







BLUE STEEL

Building Material Trading L.L.C.

fixing the world together....

fixing the world together....

lead Innovate



BLUE STEEL BLDG. MAT. TRADING L.L.C.

Blue Steel Bldg Mat. Trading L.L.C. is a Progressive, serving - ideology based company with a large range of quality products.

We would like to introduce ourselves as a specialist to Project Supplies, with our great expertise and experience can handle all stringent environment condition Prestigious Project, specially Power Project, Oil & Gas and Construction Industries.

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E Mail: bluestee@eim.ae, salesdxb@bluesteel.ae

Website: www.bluesteel.ae

WELDING, HARDWARE (FIXING & FASTENERS, MARINE)

WELDING: Stockiest of the following range of products,

Tech Alloy - USA : Stainless Steel Welding Electrodes.

Daiko - Italy : Stainless Steel Tig Wires.

Blu -Tec - Germany : Aluminium Tig/Mig Wire, Tungsten Electrodes, Ceramic Cups, Welding Helmets.

Pelox - Germany : Post Weld Treatment - Pickling and Passivation.

Oxyturbo - Italy : Pressure Reducer, Acetylene, CO2, Argon, Oxygen, Argon/CO2-Mix Vlamboog - Holland : Welding Cable WeldSafe Neoprene Sheath (50, 70 and 95mm²)

Optimus/Samson Electrode Holders 400/500/600 Amp.Earthing Clamp Crocodile Type 400/600 Amp Cable Connectors (Male/Female) (35 -95mm²). Multivision

Welding Helmet and Gouging Flair 600 Amp, etc.

HARDWARE (MARINE):

Stockiest for Complete Range of Stainless Steel (A4-316) Rigging Hardware such as Wire Rope, Short/Long Link Chain, Lifting Eye Bolt/Nut, "D" Shackle, Wire Rope Clip, Quick Link for Chain, Thimbles, Spring Hooks, TurnBuckle (Eye to Eye, Hook to Hook, Eye to Hook)

HARDWARE (FIXING & FASTENERS):

Stockiest for Complete Range of Special Stainless Steel fasteners, with DIN/ISO Standard, such as 931/4014, 933/4017, 934/4032, 912, 7991, 7981, 7982, 1587, 986, 7504K with authentic Test Certificates 3.1. Full Range of Fasteners in Electrogalvanized, Hot Dip Galvanized from Grade 8.8, 10.9, 12.9.

G & B Fixings - Italy.
Schafers & Peters - Germany.
Lederer - Germany.
Blu Tec Fasteners Limited - U.K.
Viraj - India.
Tong Hwei Enterprise Co.Ltd.
Engineering Edge - Italy.
Germany.
Italy.
I

Our wide experience in sourcing all kind of material through reliable contacts from Europe puts our company in high esteem.

We look forward to serve you promptly & efficiently, kindly do forward your enquiries.

Blue Steel Bldg. Material Trading L.L.C. implements a quality system to meet the requirements of national and international standards.

Our Values:

- * Integrity.
- * Respect & Recognition of Employees & Customers.
- * Team Work.
- * Passion for Excellence in whatever we do.

Our Vision:

- * To improve the Lifestyle of our customers by providing innovative products and services.
- * To be the most preferred Universal Choice for its customer.

Our Mission:

* By setting high standards in service, quality, safety and environment.

Testing/Destructive Testing:

All products supplied by **Blue Steel Bldg. Material Trading L.L.C** are tested in accordance with respective standards and international specifications.

We are also able to provide Product analysis testing, Tensile testing or 3rd party inspection towards any special requirements you may have for any project you are involve with.





