



Fortis

Fortis 400



Next generation
manual MIG/MAG welding



As flexible as your work

Welding tasks are often a challenge, especially for small and medium-sized companies. Every job brings new requirements and different materials. Some of the tasks change on a daily basis, as do the required welding processes. This calls for a welding machine that can be adapted perfectly to these dynamic conditions.

With up to 240 optimized characteristics that have been specially developed for the requirements of steel construction, the Fortis series impresses with its reliable welding performance. In addition to steel, this MIG/MAG welding machine also masters materials such as aluminum and stainless steel effortlessly, especially in combination with the pulsed arc.

Fortis makes the welding experience easier than ever before, thanks to its particularly user-friendly interface. Intuitive operating elements not only optimize workflows, but also enable even more precise control of the welding parameters.

Highlights of the Fortis series



Reliable and powerful

Equipped for all applications

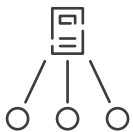
The focus of the Fortis series is reliable and stable welding performance for manual applications. Thanks to its excellent ignition properties and stable arc, it can cover a wide range of applications.



Welding made easy

All key welding parameters at a glance

Our clear, digital user interface allows you to keep a constant eye on the most important welding parameters. Fast process changes, more than 30 system languages to choose from, and customizable parameter settings are just a few of the highlights that make these devices extremely easy and intuitive to use.



Multiprocess

One device for every process

Whether for MIG/MAG, TIG, or MMA, our Fortis welding machines with multiprocess functionality offer maximum flexibility for practically every field of application.



Connectivity

Welding connects

The Fortis series is compatible with our innovative WeldCube Air and WeldCube Premium software solutions. Other add-on options include the Vizor Connect welding helmet and Bluetooth remote control.



Designed with sustainability in mind

High recycled content, low application error rate

The Fortis series contains 53% recycled aluminum in order to keep the ecological footprint as low as possible. Application errors are minimized thanks to the intuitive operation of the devices and the welding parameter wizard in particular. The housing concept and good serviceability also contribute to a long service life.

For further information, visit:
www.fronius.com/Fortis



Sophisticated design

User-friendly and robust

The design of the new Fortis series places a clear focus on ergonomics. Integrated carrying handles on the housing and wirefeeder make them easy to move around. The storage compartments provide enough space for everything that needs to be easily reachable. Regardless of whether you opt for the Compact or Split version, the working height is tailored to the needs of the welder.

The protective features, including the robust aluminum housing, an angled display with integrated and replaceable display protection, as well as rotary buttons set back into the device, ensure it can deliver its full performance even under demanding conditions.





Compact or Split: what's your preference?

The overall design of the Fortis is based on a compact system with a maximum output current of up to 500 A. Space for an optional cooling unit is also provided in the housing.

This enables space-saving setup and use, even in environments with limited space. MIG/MAG welding torches of up to 6 meters may be used.

In addition to the Compact version, models with an external wirefeeder are also available to extend the operating range. Furthermore, the Pulse function can be used with an inter-connecting hosepack length of up to 15 m.



The all-in-one system: one device, countless possibilities

- Compact welding machines up to 500 A
- Retrofitting of water cooling for 320, 400, 500 A versions possible at any time
- Split versions with external wirefeeder for an extended operating radius
- Duo variant: compact welding machines starting at 320 A can be combined with an additional wirefeeder
- One user interface for all variants



Fortis 270 | 320 Compact
Gas-cooled



Fortis 320 | 400 | 500 Compact
Gas-cooled or water-cooled



Fortis 320 | 400 | 500 Split
Gas-cooled or water-cooled



Duo option
for Fortis 320 | 400 | 500 Compact
Gas-cooled or water-cooled



Connected
by welding | **United**
by passion

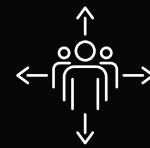
We focus on connections—
between people, industries,
and metals. Find out more
here.

www.fronius.com/welding/aboutus

Simple, clear, customizable

- | | | | | | |
|---|-----------------------|---|-------------------------|---|-----------------------------|
| 1 | Menu and Home button | 4 | Gas test function | 7 | 7" color display |
| 2 | Info button | 5 | Status LED | 8 | Memory buttons and EasyJobs |
| 3 | Wire-feeding function | 6 | Rotary and push buttons | | |





User Management

The integrated authorization system assigns individual rights. Central User Management enables you to manage several welding machines in one place.



