



# Maxx<sup>®</sup> weld process gases

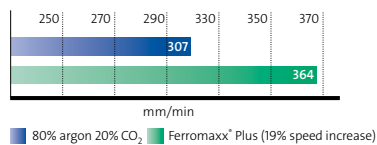
Improved productivity, fewer rejects  
and a better working environment

Purpose-designed for MAG welding carbon, carbon manganese and low alloy steels, the Ferromaxx® gases give superb weld quality and excellent penetration together with minimal spatter and low fume levels.

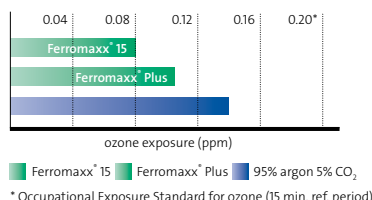
# Ferromaxx®

## For faster, cleaner welding of carbon steel

Average weld speed for manual MAG welding of 12mm thick carbon steel plate

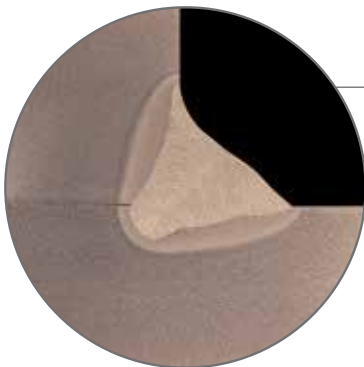


Average ozone exposure for manual MAG welding of carbon steel plate using spray transfer



\* Occupational Exposure Standard for ozone (15 min. ref. period)

Ferromaxx® Plus MAG fillet weld in 12mm thick BS970:080M50 steel



### Ferromaxx® Plus\*

the best gas for carbon steel

- improves weld quality and reduces rejects, excellent penetration characteristics and tolerant to variations in weld parameter settings
- higher productivity, up to 19% increase in manual weld speeds when compared with conventional mixtures and reduced cleanup times due to minimal spatter and a smooth flat weld finish
- cuts cylinder stocks, suitable for all material thickness, and all consumable types (solid, metal and flux cored wires)
- protects the work environment, minimal ozone generation

\*EU Patent 958098; Canada 2269113; Japan 4037914; United States 6274838

### Ferromaxx® 15

the reliable all-rounder

- improves weld quality and reduces rejects, excellent penetration characteristics, tolerant to variations in weld parameter settings
- cuts cylinder stocks, suitable for all material thickness
- protects the work environment, minimal ozone generation

Ferromaxx® 15 MAG butt weld in 12mm thick BS970:080M50 steel



### Ferromaxx® 7

the thin steel specialist...

- improves weld quality and reduces rejects, excellent weld pool control, particularly at low voltages on thin sheet materials (up to 10mm thick) and for positional welding
- cuts post weld cleaning times, ultra low spatter levels and excellent pulsed arc characteristics

Ferromaxx® 7 MAG fillet weld in 3mm thick BS970:080M50 steel

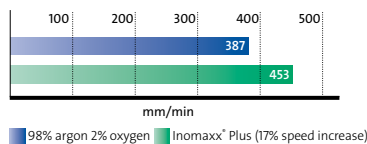


The Inomaxx® range of gases has been developed to give high quality welds in stainless steel which have excellent surface finish and superb corrosion resistance.

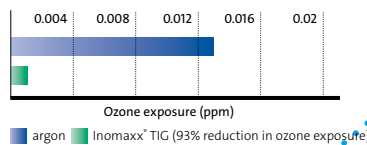
# Inomaxx®

## Maximum performance for welding stainless steel

Average weld speed for manual MAG welding of 3mm thick AISI 316L stainless steel plate



Average ozone exposure for manual TIG welding of stainless steel plate



### Improved productivity

Increased productivity through higher weld speed is available from Inomaxx® Plus and Inomaxx® TIG gas mixtures.

### Fewer rejects

Inomaxx® gases are easy to use and tolerant to variations in weld parameter settings. This improves weld quality and means fewer rejects.

### A better working environment

Because ozone is a health hazard which cannot always be removed by fume extraction equipment, Air Products has concentrated on developing gases that give low ozone exposure levels. The result – a gas that provides a better working environment as well as improved productivity and fewer rejects.



