

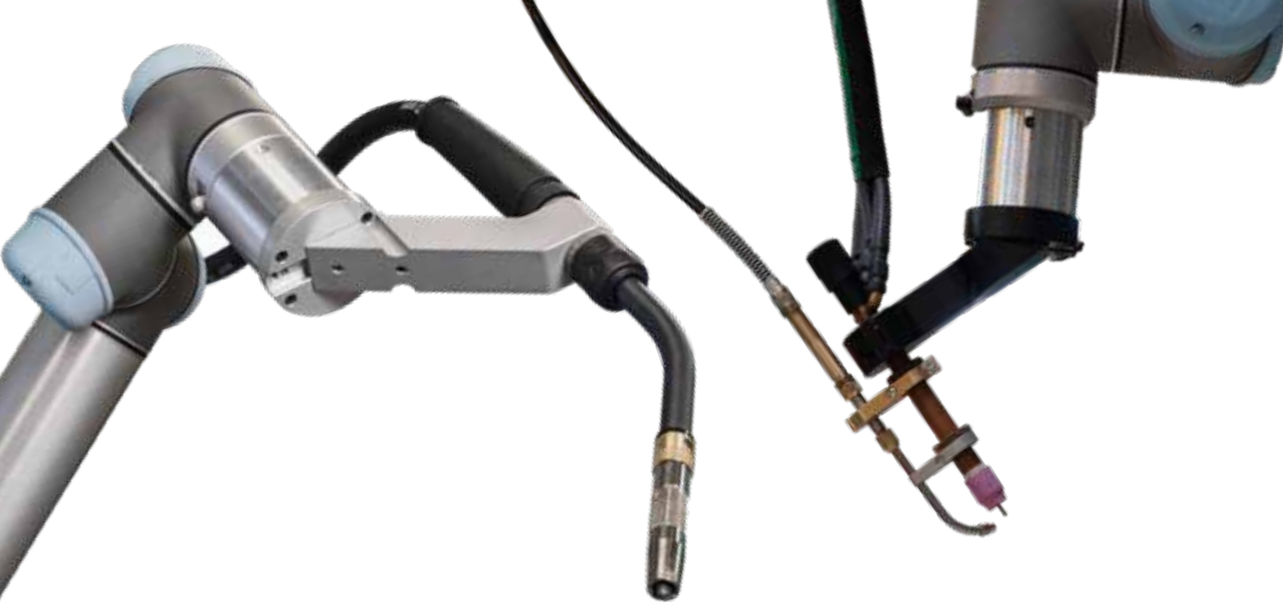
MICATRONIC
WELDING VALUE

BUILT IN SAFETY
SYSTEM
CE APPROVED

SMALL
AND SMART

**CALL ME
COWELDER**

A COLLABORATIVE WELDING ROBOT



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A NEW WELDING ASSISTANT

The CoWelder™ is possibly the smartest and smallest automated welding solution on the market. It joins the family of cobots: collaborative robots working together with humans in a shared workspace. The CoWelder is the world's first CE approved welding cobot package solution.

With this flexible and easy-to-program cobot you can increase work efficiency, releasing skilled welders for other tasks, therefore saving time and costs.

The CoWelder can improve your small and large batch component production, delivering uniform welds of continuous high quality.

EASY INSTALLATION AND PROGRAMMING

It takes little time to install the CoWelder in your existing production and you can start welding on the first day.

Programming the CoWelder is simple and intuitive. Staff with no programming experience can easily learn how to operate the robot. Build up a catalogue of workpieces each with an attached program and switch between them as required during a workday.

The CoWelder is an affordable step into automation and has a short payback period.

CE APPROVED PACKAGE

All robot installations require CE marking according to European legislation (The Machinery Directive 2006/42/EC) with the purpose of ensuring the safety of the user. The CoWelder package includes a CE marking, so no complicated approval process is required. Just follow the instructions and get ready to use the CoWelder from day one.



