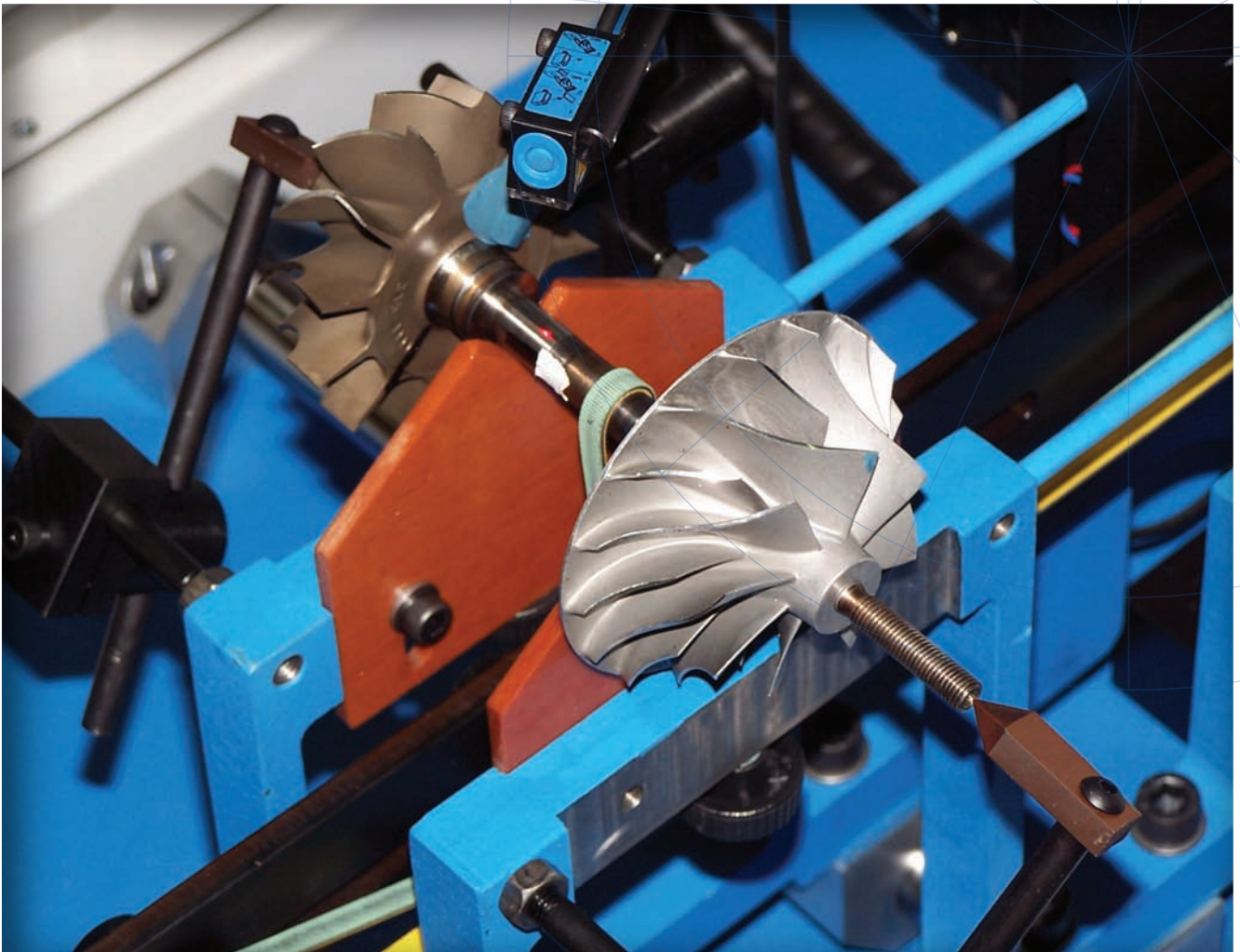


UNIVERSAL BALANCING



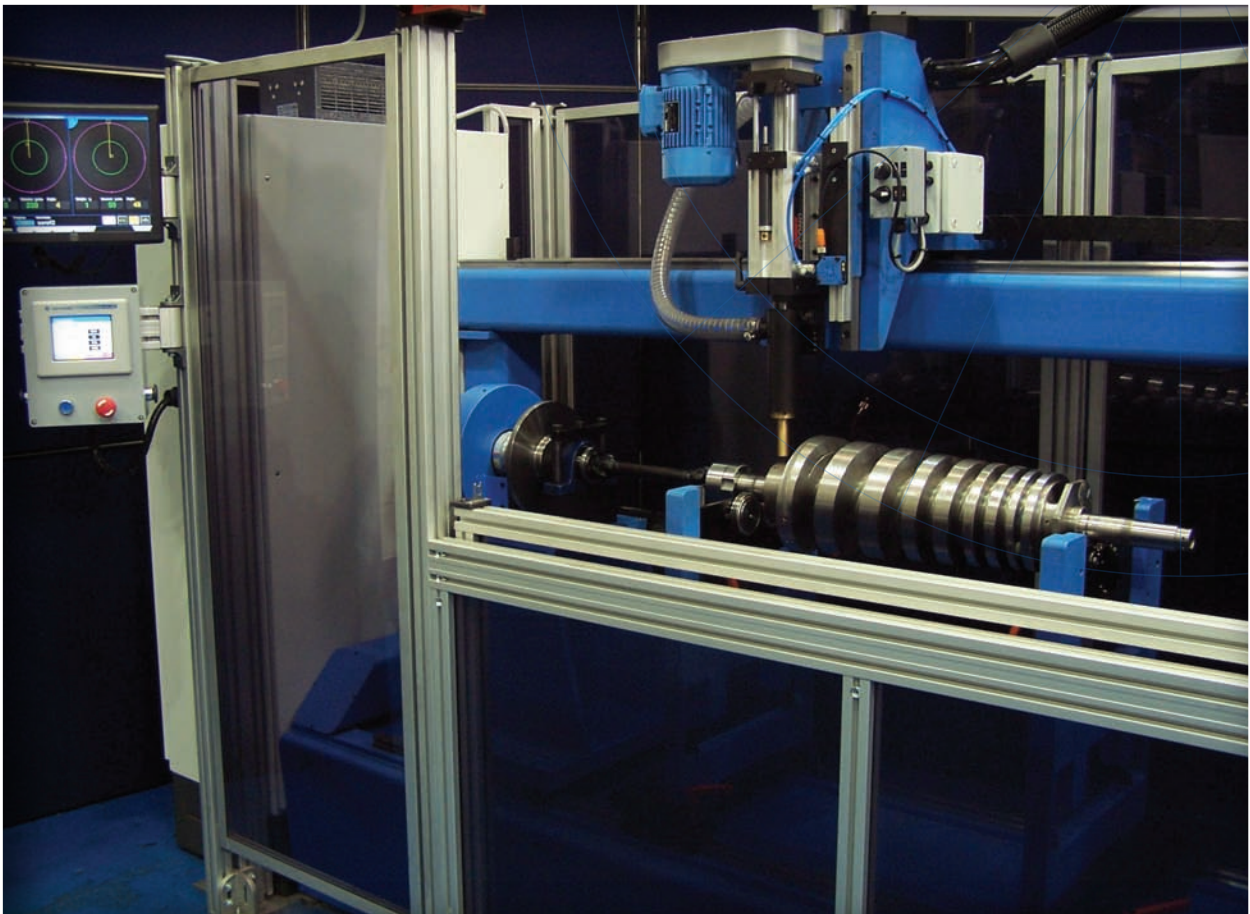
Horizontal balancing machines

Universal Balancing's standard range of horizontal axis balance machines

provides fast, accurate balancing of components weighing up to 20,000Kg. Manual and automatic machines are available to cover the full range of application requirements – either static or dynamic balancing – with precision measurement and correction in 1 or 2 planes.

Our horizontal axis balancers can be installed as standalone units or equipped with drilling, milling or welding heads to achieve on machine correction in a single operation. They can also be fitted with sophisticated work handling and manipulation modules or integrated into fully automatic high-speed production facilities.

In addition, our dedicated team of specialists will design, develop and manufacture custom engineered systems to meet individual user requirements.



