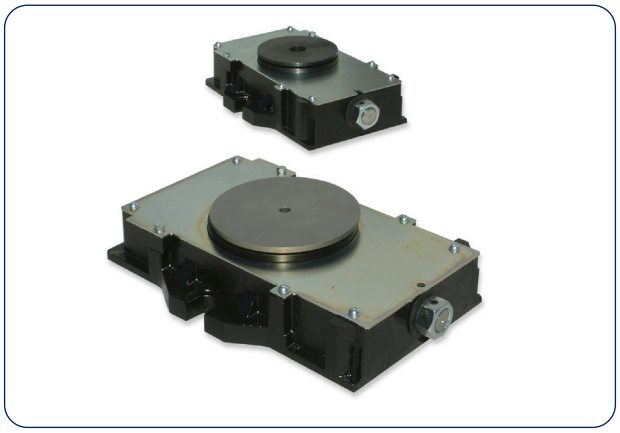
Farrat
ENGINEERS ON A MISSION

Data Sheet

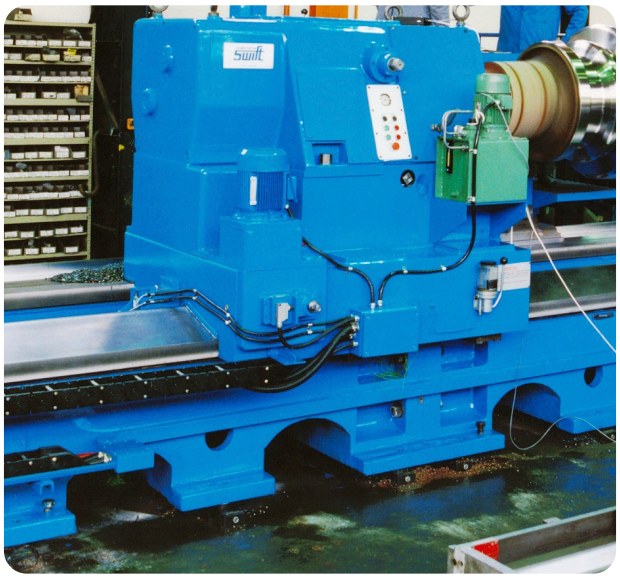
Levalators
Precision Levelling mounts



Why choose Farrat Levalators?

Levalators improve large, precision and long bed machinery performance by increasing alignment accuracy, rigidity and stability. Large machines generally need good foundations both to re-inforce the machine bed and to reduce vibration by mass damping. Levalators are the vital connection between machine and foundation enabling machine and foundation to become one unit. A machine on weak supports may as well not have a foundation.

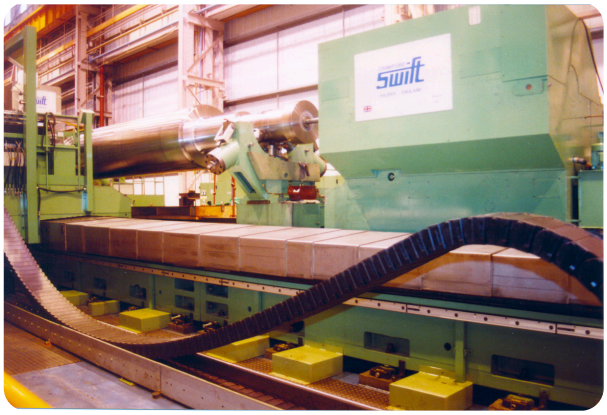
Levalators can be fully grouted in, thus achieving a virtually built-in or encastré support which considerably increases the stiffness of the machine base and creates complete machine foundation integration.