TECHNICAL DATA

WELDING MACHINES



COWELDER PACKAGE SOLUTIONS

MIG						TIG
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	OMEGA ² COWELDER 300 AIR-COOLED	SIGMA SELECT 400 SYNERGIC AIR-COOLED	SIGMA SELECT 400 PULSE AIR-COOLED	SIGMA SELECT IAC 400 SYNERGIC AIR-COOLED	SIGMA SELECT 400 SYNERGIC WATER-COOLED	SIGMA SELECT 400 PULSE WATER-COOLED	SIGMA SELECT IAC 400 PULSE WATER-COOLED	PI 350 AC/DC WATER-COOLED
Current range, A	15-300	15-400	15-400	15-400	15-400	15-400	15-400	5-350
Mains voltage +/- 15%, V	3x400	3x400	3x400	3x400	3x400	3x400	3x400	3x400
Fuse, A	10	20	20	20	20	20	20	25
Duty cycle 100%/40°C, A/V	175/22.8	300/29	280/28.0	300/29	300/29	280/28.0	280/28.0	290/21.6
Duty cycle 60%/40°C, A/V	195/23.8	370/32.5	350/31.5	370/32.5	370/32.5	350/31.5	350/31.5	350/24.0
Duty cycle max./40°C, A/%V	300/24/29.0	400/50/34.0	400/40/34.0	400/50/34.0	400/50/34.0	400/40/34.0	400/40/34.0	350/60/24.0
Duty cycle 100%/20°C, A/V	230/25.5	345/31.5	310/29.5	345/31.5	345/31.5	310/29.5	310/29.5	340
Duty cycle 60%/20°C, A/V	245/26.3							350
Open circuit voltage, V	52	65-70	65-70	65-70	65-70	65-70	65-70	95
Protection class	IP 23S	IP 23	IP 23	IP 23	IP 23	IP 23	IP 23	IP 23
Norm	EN/IEC60974-1. EN/IEC60974-5. EN/IEC60974-10	IEC60974-1. IEC60974-5. IEC60974-10 Cl. A		IEC60974-1. IEC60974-5. IEC60974-10 Cl. A		IEC60974-1. IEC60974-5. IEC60974-10 Cl. A		EN/IEC60974-1. EN/IEC60974-2. EN/IEC60974-3 EN/IEC90974-10
Dimensions (H x W x L), mm	550x250x640	700x260x735		700x260x735		700x260x735		980x545x1090
Weight, kg	26	52		52		52		72
COOLING UNIT					MCU 1300		MCU^{*)}	
Cooling capacity (1 l/min.), W	-	-		1300		1200		
Tank capacity, l	-	-		5		3.5		
Max. pressure, bar	-	-		5		3		
Max. temperature, °C	-	-		70		-		
Dimensions (HxWxL), mm	-	-		207x260x680		-		
Weight, kg	-	-		20		-		

*) Integrated cooling unit



TECHNICAL DATA UR5

COWELDER 6-JOINTED ROBOT ARM	
Power consumption, watts	Approx. 200 (using a typical program)
Power supply	100-240 VAC, 50-60 Hz
Ambient temperature	The robot can work in the 0-40° range
Collaborative operation	15 advanced safety functions tested according to EN ISO 13849:2008 PL d EN ISO 10218-1:2011, 5.4.3
Programming	Graphical user interface on 12" touchscreen
Repetitive accuracy, mm	+/- 0.1
Speed of rotating joints	Up to 180° per second
Rotation of joints	+/- 360°
Degree of freedom	6 rotating joints
Working radius, mm	850
Payload ability, kg	5
Weight*), kg	18.4

*) Total weight of CoWelder UR5 solution excl. welding machine: 105 kg



COWELDER™ UR5

Packages

IN THE SUPPLY OF THE PRODUCT PACKAGES DESCRIBED ON PAGES 7-15 THE FOLLOWING IS INCLUDED:

UR5 robot – working radius 850 mm

ARC safety control. Ensuring the robot will only process/weld when a welding arc is present.

