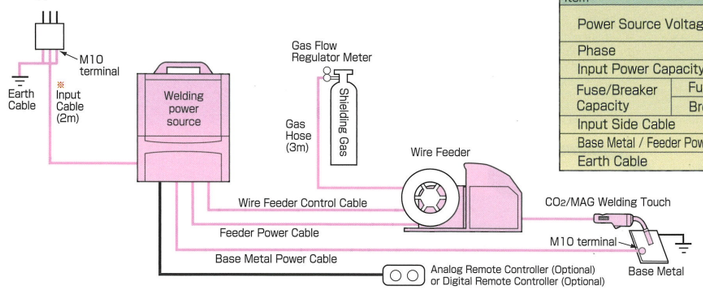
●Connection Diagram

Colors indicate standard composition



※2m Input Cable is attached to Welding Power Source.

■Input Power Capacity and Cable Specifications

Item		Model Name /	DM-350
Power Source Voltage		V	400±15% (Inform input voltage when ordering)
Phase		–	3 phase
Input Power Capacity		kVA	more than 20
Fuse/Breaker Capacity	Fuse	A	50
	Breaker	A	50
Input Side Cable		mm^2	more than 4
Base Metal / Feeder Power Cable		mm^2	38
Earth Cable		mm^2	more than 4

Standard Composition and Specifications

■Welding Power Source

•Welding Power Source	type	DM-350 (Standard)	DM-350 (CE-Marking)
Rated Input Voltage	V	400±15% (Inform input voltage when ordering)	
Phase		3 phase	
Rated Input	kVA	18 (15kW)	
Rated Output Current	A	350	
Rated Load Voltage	V	31.5	
Range of Output Current	A	30~350	
Range of Output Voltage	V	12~36	
Max. no-load Voltage	V	58	
Rated Duty Cycle	%	60	
Dimensions (W×D×H)	mm	250×640×370 (except handle)	
Weight	kg	30	

■Wire Feeder

•Wire Feeder	type	CM-7403 (Standard)	CM-7403-D (CE-Marking)
Applicable Wire Size	mm	(0.8)、0.9、1.0、1.2、(1.4)、(1.6)	
Wire type		Solid Wire, Flux-cored Wire	
Wire Feeding Speed	m/min	Max 22	
Weight	kg	14	17
Dimensions (W×D×H)	mm	215×543×350	243×732×402

■CO_2/MAG Welding Torch

•CO_2/MAG Welding Torch	type	BT3500-30	BT3510-30
Rated Current	A	350	
Applicable Wire Size	mm	(0.9)、(1.0)、1.2	(0.9)、(1.0)、1.2、(1.4)、(1.6)
Duty Cycle	%	30	60
Cooling Method		Air-Cooled	
Cable Length	m	3、(4.5)、(6)	

■Wire Feeder Control Cable (10 pins)

•Wire Feeder Control Cable	DM350 Standard Spec.	DM350 CE-Marking Spec.
Standard Cable	1.5m Cable is attached to Wire Feeder.	Choose cable from the following. BKCPP-1002 (2m) BKCPP-1007 (5m) BKCPP-1012 (10m)
Extention Cable	BKCPJ-1005 (5m)、BKCPJ-1010 (10m) BKCPJ-1015 (15m)、BKCPJ-1020 (20m)	

■Gas Hose

•Gas Hose	DM350 Standard Spec.	DM350 CE-Marking Spec.
Standard	3m Gas Hose is attached to Wire Feeder.	
Extention	BKGG-0605 (5m)、BKGG-0610 (10m) BKGG-0615 (15m)、BKGG-0620 (20m)	

■Wire Feeder Power Cable

•Wire Feeder Power Cable	DM350 Standard Spec.	DM350 CE-Marking Spec.
Standard Cable	Choose cable from the following. BKPDT-3802 (2m) BKPDT-3807 (5m) BKPDT-3812 (10m) BKPDT-3817 (15m) BKPDT-3822 (20m)	Choose cable from the following. BKPDJ-3802 (2m) BKPDJ-3807 (5m) BKPDJ-3812 (10m) BKPDJ-3817 (15m) BKPDJ-3822 (20m)

