so. If it gets you interested in rowing, that's great. Of course, as someone who is passionate about the sport, I'm hooked on the "real thing", rowing on water, but I realise not everyone gets to do that. However, the Fluid Rowers from First Degree Fitness are excellent machines that can give you the equivalent aerobic exercise and pleasure without you ever getting an oar wet.

The Fluid Rower is an exception amongst the wide array of rowing machines out there. What sets it apart from some of the others is that it has been developed by a team who care about customers getting the most out of it. Rowing is not hard to learn, but what is vital is to get the basics correct early on, rather than persist in poor and potentially harmful technique simply because nobody has shown you otherwise. Rowing on a machine shouldn't be dangerous, but it certainly is hard physical activity, and any activity that stresses the body has the potential to cause injury if it's not done correctly. Correct technique is easy to learn and, just like learning to ride a bike, once you've got it, nothing could feel more natural. So if you are a newcomer to rowing, or have never been coached, please take the time to study these notes.

And please excuse me if my explanations are too "back to basics" for you, but I'm writing this so it will be clear and have meaning for someone who knows absolutely nothing about rowing; someone who is faced with a Fluid Rower for the first time in their life. You want a good workout and you don't want back pain tonight, tomorrow, or next week. How do you start?

Fluid ROWER



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BE PREPARED

Firstly ensure you are adequately prepared and in suitable physical condition. If in any doubt at all about this, please seek appropriate medical advice prior to attempting any exercise. Other aspects of being prepared are that you are wide awake and not under the influence of alcohol or mood-affecting drugs, that you are well hydrated and that you have allowed reasonable time to digest your last meal. Always get properly warmed-up prior to serious exercise. If you don't already have your own practised warm-up and stretching routine, talk to a coach or personal trainer on how to avoid niggling injuries arising from suddenly oversteering an unprepared body.

Check that you are suitably clothed. Rowing requires some small specific clothing requirements beyond those of other sports. You will be working out while on a sliding seat, and loose items of clothing, including draw strings, allowed to dangle below waist level can catch in the seat tracks and wheels, damaging clothing and equipment and possibly causing injury. Rowing requires free movement of the hands close to the front of the body. Bulky or baggy tops can inhibit this, and the tips of fingers or thumbs can get caught up in them, again with possible injury resulting. T-shirt and shorts is the simplest and best attire, and if you're well warmed-up you'll not want to wear anything heavier.

And while on fingers and thumbs, long nails can be the cause of very nasty self-inflicted injuries to knees and thighs, so keep nails well trimmed. Rings can also cause problems. Rings on adjacent fingers, or more than one ring on the same finger, have a tendency to chafe against one another. In doing so, they momentarily trap the skin between them, and this accelerates the formation of painful blisters. Some prefer to wear light gloves to protect the hands and excellent rowing gloves are inexpensive and readily available by mail order. For information and pricing, please contact success@scull.com.au.

Finally footwear. The Fluid Rower's footplate is designed to be most comfortable with light running shoes.

GETTING ONTO THE MACHINE

You could just leap on and tug, but getting comfortable, working on good posture, and rehearsing the correct body movements will pay dividends. Firstly just sit down on the seat of the machine, and make sure your weight is well centred and evenly distributed, your head high and your back straight. From long experience of coaching beginner rowers I have observed that a small minority of people have a tendency to drop one shoulder and lean to one side when seated and these folk are invariably unaware they are doing so. If you have a coach (or just some other friendly assistant) they should stand behind your back to check your body is upright and shoulders level, but if you are alone, use visual cues by sighting along the machine. Another option is to place a mirror in front of you to ensure you are sitting correctly.

Next the feet. What is the correct position for the feet? Are the heels together or apart? Are the feet parallel or do they splay out at the toes? There is no correct answer. We are all different. But in general terms, if the feet are too wide apart, then the start of the stroke (known as the "catch") will be awkward and lack strength, and if the feet are too close together, then we have a serious culinary issue for the guys, known as "crushed nuts syndrome", when the legs straighten. How to know what's best for you? Easy. Do something you already know how to do. Step off the machine and simply stand upright with your weight evenly distributed between both feet. Stand nice and tall, as tall as you can go (but avoid the extreme of a stiff military "standing to attention" position and then look down at your feet. They will be at pretty much the correct spacing and angle for you.

Fluid Rower is the only rowing ergometer that allows a wide range of foot positions, and on it you can try and replicate your standing posture. Don't tug the foot straps over tight. They are there to stop you falling over backwards at the end of the stroke, so have them comfortably secured above the balls of your feet.

REHERSING THE BODY MOVEMENTS

Just as a theatre director will get an actor to rehearse the required body movements long before the curtain ever goes up on opening night, so we will rehearse the correct body movements before we begin to do serious work on the rower.