ROBOT motion safety control. Ensuring welding process and arc ignition are not initiated until the robot is in the right execution mode.

Migatronic programming templates

IGC® Intelligent Gas Control

Robot welding torch, 4 m length

CE-marking

Robot controller incl. teach pendant with E-stop and 5 m cable

Free drive button on the 6th joint of the robot arm for easy programming of the robot

Start/stop unit with 5 m cable

Mobile table mount, auto-balancing system

Standard robot torch holder

Calibration certificate

Instruction manual

MAXIMUM
... FLEXIBILITY

ART NO. 79115001

CoWelder/UR5/Omega² CoWelder 300
Advanced air-cooled MIG/MAG welding machine



Omega² CoWelder 300 Advanced
Control panel

Air-cooled

Analog communication

Synergic programs

Duty cycle: 100% 175 A, 60% 195 A

Earth cable 3 m 35 mm²

Rolls 1.0 V

Torch 4m AB 350 GC

ART NO. 79115002

CoWelder/UR5/Sigma Select 400

Synergic air-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel

Air-cooled

Fully digital communication Profinet

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, MigaLog

Duty cycle: 100% 300 A, 60% 370 A

Earth cable 3m 70 mm²

Rolls 1.2 V

Torch 4m AB 360 ECO

Possibility of upgrade

MAXIMUM
... FLEXIBILITY

ART NO. 79115003

CoWelder/UR5/Sigma Select 400 W
Synergic water-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel



Water-cooled

Fully digital communication Profinet

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, Migalog

Duty cycle: 100% 300 A, 60% 370 A

Earth cable 3m 70 mm²

Rolls 1.2 V

Torch 4m AB 500 W

Possibility of upgrade

ART NO. 79115004

CoWelder/UR5/Sigma Select 400
Pulse air-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel

Air-cooled

Fully digital communication Profinet

Pulse welding package

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, MigaLog

Duty cycle: 100% 300 A, 60% 370 A

Earth cable 3m 70 mm²

Rolls 1.2 V

Torch 4m AB 360 ECO

Possibility of upgrade

MAXIMUM
... FLEXIBILITY

ART NO. 79115005

CoWelder/UR5/Sigma Select 400
Pulse water-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel

Water-cooled

Fully digital communication Profinet

Pulse welding package

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, MigaLog

Duty cycle: 100% 300 A, 60% 370 A

Earth cable 3m 70 mm²

Rolls 1.2 V

Torch 4m AB 500 W

Possibility of upgrade

ART NO. 79115006

CoWelder/UR5/Sigma Select IAC 400
Synergic air-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel

Air-cooled

Fully digital communication Profinet

IAC^{*)} hardware, including SW license

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, MigaLog

Duty cycle: 100% 280 A, 60% 350 A

Earth cable 3m 70 mm²

Rolls 1.2 V

Torch 4m AB 360 ECO

Possibility of upgrade

^{*)} Intelligent Arc Control (IAC) makes difficult downward welding of root passes easy, even for less experienced welders. With a 100% stable and focused short arc, you achieve complete fusion in root passes. This increases the quality of each weld and your product.

MAXIMUM
... FLEXIBILITY

ART NO. 79115007

CoWelder/UR5/Sigma Select IAC 400
Synergic water-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel



Water-cooled

Fully digital communication Profinet

IAC^{*)} hardware, including SW license

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, MigaLog

Duty cycle: 100% 280 A, 60% 350 A

Earth cable 3m 70 mm²

Rolls 1.2 V

Torch 4m AB 500 W

Possibility of upgrade

^{*)} Intelligent Arc Control (IAC) makes difficult downward welding of root passes easy, even for less experienced welders. With a 100% stable and focused short arc, you achieve complete fusion in root passes. This increases the quality of each weld and your product.