Keylock

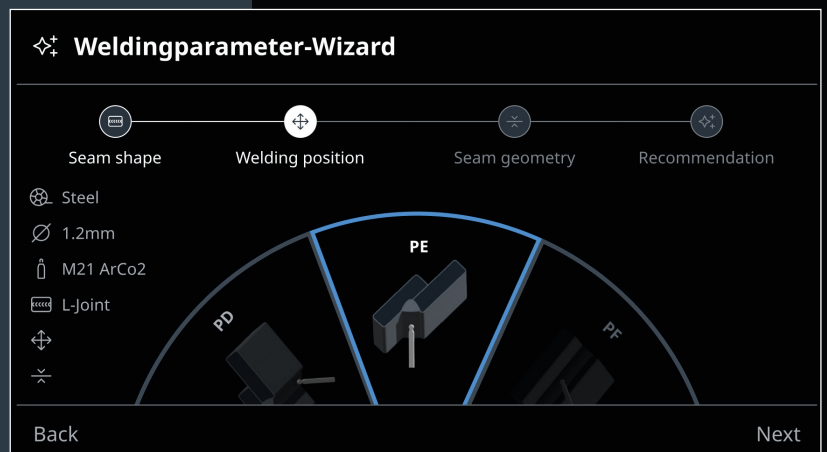
A keylock can be activated to prevent the settings from being inadvertently changed on the control panel. It also ensures that constant welding parameters remain unchanged. Operating elements can be activated individually.



Welding parameter wizard

The welding parameter wizard supports the welding specialist by recommending the ideal parameter settings for upcoming welding jobs. These can be precisely adapted to the respective welding requirements in just a few steps to reduce errors, rejects, and rework while significantly increasing efficiency and quality.

The welding parameter wizard is indispensable, especially for tasks with constantly changing variables. The self-explanatory graphics make it easier to understand the settings so that even complex tasks can be mastered with ease.



For further information, visit:
www.fronius.com/Fortis



Optimal welding results

Whether you're welding short or long seams, fast or slow, vertical-up seams, root passes, or fillet welds, our welding characteristics have been developed together with our experts and guarantee excellent results for every application. With a wide range of setting options, they can be adapted to your specific requirements to guarantee the best welding results. Rely on our expertise to achieve the highest level of welding quality and efficiency.



MIG
weld
fun



G/MAG welding applications



Pulse welding—controlled and fast

Our Pulse Welding Package enables pulsed arc welding, which ensures low spatter and a variable working range (thin to thick sheets). The pulsed arc therefore also reduces re-work.

SynchroPulse—seam rippling for aluminum alloys

Out-of-position welding has never been easier. The fact that the energy input can be adjusted with ease makes SynchroPulse particularly suited for welding aluminum, even in the most difficult positions.



Stitch welding—low material distortion

Stitch welding not only produces a rippled seam appearance, but adjustable, regular welding and pause times can further reduce heat input and thus material distortion in thin sheets.

One device for all processes

Ready for the challenges of tomorrow

MIG/MAG, TIG, or MMA? All Fortis variants with the multiprocess function (standard on the Fortis 270/320 Compact, optional on the Fortis 400/500 Compact) give you complete freedom and unleash your full welding potential.