Fluid ROWER



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Now, because rowing is a “backwards” sport, instead of saying “let’s start at the very beginning”, we normally start at the end. The coaching process begins at the finish of the stroke, finding out the right position for that. So as explained above, sit on the seat of the rower with your feet in position on the footboard, and your legs straight. Sit with your head high and a nice straight back, ensuring you are not leaning to one side, and your shoulders are level. Fluid Rower is specially designed to have a higher seating position than its competitors, which we find gives better physical and psychological encouragement towards correct upright posture.

And remember that if you are doing this right, your weight should be evenly distributed on the seat, both buttocks supporting equal load. We are still not touching the handle. Now just practice swinging the body from the hips. Not a long way, only about 15 degrees forward of the vertical to 15 degrees back. OK, you don’t have an angle protractor handy, nor one locked in your brain, but this is about the angle of a ladder leaning against a wall. Picture that in your mind. And a ladder is STRAIGHT, and so should your back be, not curved, no chin slumping on your chest. Just think about it. Straight ladder leaning forwards, easy swing through the vertical, straight ladder leaning back. Keep your head high at all times and just let your arms swing loose by your sides to ease the movement. Rehearse this motion for a minute until it feels comfortable.

What we are doing here is starting to teach our body a sequence of movements which comprise the rowing stroke, and whilst very simple, these are to some extent counter-intuitive. What does this mean? The body has a natural inclination to do something different, but once it has learnt the new sequence, it remembers it, and that then becomes “natural” for it.

Now we can start using the legs. First of all, do this with the body vertical. Draw your knees up so that your seat slides forwards towards your feet. How far to go? Until the shins are vertical is a good guide. Any less means that you are under-utilising the leg muscles, any more, and it becomes a law of diminishing returns as you go beyond the optimum. Perhaps you don’t have the flexibility to get the shins vertical but this will improve over time and practice. If problems in the hip, knee or ankle constrain your leg movement, please seek medical advice on this issue.

Continuity of momentum is very important in rowing and we can learn this right away by swinging the arms as we slide. Swing them back as your legs are straightening and you slide towards “backstops” position, and swing them forwards as your legs compress towards “frontstops” – the start of the stroke. And that extra momentum should make compression a little easier.

There is a popular perception that rowing is a sport that derives all its power from the arms, shoulders and back. And that perception is wrong. All those muscle groups play a part, but this is way overshadowed by the legs, the most powerful muscles in the human body, which you have used since infancy to support your weight, to propel you along, and to take you up stairs and steep hills. And it is those leg muscles which we need to use to the full in this sport. That is why we sit on a sliding seat, and why we need to rehearse this movement to get it correct.

Only the Fluid Rower offers total clear space between the rower’s feet and the seat. No awkward bar between the legs, no side rails forcing the feet close together. And interestingly enough, that’s exactly what it’s like in an Olympic rowing boat. Clear space to offer the rower complete sliding freedom. Its one of the great features that makes a Fluid Rower feel so natural.

So now as you swing backwards and forwards on the slide, sense the power in your legs, which is soon going to be transferred to the handle. The rest of the body, the back, shoulders and arms, are for much of the stroke merely the connecting mechanism between the power of the legs and the handle where your work output is delivered to the machine. Begin to think of it this way and you will progress fast.

OK, it’s time to take up that handle!

STARTING TO USE THE HANDLE

Take the handle in both hands. Don’t grip it with white knuckles like you are holding on for dear life, but simply curl all the fingers over the top of it and allow them to act as hooks. The thumbs can simply rest lightly on the underneath of the handle. Now look at your wrists. The bones and tendons in the wrists are delicate, so don’t overstress them. The wrists should be flat, with a straight horizontal line from the finger knuckles to the elbow. If the wrist is humped or curved down, you will feel it at the end of a workout.

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The Fluid Rower handle is ergonomically designed for a comfortable light grip, which should enable a long workout without wrist pain and optimum avoidance of blisters. Now, as you hold the handle, look at your forearms. They should be horizontal and at right angles to the handle, so three sides of a flat rectangle are formed by the two forearms and the handle between them. And this flat rectangle should be maintained throughout the entire stroke cycle.

THE FINISH

Yes, we do the finish first. Take the handle through to the finish position. Your legs are straight, your back is straight and leaning backwards like a ladder at about 15 degrees. Head held high. Pull that flat rectangle into your body so your elbows are at your sides, shoulders back, forearms still horizontal, and the handle about an inch (2 or 3 cm) from your chest. That's the finish position. Memorise it carefully.

THE CATCH

Rowers use the word "catch" for the start of the stroke, when the oars engage the water. The motions for achieving this to maximum effect in a boat are quite complicated, but on land it's far simpler. Compress those legs, shins to the vertical, or as near as you can get. The clever location of the Fluid Rower's tank alongside your right knee offers a useful visual reference point to ensure you are consistently getting the correct compression when working at speed, so note where your knee is in relation to it now while doing this rehearsal work.