Semi-automatic horizontal balancer model H200D-SAD



Machine model H3000D-BM, UNI-44 computer measuring system with Winbal software



Screen shot of UNI-44



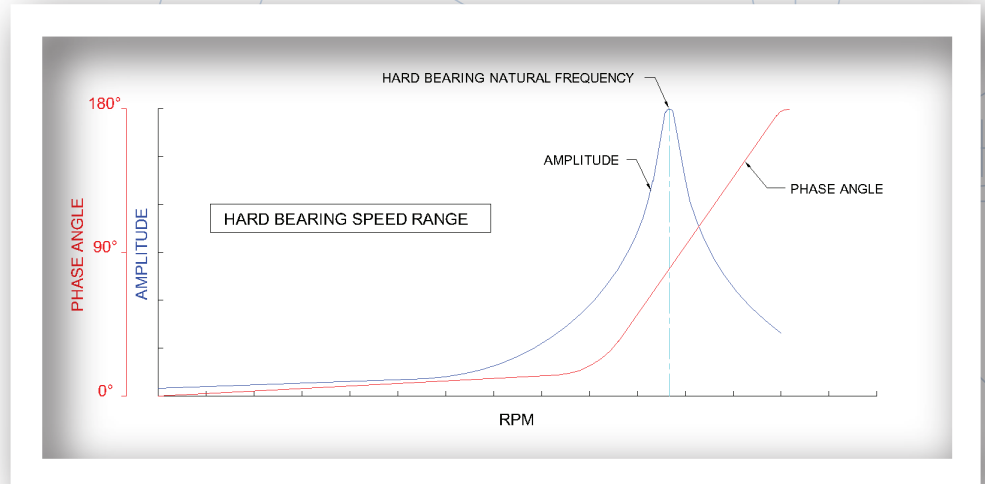
UNI-25 Digital measuring system



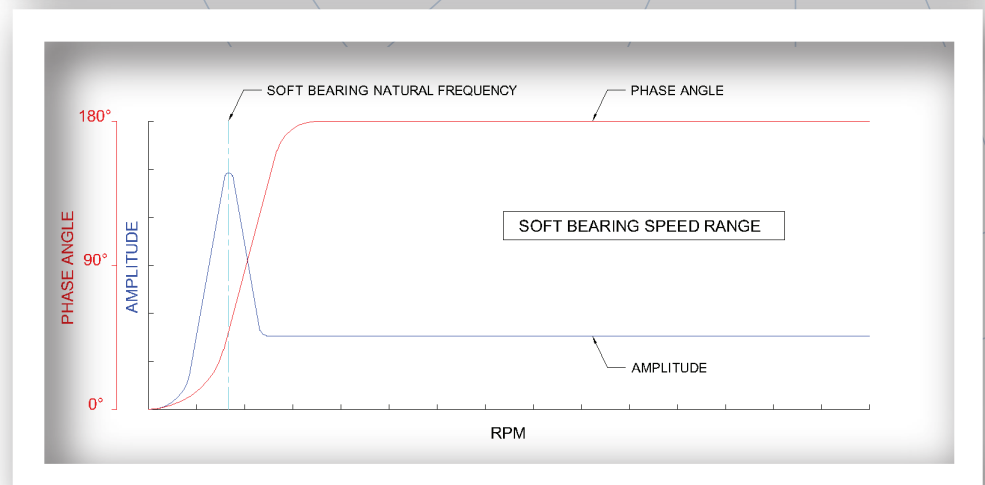
We offer both hard and soft bearing machine variants to meet all application requirements.

Hard bearing machines use force transducers to measure unbalance – providing accurate results independent of rotor mass or inertia. Because they can be permanently calibrated and will handle high out of balance forces, hard bearing machines allow fast and accurate results to be achieved in a single run.

Hard bearing suspension



Soft bearing suspension



Soft bearing machines are ideal for balancing

flexible, as well as rigid or semi-rigid parts and assemblies. They require calibration for each component to be measured, but will simultaneously determine the amount and position of imbalance in both correction planes. Soft bearing machines also have the advantage of allowing rotor measurements to be taken throughout a greater operating speed range.



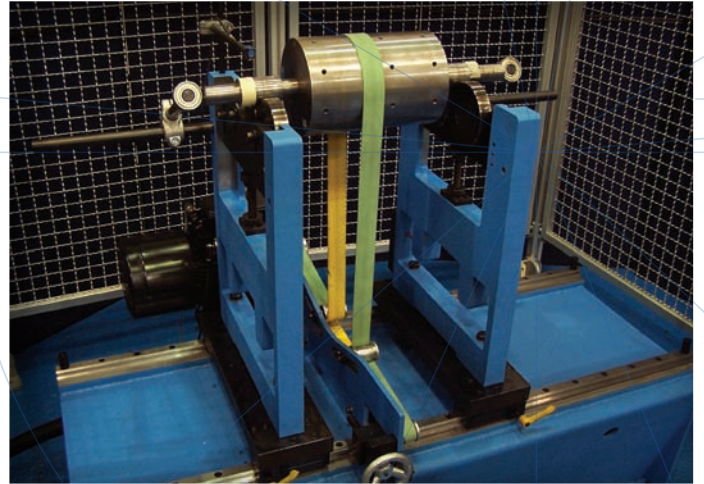
Universal horizontal balance machines

are available in three drive configurations to suit all applications:

- Belt drive – requires no adapters and no direct connection to the component. The belt can either have an ‘under drive’ which provides most flexibility or an ‘over drive’ which can be used for faster loading on smaller machines.

Belt drive machine model H500D-BM

- End drive – usually means a cardan shaft is connected to the component through an adapter (can be quick-fit). The drive speed is the actual speed that the drive unit outputs. This option allows a greater amount of torque to be applied at an increased rate so that components with high inertia such as fan impellers can be accelerated/decelerated faster and safer.
- Dual drive – both end and belt. All drive types have infinitely variable speed via an AC inverter control system.



