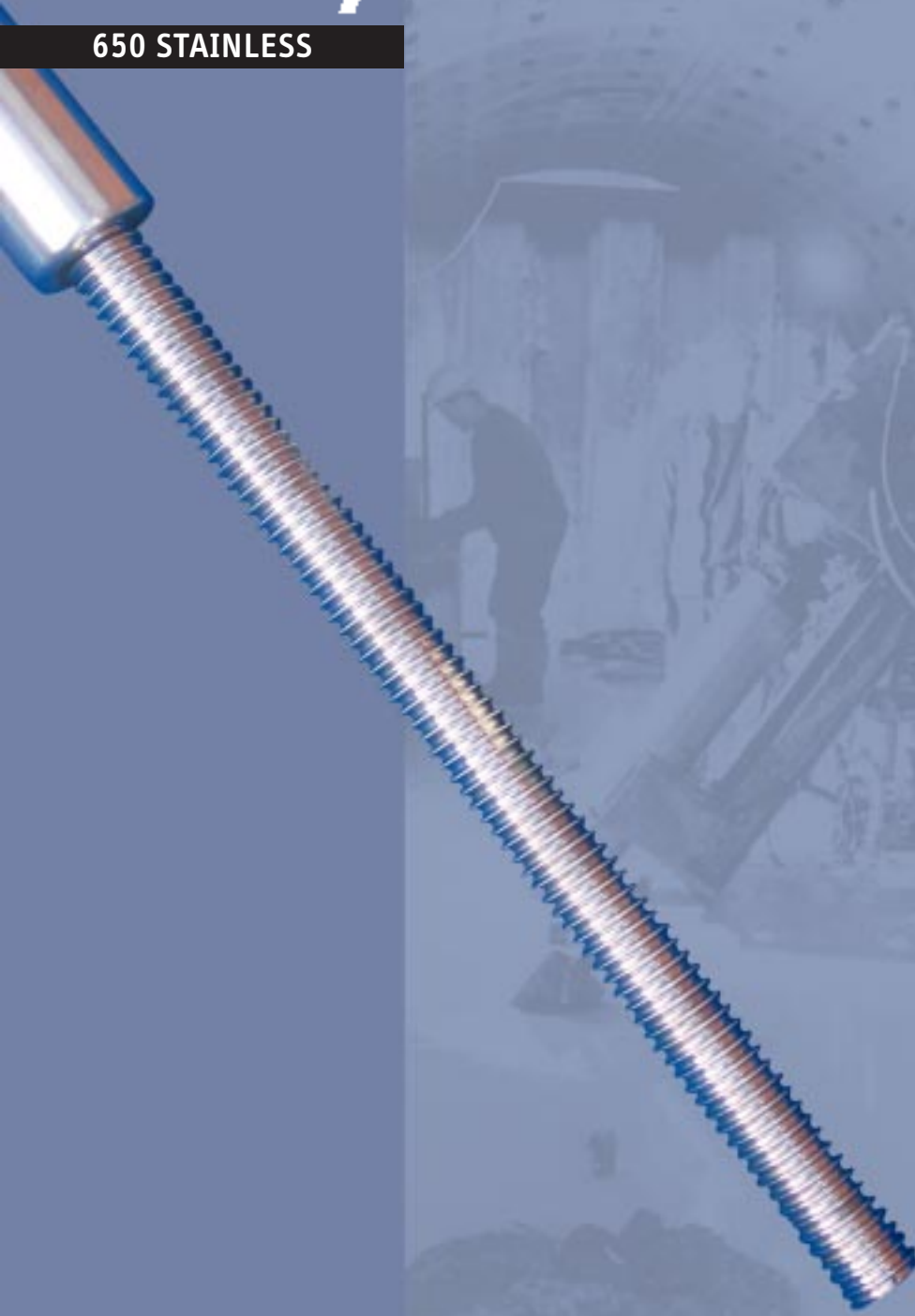


Macalloy

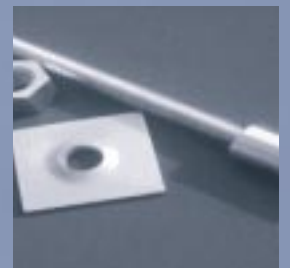
650 STAINLESS



GROUND ENGINEERING



Macalloy 650 Stainless Fully Threaded Bar Systems



Macalloy 650 Stainless specification

Macalloy Ltd has been the leader in the design, manufacture and supply of threaded bar systems since 1948. The Macalloy 650

Stainless has been introduced to complement the existing carbon steel Macalloy 500 range, enabling customers to purchase from one

source both stainless and carbon systems for their threaded bar requirements.