Get your back nice and straight and leaning forward like a ladder at 15 degrees. Head high. Arms fully extended. The flat rectangle is now right out in front of you. We will call this position C, for Catch, and you are ready to pull.

But you must learn the correct sequence. In doing this we divide the stroke into three roughly equal sections, which we will call "drive", "ease through", and "arms finish", and the positions that separate them we will call D and E, as shown in this article..

THE DRIVE

This part of the stroke belongs to the legs alone. Envisage a point on the slide, mid way through its travel. Keeping everything else about your posture absolutely constant, push with your legs to bring the seat though to that mid point, and stop there. Now check. Is your back still straight and leaning forwards like a ladder? Head still high, Are your arms still fully extended? Most likely not at the first attempt, so analyse your mistakes and work on them. From my long experience I know that most beginners tend to do one of three things.

The majority begin by bending the elbows and pushing them outwards, so that flat rectangle is now squashed out into an altogether different shape. Your brain is telling you body to do this, so you must tell your brain to do things differently. Keep your arms straight and remember that flat rectangle. Practise it.

Many inexperienced rowers throw their body back first, so by now they are either bolt upright or already leaning backwards. If that is you, form a mental picture of that forward leaning ladder being slid away from the wall without any change in its angle. Once again, you must educate your brain to do it right, and this means practice. Use your legs to drive the seat back half way along its travel, arms still locked out straight, body still leaning forwards like that ladder, back straight, head held high. DRIVE to Position D. Practise it.

EASE THROUGH

The leg muscles continue to work, but now the body joins in. Let's do this in two parts, starting with the body. Go to position D, as described above, sitting at mid slide with the arms straight and the body leaning forward. Then, without moving any other part of the body, swing from the hips to be leaning back at 15 degrees. Get into the swing of it, until it feels natural.

Now let's add the legs. Picture the point where the slide is only 25% of its travel out from the finish, and as you swing the body through, push with the legs to go from that mid slide position to quarter slide. Try and co-ordinate these two movements so they are simultaneous and keep practising this middle third of the stroke until your body has learnt it. Remember that there is still no arm action up to this point. You EASE THROUGH to arrive at Position E with the arms still locked out straight.

ARMS FINISH

The word “arms” is emphasised because, as mentioned earlier, most beginners start bringing the arms in early. Yes, at Position E the arms are still straight but now it’s their turn.

Go to Position E, and give a strong positive tug with the arms, retaining that flat rectangle of forearms and handle. So the forearms work like pistons pulling straight back, and the elbows slip past the sides of the body almost brushing the lower ribs. Practice until you get used to it. Now add the legs, simultaneous with the arm tug, just using up that last quarter of slide so the knee joints are straight. The body remains at that backward leaning ladder angle throughout this phase, the back is still straight and the head high. Resist the temptation to drop the chin to the chest as the stroke ends. And that’s the FINISH, Position F.

PUTTING IT ALL TOGETHER

Once you have these three phases well rehearsed, start to put them together. Start at the Catch (Position C), do the Drive to Position D, followed without pause by the Ease Through, to end at position E. When you have done this a couple of dozen times and feel comfortable with it, start at Position D, Ease Through to Position E, followed without pause by the Arms Finish, to Position F. Finally do all three together. It’s often a help to call out “legs, body, arms” during those three phases. Try to avoid a tendency to “bum shove” in which the rower arrives at a variation on Position D where the legs have already completed their work and are fully straight, but the body has folded forwards and increased the angle to 25 or even 30 degrees. This is then followed by a massive and potentially injurious heave of the back. Just don’t do it!

THE RECOVERY

Well, you’ve done the hard work of the stroke, and all you now need do is get forward again for the next one. We call this the “Recovery”. Only two points to remember:

1. Get the sequence right
2. Don’t hurry

Go into any gym and look at people on the rowing machines. You can instantly spot those who are real rowers, or have been well coached, sorting them out from the rest just by watching the recovery. For the real rowers it’s smooth and slick, but very well controlled. You can almost feel them taking their time to wind up the spring for the next burst of power. For the others it’s a frantic effort, most especially when you see their hands go up over a hump to avoid colliding with their knees.

Yes, getting the hands past the knees is the trick. How do you do it? Easy. Get the sequence right. Just keep the knees down until the hands are past them. From the Finish, Position F, push the hands quickly away. Don’t move any other part of the body. ARMS AWAY to Position A. Now, at this point, as the arms come straight, the forward momentum of hands and handle effectively encourages the body to follow, with the swing of the hips from “ladder” leaning back to “ladder” leaning forward. BODY to Position B. And just look – as if by magic, your hands are now forward of your knees. No need to worry about having to lift them over.