Features

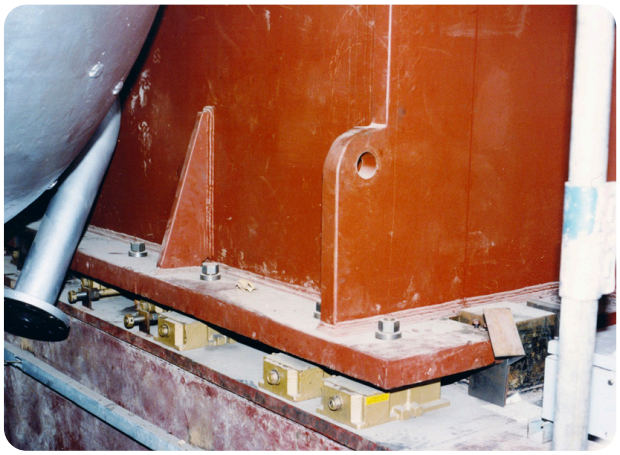
The most accurate method of precision alignment

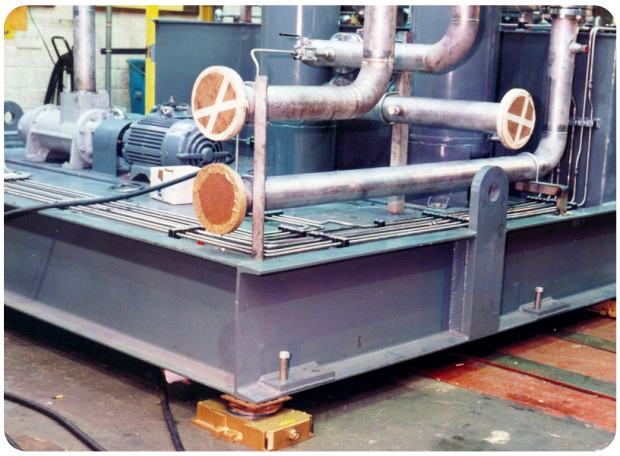
- Rigid support for maximum machine bed stiffness
- Total machine-to-foundation integration
- Low overall height to ensure a low machine centre of gravity
- Systemised and predictable precision machine installation
- Precision adjustment to obtain very fine alignment
- High bolt tensions without bed distortion
- Micrometer type height adjustment range of 12mm
- Facility to carry out subsequent alignment readjustments
- For machines with significant changes in load distribution
- No horizontal forces applied when adjusting
- High ratio of lifting force to adjustment torque
- Developed and manufactured by Farrat
- Used for decades in countless applications worldwide



Typical Applications

- Long bed machine tools
- Roll grinders
- Lathes
- Plano-millers and grinders
- Machining centres
- Turbomachinery
- Steam Turbines
- Gas Turbines
- Rolling mills
- Large process machinery



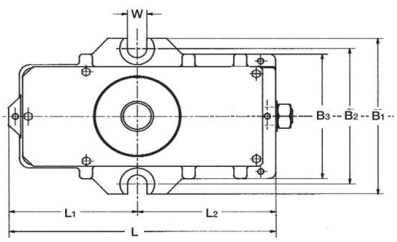


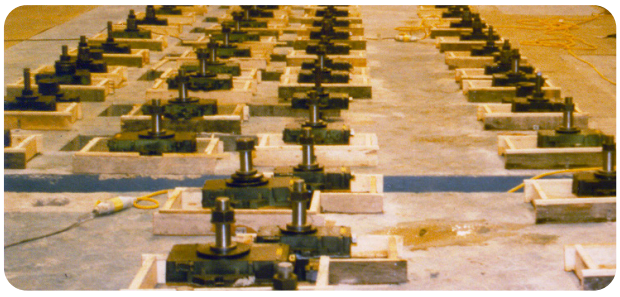
Full technical data sheet is available on request. Please call us on: **+44 (0) 161 924 1600 or email sales@farrat.com**

Levalator - Load Capacity							
	Max Ultimate Load per Unit* (kN)	Max Share of Machine Weight (kN)	Max Lifting Capacity (kN)	Specific Adjustment Torque (Nm/10kN)	Maximum Adjustment Torque (Nm)	Height Adjustment per full turn (mm)	Vertical Stiffness (N/µm)
LA4	240	40	80	4	100	0.40	2500
LA8	400	80	160	7.7	115	0.25	6500
LA16	600	160	200	8.9	200	0.25	8000