"LEDERER" Stainless Steel Fasteners

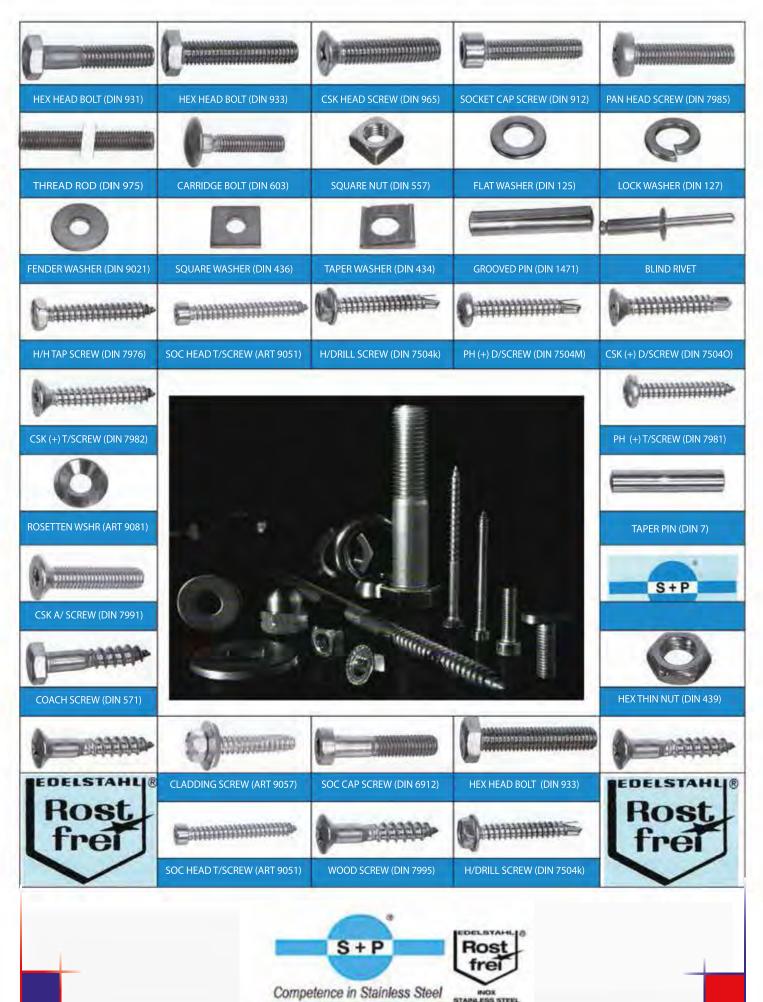


3				
DIN 84	DIN 316	DIN 444	DIN 603	DIN 912
				00000000000000000000000000000000000000
DIN 931/ISO4014	DIN 933/ISO4017	DIN 933 SZ	DIN 963	DIN 975
140000000000000000000000000000000000000	**************************************	January .	muuus	
DIN 6912	DIN 7504K	DIN 7504M	DIN 7504O	DIN 7976
9	0		••••••••••••••••••••••••••••••••••••••	
DIN 7985	DIN 7991	DIN 7997	DIN 7982 TX	DIN 9056





STAINLESS STEEL FASTENERS



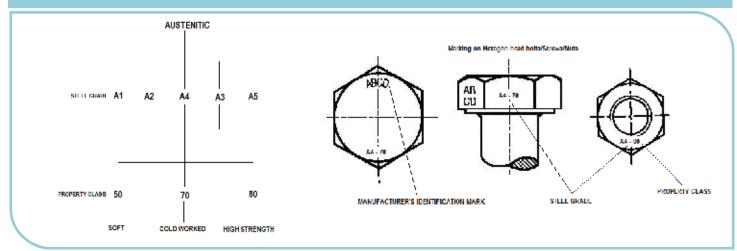


BLU TEC FASTENERS LIMITED (Manufacturing and Exports)

STAINLESS STEEL FASTENERS



HEX BOLTS – HEX NUTS – FLAT WASHERS – SPRING WASHER







BLU TEC FASTENERS LIMITED (Manufacturing and Exports)