All you now have to do is slide forward to full compression, keeping the arms out straight and the body at its 15 degree lean, straight like a ladder, head high, and you arrive back at the Catch, Position C, to complete the perfect stroke cycle. And here comes the point about not hurrying. Effective rowing is achieved by giving the body a clear rest of a full second through the total recovery phase. The hard work will come soon enough, but excessive fast movement back and forth on the slide would be pretty wearying even if you didn’t have a handle to tug on. Rowing coaches talk of “ratio” of the time the oars are in the air compared to their time in the water, and 2:1 is a good target number at all levels from novice to Olympics. Watch an Olympic final and you’ll hear the commentators telling you the stroke rating (number of strokes per minute) of the crews, and it’s usually a number around 40. That means the stroke cycle takes 1½ seconds, and so at a 2:1 ratio the oars are in the air for one second and in the water for half a second on each stroke. Make your overall recovery time from Finish back to Catch at least 1 second, even when you are going flat out for a medal!

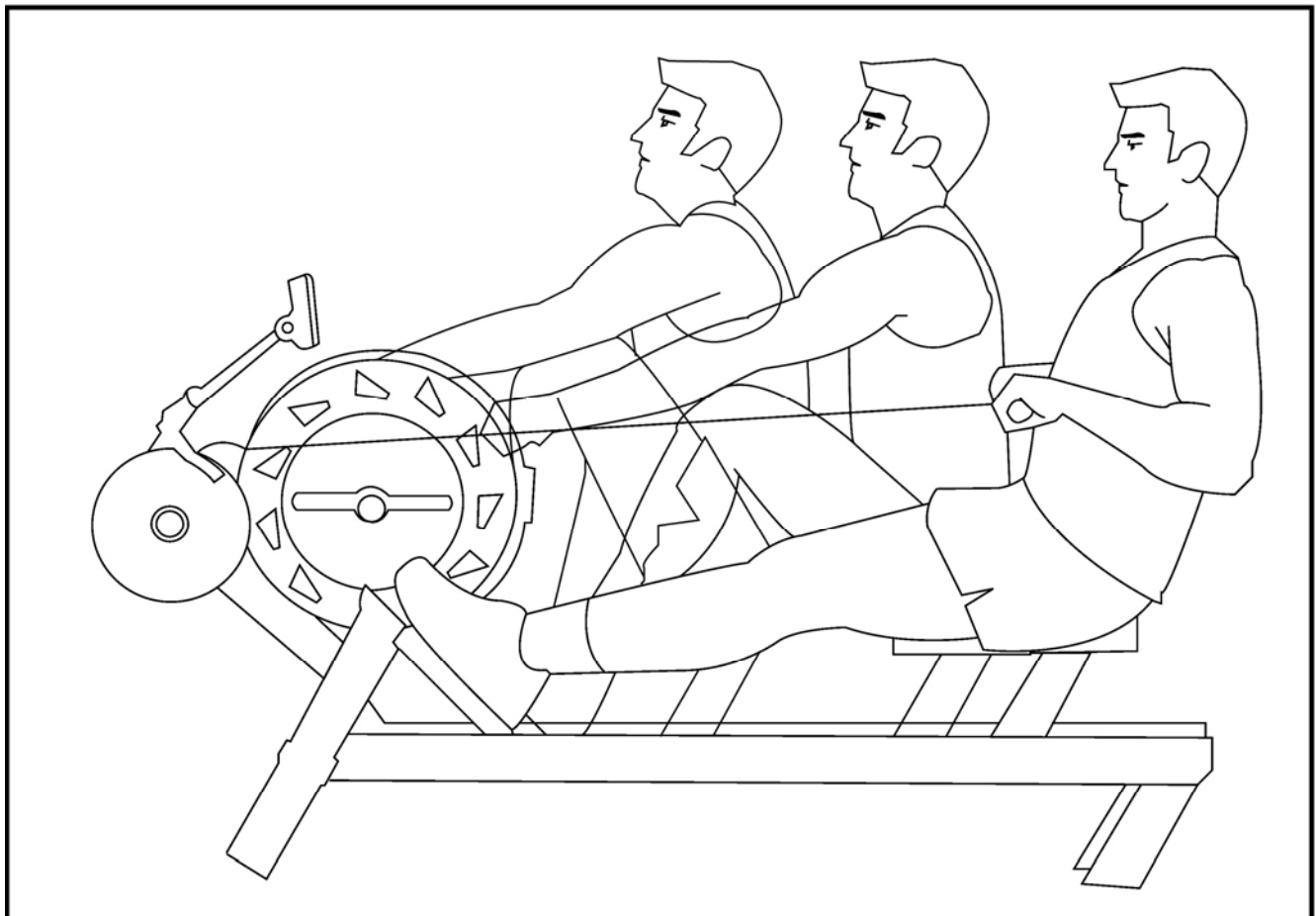
Fluid ROWER

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HOW TO THINK OF YOUR ROWING

Rowing is a sport that is highly meditative, with the hypnotic repetition of simple body movements. Note that in describing the sequences we started with C, went D, E, F and continued with A, B and back to C. Why not start at A? Well, the cycle has no beginning or end. It's a bit like the Buddhist concept of Karma, in which life is perceived as an ever-revolving wheel. That rotating water wheel on the Fluid Rower is in many ways indicative that its designers know and understand these principles very well, and gave particular thought to the point I am about to make. You see, experienced rowers mentally work around the rowing cycle in this way. It's not forwards and backwards, it's round and round. This encourages the meditative state of mind which in essence means you finish your workout physically exhausted but mentally refreshed and relaxed and 100% ready for the rest of your day. And this is what Fluid Rower brings to its fortunate owners.