Table 1. Mechanical Properties of Macalloy 650 Stainless

Bar diameters	Minimum ultimate tensile strength	Characteristic minimum 0.2% proof stress
mm	N/mm ²	N/mm ²
16 to 48	800	650

The System

The Macalloy 650 Stainless is a high strength continuously threaded bar system. It is available from stock in diameters 16 to 30mm, and in diameters 33 to 48mm by request. Fittings come as standard across the range, standard lengths are 6 metre.

Quality Assurance

Macalloy is a quality assured company holding CARES accreditation to BS EN ISO 9001:2000. The Macalloy 650 Stainless System is manufactured under a testing system in accordance with this quality regime.

Table 2. Range and Characteristic Loads of Macalloy 650 Stainless

Nominal diameter	Stress area	Mass per metre	Thread pitch	Minimum failing load	Minimum 0.2% proof load
mm	mm ²	kg/m	mm	kN	kN
16	167	1.44	6	133	108
20	261	2.21	6	209	170
24	380	3.17	6	304	247
27	495	4.10	6	395	321
30	597	4.92	6	477	388

Steel Quality

Macalloy 650 Stainless has a minimum guaranteed yield stress after threading of 650N/mm². It is available as standard in grade 304, grade 316 is also available for projects in a more highly corrosive environment.

The bond value of the coarse thread when cast into concrete, or grouted into a preformed hole, complies with the requirements for a class 2 deformed bar. (BS 8110: 1997)

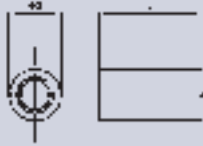



The threads are rolled on the bars in the factory with stringent controls on tolerance and form. Load is transferred from bar to fittings over the full circumference of the bars allowing use of compact fittings.

Threads

The coarse thread is rolled directly onto the bar, of a form specially designed to give speed and ease of assembly. The thread gives the minimum anchorage strengths as given in table 2.

Macalloy 650 Stainless accessories

Table 3. Macalloy 650 Stainless Accessories

COUPLERS		Nominal Diameter	16	20	24	27	30
	Ref. No.	650SC16	650SC20	650SC24	650SC27	650SC30	
	Length (L) mm	54	70	76	84	90	
	Outside (D) mm Diameter	28.6	35	38	44.5	50	
FULL NUTS		Nominal Diameter	16	20	24	27	30
	Ref. No.	650SN16	650SN20	650SN24	650SN27	650SN30	
	Length (L) mm	22	30	33	37	40	
	Across Flats mm	34	38	45	50	55	
LOCK NUTS		Nominal Diameter	16	20	24	27	30
	Ref. No.	650SLN16	650SLN20	650SLN24	650SLN27	650SLN30	
	Length (L) mm	15	15	16	18	20	
	Across Flats mm	34	38	45	50	55	
FLAT PLATES		Nominal Diameter	16	20	24	27	30
	Ref. No.	650SP16	650SP20	650SP24	650SP27	650SP30	
		100 x 100 x 8	125 x 125 x 10	150 x 150 x 10	150 x 150 x 10	200 x 200 x 12	

For sizes between 33mm and 48mm please contact our sales department.

Also available within the Macalloy 650 Stainless Steel range are dished plate washers, pattress plates, lantern spacers and hemispherical load nuts. Full details available upon request.

Site Stressing

Hydraulic jacking equipment is available to apply load to the bars. Jacks are provided with gauges calibrated against a certified load cell to register the force exerted on the bars. In addition, load cells are available to give an independent check on the accuracy of the pump gauge if necessary.

Hand and air operated pumps are available to drive the full range of jacks. Our site service team is also available to provide on-site stressing and training.

Other Stainless Systems from Macalloy

Macalloy is also able to offer a metric end threaded stainless steel ribbed bar complete with full strength nuts and couplers in diameters M16 to M40. Please contact our sales team for a quotation.

A further stainless bar offered by Macalloy is the high strength Macalloy S1030 system with a yield stress of 835N/mm² and an ultimate stress of 1030N/mm². Details of this system can be found in our Macalloy Post Tensioning brochure.

Applications of Macalloy 650 Stainless

Possible Applications: Coastal Protection. Rail Track Bridge and Structure Repairs. Highways.



Pipe supports – U-bolts



Shuttering or building ties



Holding down bolts



Rock bolts, soil nails, ground anchors
and micropile reinforcement

Other products within the Macalloy range include:

Macalloy 500 Reinforcing Bar

Macalloy S460 Stainless Steel Tendons

Macalloy 17MHS Tie Bar Systems

Macalloy 1030 Post Tensioning System

Macalloy 460 Carbon Steel Tendons

Macalloy Guy Linking Architectural Ties

Macalloy Ltd Local Representative:

This publication provides the technical details currently used by Macalloy Ltd in the manufacture of its components. The company reserves the right to amend technical details

as and where necessary in line with its policy of continuous development.

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