RANGE OF MATERIAL

STAINLESS STEEL									
Standard Dimension	Description	Diameter	Length	Finish	Material Grade				
ISO 4014 / DIN 931	Hex Head bolts	M5 to M45	30 mm to 500 mm		SS 304, SS 316				
ISO 4017 / DIN 933	Hex Head Screws	M2 to M64	4 mm to 500 mm		SS 304, SS 316				
ANSI B18.2.1	Hex Head bolts	1/2" to 4"	1" to 24"		B8, B8M				
BS 1768	Hex Head Screws	1/2" to 4"	30 mm to 500 mm		B8, B8M				
ISO 4032	Hex nuts	M-2 to M-45	MM		SS 304, SS 316				
DIN 934	Hex nuts	M-2 to M-64	MM		SS 304, SS 316				
ANSI B18.2.2	Hex nuts	1/2" to 4"	UNC		(A-194) 8 , 8M				
BS 1083	Hex nuts	1/2" to 4"	BSW		(A-194) 8 , 8M				
ISO 7089	Washers	M-2 to M-64	MM and Inches	Ρţ	SS 304, SS 316				
DIN 125	Washers	M-2 to M-64	MM and Inches	Bright	SS 304, SS 316				
DIN 127	Washers	M-2 to M-48	MM and Inches	ā	SS 304, SS 316				
DIN 938	Stud bolts	M-6 to M-100	MM and Inches		SS 304, SS 316				
DIN 939	Stud bolts	M-6 to M-100	MM and Inches		SS 304, SS 316				
DIN 975	Stud bolts	M-6 to M-100	MM and Inches		SS 304, SS 316				
DIN 9021	Fender Washers	M-2 to M-36	MM and Inches		SS 304, SS 316				
As per drawing	U Bolts	M-12 to M-64	MM and Inches		SS 304, SS 316				
As per drawing	L Bolts	M-12 to M-64	MM and Inches		SS 304, SS 316				
As per drawing	J Bolts	M-12 to M-64	MM and Inches		SS 304, SS 316				
As per drawing	Foundation bolts	M-12 to M-64	MM and Inches		SS 304, SS 316				



TECHNICAL SPECIFICATION

(STAINLESS STEEL FASTENERS)







There could be over 150 different grades of stainless steel, with fifteen of them being the ones most commonly used. Popular grades of steel include: 304 stainless steel and 316 stainless steel. On a more basic level, there are five *types* of stainless steel, which can be classified as follows:

Ferritic – These steels contain less than 0.10% carbon and are magnetic. The fact that they can't be hardened via heat treatment and don't weld to a high standard limits the use of these metals somewhat are limited, but they are still suitable for a wide range of applications.

Austenitic – This is the most common type of stainless steel, accounting for up to 70% of all stainless steel production. Its versatility is in large part down to the fact that it can be formed and welded with successful results.

Martensitic – This type of steel shares some characteristics with ferritic, but boasts higher levels of carbon, up to a full 1%. This means that they can be tempered and hardened and are thus highly useful in situations where the strength of the steel is more important than its resistance to corrosion.

Duplex – Put simply, <u>Duplex steels</u> are a combination of ferritic and austenitic steels, a structure which renders duplex steel stronger than both.

Precipitation Hardening – With the addition of elements such as Aluminium, Copper and Niobium, these steels become extremely strong. They can be machined and worked into a wide variety of shapes without becoming distorted and, in terms of corrosion, have the same resistance levels as austenitic steels.

Standards:

DIN – DeutschesInstitutfürNormung
ISO – International Organization for Standardization
EN - Europäische Norm (European Standard)

What does a DIN standard reveal:

Just like any other standard, the DIN standard delivers standardisation and simplicity. For example, for a query it would suffice to say "DIN 931, M12 X 40, A4-70" to define a multitude of features. This means that you don't always have to cross-check the requirments of a product and the customer can be sure that he or she receives precisely the goods they ordered.

For Example: DIN 931, M12 X 40, A4-70

DIN 931- Hexagonal head with shoulder.

M - Metric ISO thread

- d... Thread diameter of screw – 12mm

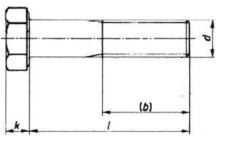
X40 - I... Nominal length in mm.

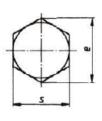
A4 - Material class, Stainless steel A4.

-70 - Strength class 70

- The thread pitch is stated by a number. If this number is not provided, it is a standard thread(M12X40)

The pitch is only stated for screws with a thread other than a standard thread. e.g. M12 X 1 X 40





Mechanical properties of fasteners – Austenitic steel grade. (Extract from DIN ISO 3506-1)

Steel Group			Screws				
	Steel Grade	Strength Class	Tensile Strength R _m ¹) N/mm ² min.	0.2% Yield Strength R _p 0.2 ¹) N/mm ² min.	Elongation at fracture A ²) mm min.		
	A1,A2.A3,A4 and A5	50	500	210	0.6 d		
Austenitic		70	700	450	0.4 d		
		80	800	600	0.3 d		

- 1) The tensile stress is calculated with reference to the tensile stress area (see DIN EN ISO 3506-1)
- 2) The elongation at fracture should be calculated according to 7.2.4 of the corresponding screw length and not on the turned samples. d is the nominal diameter.

