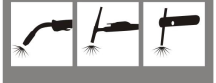
EN IT FR ES DE RU PT
NL EL RO SV CS HR-SR
PL FI DA NO SL SK HU
LT ET LV BG AR

(EN)	INSTRUCTION MANUAL
(IT)	MANUALE D'ISTRUZIONE
(FR)	MANUEL D'INSTRUCTIONS
(ES)	MANUAL DE INSTRUCCIONES
(DE)	BEDIENUNGSANLEITUNG
(RU)	РУКОВОДСТВО ПОЛЬЗОВАТЕЛЯ
(PT)	MANUAL DE INSTRUÇÕES
(NL)	INSTRUCTIEHANDLEIDING
(EL)	ΕΓΧΕΙΡΙΔΙΟ ΧΡΗΣΗΣ
(RO)	MANUAL DE INSTRUCŢIUNI
(SV)	BRUKSANVISNING
(CS)	NÁVOD K POUŽITÍ
(HR-SR)	PRIRUČNIK ZA UPOTREBU
(PL)	INSTRUKCJA OBSŁUGI
(FI)	OHJEKIRJA
(DA)	INSTRUKTIONSMANUAL
(NO)	BRUKERVEILEDNING
(SL)	PRIROČNIK Z NAVODILI ZA UPORABO
(SK)	NÁVOD NA POUŽITIE
(HU)	HASZNÁLATI UTASÍTÁS
(LT)	INSTRUKCIJŲ KNYGELĖ
(ET)	KASUTUSJUHEND
(LV)	ROKASGRĀMATA
(BG)	РЪКОВОДСТВО С ИНСТРУКЦИИ
(AR)	دليل التشغيل

HyperWelding
MIG 300

MIG-MAG • TIG (DC) • MMA



▶ (EN)	*Professional MIG-MAG, TIG (DC), MMA welding machines with inverter.*
▶ (IT)	*Saldatrici professionali ad inverter MIG-MAG, TIG (DC), MMA.*
▶ (FR)	*Postes de soudage professionnels à inverseur MIG-MAG, TIG (DC), MMA.*
▶ (ES)	*Soldadoras profesionales con inverter MIG-MAG, TIG (DC), MMA.*
▶ (DE)	*Professionelle Schweißmaschinen MIG-MAG, TIG (DC), MMA mit Invertertechnik.*
▶ (RU)	*Профессиональные сварочные аппараты с инвертером MIG-MAG, TIG (DC), MMA.*
▶ (PT)	*Aparelhos de soldar profissionais com variador de freqüência MIG-MAG, TIG (DC), MMA.*
▶ (NL)	*Professionele lasmachines met inverter MIG-MAG, TIG (DC), MMA.*
▶ (EL)	*Επαγγελματικοί συγκολλητές με ινβέρτερ MIG-MAG, TIG (DC), MMA.*
▶ (RO)	*Aparate de sudură cu invertor pentru sudura MIG-MAG, TIG (DC), MMA, destinate uzului profesional.*
▶ (SV)	*Professionella svetsar med växelriktare MIG-MAG, TIG (DC), MMA.*
▶ (CS)	*Profesionální svařovací agregáty pro svařování MIG-MAG, TIG (DC), MMA.*
▶ (HR-SR)	*Profesionalni stroj za varenje sa inverterom MIG-MAG, TIG (DC), MMA.*
▶ (PL)	*Profesjonalne spawarki inwerterowe MIG-MAG, TIG (DC), MMA.*
▶ (FI)	*Ammattihitsauslaitteet vaihtosuuntaajalla MIG-MAG, TIG (DC), MMA.*
▶ (DA)	*Professionelle svejsemaskiner med inverter MIG-MAG, TIG (DC), MMA.*
▶ (NO)	*Profesjonelle sveisebrenner med inverter MIG-MAG, TIG (DC), MMA.*
▶ (SL)	*Profesionalni varilni aparati s frekvenènim menjalnikom MIG-MAG, TIG (DC), MMA.*
▶ (SK)	*Profesionálne zváracie agregáty pre zváranie MIG-MAG, TIG (DC), MMA.*
▶ (HU)	*Professzionális MIG-MAG, TIG (DC), MMA inverthegesztők.*
▶ (LT)	*Profesionalūs suvirinimo aparatai su Inverteriu MIG-MAG, TIG (DC), MMA.*
▶ (ET)	*Inverter MIG-MAG, TIG (DC), MMA professionaalsed keevitusaparaadid.*
▶ (LV)	*Profesionālie metināšanas aparāti ar invertoru MIG-MAG, TIG (DC), MMA metināšanai.*
▶ (BG)	*Професионални инверторни електрожени за заваряване MIG-MAG, TIG (DC), MMA.*
▶ (AR)	ألات لحام احترافية ذات محول للحام بالقوس المعدني بالغاز الخامل- القوس المعدني بالغاز النشط، لحام بغاز التنجستين الخامل (تيار مستمر)، لحام بالقوس المعدني اليدوي.