■Base Metal Power Cable

•Base Metal Power Cable	DM350 Standard Spec.	DM350 CE-Marking Spec.
Standard Cable	Choose cable from the following. BKPDT-3802 (2m) BKPDT-3807 (5m) BKPDT-3812 (10m) BKPDT-3817 (15m) BKPDT-3822 (20m)	

Optional

■Remote Control Box

Analog Remote Controller

●Analog Remote Controller

Name	Part numbers
Analog Remote Controller (3m Cable is attached)	K5416H00
Exention Cable	BKCPJ-0605 (5m)
	BKCPJ-0610 (10m)
	BKCPJ-0615 (15m)
	BKCPJ-0620 (20m)

Digital Remote Controller

●Digital Remote Controller

Name	Part numbers
Digital Remote Controller	E-2454
Control Cable	BKCAN-0410 (10m)
	BKCAN-0420 (20m)
CAN Communication Board	K5422B00

■Wheel Kit

Part numbers : K5416B

This is convenient for the works, in which the power source is moved frequently. The rubber feet are attached originally.

In accordance with DAIHEN's policy to make continuing improvements,design and/or specifications are subject to change without notice and without any obligation on the part of manufacturer.

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OTC DAIHEN Corporation

CO_2/MAG

DM350

CO_2/MAG Automatic Welding Machine

NEW

Digital Inverter Welding Machine D SERIES

CO_2/MAG Welding Machine, pursuing Higher Quality and Efficiency

- High Quality Welding in low current range
- Spatter Free with Digital Electronic Reactor
- Stable Welding Quality by Penetration Adjustment Function
- Perfect Arc Starts for reliable welding operations
- Standard 4 Roll Feeder type with Encoder

DAIHEN Corporation

Digital Control creates new CO_2/MAG Welding World!!!

The Newest Advanced Welding Machine with new user-friendly functions, changing conventional welding machines.

TRUE DIGITAL

INVERTER
DM350

New Functions with High Quality and High Efficiency Welding

● Less Spatter Generation

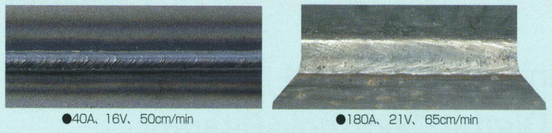
High accurate control of current waveform in the short circuit period granulates and generates fewer spatters.

■ An example of accurate current waveform control

● Stable arc control within full range of current

Stable Welding Control from 30A to 350A. Excellent for complicated joint welding and out of position welding.

■ Bead Appearance

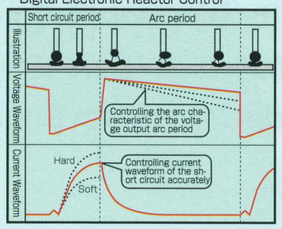


●40A、16V、50cm/min　　●180A、21V、65cm/min

● Digital Electronic Reactor Control which supports high quality welding

OTC s original Digital Electronic Reactor controls output voltage accurately not only in the short circuit period, but also in the arc period.

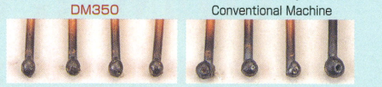
■Conceptual diagram of newly developed Digital Electronic Reactor Control



● Substantially improved the instantaneous arc starts by digital turbo start function and digital antistick

By standardizing the diameter of the wire point, stable arc starts are achieved for Spatter Free Welding. With automatic welding the number of start errors and down time are drastically reduced.

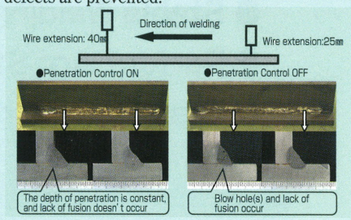
DM350　　Conventional Machine



●The wire points are small and same size　●The wire points are irregular and not same size

● Standard Feature: Penetration Adjustment Function, contributes to the stabilization of the welding quality

Even when the wire extension is changed while welding, penetration is maintained and welding defects are prevented.