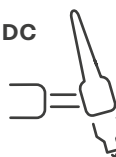


MIG/MAG



- MIG/MAG from 3 to 500 A
- Up to 240 welding characteristics
- 0.8-1.6 mm wire diameter
- Steel, Stainless, Aluminum, Metal Cored, Rutile FCW, Basic FCW, self-shielded wires
- Welding Packages: Standard and Pulse

TIG DC



- TIG DC from 3 to 500 A
- TIG pulse welding
- Touchdown ignition
- TAC tacking function
- Gas pre-flow time and post-flow time

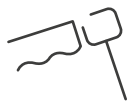


Ready for all applications

The Fortis series impresses with its reliable and stable welding performance. Thanks to its excellent ignition properties and constant arc, it can be used for a wide range of applications.



MMA welding



- MMA welding from 10 to 500 A
- CEL function
- Arc air gouging
- Anti-stick, HotStart, arc-force dynamic

Fortis XT variant

Energy efficiency for
all power categories

Economical and powerful

A true all-rounder. XT stands for Extended, as the Fortis Extended variant is designed for mains voltages from 200 to 600 V and can therefore be used around the world. Depending on the power category and the mains fuse, up to 320 A is possible in single-phase operation.

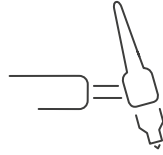
The Fortis XT is the ideal choice for businesses that value energy, efficiency, and performance. With its higher power factor, it is 16% more energy-efficient than other Fortis variants.



Special characteristics of the XT variant

- Available in all power categories (270-500 A)
- Can be used worldwide
- Full generator compatibility
- Optimized welding performance due to higher output characteristics
- Energy savings of up to 16% compared with the standard version
- CEL-compatible

TIG DC welding functions



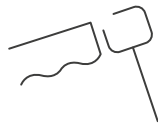
TIG pulse welding

Pulse welding is used primarily for welding in tight spaces or for welding particularly thin materials. The result is an improved seam appearance.

Touchdown ignition

As an alternative to high-frequency ignition, highly accurate touchdown ignition helps to improve user-friendliness. In addition, there are no restrictions in terms of the area of application.

MMA welding functions



HotStart

The HotStart function was specially developed for welding with rutile and cellulose electrodes. In order to make the electrode easier to ignite, the current is increased for a split second during ignition on the welding machine.

Anti-stick

If a short circuit occurs (electrode sticks during electrode welding), the welding process is interrupted. This prevents electrode burn-out and/or serious weld seam faults.

TAC tacking function

Pulse currents are used to make the weld pool oscillate. This makes it easier to tack components together and reduces tacking time. The pulsed arc optimizes the process on very thin materials.



Arc-force dynamic

If basic electrodes are welded with coarse droplet material transfer at a low current (underloaded), there is a danger of sticking. When the arc-force dynamic is set accordingly, the electrode burns freely, preventing sticking.

Discover all welding functions at:
www.fronius.com/Fortis



Fortis Duo

One system— multiple applications

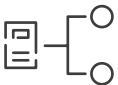
The Fortis Duo option combines a compact welding machine from 320 to 500 A with an additional, external wirefeeder. Software activation is also required.



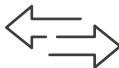
The advantages for you



Maximum flexibility for frequently changing applications or wire diameters



Two different materials can be processed



**Faster process changes
(switching via welding torch button)**



**Little space needed
(2-in-1 solution) and lower purchase costs**



Ideal for small and medium-sized companies with frequently changing welding tasks

Welding Packages

When equipped with our software packages, known as Welding Packages, the Fortis can be tailored entirely to your needs. The Welding Packages bring together in-depth welding expertise to make your device the perfect tool for your individual welding projects. Choose from Standard or Pulse depending on the application, or opt for both. Our Welding Packages and software solutions can also be retrofitted at any time.



The right solution for every application

Standard

The Fortis Standard package allows you to weld all common materials reliably and efficiently across the entire power range, from root passes and thin sheets to thicker sheets.

Pulse

The Fortis Pulse package uses the pulsed arc for clean and efficient welding. It ensures minimal spatter and flexibility on thin to thick sheets.