(EN)	EXPLANATION OF DANGER, MANDATORY AND PROHIBITION SIGNS.
(IT)	LEGENDA SEGNALI DI PERICOLO, D'OBBLIGO E DIVIETO.
(FR)	LÉGENDE SIGNAUX DE DANGER, D'OBLIGATION ET D'INTERDICTION.
(ES)	LEYENDA SEÑALES DE PELIGRO, DE OBLIGACIÓN Y PROHIBICIÓN.
(DE)	LEGENDE DER GEFAHREN-, GEBOTS- UND VERBOTSZEICHEN.
(RU)	ЛЕГЕНДА СИМВОЛОВ БЕЗОПАСНОСТИ, ОБЯЗАННОСТИ И ЗАПРЕТА.
(PT)	LEGENDA DOS SINAIS DE PERIGO, OBRIGAÇÃO E PROIBIDO.
(NL)	LEGENDE SIGNALEN VAN GEVAAR, VERPLICHTING EN VERBOD.
(EL)	ΛΕΖΑΝΤΑ ΣΗΜΑΤΩΝ ΚΙΝΔΥΝΟΥ, ΥΠΟΧΡΕΩΣΗΣ ΚΑΙ ΑΠΑΓΟΡΕΥΣΗΣ.
(RO)	LEGENDĂ INDICATOARE DE AVERTIZARE A PERICOLELOR, DE OBLIGARE ŞI DE INTERZICERE.
(SV)	BILDTEXT SYMBOLER FÖR FARA, PÅBUD OCH FÖRBUD.
(CS)	VYSVĚTLIVKY K SIGNÁLŮM NEBEZPEČÍ, PŘÍKAZŮM A ZÁKAZŮM.

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(EN) DANGER OF ELECTRIC SHOCK - (IT) PERICOLO SHOCK ELETTRICO - (FR) RISQUE DE CHOC ÉLEC
ПОРАЖЕНИЯ ЭЛЕКТРИЧЕСКИМ ТОКОМ - (PT) PERIGO DE CHOQUE ELÉTRICO - (NL) GEVAAR
(SV) FARA FÖR ELEKTRISK STÖT - (CS) NEBEZPEČÍ ZÁSAHU ELEKTRICKÝM PROUDEM - (HR-SR
SÄHKÖISKUN VAARA - (DA) FARE FOR ELEKTRISK STØD - (NO) FARE FOR ELEKTRISK STØT - (SL) N
- (HU) ÁRAMÜTÉS VESZÉLYE - (LT) ELEKTROS SMŪGIO PAVOJUS - (ET) ELEKTRILÖÖGIOHT - (LV)