* Max ultimate load made up of: Machine + Workpiece + Bolt Tension + Moment + Dynamic Forces

Levalator - Dimensions (mm)											
	L	L1	L2	B1	B2	B3	W	Hmid	Hmin	Hmax	Adjustment
LA4	247	119	128	156	135	128	18	75	69	81	±6.0
LA8	305	145	160	210	185	170	23	82	76	88	±6.0
LA16	370	180	190	260	230	210	26	84	78	90	±6.5

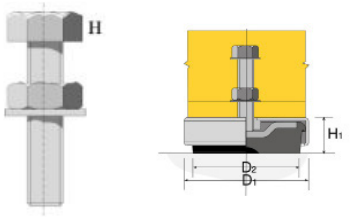




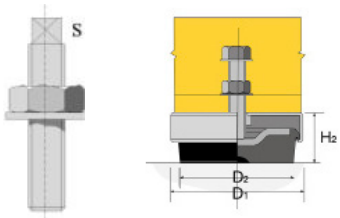
Adjusting Screws Sizes and Lengths Available

Farrat Isomount (ISO)	Unit	0-70	1-80	2-80	3HM-80	35-80	4-80
Maximum Load / Mount (hp)	**kg**	**150**	**500**	**1,200**	**3,000**	**4,000**	**5,000**
Diameter D1	mm	50	78	118	160	200	228
Diameter D2	mm	36	60	100	140	170	200
Height Min H1	mm	21	32	39	55	55	55
Height Min H2	mm	30	44	55	75	75	75
Vertical Adjustment	mm	9	12	16	20	20	20
Standard Rubber	IRHD A	-70	-80	-80	-80	-80	-80
Vertical Spring Constant	kN / mm	1.2	3.3	7	17	21	26
Horizontal Spring Constant	kN / mm	0.4	1.2	2.5	6	7	10
Damping Factor	C / Cc	0.09	0.09	0.09	0.09	0.09	0.09
Ratio of Dynamic to Static Modulus		2.4	2.4	2.4	2.4	2.4	2.4
Screw Threads	**H (Hex head)**	M10X1.5 -	M10X1.5 M12X1.75	M12X1.75 M16X2.0	M20X1.5 -	M20X1.5 M24X1.5	M20X1.5 M24X1.5
	SH (Hex stud)	- -	- -	M16X1.5 -	- M20X1.5	M20X1.5 M24X1.5	M20X1.5 M24X1.5

Farrat Isomount - Adjusting Screws Sizes and Lengths Available					
	H = Hexagon Head Screw - zinc plated				
Style - H	M10x1.5	M12x1.75	M16x2.0	M20x1.5	M24x1.5
Length (mm)	60	80	100	100	130
	80	100	150	150	150
	-	-	-	250	200
Spanner Required	17 A/F	19 A/F	24 A/F	30 A/F	36 A/F
	SH = Hexagon Head Stud - zinc plated				
Style - SH	-	-	M16x1.5	M20x1.5	M24x1.5
Length (mm)	-	-	100	170	170
	-	-	120	-	-
Spanner Required	-	-	12 A/F	15 A/F	19 A/F



H



SH

H = Hexagon Head Screw - zinc plated
SH = Hexagon Head Stud - zinc plated

Farrat Isomount Selection

Select Mounts so that the below equation result is within the maximum load mount given in the table above. If the machine is made up of sections, calculate load per mount for each section:

$$\frac{\text{Machine} + \text{Tooling} + \text{Workpiece Weight (Kg)}}{\text{Number of Mounts}}$$

Order example (mount + screw assembly):
ISO4-80 + H20 x 1.5 x 180 or ISO2-80 + SH16x1.5x120.

Standard steel cover finish: Bright zinc plated.
Alternative finishes are available upon request.

This brochure features our standardised range. Other damping/isolation materials are available and we would happily draw upon our 55 years' experience to advise you on an appropriate solution for specialised applications.