Options

- Duo: For Fortis 320, 400, and 500 Compact
- Jobs: For all Fortis power categories
- Documentation: For all Fortis power categories
- Trial: Available for all Fortis devices (ex: works for 10 h arc time)
- Pulse/Standard Mix:
Ideal for vertical-up seams—a combination of both processes enabling up to 40% faster welding speeds without any oscillating movements

Maximum connectivity

Our Fortis supports the most
commonly used communication
standards.

Data management



WeldCube Navigator

The WeldCube Navigator helps to standardize manufacturing processes, avoid errors, and increase production quality. Welders are visually guided through the job at the workplace and predefined parameters are set automatically. In the event of an error, alarm messages or the locking of the welding system prevent rejects and rework.



WeldCube Air

WeldCube Air is the cloud-based software solution for companies of all sizes. Users not only have the option of managing their welding machines connected via the Internet, but also receive an overview of welding procedure specifications, qualifications, and the most important welding key figures. All this makes WeldCube Air the perfect companion to help welding companies go digital.



WeldCube Premium

WeldCube Premium is the ideal tool for ensuring your production processes are stable and verifiable. Welding equipment management simplifies the efficient management of multiple welding systems and the monitoring of welding parameters. Component documentation and analysis functions increase the efficiency and quality of your welding operations. The number one solution for industrial welding companies.



Bluetooth

For connecting wireless remote controls and Bluetooth-compatible welding helmets



WiFi

For complete network capability—for updates and use of the Smart Manager function (data documentation) without Ethernet



NFC (optional)

For user management or to easily lock and unlock the welding system with a card or RFID tag

More solutions at:
www.fronius.com/weldcube





Accessories

Welding torches for all power categories

Lightweight, versatile, ergonomic

Particularly light and user-friendly generation of more than 60 welding torch variants available in different versions: gas or water-cooled, Standard or Up/Down operation with LED as well as in different lengths: 3.5 m, 4.5 m, and 6 m.



Manual welding torches

Gas-cooled	Power / ED	Power / ED
MTG 270s	270 A / 40% CO ₂ 200 A / 40% mixed gas	170 A / 100% CO ₂ 140 A / 100% mixed gas
MTG 320s	320 A / 40% CO ₂ 260 A / 40% mixed gas	210 A / 100% CO ₂ 170 A / 100% mixed gas
MTG 400s	400 A / 40% CO ₂ 320 A / 40% mixed gas	260 A / 100% CO ₂ 210 A / 100% mixed gas
MTG 500s	500 A / 35% CO ₂ 420 A / 35% mixed gas	300 A / 100% CO ₂ 260 A / 100% mixed gas

Water-cooled	Power / ED
MTW 320s	320 A / 100% CO ₂ and mixed gas
MTW 400s	400 A / 100% CO ₂ and mixed gas
MTW 500s	500 A / 100% CO ₂ and mixed gas

Trolleys



TU Move 4 Pro

- Ergonomic handling for split systems thanks to low-positioned holder (also suitable for two gas cylinders)
- Integrated crane attachment and forklift truck mounting, optional hosepack holder, and pivot arm to hold the welding torch



TU Move 4 Standard

Low-level gas cylinder holder, crane attachment, and forklift truck mounting for Fortis Compact models



TU Move 4 Basic

Simple and space-saving variant for all Fortis Compact models



Remote control

Remote control for starting the welding process and setting the main welding parameters



Find out more about the MIG/MAG welding torches at:
www.fronius.com/mig-mag-torches





Minimize welding errors

The clear user interface and welding parameter wizard in particular assist the welder throughout the entire welding process. This minimizes errors and improves weld quality, reducing the rejection rate.