Magnetic properties of austenitic stainless steel.

All fasteners made from austenitic stainless steel are generally non-magnetic: a certain magnetisability may occur after cold processing.

Each material, including stainless steel, is labelled by its ability to the magnetisable. In all probability only vacuums will be fully non-magnetic. The guage for the material permeability value μ_r for this material in relation to a vacuum. The material has a low magnetic permeability when μ_r near is equal to 1.

Examples: A2: μ_r ~1.8 / A4: μ_r ~1.015 / A4L: μ_r ~1.005 / AF1: μ_r ~5

CORROSION RESISTANCE A2 and A4:

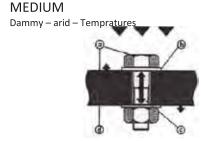
Austenitic stainless steel such as A2 and A4 fall under the category of "active" corrosion protection.

These high-grade stainless steels must contain at least 16% Chrome (Cr) and are resistant to oxidising corrosive agents. Increasing the Cr content and if necessary other alloy components such as Nickel (Ni), Molybdenum (Mo), Titanium (Ti) and Niobium (Nb) improves resistance to corrosion. These additives also effect the mechanical properties. Depending on use, this may have to be noted. Other alloy components are only added to improve the mechanical properties, e.g. nitrogen (N) or the chip- removing process, e.g. sulphur(S).

The fasteners may experience a certain degree of magnetisability during cold working. Austenitic stainless steels are not however generally magnetic. But the resistance to corrosion is not affected by this. The level of magnetisation produced by cold work hardening may even extend to the steel part sticking permanently to a magnet.

In practice it should be noted that a whole series of different types of corrosion may arise. The most common forms of corrosion for high- grade stainless steel are shown in the diagram below and detailed underneath:

Diagram of the most common types of corrosion in screw connections.



- a Localised corrosion.
- b Contact corrosion.
- c Stress corrosion craching.
- d Mechanical effect.







STRUCTURAL FASTENERS







HEX HEAD BOLT ASTM A325

HEX HEAD BOLT GRADE 8.8



FULL THREADED ROD DIN 975 (GRADE 8.8,10.9)



FINISH: HOT DIP GALVANIZED



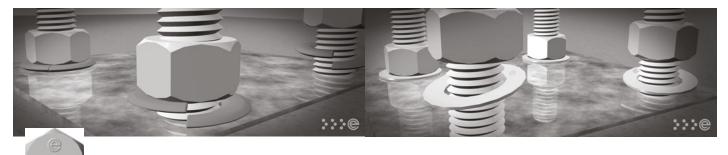




















TECHNICAL SPECIFICATION

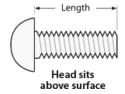
(STEEL FASTENERS)

MECHANICAL PROPERTIRES OF FASTENERS (METRIC BOLTS):

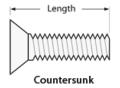
		Nominal Size	Mechanical Properties					
Head Marking	Class & Material	Range (mm)	Proof Load	Min. Yield	Min Tensile			
			(MPa)	Strength (MPa)	Strength (MPa)			
	Class 8.8 Medium carbon	All sizes below 16mm	580	640	800			
8.8	steel, Quenched and Tempered	16mm – 72 mm	600	660	830			
10.9	Class 10.9 Alloy steel, Quenched and Tempered	5 mm – 100 mm	830	940	1040			
12.9	Class 12.9 Alloy steel, Quenched and Tempered	16mm – 100 mm	970	1100	1220			
B7	Alloy steel, Quenched and Tempered	12mm – 64mm	590	720	860			
A 325	Alloy steel, Quenched and Tempered	16mm – 36mm	600	660	830			

GENERAL INFORMATION:

Fastener length is **measured from where the material surface is assumed to be**, to the end of the fastener.

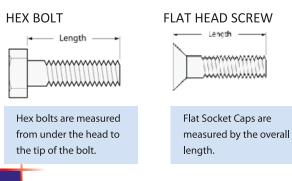


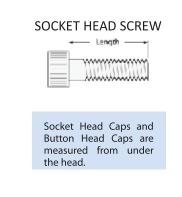
For fasteners where the head usually sits above the surface, the measurement is from directly under the head to the end of the fastener.