End drive machine model H10000D-EM



Correction systems

can be fitted to any horizontal balancer, allowing on machine correction. A common system is a drill unit that can be either vertically or axially mounted. Correction systems can be manual or automatic or you can have 'auto depth control' on a manual machine, thereby removing any guesswork from correcting unbalance by drilling. The operator simply turns the component to the prompted highlighted position, then drills at that point until the cursor disappears ie the correct depth is achieved. This system with software vector segmenting program provides an intermediate between manual and automatic status.

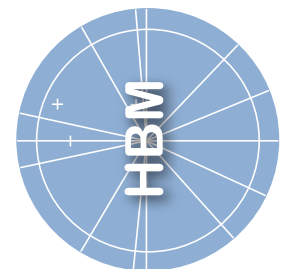
H50D-BMD being used in production



Machine model H10D-BM



	H10	H50	H100	H200	H500	H1500	H3000	H5000	H10000	H20000	
General	Maximum weight for symmetrical rotor	10Kg	50Kg	100Kg	200Kg	500Kg	1500Kg	3000Kg	5000Kg	10000Kg	20000Kg
	Maximum rotor diameter	300mm	750mm	750mm	1200mm	1200mm	1850mm	1850mm	2000mm	2450mm	2450mm
	Standard journal range	4-20mm	10-70mm	10-70mm	10-90mm	15-125mm	20-180mm	20-180mm	20-200mm	20-200mm	50-250mm
	ISO 2953 reduction ratio	98%	98%	98%	97%	97%	97%	97%	95%	95%	95%
	Measurement uncertainty 60 runs@95% 2 standard deviations	0.001-0.2gmm	5gmm	8gmm	12gmm	15gmm	20gmm	30gmm	50gmm	100gmm	200gmm
	Standard voltage & phase. (all 50-60Hz)	110 or 240 1ph	380-480 3ph	380-480 3ph	380-480 3ph	380-480 3ph	380-480 3ph	380-480 3ph	380-480 3ph	380-480 3ph	380-480 3ph
End drive	Machine length (mm) including panel if machine mounted. Width depends on guard type. Allow extra space for guard length.	1100 end drive mc. mounted	1550 end drive mc. mounted	1550 end drive mc. mounted	2000 end drive mc. mounted	2000 end drive mc. mounted	3500 end drive bed mounted	4500 end drive bed mounted	5750 end drive bed mounted	5750 end drive bed mounted	5750 end drive bed mounted
	Maximum distance between bearers with standard bed (mm)	400	600	600	1100	1100	1800	2800	5000	5000	5000
	Incremental bed length increases (mm)	100	100	100	100	200	200	250	250	500	500
	Minimum distance between bearer centre line (mm)	16	25	25	25	100	250	250	150	150	250
	Infinitely variable balancing speed (RPM)	282-3000	282-1500	282-1500	282-1200	282-1200	141-1200	141-1000	141-1000	141-1000	141-700
	AC motor size (Kw)	0.18	0.75	1.5	2.2	4	7.5	15	18.5	30	45
Belt drive	Machine length (mm) including panel if machine mounted. Width depends on guard type. Allow extra space for guard length.	1100	1350	1350	1550	1550	3500	4500	5750	5750	5750
	Maximum distance between bearers with standard bed (mm)	400	600	600	1100	1100	3000	4000	5000	5000	5000
	Incremental bed length increases (mm)	100	100	100	100	200	200	250	250	500	500
	Minimum distance between bearers with/without belt drive (mm)	16/40	25/110	25/110	25/125	100/225	250/550	250/550	150/500	150/500	250/650
	Maximum diameter over belt drive (underslung) (mm)	150	500	500	750	750	1100	1100	1350	1650	1650
	Motor speed at drive pulley infinitely variable (mm)	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	AC motor size (Kw)	0.18	0.75	0.75	1.5	2.2	5.5	11	15	22	30



Why chose a horizontal axis machine from the UK's leader in component balancing technology?

- Virtually all components can be balanced in this orientation.
- All of our horizontal axis machines balance components both statically and dynamically.
- All machines are super high accuracy, easy to use, fast and reliable.
- Machines available with UNI-44 windows based measuring system or UNI-25 digital entry level system.
- Standard horizontal axis balancers accommodate rotors up to 6.00 metres long x 2.45 metres diameter.
- Machine variants are available for components weighing up to 20 tonnes.
- Horizontal axis machines provide maximum access for balancing operations.
- V rollers or gimbal units enable components to be mounted in their own bearing.
- Belt or end-drive options available.

Universal Balancing can tailor a balancer to suit your exact needs – let us know your requirements.

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Horizontal balancing machines