(EN) DANGER OF WELDING FUMES - (IT) PERICOLO FUMI DI SALDATURA - (FR) DANGE
ENTWICKLUNG VON RAUCHGASEN BEIM SCHWEISSEN - (RU) ОПАСНОСТЬ ДЫМОВ СВАРКИ
ΚΑΠΝΩΝ ΣΥΓΚΟΛΛΗΣΗΣ - (RO) PERICOL DE GAZE DE SUDURĂ - (SV) FARA FÖR RÖK F
PRILIKOM VARENJA - (PL) NIEBEZPIECZEŃSTWO OPARÓW SPAWALNICZYCH - (FI) HITSAU
(SL) NEVARNOST VARILNEGA DIMA - (SK) NEBEZPEČENSTVO VÝPAROV ZO ZVÁRANIA -
DŪMŲ PAVOJUS - (ET) KEEVITAMISEL SUITSU OHT - (LV) METINĀŠANAS IZTVAIKOJUMU BĪ

(EN) DANGER OF EXPLOSION - (IT) PERICOLO ESPLOSIONE - (FR) RISQUE D'EXPLOSION - (ES)
DE EXPLOSÃO - (NL) GEVAAR ONTPLOFFING - (EL) ΚΙΝΔΥΝΟΣ ΕΚΡΗΞΗΣ - (RO) PERICOL DE E
EKSPLOZIJE - (PL) NIEBEZPIECZEŃSTWO WYBUCHU - (FI) RÄJÄHDYSVAARA - (DA) SPRÆNGFA
VÝBUCHU - (HU) ROBBANÁS VESZÉLYE - (LT) SPROGIMO PAVOJUS - (ET) PLAHVATUSOHT

(EN) WEARING PROTECTIVE CLOTHING IS COMPULSORY - (IT) OBBLIGO INDOSSARE INDUMENT
DE LLEVAR ROPA DE PROTECCIÓN - (DE) DAS TRAGEN VON SCHUTZKLEIDUNG IST PFLICHT - (RU)
DE PROTEÇÃO - (NL) VERPLICHT BESCHERMENDE KLEDIJ TE DRAGEN - (EL) ΥΠΟΧΡΕΩΣΗ Ν
OBLIGATORIE - (SV) OBLIGATORISKT ATT BÄRA SKYDDSPLAGG - (CS) POVINNÉ POUŽITÍ OCH
NOSZENIA ODZIEŻY OCHRONNEJ - (FI) SUOJAVAATETUKSEN KÄYTTÖ PAKOLLISTA - (DA) PLIGT
OBLECITE ZAŠČITNA OBLAČILA - (SK) POVINNÉ POUŽITIE OCHRANNÝCH PROSTRIEDKOV - (H
(ET) KOHUSTUSLIK KANDA KAITSERIIETUST - (LV) PIENĀKUMS ĢĒRBT AIZSARGTĒRPUS - (BG) З

(EN) WEARING PROTECTIVE GLOVES IS COMPULSORY - (IT) OBBLIGO INDOSSARE GUANTI PROT
GUANTES DE PROTECCIÓN - (DE) DAS TRAGEN VON SCHUTZHANDSCHUHEN IST PFLICHT - (RU
DE SEGURANÇA - (NL) VERPLICHT BESCHERMENDE HANDSCHOENEN TE DRAGEN - (EL) ΥΠΟΧ
OBLIGATORIE - (SV) OBLIGATORISKT ATT BÄRA SKYDDSHANDSKAR - (CS) POVINNÉ POUŽITÍ O
NOSZENIA RĘKAWIC OCHRONNYCH - (FI) SUOJAKÄSINEIDEN KÄYTTÖ PAKOLLISTA - (DA) PLIGT
OBVEZNO NADENITE ZAŠČITNE ROKAVICE - (SK) POVINNÉ POUŽITIE OCHRANNÝCH RUKAVÍC - (H
- (ET) KOHUSTUSLIK KANDA KAITSEKINDAID - (LV) PIENĀKUMS ĢĒRBT AIZSARGCIMDUS - (BG) З