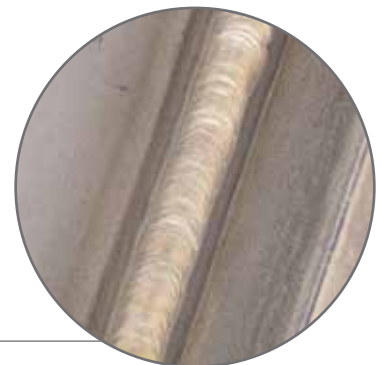
Inomaxx® Plus MAG fillet weld in 6mm thick AISI 316L stainless steel

## Inomaxx® Plus

the best gas for stainless

- improves weld quality and reduces rejects, excellent penetration characteristics, tolerant to variations in weld parameter settings
- more productive, up to 17% increase in manual weld speeds when compared with conventional mixtures. Also, reduces cleanup times due to minimal spatter and a smooth weld finish
- cuts cylinder stocks, suitable for all material thickness and modes of metal transfer
- protects the work environment, minimal ozone generation

Inomaxx® TIG butt weld in 3mm thick AISI 316L stainless steel



## Inomaxx® 2

the all-rounder for stainless

- excellent weld quality with low spatter levels and bright weld finish
- highly suited to pulsed arc transfer, offering superior mechanical properties
- cuts cylinder stocks, suitable for all material thickness and modes of metal transfer

Inomaxx® 2 MAG fillet weld in 3mm thick AISI 316L stainless steel

## Inomaxx® TIG

the best gas for TIG welding austenitic stainless

- improves weld quality and reduces rejects through excellent penetration characteristics and brilliant, smooth, flat weld finish
- higher productivity (up to 30% increase in manual weld speeds when compared with argon) • protects the work environment, minimal ozone generation

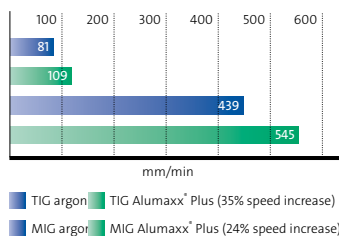
# Alumaxx®

## One gas that does it all for aluminium

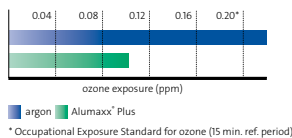
Alumaxx® Plus shielding gas has been specifically designed as the only gas that you need for the high quality welding of aluminium and its alloys.

If you aim for the most exacting standards, you'll need a dedicated gas like Alumaxx® Plus. A multi-purpose shielding gas, it is specially designed for MIG and TIG welding aluminium and its alloys across all material thickness.

Average weld speed for manual MIG and TIG welding of 10mm thick aluminium alloy plate



Average ozone exposure for manual MIG welding aluminium 5% magnesium alloy plate (spray transfer)



Alumaxx® Plus shielding gas gives superb weldability, combined with high welding speeds, up to 35% faster than possible with argon, as well as promoting safety through low ozone generation..

### Just look at the advantages:

When you aim for the highest standards the elimination of weld metal porosity can be a problem. Alumaxx® Plus gas with its controlled helium addition is all that you need to give you the edge.

### Improved productivity

Alumaxx® Plus shielding gas gives you an increase in manual weld speeds of up to 24% in MIG welding and up to 35% in TIG welding when compared with argon.

### Fewer rejects

Alumaxx® Plus shielding gas is easy to use, gives ultra low porosity levels and excellent fusion characteristics. This improves weld quality and means fewer rejects.

### A better working environment

Because ozone is a health hazard which cannot always be removed by fume extraction equipment, Air Products has concentrated on developing gases that give low ozone exposure levels. The result – a gas that provides a better working environment as well as improved productivity and fewer rejects.

## Alumaxx® Plus

the best and only gas  
you need for aluminium

- improves weld quality and reduces rejects through excellent penetration, low porosity levels, and a flat weld finish. Also, superb arc starting for TIG welding
- higher productivity – increase of up to 24% in MIG welding and up to 35% in TIG welding when compared with argon
- cuts cylinder stocks, multi-purpose shielding gas (MIG and TIG, all material thickness and modes of metal transfer)
- protects the work environment, minimal ozone generation



TIG butt weld in 10mm thick  
4140 aluminium alloy using  
Alumaxx® Plus



MIG fillet weld in 10mm thick  
4140 aluminium alloy using  
Alumaxx® Plus

Whatever you're welding, Air Products' innovative shielding gas range will give you superior results. Formulated to boost output through a unique combination of weldability, weld quality and higher welding speeds, you'll achieve more with fewer rejects.