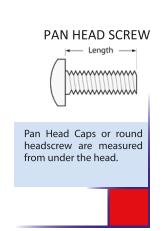


For fasteners that are designed to be countersunk, the measurement is made from the point on the head where the surface of the material is, to the end of the fastener.

SPECIFIC TYPES:









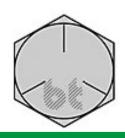
BLU TEC FASTENERS LIMITED (Manufacturing and Exports)

HOT DIP/ELECTRO GALVANIZED FASTENERS













HEX BOLTS – NUTS – WASHERS – THREADED RODS



ALLOY STEEL										
Standard Dimension	Description	Diameter	Length	Finish	Material Grade					
ISO 4014 / DIN 931	Hex Head bolts	M12 to M45	30 mm to 500 mm		10.9 / 12.9					
ISO 4017 / DIN 933	Hex Head Screws	Fian		Plain / Zinc plated / HDG / Teflon /	10.9 / 12.9					
ANSI B18.2.1	Hex Head bolts	1/2" to 4"	1" to 24"	PTFE	B-7 / L-7 / B-16					
BS 1768	Hex Head Screws	1/2" to 4"	30 mm to 500 mm		B-7 / L-7 / B-16					
		CARBO	N STEEL							
Standard Dimension	Description Diameter		Length	Finish	Material Grade					
ISO 4014 / DIN 931	Hex Head bolts	M5 to M45	30 mm to 500 mm		4.6, 8.8					
ISO 4017 / DIN 933	Hex Head Screws	M2 to M64	30 mm to 500 mm	Plain / Zinc plated /	4.6, 8.8					
ANSI B18.2.1	Hex Head bolts	1/2" to 4"	1" to 24"	HDG						
BS 1768	Hex Head Screws	1/2" to 4"	30 mm to 500 mm							



BLU TEC FASTENERS LIMITED (Manufacturing and Exports)

HOT DIP/ELECTRO GALVANIZED FASTENERS



DIN 975



DIN 934

DIN 127

DIN 125

ASTM F436M

ASTM A563M



G&B FIXING INNOVATION



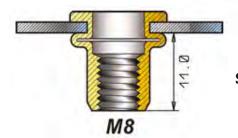
STAINLESS STEEL RIVET NUT





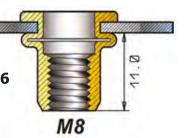






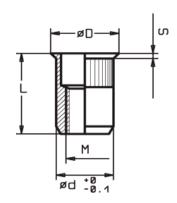
SIZES: M3 – M12
STAINLESS STEEL GRADE 304, 316

ALUMINIUM

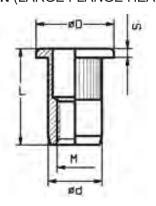


Type:

TS/KN (SMALL COUNTERSUNK HEAD)



LF/KN (LARGE FLANGE HEAD)



TECHNICAL SPECIFICATION

	Pull-Out	Strength	Shear Strength			
	STEEL low carbon / Stainless steel	STEEL BBA T - Spec	STEEL low carbon / Stainless steel	STEEL BBA T - Spec		
	NEWTON	NEWTON NEWTON		NEWTON		
	9.200	12.500	3.300	3.600		
M5	14.000	20.000	4.400	4.800		
M6	27.000	32.000	5.200	5.800		
M8 M10	36.000	46.000	7.100	7.700		
M12	52.000	63.000	10.700	11.500		

Test must always be performed on actual application components before the fastener is specified.

The technical characteristics of the rivet nut do not change according to the material and grip range

of application.

RIGGING HARDWARE

Stainless Steel Grade A4 – 316 Carbon Steel (Electro galvanized / Hot Dip Galvanized)



Spring Hooks - Type 1

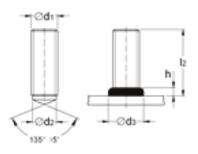
Thimble

Lifting Eye Nut (Din 582)

STUD WELDING CONSUMABLES







TYPE DD/RD- Threaded Stud with Complete Thread

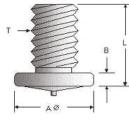
TYPE SD – Shear Connector

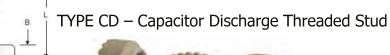
Application for Shear Connectors ***

- 1) Composite Bridges
- 2) Anchoring System/Anchoring Plate3) Through Deck Welding
- 4) Building constructions.

