(EN) DANGER OF ULTRAVIOLET RADIATION FROM WELDING - (IT) PERICOLO RADIAZIONI UL
(ES) PELIGRO RADIACIONES ULTRAVIOLETAS - (DE) GEFAHR ULTRAVIOLETTER STRAHLUNGEN
PERIGO DE RADIAÇÕES ULTRAVIOLETAS DE SOLDADURA - (NL) GEVAAR ULTRAVIOLET STRA
- (RO) PERICOL DE RADIAŢII ULTRAVIOLETE DE LA SUDURĂ - (SV) FARA FÖR ULTRAVIOLETT
Í - (HR-SR) OPASNOST OD ULTRALJUBIČASTIH ZRAKA PRILIKOM VARENJA - (PL) NIEBEZPIE
AIHEUTTAMAN ULTRAVIOLETTISÄTEILYN VAARA - (DA) FARE FOR ULTRAVIOLETTE SVEJSEST
NEVARNOST SEVANJA ULTRAVIJOLIČNIH ŽARKOV ZARADI VARJENJA - (SK) NEBEZPEČENSTVO
IBOLYÁNTÚLI SUGÁRZÁS VESZÉLYE - (LT) ULTRAVIOLETINIO SPINDULIAVIMO SUVIRINIMO METU
ULTRAVIOLETĀ IZSTAROJUMA BĪSTAMĪBA - (BG) ОПАСНОСТ ОТ УЛТРАВИОЛЕТОВО ОБЛЪЧВА

(EN) DANGER OF FIRE - (IT) PERICOLO INCENDIO - (FR) RISQUE D'INCENDIE - (ES) PEL
DE INCÊNDIO - (NL) GEVAAR VOOR BRAND - (EL) ΚΙΝΔΥΝΟΣ ΠΥΡΚΑΓΙΑΣ - (RO) PERIC
OD POŽARA - (PL) NIEBEZPIECZEŃSTWO POŻARU - (FI) TULIPALON VAARA - (DA) B
POŽIARU - (HU) TŰZVESZÉLY - (LT) GAISRO PAVOJUS - (ET) TULEOHT - (LV) UGUNSGR

(EN)DANGEROFBURNS-(IT)PERICOLODIUSTIONI-(FR)RISQUEDEBRÛLURES-(ES)PELIGRODEQUEMA
- (NL) GEVAAR VOOR BRANDWONDEN - (EL) ΚΙΝΔΥΝΟΣ ΕΓΚΑΥΜΑΤΩΝ - (RO) PERICOL DE ARSURI - (S
NIEBEZPIECZEŃSTWO OPARZEŃ - (FI) PALOVAMMOJEN VAARA - (DA) FARE FOR FORBRÆNDINGER - (
(HU) ÉGÉSI SÉRÜLÉS VESZÉLYE - (LT) NUSIDEGINIMO PAVOJUS - (ET) PÕLETUSHAAVADE SAAMISE OH

(EN) DANGER OF NON-IONISING RADIATION - (IT) PERICOLO RADIAZIONI NON IONIZZANTI - (FR) DA
NICHTIONISIERENDER STRAHLUNGEN - (RU) ОПАСНОСТЬ НЕИОНИЗИРУЮЩЕЙ РАДИАЦИИ - (PT) PE
ΜΗ ΙΟΝΙΖΟΝΤΩΝ ΑΚΤΙΝΟΒΟΛΙΩΝ - (RO) PERICOL DE RADIAŢII NEIONIZANTE - (SV) FARA FÖR ICKE
ZRAKA - (PL) ZAGROŻENIE PROMIENIOWANIEM NIEJONIZUJĄCYM - (FI) IONISOIMATTOMAN SÄTEI
- (SL) NEVARNOST NEJONIZIRANEGA SEVANJA - (SK) NEBEZPEČENSTVO NEIONIZUJÚCEHO ZARIA
- (ET) MITTEIONISEERITUDKIIRGUSTE OHT - (LV) NEJONIZĒJOŠA IZSTAROJUMA BĪSTAMĪBA - (BG

(EN) GENERAL HAZARD - (IT) PERICOLO GENERICO - (FR) DANGER GÉNÉRIQUE - (ES)
- (PT) PERIGO GERAL - (NL) ALGEMEEN GEVAAR - (EL) ΓΕΝΙΚΟΣ ΚΙΝΔΥΝΟΣ - (RO) PE
OPASNOST - (PL) OGÓLNE NIEBEZPIECZEŃSTWO - (FI) YLEINEN VAARA - (DA) ALMEN F
NEBEZPEČENSTVO - (HU) ÁLTALÁNOS VESZÉLY - (LT) BENDRAS PAVOJUS - (ET) ÜLDIN