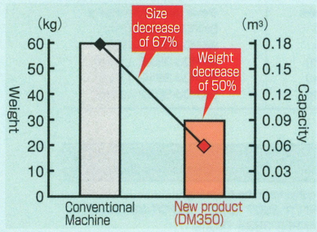
● Adjustment of arc characteristic provides various selection of arc control

■ Arc characteristic adjustment

HARD	SOFT
· Improvement of stability for high speed welding · Improvement of efficiency of out of position welding · Arc stability control when the extension cable is lengthened · Hard arc feeling is required	· Reduce spatter generation · Secure the flat bead · Improvement of high current weldability · Soft arc feeling is required

● Substantially small size and light weight

A combination of 80kHz (Output Frequency) high speed inverter circuit by OTC's original Soft Switching Control and digital control provides substantially small size and light weight.



● Touch panel control type for user friendly operation and layout

New touch panel control based with One Key One Operations and LED indications

Digital Meter easily read in dark places

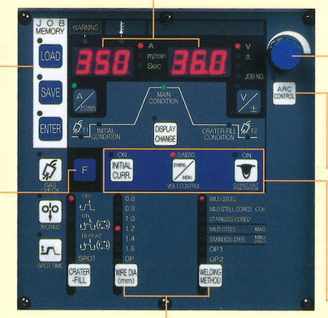
Digital Display of current and voltage while welding, along with the average current or voltage when welding is complete. Digital Diagnostic Display of error codes for troubleshooting

Welding condition memory function

Welding memory play back function of welding conditions by one touch control. Repeatability of welding conditions and for welding efficiency.

Function Key

Front Panel control functions instead of setting switches inside welding power source, so operators can easily set the special functions through the user friendly Touch Control Panel



Easy to set the conditions by Dial

Setting of the Amps and Volts conditions accurately such as 1A and 0.1V.

Arc characteristics

Arc type choices selectable via front touch panel control for a variety of applications

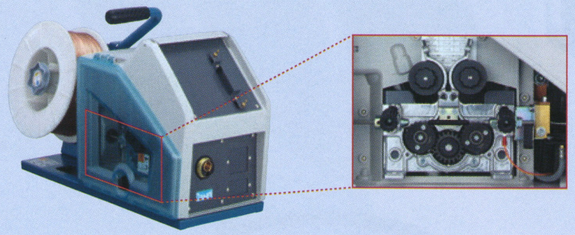
A variety of functions

Touch Panel control for user friendly operation for various functions to achieve high quality welding

A choice of the welding modes

Easy set up of the welding wire and wire diameter by touch panel with LED indications of present setting at a glance.

Pursuit of design, safety functions and operatability



It will be realized easy replacement of main consumable parts,e.g., feed roll, pressure roll, centure guide and outlet guide.

Image of replacement

●Increasing of safety !

Increasing of insulation efficiency by using of resin for main body cover, it will be reduced the risk of electrical shock.

●Easy to operate !

- Superior caring is realized by both of easy handling grip and balance.
- Easy replacement of consumable parts with short time is realized.

●Superior long life time !

Reducing the damaged risk from water and dust, it make reducing the risk of damage. (Protection class IP23)

User Friendly Design and Operation

●5 welding types can correspond with 16 type's wire diameter. With option soft, also Aluminum can be weld.

■DM350 Welding Modes

Wire type	Gas	Wire diameter (mmφ)	Wire type	Gas	Wire diameter (mmφ)
Mild Steel Solid	CO_2	0.8	Mild Steel Cored	CO_2	1.2
		0.9			1.4
		1.0	Stainless Steal Solid	MIG [98%Ar + 2%O_2]	0.8
		1.2			0.9
	MAG [80%Ar + 20%CO_2]	0.8			1.0
		0.9			1.2
		1.0	Stainless Steal Cored	CO_2	0.9
		1.2			1.2

●Double Operation Type for the first time in the CO_2/MAG Welding world.

Two types of Optional Remote Controllers are available for setting welding conditions. Analog Remote Pendant or a Digital Remote Pendant for a more accurate control of welding conditions.

●Easy to control the welding condition of the welding power source intensively or connect with Automatic Machine and Robots.

Possible to equip communications board (CAN) of high expandability as an option. Easy to join with personal computers, automatic machines and robots.

●Soft Arc Mode Standard

For soft arc, select Soft Arc Mode by Function Key. (Soft arc applicable mode:CO_2 mild steel solid 0.9,1.0,1.2)