STAINLESS STEEL WELDING CONSUMABLES

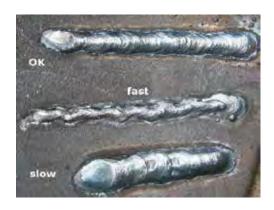






Tech-Rod 308/308L (AWS A5.4 E308L-16)

Tech-Rod 308/308L is a low carbon electrode used to weld 304L. The weld deposit contains a maximum of 0.04% carbon which minimizes the formation of chromium carbides, and subsequent susceptibility to inter granular corrosion. The weld deposit, with controlled ferrite, gives excellent notch toughness at -320° F.



Tech-Rod 309/309L (AWS A5.4 E309L-16)

Tech-Rod 309L electrodes give a weld deposit similar to 309, with reduced carbon levels 0.04% max that offers increased resistance to inter-granular corrosion. Type 309L is ideal for joining stainless steels to themselves or to carbon and low alloy steels. Tech-Rod 309L is preferred to Tech-Rod 309 for cladding over carbon or low alloy steels, as well as dissimilar joints, which undergo heat treatment.



Tech- Rod 316/ 316L (AWS A5.4 E316L-16)

The weld deposit of Tech-Rod 316L electrodes is similar to that of type 316, except carbon levels are limited to a maximum of 0.04%. Precise control of the carbon content in Tech-Rod 316/316L electrodes provides a weld deposit matching the corrosion resistant qualities of type 316/316L stainless steel. The low carbon content reduced the possibility of carbide precipitation and consequent inter-granular corrosion.

We also carry wide stock of Aluminium Tig wire (ER 4043 and ER 5356) Aluminium Mig Wire (0.5 Kg Spool) Stainless Steel Tig wire ER 308L, ER 309L and ER 316L (Diameter 1.00 mm to 3.20 mm)

Stainless Steel

DANKS / G TTOU		-10	0.4344	5014		51.10 4	07717	AWS OR OTHER STANDARDS		
DAIKO / G-TECH	MIG	TIG	SAW	FCW	MMA	FLUX	STRIP	MIG - TIG - SAW	ELECTRODES	
308L	0.	0	0	9.	0.			ER 308L	E 308L-17 / 16 / 15	
308LSI	8	8						ER 308LSI		
308H	8	9	8	9	8	0		ER 308H	E 308H-16 / 15	
347	0	0	•	0				ER 347	E 347-16 / 15	
347SI								ER 347SI		
347H		0		8		9		ER 347H	E 347-16 / 15	
316L				0		0.		ER 316L	E 316L-17 / 16 / 15	
316LSI	8	8						ER 316LSI		
316H	0	0	0	•	0			ER 316H	E 316H-16 / 15	
316MNF	•	•	•	9.	0	•		ER 316LMN	(E 316LMN-16 / 15)	
16.8.2	•	•	•	0		•		ER 16.8.2	E 16.8.2-16 / 15	
309L				8				ER 309L	E 309L-17 / 16 / 15	
309LSI								ER 309LSI		
309LMO	8	8	8	8	9			(ER 309LMO)	E 309LMO-17 / 15 / 16	

Aluminium Alloys

DANKO / O TEOU	/ G-TECH MIG TIG SAW FCW MMA FLUX STR	OTDID	AWS OR OTHER STANDARDS							
DAIKO / G-TECH	MIG	IIG	SAW	FCW	MINIA	FLUX	STRIP	М	IG - TIG - SAW	ELECTRODES
AL 99,5	0	0			9			1050	SG AL99,5	EL-AL99,5
AL 99,8	9	9						1080	SG AL99,8	
ALSI 5	9	9						4043	SG ALSI-5SG	EL-ALSI5
ALSI 12	9	9						4047	SG ALSI12	EL-ALSI12
ALMG 4,5 MN	9	9						5183	SG ALMG4,5MN	
ALMG 5	0.	0.				•		5356	SG ALMG5	
ALMG 5 MN	9	9				•		5556		
ALMG 3	0	0						5754	SG ALMG3	

Available

On request

OXY TURBO - REGULATORS

OXYGEN MEGA



MAGNUM PLUS



MAGNUM PLUS CO2



MAXY FLUX



PREHEATER 220V



PELOX – PICKLING PASTE & PASSIVATION LIQUID



DE VLAMBOOG B.V./BLU-TEC



De Vlamboog B.V.- HOLLAND











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