(EN) DO NOT USE THE HANDLE TO HANG THE WELDING MACHINE. - (IT) VIETATO UTILIZZ
D'UTILISER LA POIGNÉE COMME MOYEN DE SUSPENSION DU POSTE DE SOUDAGE - (ES)
- (DE) ES IST UNTERSAGT, DEN GRIFF ALS MITTEL ZUM AUFHÄNGEN DER SCHWEISSM
ЗА РУЧКУ - (PT) É PROIBIDO UTILIZAR A MAÇANETA COMO MEIO DE SUSPENSÃO DO
HET LASAPPARAAT AAN OP TE HANGEN - (EL) ΑΠΑΓΟΡΕΥΕΤΑΙ Η ΧΡΗΣΗ ΤΗΣ ΧΕΙΡΟΛΑ
FOLOSIREA MÂNERULUI CA MIJLOC DE SUSŢINERE A APARATULUI DE SUDURĂ - (SV)
(CS) JE ZAKÁZÁNO POUŽÍVAT RUKOJEŤ JAKO PROSTŘEDEK K ZAVĚŠENÍ SVAŘOVACÍ
STROJA ZA VARENJE - (PL) ZABRANIA SIE UŻYWANIA UCHWYTU JAKO ŚRODKA DO ZAW
RIPUSTUSVÄLINEENÄ - (DA) DET ER FORBUDT AT ANVENDE HÅNDREBET TIL AT HÆV
SVEISEMASKINEN OPP - (SL) ROČAJA NE SMETE UPORABLJATI ZA OBEŠANJE VARIL
TILOS A HEGESZTŐGÉPET A FOGANTYÚJÁNÁL FOGVA FELAKASZTANI - (LT) DRAU
- (ET) ON KEELATUD RIPUTADA KEEVITUSSEADET KASUTADES SELLEKS KÄEPIDE
- (BG) ЗАБРАНЕНО Е ДА СЕ ИЗПОЛЗВА РЪКОХВАТКАТА КАТО СРЕДСТВО ЗА ОКАЧВА

(EN) WARNING: MOVING PARTS - (IT) ATTENZIONE ORGANI IN MOVIMENTO - (FR) ATTEN
VORSICHT BEWEGUNGSELEMENTE - (RU) ВНИМАНИЕ, ЧАСТИ В ДВИЖЕНИИ - (PT) C
ΠΡΟΣΟΧΗ ΟΡΓΑΝΑ ΣΕ ΚΙΝΗΣΗ - (RO) ATENŢIE PIESE ÎN MIŞCARE -(SV) VARNING FÖR
DIJELOVI U POKRETU - (PL) UWAGA: RUCHOME CZĘŚCI MASZYNY - (FI) VARO LIIKKU
- (SL) POZOR, NAPRAVE DELUJEJO - (SK) POZOR NA POHYBUJÚCE SA SÚČASTI - (H
DETALĖS - (ET) TÄHELEPANU! LIIKUVAD MASINAOSAD - (LV) UZMANĪBU KUSTĪGĀS

(EN) MIND YOUR HANDS, MOVING PARTS - (IT) ATTENZIONE ALLE MANI, ORGANI IN MOV
LAS MANOS, ÓRGANOS EN MOVIMIENTO - (DE) AUF DIE HÄNDE ACHTEN, BEWEGUNGSE
MÃOS, ÓRGÃOS EM MOVIMENTO - (NL) OPGELET VOOR DE HANDEN, ORGANEN IN BEWE
ÎN MIŞCARE - (SV) AKTA HÄNDERNA, ORGAN I RÖRELSE - (CS) POZOR NA RUCE, POHYBU
RĘCE PRZED RUCHOMYMI CZĘŚCIAMI MASZYNY - (FI) SUOJAA KÄDET LIIKKUVILTA OSI
BEVEGELIGE DELER - (SL) PAZITE NA ROKE, NAPRAVE DELUJEJO - (SK) POZOR NA
MOZGÁSBAN VANNAK - (LT) SAUGOTI RANKAS, JUDANČIOS DETALĖS - (ET) TÄHELEPA
SEKOJIET TAM, LAI ROKAS NEPIESKARTOS KUSTĪGAJĀM DAĻĀM - (BG) ВНИМАНИЕ П