ART NO. 79115050

CoWelder/UR5/Pi 350 AC/DC, IGC®, water-cooled TIG welding machine



Pi 350 AC/DC
Control panel

Water-cooled

Fully digital communication Profinet

Programs

Function package: TIG DC og AC/DC, Puls, SYNERGY PLUS™, TIG-A-Tack™, D.O.C.® function (Dynamic Oxide Control)

Duty cycle: 100% 290 A, 60% 350 A

Torch 4 m AD250

MAXIMUM
... FLEXIBILITY

ART NR. 79115051

CoWelder/UR5/Pi 350 AC/DC, IGC®, water-cooled TIG welding machine with CWF



Pi 350 AC/DC
Control panel

Water-cooled

Fully digital communication Profinet

Programs

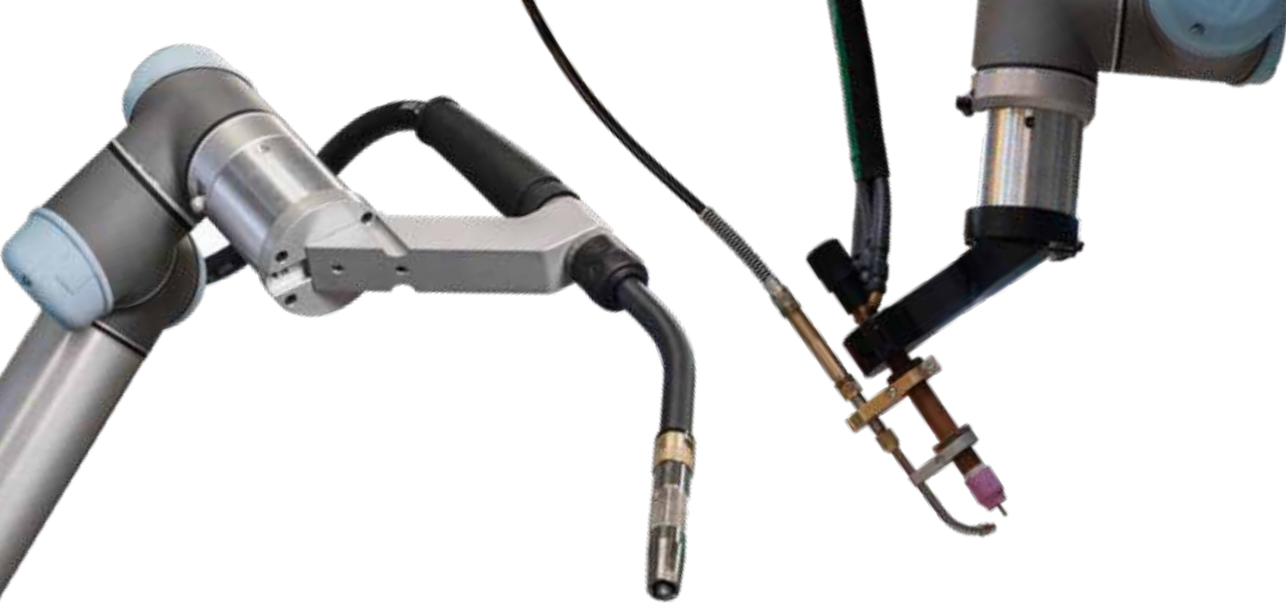
Function package: TIG DC og AC/DC, Puls, SYNERGY PLUS™, TIG-A-Tack™, D.O.C.® function (Dynamic Oxide Control)