This article appears on www.firstdegreefitness.com under rowing coach.

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Computer functions.

Fluid ROWERING ERGOMETER v2.5

	0:19		TIME	Auto start elapsed time.
	2:30		500M TIME	Update on completion of each rowing stroke of time to travel 500 meters..
	P		PULSE Use chest strap	Use a non coded heart rate transmitter and have optional receiver mounted under the seat rail
DIST	23	26	SPM	Update each rowing stroke of strokes per minute.
CAL HOUR	654	103	WATTS L20	Watts are read at Level 20 fluid resistance.

RESET HOLD TO RESET **DISTANCE ADD 1000M EACH TOUCH ROW TO START**

Total distance can be set prior to beginning an exercise session.

Distance accumulates each rowing stroke. Calories per hour recalculated each rowing stroke. Reset the computer to zero by holding the button down for 1 second.

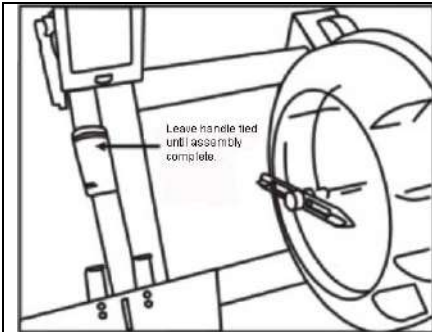
OPTIONS.

1. JUST ROW. DISTANCE AND TIME WILL ACCUMULATE
2. SET A DISTANCE UP TO 99000 METERS THEN BEGIN DISTANCE COUNTBACK.
3. SET AN INTERVAL TRAINING DISTANCE. EXAMPLE 2000 METERS.
COMPLETE THE DISTANCE AND STOP ROWING. THE COMPUTER WILL BEGIN
A COUNT UP FOR 6 MINUTES MAXIMUM REST PERIOD. RESET DISTANCE AND CONTINUE

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Assembly instructions.



Step 1. Lay parts out as pictured.

Note: Do not release rowing handle until fully assembled.

Parts List

Frame

1. Main Frame
2. Front leg x 2
3. Rear Leg
4. Seat
5. Seat rail x 2

Bolts,nuts and washers in package.

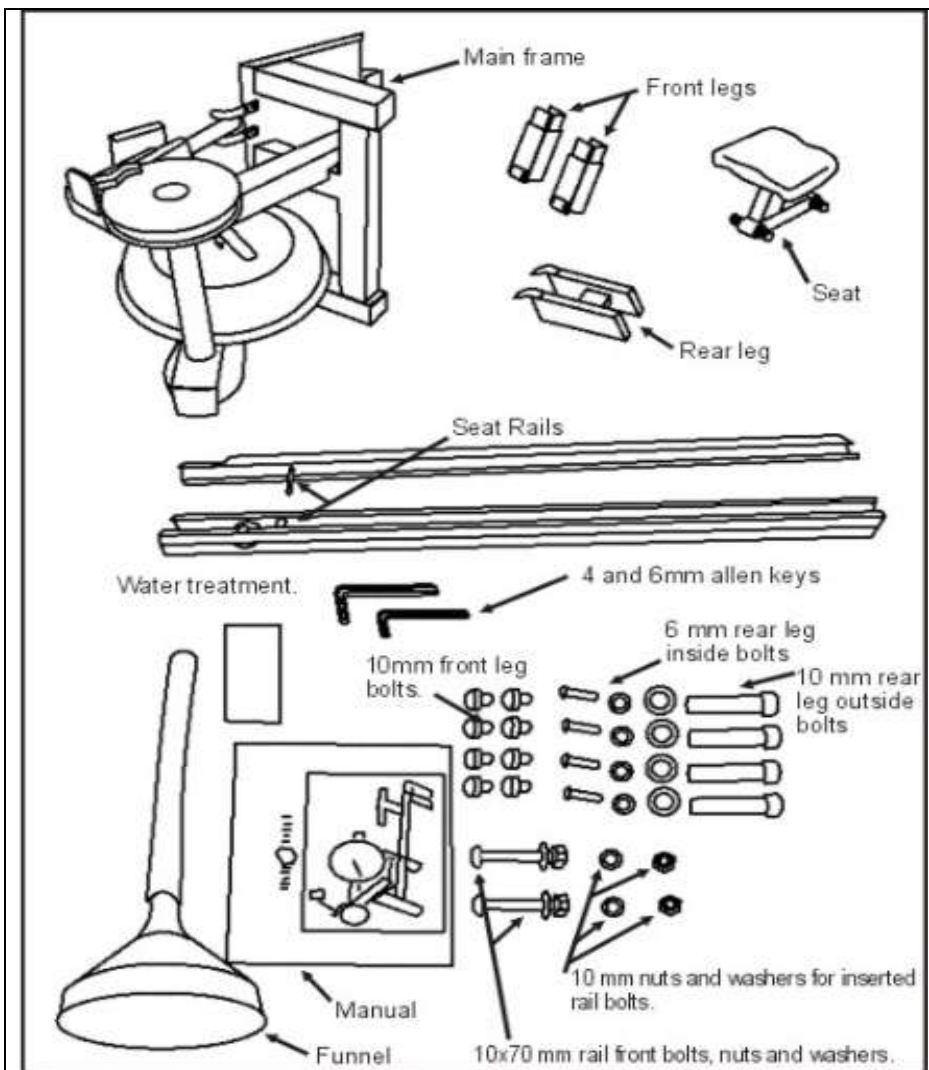
1. 10x20mm bolt x 8
2. 10x47mm bolt x 4
3. 10x70mm bolt x 2
4. 6x20mm bolt x 4
5. 10mm washer x 18
6. 6mm washer x 4
7. 10mm nut x 4