) LEGENDA OZNAKA OPASNOSTI, OBAVEZA I ZABRANA.
OBJAŚNIENIA ZNAKÓW OSTRZEGAWCZYCH, NAKAZU I ZAKAZU.
VAROITUS, VELVOITUS, JA KIELTOMERKIT.
OVERSIGT OVER FARE, PLIGT OG FORBUDSSIGNALER.
SIGNALERINGSTEKST FOR FARE, FORPLIKTELSER OG FORBUDT.
LEGENDA SIGNALOV ZA NEVARNOST, ZA PREDPISANO IN PREPOVEDANO.
VYSVETLIVKY K SIGNÁLOM NEBEZPEČENSTVA, PRÍKAZOM A ZÁKAZOM.
A VESZÉLY, KÖTELEZETTSÉG ÉS TILTÁS JELZÉSEINEK FELIRATAI.
PAVOJAUS, PRIVALOMŲJŲ IR DRAUDŽIAMŲJŲ ŽENKLŲ PAAIŠKINIMAS.
OHUD, KOHUSTUSED JA KEELUD.
BĪSTAMĪBU, PIENĀKUMU UN AIZLIEGUMA ZĪMJU PASKAIDROJUMI.
ЛЕГЕНДА НА ЗНАЦИТЕ ЗА ОПАСНОСТ, ЗАДЪЛЖИТЕЛНИ И ЗА ЗАБРАНА.
مفاتيح رموز الخطر والإلزام والحظر

TRIQUE - (ES) PELIGRO DESCARGA ELÉCTRICA - (DE) STROMSCHLAGGEFAHR - (RU) ОПАСНОСТЬ
ELEKTROSHOCK - (EL) ΚΙΝΔΥΝΟΣ ΗΛΕΚΤΡΟΠΛΗΞΙΑΣ - (RO) PERICOL DE ELECTROCUTARE -
) OPASNOST STRUJNOG UDARA - (PL) NIEBEZPIECZEŃSTWO SZOKU ELEKTRYCZNEGO - (FI)
EVARNOST ELEKTRIČNEGA UDARA - (SK) NEBEZPEČENSTVO ZÁSAHU ELEKTRICKÝM PRÚDOM
ELEKTROŠOKA BĪSTAMĪBA - (BG) ОПАСНОСТ ОТ ТОКОВ УДАР - (AR) خطر الصدمة الكهربائية

R FUMÉES DE SOUDAGE - (ES) PELIGRO HUMOS DE SOLDADURA - (DE) GEFAHR DER
- (PT) PERIGO DE FUMAÇAS DE SOLDAGEM - (NL) GEVAAR LASROOK - (EL) ΚΙΝΔΥΝΟΣ
RÅN SVETSNING - (CS) NEBEZPEČÍ SVAŘOVACÍCH DÝMŮ - (HR-SR) OPASNOST OD DIMA
SSAVUJEN VAARA - (DA) FARE P.G.A. SVEJSEDAMPE - (NO) FARE FOR SVEISERØYK -
- (HU) HEGESZTÉS KÖVETKEZTÉBEN KELETKEZETT FÜST VESZÉLYE - (LT) SUVIRINIMO
STAMĪBA - (BG) ОПАСНОСТ ОТ ПУШЕКА ПРИ ЗАВАРЯВАНЕ - (AR) خطر أدخنة اللحام