Technical data Fortis 270 and 320

	Fortis 270 C /G	Fortis 270 C /G/XT	Fortis 320 C /G	Fortis 320 C /G/XT	Fortis 320 C /GW	Fortis 320 C /GW/XT	Fortis 320 /GW	Fortis 320 /GW/XT
Weight	36 kg (79.3 lb)	36.2 kg (79.8 lb)	36 kg (79.3 lb)	36.2 kg (79.8 lb)	42.5 kg (93.7 lb)	43.5 kg (95.9 lb)	40.1 kg (88.4 lb)	41.1 kg (90.6 lb)
Dimensions l x w x h	681 x 367 x 555 mm (26.8 x 14.4 x 21.9 in)				681 x 367 x 783 mm (26.8 x 14.4 x 30.8 in)			
Mains frequency	50/60 Hz							
Mains voltage	3 x 400 V	3 x 200-600 V 1 x 208/240 V	3 x 400 V	3 x 200-600 V 1 x 208/240 V	3 x 400 V	3 x 200-600 V 1 x 208/240 V	3 x 400 V	3 x 200-600 V 1 x 208/240 V
Mains voltage tolerance	±10%	-10/+6%	±10%	-10/+6%	±10%	-10/+6%	±10%	-10/+6%
40% duty cycle [10 min / 40 °C]	270 A		320 A					
60% duty cycle [10 min / 40 °C]	250 A		260 A					
100% duty cycle [10 min / 40 °C]	210 A		240 A					
Welding current range	MIG/MAG 3-270 A TIG 3-270 A MMA 10-270 A Multiprocess Standard			MIG/MAG 3-320 A TIG 3-320 A MMA 10-320 A Multiprocess Standard		MIG/MAG 3-320 A without Multiprocess		
Open circuit voltage	max. 107 V							
Working voltage range	MIG/MAG 14.2-27.5 V TIG 10.1-20.8 V MMA 20.4-30.8 V Multiprocess Standard			MIG/MAG 14.2-30.0 V TIG 10.1-22.8 V MMA 20.4-32.8 V Multiprocess Standard		MIG/MAG 14.2-30.0 V without Multiprocess		
Wire speed	1-25 m/min / 40-980 ipm						—	
Wirefeeder	4-roller drive							
Wire diameter	0.6-1.6 mm / 0.023-0.06 in							
Protection class	IP23							
Mark of conformity	CE, S, UKCA	CE, S, UL/CSA	CE, S, UKCA	CE, S, UL/CSA	CE, S, UKCA	CE, S, UL/CSA	CE, S, UKCA	CE, S, UL/CSA



Recycle instead of disposal

Thanks to the new housing concept, a significant proportion of the plastic components have been replaced by recyclable aluminum. As a result, we have increased the proportion of recyclable material to a total of 53%. The majority of the components can therefore be recycled and help to conserve natural resources.



Fix it, don't bin it

The easy accessibility of the components, especially the mains cable and connection panel, makes repairs quick and easy, which minimizes downtime. The high proportion of replaceable components also enables the devices to be used for a long time.



Save electricity with the XT variant

The Fortis XT variant is the perfect companion for anyone who wants to save even more power. It boasts a higher power factor, making it 16% more energy-efficient than conventional variants.