Bolts, washers and spacers taped in place in aluminum rails.

1. 10x70mm bolt x 2
2. 10mm washer x 2
3. rail spacer x 2

Miscellaneous

1. Funnel.
2. Manual.
3. 6mm Allen Key
4. 4mm Allen Key
5. Water treatment.
6. Blue water dye.
7. Touch up paint.

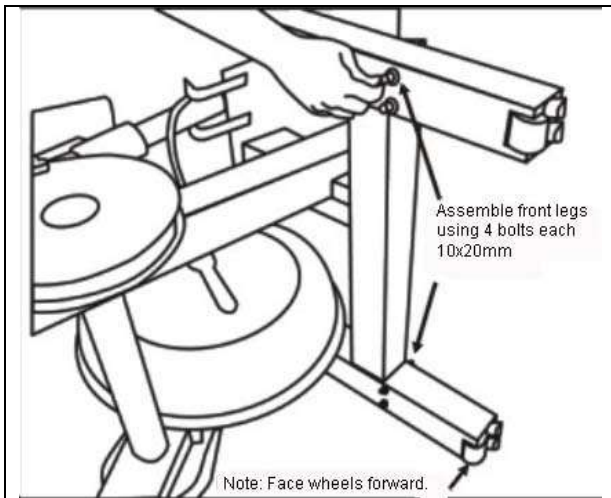


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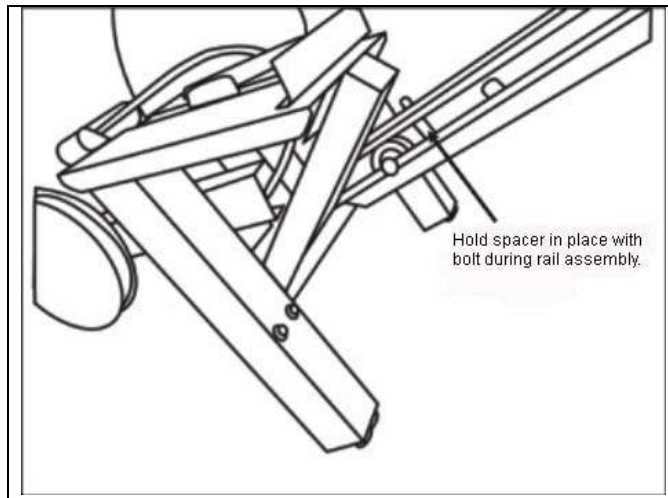
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Assembly instructions.

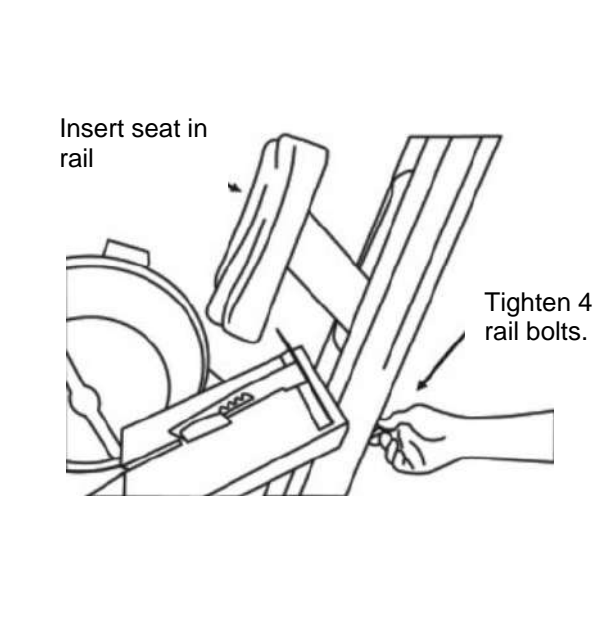
Step 2.
Insert front legs as pictured.