### Productivity without compromise

This range of gases is also designed to protect people at work, by generating the lowest levels of ozone and fume.

# Maximise your productivity

with Air Products' range of shielding gases.

### Ask the customer

Extensively tested by Air Products' own specialists, by its customers and by independent accredited laboratories, including TWI (formerly The Welding Institute, UK), this range has proven performance.

Material	Shielding gas	Application
Carbon and alloy steels	<b>Ferromaxx® Plus</b> the best gas for steel	<i>MAG welding</i> , all material thickness. Dip, pulsed and spray transfer. All welding positions. Solid, metal and flux cored wires. Coated steels. Manual, robotic or automated welding.
	<b>Ferromaxx® 7</b> the thin steel specialist	<i>MAG welding</i> , up to 10mm material thickness. Dip, pulsed and spray transfer. All welding positions. Solid wires.
	<b>Ferromaxx® 15</b> the reliable all-rounder	<i>MAG welding</i> , all material thickness. Dip, pulsed and spray transfer. All welding positions. Solid, metal and flux cored wires.
Stainless steels	<b>Inomaxx® Plus</b> the best gas for stainless	<i>MAG welding</i> , all material thickness. Dip, pulsed and spray transfer. All welding positions. Solid and metal cored wires. Manual, robotic or automated welding.
	<b>Inomaxx® 2</b> the all-rounder for stainless	<i>MAG welding</i> , all material thickness. Dip, pulsed and spray transfer. All welding positions. Solid wires.
	<b>Inomaxx® TIG</b> the best gas for TIG welding austenitic stainless	<i>TIG welding</i> , all material thickness. Manual, robotic, automated or orbital.
Aluminium and alloys	<b>Alumaxx® Plus</b> the best and only gas you need for aluminium	<i>MIG and TIG welding</i> , all material thickness. Pulsed and spray transfer. Manual, robotic or automated welding.

# Welding gases supplied to suit your needs

Air Products offers the full range of welding gas supply options:

- single cylinders
- high volume cylinder packs
- bulk liquefied gases



## Integra®-the revolutionary cylinder with a built-in regulator

– no need to buy or repair a regulator again

The Integra® cylinder (X30S) features:

- a fully protected valve and regulator assembly
- a built-in gas economiser
- an “active” cylinder contents gauge
- a quick connect gas outlet



X475    Integra®

In addition, the Integra® cylinder delivers similar gas contents to a traditional shoulder high cylinder but it is 23% lighter as well as being shorter and more stable. Integra® cylinders are ideally suited for use on the back of a welding machine, or for site work.

Just look at the benefits:

- easier and safer to handle
- often lasts longer than a traditional cylinder
- no need for spanners and bottle keys
- eliminates cost associated with regulator purchase and repair

## High volume cylinders

– fewer cylinder changes boost productivity

The X475 contains 40% more gas than a traditional cylinder and is fitted with a NEVOC male valve outlet.

Designed for the larger fabricator, it increases productivity and delivers operational savings.

Just look at the benefits:

- fewer cylinder change-overs
- less frequent cylinder deliveries
- reduced cylinder stocks
- NEVOC regulator with hand-tight connection eliminates the need for spanners and bottle keys



## High volume cylinder packs

Consisting of 18 cylinders, the 18X50S is the largest cylinder pack available, containing over 50% more gas than a conventional pack. This results in cost savings for larger users by reducing pack changeovers, deliveries and rental costs.



## Welding gases on tap

For the largest gas users we will design and install on-site Cryoease® services or bulk gas delivery system. This convenient method of supply enhances productivity, improves safety and reduces cost by eliminating cylinder handling and gas ordering. Air Products will manage the project from start to finish and ensure compliance with all relevant national and international safety guidelines and legislation.

## Gas control equipment

A full range of gas control accessories specifically designed for use with Air Products' range of Maxx® gases and cylinders is available. All Integra® accessories feature our revolutionary low pressure snap-on connector and all high pressure regulators feature an easy-to-use, hand-tight connection – so there is no need for spanners or bottle keys. Air Products' full range of gas control equipment is featured in our catalogue.

**Air Products PLC**  
2 Millennium Gate, Westmere Drive  
Crewe CW1 6AP  
T 0800 389 0202  
apukinfo@airproducts.com

**Air Products Ireland Ltd**  
Unit 950, Western Industrial Estate  
Killeen Road, Dublin 12  
T 1800 99 50 29  
ieinfo@airproducts.com



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