PELIGRO EXPLOSIÓN - (DE) EXPLOSIONSGEFAHR - (RU) ОПАСНОСТЬ ВЗРЫВА - (PT) PERIGO
XPLOZIE - (SV) FARA FÖR EXPLOSION - (CS) NEBEZPEČÍ VÝBUCHU - (HR-SR) OPASNOST OD
RE - (NO) FARE FOR EKSPLOSJON - (SL) NEVARNOST EKSPLOZIJE - (SK) NEBEZPEČENSTVO
- (LV) SPRĀDZIENBĪSTAMĪBA - (BG) ОПАСНОСТ ОТ ЕКСПЛОЗИЯ - (AR) خطر الانفجار

PROTETTIVI - (FR) PORT DES VÊTEMENTS DE PROTECTION OBLIGATOIRE - (ES) OBLIGACIÓN
ОБЯЗАННОСТЬ НАДЕВАТЬ ЗАЩИТНУЮ ОДЕЖДУ - (PT) OBRIGATÓRIO O USO DE VESTUÁRIO
A ΦΟΡΑΤΕ ΠΡΟΣΤΑΤΕΥΤΙΚΑ ΕΝΔΥΜΑΤΑ - (RO) FOLOSIREA ÎMBRĂCĂMINTEI DE PROTECȚIE
RANNÝCH PROSTŘEDKŮ - (HR-SR) OBAVEZNO KORIŠTENJE ZAŠTITNE ODJEĆE - (PL) NAKAZ
IL AT ANVENDE BESKYTTELSESTØJ - (NO) FORPLIKTELSE Å BRUKE VERNETØY - (SL) OBVEZNO
U) VÉDŐRUHA HASZNÁLATA KÖTELEZŐ - (LT) PRIVALOMA DĖVĖTI APSAUGINĘ APRANGĄ -
АДЪЛЖИТЕЛНО НОСЕНЕ НА ПРЕДПАЗНО ОБЛЕКЛО - (AR) الالتزام بارتداء الملابس الواقية

ETTIVI - (FR) PORT DES GANTS DE PROTECTION OBLIGATOIRE - (ES) OBLIGACIÓN DE LLEVAR
) ОБЯЗАННОСТЬ НАДЕВАТЬ ЗАЩИТНЫЕ ПЕРЧАТКИ - (PT) OBRIGATÓRIO O USO DE LUVAS
ΡΕΩΣΗ ΝΑ ΦΟΡΑΤΕ ΠΡΟΣΤΑΤΕΥΤΙΚΑ ΓΑΝΤΙΑ - (RO) FOLOSIREA MĂNUȘILOR DE PROTECȚIE
CHRANNÝCH RUKAVIC - (HR-SR) OBAVEZNO KORIŠTENJE ZAŠTITNIH RUKAVICA - (PL) NAKAZ
TIL AT BRUGE BESKYTTELSESHANDSKER - (NO) FORPLIKTELSE Å BRUKE VERNEHANSKER - (SL)
U) VÉDŐKESZTYŰ HASZNÁLATA KÖTELEZŐ - (LT) PRIVALOMA MŪVĖTI APSAUGINES PIRŠTINES
АДЪЛЖИТЕЛНО НОСЕНЕ НА ПРЕДПАЗНИ РЪКАВИЦИ - (AR) الالتزام بارتداء القفازات الواقية

RAVIOLETTE DA SALDATURA - (FR) DANGER RADIATIONS ULTRAVIOLETTES DE SOUDAGE -
BEIM SCHWEISSEN - (RU) ОПАСНОСТЬ УЛЬТРАФИОЛЕТОВОГО ИЗЛУЧЕНИЯ СВАРКИ - (PT)
LEN VAN HET LASSEN - (EL) ΚΙΝΔΥΝΟΣ ΥΠΕΡΙΩΔΟΥΣ ΑΚΤΙΝΟΒΟΛΙΑΣ ΑΠΟ ΣΥΓΚΟΛΛΗΣΗ
STRÅLNING FRÅN SVETSNING - (CS) NEBEZPEČÍ ULTRAFIALOVÉHO ZÁŘENÍ ZE SVAŘOVÁNÍ
CZEŃSTWO PROMIENIOWANIA NADFIOLETOWEGO PODCZAS SPAWANIA - (FI) HITSAUKSEN
RÅLER - (NO) FARE FOR ULTRAFIOLETT STRÅLNING UNDER SVEISINGSPROSEDYREN - (SL)
ULTRAFIALOVÉHO ŽIARENIA ZO ZVÁRANIA - (HU) HEGESZTÉS KÖVETKEZTÉBEN LÉTREJÖTT
PAVOJUS - (ET) KEEVITAMISEL ERALDUVA ULTRAVIOLETTKIIRGUSEOHT - (LV) METINĀŠANAS
НЕ ПРИ ЗАВАРЯВАНЕ - (AR) خطر التعرض للاشعة تحت البنفسجية الناتجة عن اللحام