Duty cycle: 100% 290 A, 60% 350 A

Torch 4 m AD250 with CWF wire guide

CWF cold wire feeding: programs for control of quantity of wire during welding

Possibility of synchronised pulsation of wire



TECHNICAL DATA UR10

COWELDER 6-JOINTED ROBOT ARM

Power consumption, watts	Approx. 300 (using a typical program)
Power supply	100-240 VAC, 50-60 Hz
Ambient temperature	The robot can work in the 0-40° range
Collaborative operation	15 advanced safety functions tested according to EN ISO 13849:2008 PL d EN ISO 10218-1:2011, 5.4.3
Programming	Graphical user interface on 12" touchscreen
Repetitive accuracy, mm	+/- 0.1
Speed of rotating joints	Up to 180° per second
Rotation of joints	+/- 360°
Degree of freedom	6 rotating joints
Working radius, mm	1300
Payload ability, kg	10
Weight, kg	28.9

*) Total weight of CoWelder UR10 solution excl. welding machine: 115.5 kg



COWELDER™ UR10

Packages

IN THE SUPPLY OF THE PRODUCT PACKAGES DESCRIBED ON PAGES 18-26 THE FOLLOWING IS INCLUDED:

UR10 robot – working radius 1300 mm

ARC safety control. Ensuring the robot will only process/weld when a welding arc is present.

ROBOT motion safety control. Ensuring welding process and arc ignition are not initiated until the robot is in the right execution mode.

Migatronic programming templates

IGC® Intelligent Gas Control

Robot welding torch, 4 m length

CE-marking

Robot controller incl. teach pendant with E-stop and 5 m cable

Free drive button on the 6th joint of the robot arm for easy programming of the robot

Start/stop unit with 5 m cable

Mobile table mount, auto-balancing system

Standard robot torch holder

Calibration certificate

Instruction manual

ART NO. 79115011

CoWelder/UR10/Omega² CoWelder 300

Advanced air-cooled MIG/MAG welding machine



Air-cooled

Analog communication

Synergic programs

Duty cycle: 100% 175 A, 60% 195 A

Earth cable 3 m 35 mm²

Rolls 1.0 V

Torch 4m AB 350 GC

ART NO. 79115012

CoWelder/UR10/Sigma Select 400
Synergic air-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel

Air-cooled

Fully digital communication Profinet

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, MigaLog

Duty cycle: 100% 300 A, 60% 370 A

Earth cable 3 m 70 mm²

Rolls 1.2 V

Torch 4m AB 360 ECO

Possibility of upgrade

ART NO. 79115013

CoWelder/UR10/Sigma Select 400

Synergic water-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel

Water-cooled

Fully digital communication Profinet

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, MigaLog

Duty cycle: 100% 300 A, 60% 370 A

Earth cable 3 m 70 mm²

Rolls 1.2 V

Torch 4m AB 500 W

Possibility of upgrade

MAXIMUM
... FLEXIBILITY

ART NO. 79115014

CoWelder/UR10/Sigma Select 400
Pulse air-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel



Air-cooled

Fully digital communication Profinet

Pulse welding package

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, MigaLog

Duty cycle: 100% 300 A, 60% 370 A

Earth cable 3 m 70 mm²

Rolls 1.2 V

Torch 4m AB 360 ECO

Possibility of upgrade

ART NO. 79115015

CoWelder/UR10/Sigma Select 400
Pulse water-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel

Water-cooled

Fully digital communication Profinet

Pulse welding package

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, MigaLog

Duty cycle: 100% 300 A, 60% 370 A

Earth cable 3 m 70 mm²

Rolls 1.2 V

Torch 4m AB 500 W

Possibility of upgrade

ART NO. 79115016

CoWelder/UR10/Sigma Select IAC 400
Synergic air-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel



Air-cooled

Fully digital communication Profinet

IAC^{*)} hardware, including SW license

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, MigaLog

Duty cycle: 100% 280 A, 60% 350 A

Earth cable 3 m 70 mm²

Rolls 1.2 V

Torch 4m AB 360 ECO

Possibility of upgrade

^{*)} Intelligent Arc Control (IAC) makes difficult downward welding of root passes easy, even for less experienced welders. With a 100% stable and focused short arc, you achieve complete fusion in root passes. This increases the quality of each weld and your product.