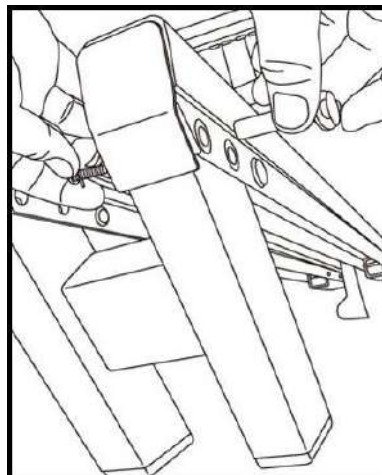
Step 3.
Lay frame as shown on wheels and belt pulley then insert seat rails.



Step 4. Insert 10 x 70mm front rail bolts and seat. Note: No spacer is necessary for the front bolts.



Step 5. Insert rear leg. Use 10x47mm bolts and washers x 4 and 6x20mm bolts and washers.

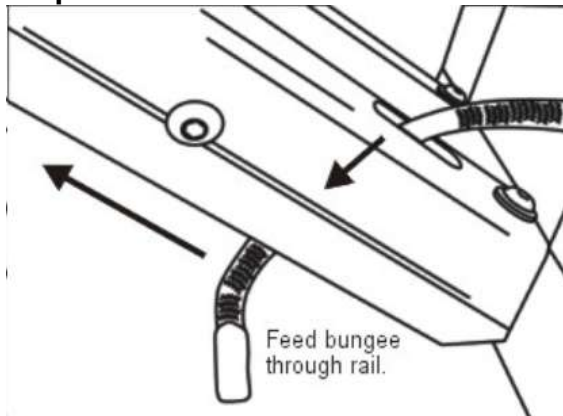


Note: 6mm bolts (4mm Allen Key) are used between the rails and 10mm bolts (6mm Allen key) insert from outside the rails.

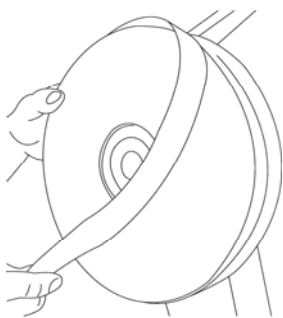
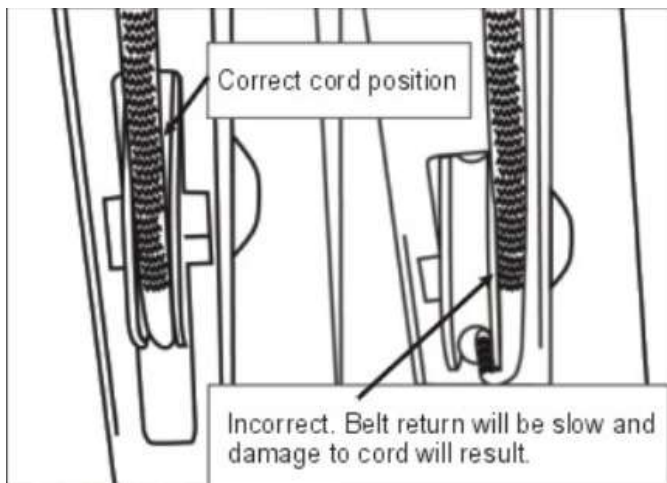
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Step 6.

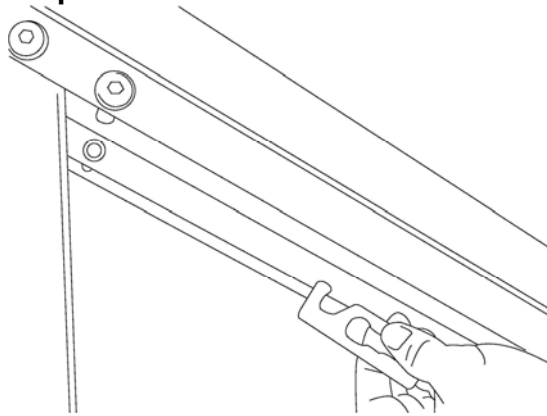


Step 8.

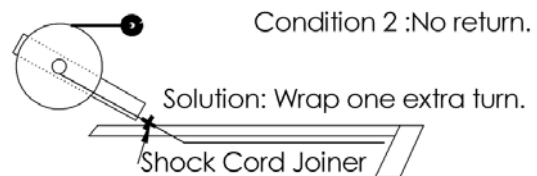
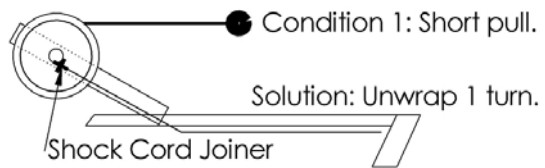


Add or remove belt as pictured at left to solve either condition.