Technical data Fortis 400 and 500

	Fortis 400 C /GW	Fortis 400 C /GW/XT	Fortis 400 /GW	Fortis 400 /GW/XT	Fortis 500 C /GW	Fortis 500 C /GW/XT	Fortis 500 /GW	Fortis 500 /GW/XT
Weight	42.5 kg (93.7 lb)	43.5 kg (95.9 lb)	40.1 kg (88.4 lb)	41.1 kg (91.3 lb)	42.5 kg (93.7 lb)	43.5 kg (95.9 lb)	40.1 kg (88.4 lb)	41.1 kg (91.3 lb)
Dimensions l x w x h	681 x 367 x 783 mm (26.8 x 14.4 x 30.8 in)							
Mains frequency	50/60 Hz							
Mains voltage	3 x 400 V	3 x 200-600 V 1 x 208/240 V	3 x 400 V	3 x 200-600 V 1 x 208/240 V	3 x 400 V	3 x 200-600 V 1 x 208/240 V	3 x 400 V	3 x 200-600 V 1 x 208/240 V
Mains voltage tolerance	±10%	-10/+6%	±10%	-10/+6%	-10/+6%	-10/+6%	±10%	-10/+6%
40% duty cycle [10 min / 40 °C]	400 A				500 A			
60% duty cycle [10 min / 40 °C]	360 A				430 A			
100% duty cycle [10 min / 40 °C]	320 A				360 A			
Welding current range	MIG/MAG 3-400 A TIG 3-400 A MMA 10-400 A optionally with Multiprocess		MIG/MAG 3-400 A without Multiprocess		MIG/MAG 3-500 A TIG 3-500 A MMA 10-500 A optionally with Multiprocess		MIG/MAG 3-500 A without Multiprocess	
Open circuit voltage	max. 107 V							
Working voltage range	MIG/MAG 14.2-34.0 V TIG 10.1-26.0 V MMA 20.4-36.0 V optionally with Multiprocess		MIG/MAG 14.2-34.0 V without Multiprocess		MIG/MAG 14.2-39.0 V TIG 10.1-22.8 V MMA 20.4-40.0 V optionally with Multiprocess		MIG/MAG 14.2-39.0 V without Multiprocess	
Wire speed	1-25 m/min / 40-980 ipm		—		1-25 m/min / 40-980 ipm		—	
Wirefeeder	4-roller drive				4-roller drive			
Wire diameter	0.8-1.6 mm / 0.03-0.06 in				0.8-1.6 mm / 0.03-0.06 in			
Protection class	IP23							
Mark of conformity	CE, S, UKCA	CE, S, UL/CSA	CE, S, UKCA	CE, S, UL/CSA	CE, S, UKCA	CE, S, UL/CSA	CE, S, UKCA	CE, S, UL/CSA



Fortis function overview

	Features	Fortis 270 C/G	Fortis 320 C/G	Fortis 320 C/GW	Fortis 320/GW	Fortis 400 C/GW	Fortis 400/GW	Fortis 500 C/GW	Fortis 500/GW
System design	Compact	✓	✓	✓	–	✓	–	✓	–
	External wirefeeder	–	–	–	✓	–	✓	–	✓
	Gas-cooled	✓	✓	✓	✓	✓	✓	✓	✓
	Water-cooled	–	–	optional					
Mains voltage variant	400 V	✓	✓	✓	✓	✓	✓	✓	✓
	XT 200-600 V	✓	✓	✓	✓	✓	✓	✓	✓
	600 V	–	–	–	–	–	✓	–	✓
Single-phase operation (XT variants only)	Up to 240 A	✓	–	–	–	–	–	–	–
	Up to 270 A	–	✓	✓	✓	–	–	–	–
	Up to 320 A	–	–	–	–	✓	✓	✓	✓
Generator-compatible	XT variants only	✓	✓	✓	✓	✓	✓	✓	✓
Multiprocess	TIG	✓	✓	✓	–	optional	–	optional	–
	MMA	✓	✓	✓	–	optional	–	optional	–
	CEL (XT variant)	✓	✓	✓	✓	✓	✓	✓	✓
Connectivity	Bluetooth	✓	✓	✓	✓	✓	✓	✓	✓
	WiFi	✓	✓	✓	✓	✓	✓	✓	✓
	NFC	optional							
	Ethernet	optional							
Data management	WeldCube Air WeldCube Premium	optional							
	WeldCube Navigator	optional							
	SmartManager	✓	✓	✓	✓	✓	✓	✓	✓
Options	Duo	–	–	✓	–	✓	–	✓	–
	Wired remote control	✓	✓	✓	✓	✓	✓	✓	✓
	Wireless remote control	✓	✓	✓	✓	✓	✓	✓	✓
	Toolbox	–	–	✓	✓	✓	✓	✓	✓
	Organizer	✓	✓	✓	✓	✓	✓	✓	✓
	Flow sensor	–	–	✓	✓	✓	✓	✓	✓
	Welding torch holder	✓	✓	✓	✓	✓	✓	✓	✓
	AI IO	✓	✓	✓	✓*	✓**	✓*	✓**	✓*

* TMC option required ** TMC or MP option required