

IRD Balancing

World's Leading Supplier of Soft- & Hard-Bearing
Balancing Machines & Instruments



balancing
IRD

Accuracy

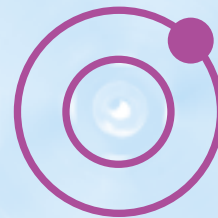
Accurate balancing is essential to the operation, maintenance and repair of rotating equipment. Whether you are dealing with a turbine in a power plant, a fan in a chemical facility, an armature from an electric motor, or a roll in a paper mill, your rotors need to be balanced as precisely as possible.

Our products can accommodate a range of rotor weights from a fraction of a kilogram to over 272 000 kilograms (.022 to 600 000 pounds). What we know about precision balancing allows us to recommend **the best soft- or hard-bearing answer for your application.**

History

We have been in the balancing business for nearly 50 years. As IRD Mechanalysis, we set the industry standard for balancing machinery and instrumentation. Almost every major balancing innovation or technology had its start with us.

Now, as a division of Entek IRD, we are the only major manufacturer to offer a complete range of both soft- and hard-bearing machines, as well as a full line of instruments. We have over 5000 systems installed in virtually every industrialized nation in the world. The systems we sell are supported by a global network of service, support, applications expertise and training programs. And we're ISO 9001 quality system registered. We're historically proven and **charging ahead into the future.**



50



4 mm 237° RPM 1
We began developing new balancing technologies 50 years ago. We haven't stopped since.

Soft- & Hard-Bearing Balancing Machines

Features of Soft-Bearing

- High balance sensitivity as small as 0.015 g mm (0.00002 oz in)
- Balance at lower & safer speeds
- Instrumentation capability of both first run readout and trial weight calibration
- Instrumentation can read vibration displacement in addition to unbalance
- Transportable, modular design
- Broad rotor weight range in each machine

Features of Hard-Bearing

- Horizontal & vertical machines available
- Ideally suited for production balancing
- Can handle excessive initial unbalance
- First-run readout, no trial weights required
- Rigid construction, fewer moving parts
- Optional weight addition or removal devices available

No expensive construction of special concrete foundations is required for any IRD soft- or hard-bearing machines.

IRD
BALANCING



A 150 ton (135 000 kilogram) turbine rotor in a nuclear power station being balanced and machined on site in a fully transportable, 300 ton capacity (270 000 kilogram) balancing machine system.



General purpose, midrange balancing machines are available in many models for rotors weighing from .45 kilogram (1 pound) to 11 340 kilograms (25 000 pounds).

Balancing Machines Selected Examples



B

**Soft-Bearing
B01/S Tabletop**

B01/S tabletop balancing machine with integrated instrument for balancing rotors weighing from less than an ounce (28 grams) up to 10 pounds (4.5 kilograms).



B

**Soft-Bearing
B140-280K**

Large, transportable B140-280 soft-bearing balancing machine with end drive and 290 balancing instrument balancing a steam turbine rotor.



F

**Hard-Bearing
F04**

Small, horizontal axis hard-bearing balancing machine for balancing cutting tools. This is a compact solution with belt drive, safety guard and 275 balancing instrument in the same frame.



FV

**Hard-Bearing
FV01**

Two-plane, vertical axis, FV01 hard-bearing balancing machine equipped with two manual drilling units, safety guard and 272 balancing instrument.



F

**Hard-Bearing
F100**

Large, horizontal axis, F100 hard-bearing balancing machine with end drive and 275 balancing instrument.

Balancing Instruments Complete Offering



model

290

**Soft-Bearing
Color Touchscreen**

Menu-driven touchscreen for quick data entry

Automatic solution of single- & dual-plane problems

Document results with balance certificate using optional printer

Comparison to established tolerances

Polar or digital displays provide graphic representation of balance vectors

Also available in hard-bearing version



model

246

**Soft-Bearing
Portable**

Ideal for use on a balancing machine & for in-situ field balancing

Automatic solution of single- & dual-plane problems

Balance corrections instantly computed & shown in weight units

Built-in printer (interface to external printer included)

Shaft-synchronous digital tracking filters for high precision balancing



model

236

**Soft- or Hard-Bearing
Digital Readout**

Cost-effective, high performance instrument

Automatic solution of single- & dual-plane problems

Balance corrections instantly computed & shown in weight units

Shaft-synchronous digital tracking filters for high precision balancing

Ideal for hard- or soft-bearing machines

Free-standing or rack-mounted configuration



model

275

**Hard-Bearing
Color Display**

Color display with built-in industrial keyboard

Automatic drive & speed control

Function-key, menu-driven operation

Fully integrates with hard-bearing balancing machine

Intuitive, easy-to-use

Includes full-size printer for generating balancing certificate



models

270

271

272

**Hard-Bearing
Digital Readout**

Cost-effective solution for hard-bearing machines

Optional interface to external computer or printer

Fully integrates with hard-bearing balancing machine

Model 270 for horizontal, 271 for single-plane vertical, 272 for dual-plane vertical

Balancing Machines Selection Chart

	capacity		drive	description	maximum rotor diameter		maximum journal diameter	
	lbs	kgs			inches	mm	inches	mm

Soft-Bearing



Series
Choose from 290, 236 or 246 instruments.