Step 7.



Step 9. Free rowing handle and check for the following conditions.



Condition 1. Unwrap one turn of rower belt and check again.

Condition 2. Wrap one extra turn of belt and check again.

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PROBLEM	SOLUTION.
<p>Computer: No display</p> <p>Computer: Display/ no reading</p> <p>Computer displays erratic readings such as very high SPM readings.</p>	<p>1) Change batteries 2) Change computer</p> <p>1) Check magnet ring (pictured below) is mounted correctly. 2) Change sensor. 3) Change computer 4) Change wire between computer and reed switch.</p> <div data-bbox="488 703 906 902" data-label="Text"> <p>Check magnet ring is flush mounted with the pulley. 2) Check the magnets to make sure 6 are in place and they are flush mounted on the inner surface of the magnet ring.</p> </div> <div data-bbox="922 703 1334 965" data-label="Image"> </div>
<p>Computer E2 error message.</p> <p>Water is cloudy</p>	<p>Replace computer.</p> <p>Is machine in direct sunlight? 1) Begin treatment schedule. 2) Water remains cloudy; Replace water and treat (3) Consider moving equipment further away from direct sunlight or change schedule to every 6 – 12 months.</p>
<p>Loose drive belt (very fast rowing on full resistance produces slip)</p>	<div data-bbox="488 1196 919 1496" data-label="Image"> </div> <p data-bbox="501 1496 874 1532">Remove covers and loosen bolts</p> <div data-bbox="935 1196 1557 1496" data-label="Image"> </div> <p data-bbox="935 1496 1257 1532">Adjust and check for slip.</p>
<p>Slow rower belt return.</p> <p>In the unlikely event of other problems occurring please contact your dealer or visit our web site at www.firstdegreefitness.com</p>	<div data-bbox="501 1554 820 1800" data-label="Image"> </div> <p data-bbox="501 1800 874 1836">1. Add tension using adjuster.</p> <div data-bbox="935 1554 1197 1823" data-label="Image"> </div> <p data-bbox="935 1823 1500 1895">2. Remove bungee and belt and check pulley turns freely anti clockwise.</p>

Fluid ROWER

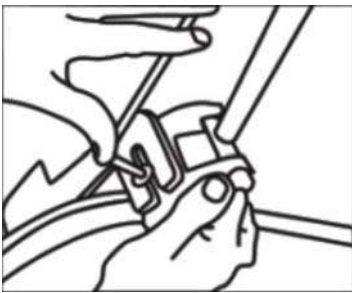
FIRST DEGREE FITNESS

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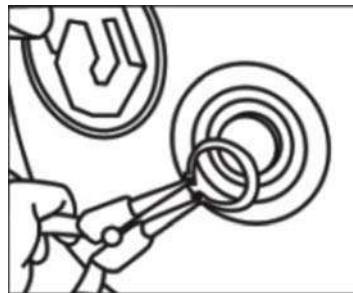
BUNGEE CORD REPLACEMENT. DEALER ASSISTANCE REQUIRED.

(Expect 2-5 years bungee life in commercial use. Damage during initial rower assembly is not covered under warranty)

1. Remove computer mount with 6mm tool and lift decal using a sharp edge.



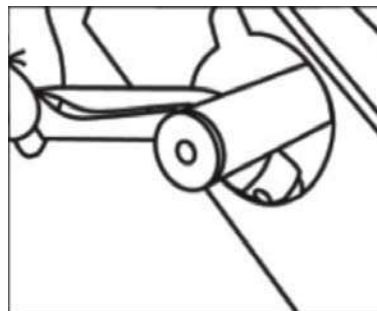
2. Remove C Clip, black spacer, belt pulley and old bungee cord.



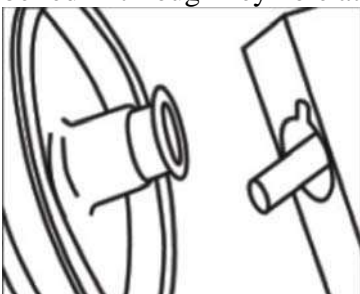
3. Feed new bungee in from below.



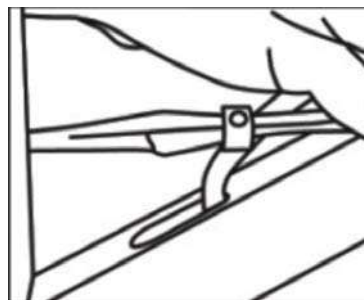
4. Pull out belt section of bungee.



5. Gently mount belt and pulley on shaft. Belt must be fed in through key hole at top.



6. Bungee joiner must reach this far.



Note: A light tap may be required if the white spacer will not pass inside the frame.

Reassemble. Note: A tight C Clip mounting indicates the process should be repeated as the belt is jammed up.

(See page 11 for rower belt tensioning)