ART NO. 79115017

CoWelder/UR10/Sigma Select IAC 400
Synergic water-cooled MIG/MAG welding machine



Sigma Select 400
Graphic Control panel

Water-cooled

Fully digital communication Profinet

IAC^{*)} hardware, including SW license

Synergic programs – program package: Standard

Function package: Miga Job Control, DUO Plus, Sequence, Sequence Repeat, MigaLog

Duty cycle: 100% 280 A, 60% 350 A

Earth cable 3 m 70 mm²

Rolls 1.2 V

Torch 4m AB 500 W

Possibility of upgrade

^{*)} Intelligent Arc Control (IAC) makes difficult downward welding of root passes easy, even for less experienced welders. With a 100% stable and focused short arc, you achieve complete fusion in root passes. This increases the quality of each weld and your product.

ART NR. 79115060

CoWelder/UR10/Pi 350 AC/DC, IGC®, water-cooled TIG welding machine



Pi 350 AC/DC
Control panel

Water-cooled

Fully digital communication Profinet

Programs

Function package: TIG DC og AC/DC, Puls, SYNERGY PLUS™, TIG-A-Tack™, D.O.C.® function (Dynamic Oxide Control)

Duty cycle: 100% 290 A, 60% 350 A

Torch 4 m AD250

ART NR. 79115061

CoWelder/UR10/Pi 350 AC/DC, IGC®, water-cooled TIG welding machine with CWF



Pi 350 AC/DC
Control panel

Water-cooled

Fully digital communication Profinet

Programs

Function package: TIG DC og AC/DC, Puls, SYNERGY PLUS™, TIG-A-Tack™, D.O.C.® function (Dynamic Oxide Control)

Duty cycle: 100% 290 A, 60% 350 A

Torch 4 m AD 250 with CWF wire guide

CWF cold wire feeding: programs for control of quantity of wire during welding

Possibility of synchronised pulsation of wire



FUNCTION PACKAGE DESCRIPTION

MIGA JOB CONTROL

A clever digital memory

Take advantage of a digital memory in your welding machine - save your favourite welding settings and recall them anytime you want. Miga Job Control makes it easy to find your routine settings and start welding right away.

DUO PLUS

For a perfect finish

Get stunning TIG-like welds with a MIG/MAG welding machine. DUO Plus technology automatically ensures a perfect final touch. It works in all materials, for all welding positions and all welders can do it. It's quite simple.

SEQUENCE

Tab your way to the perfect settings

The Sequence function makes it possible for you to save up to 9 personal sequences. Switch between them with just a tap on the welding torch. Use Sequence for mounting and assembly, for instance where welders carry out many different welds during their workday.

SEQUENCE REPEAT

Invent your own arc

The Sequence Repeat technology provides maximum freedom to construct the ideal arc for your specific welding tasks. Link together individual sequences and customise welding cycles.

MIGALOG

Register every weld

Keep track of your welding data with MigaLog software. Analyse and document your work. Use Miga-Log to extract conclusive evidence for verification in accordance with EN and ISO welding standards.

TIG-A TACK™

The ultimate fixation

Make extremely small and precise TIG-A-Tack™ fixations without root protection gas in austenitic stainless steel. The fixations are invisible in the final weld seam. Use TIG-A-Tack™ for quick tack welding of tubes, pipes or plates of austenitic stainless steel.

D.O.C.® - DYNAMIC OXIDE CONTROL

Quicker AC welding

D.O.C.® increases welding speed by 30 % and reduces your consumption of both energy and tungsten electrodes. D.O.C.® ensures a controlled, narrow cleaning zone when welding aluminium.



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MAXIMUM
... FLEXIBILITY
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We reserve the right to make corrections in the event of a misprint.

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MIGATRONIC
WELDING VALUE