B01	7	3	Belt	Tabletop	10	250	1.2	30
B01/S	7	3	Belt	Tabletop with Instrument	10	250	1.2	30
B5	500	200	Belt	General Purpose	36	914	8	203
B10	1000	450	Belt	General Purpose	40	1016	8	203
B20	2000	900	Belt	General Purpose	45	1144	13	330
B50	5000	2300	Belt	General Purpose	94	2388	13	330
B100	10 000	4500	Belt	General Purpose	115	2291	15	381
B150	15 000	7000	Belt	General Purpose	115	2291	15	381
B200	25 000	11 000	Belt	General Purpose	124	3150	24	610
B500	50 000	23 000	End	Large Capacity	128	3250	20	508
B750	75 000	34 000	End	Large Capacity	128	3250	20	508
B140-110K	110 000	50 000	End	Large Capacity, Transportable	154	3900	32	813
B140-200K	200 000	90 000	End	Large Capacity, Transportable	154	3900	32	813
B140-280K	280 000	127 000	End	Large Capacity, Transportable	212	5400	32	813
B140-500K	500 000	227 000	End	Large Capacity, Transportable	212	5400	32	813
B200R	25 000	11 000	Belt	Roll Balancing	100	2500	-	-
B500R	50 000	23 000	Belt	Roll Balancing	112	2850	-	-
B800R	80 000	36 000	Belt	Roll Balancing	112	2850	-	-
B1500R	150 000	68 000	Belt	Roll Balancing	124	3150	-	-

Hard-Bearing Horizontal



Series
Choose from 270 or 275 instruments.

	lbs	kgs			inches	mm	inches	mm
F04	44	20	Belt or End	Tool Balancing	12.6	320	1.4	36
F1	110	50	Belt or End	General Purpose	28	711	2.8	71
F2	220	100	Belt or End	General Purpose	28	711	2.8	71
F4	440	200	Belt or End	General Purpose	39	990	3.9	99
F6	660	300	Belt or End	General Purpose	39	990	3.9	99
F16	1650	750	Belt or End	General Purpose	62	1575	3.9	99
F44	4400	2000	Belt or End	General Purpose	62	1575	7.0	178
F66	6600	3000	Belt or End	General Purpose	62	1575	7.5	190
F100	10 000	4500	Belt or End	General Purpose	74	1880	7.5	190
F200	22 000	10 000	Belt or End	General Purpose	94	2388	15.7	400
F440	44 000	20 000	Belt or End	Large Capacity	94	2388	15.7	400

Hard-Bearing Vertical



Series
Choose from 271 or 272 instruments.

	lbs	kgs			inches	mm
FV01	10	5	Direct	1 or 2 plane	15.7	400
FV03	30	15	Direct	1 or 2 plane	15.7	400
FV06	60	30	Direct	1 or 2 plane	15.7	400
FV2	220	100	Direct	1 or 2 plane	21.6	550
FV4	440	200	Direct	1 or 2 plane	21.6	550
FV11	1100	500	Direct	1 or 2 plane	31.5	800
FV33	3300	1500	Direct	1 or 2 plane	47.2	1200



Optimization

Do-It-Yourself Field Fabrication

We'll provide you with a kit containing critical components such as suspensions and bearing assemblies. We'll also provide a complete set of engineering drawings for you to do most of the heavy metal fabrication (like machine bases, frames and pedestals) yourself.

Update & Upgrade Existing Equipment

Update equipment from any manufacturer by selectively adding new IRD balancing instrumentation, suspension and bearing assemblies to your existing machine bases, pedestals and drive systems. You'll get the leading-edge performance of a brand new balancing system at a fraction of the cost.

Friendly Service & Support

Taking care of our customers, no matter what it takes, is our absolute, number one priority. This is how we've built and kept our hard-earned reputation as the friendliest company in the business. On-site start-up, training, service and support are available for all balancing machines and instruments.

Balancing Training School

We know more about balancing technologies and applications than any other supplier in the industry. In fact, we've trained hundreds of thousands of people in balancing theory, techniques and procedures over the past 50 years. And, we're willing to share what we know with you. We offer an extensive curriculum of public and in-house training courses and workshops, for both engineers and operators.

Find the right balance. IRD Balancing.