GRO DE INCENDIO - (DE) BRANDGEFAHR - (RU) ОПАСНОСТЬ ПОЖАРА - (PT) PERIGO
OL DE INCENDIU - (SV) BRANDRISK - (CS) NEBEZPEČÍ POŽÁRU - (HR-SR) OPASNOST
RANDFARE - (NO) BRANNFARE - (SL) NEVARNOST POŽARA - (SK) NEBEZPEČENSTVO
EKA BĪSTAMĪBA - (BG) ОПАСНОСТ ОТ ПОЖАР - (AR) خطر التسبب في إندلاع حريق

DURAS - (DE) VERBRENNUNGSGEFAHR - (RU) ОПАСНОСТЬ ОЖОГОВ - (PT) PERIGO DE QUEIMADURAS
V) RISK FÖR BRÄNNSKADA - (CS) NEBEZPEČÍ POPÁLENIN - (HR-SR) OPASNOST OD OPEKLINA - (PL)
NO) FARE FOR FORBRENNINGER - (SL) NEVARNOST OPEKLIN - (SK) NEBEZPEČENSTVO POPÁLENÍN -
- (LV) APDEGUMU GŪŠANAS BĪSTAMĪBA - (BG) ОПАСНОСТ ОТ ИЗГАРЯНИЯ - (AR) خطر التعرض لحروق

NGER RADIATIONS NON IONISANTES - (ES) PELIGRO RADIACIONES NO IONIZANTES - (DE) GEFAHR
RIGO DE RADIAÇÕES NÃO IONIZANTES - (NL) GEVAAR NIET IONISERENDE STRALEN - (EL) ΚΙΝΔΥΝΟΣ
ONISERANDE - (CS) NEBEZPEČÍ NEIONIZUJÍCÍHO ZÁŘENÍ - (HR-SR) OPASNOST NEJONIZIRAJUĆIH
YN VAARA - (DA) FARE FOR IKKE-IONISERENDE STRÅLER - (NO) FARE FOR UJONISERT STRÅLNING
DENIA - (HU) NEM INOGEN SUGÁRZÁS VESZÉLYE - (LT) NEJONIZUOTO SPINDULIAVIMO PAVOJUS
ОПАСТНОСТ ОТ НЕ ЙОНИЗИРАНО ОБЛЪЧВАНЕ - (AR) خطر التعرض لاشعاعات غير مؤينة

PELIGRO GENÉRICO - (DE) GEFAHR ALLGEMEINER ART - (RU) ОБЩАЯ ОПАСНОСТЬ
RICOL GENERAL - (SV) ALLMÄN FARA - (CS) VŠEOBECNÉ NEBEZPEČÍ - (HR-SR) OPĆA
RE - (NO) GENERISK FARE STRÅLNING - (SL) SPLOŠNA NEVARNOST - (SK) VŠEOBECNÉ
E OHT - (LV) VISPĀRĪGA BĪSTAMĪBA - (BG) ОБЩИ ОПАСТНОСТИ - (AR) خطر عام

ARE LA MANIGLIA COME MEZZO DI SOSPENSIONE DELLA SALDATRICE - (FR) INTERDIT
SE PROHÍBE UTILIZAR LA MANILLA COMO MEDIO DE SUSPENSIÓN DE LA SOLDADORA
ASCHINE ZU BENUTZEN - (RU) ЗАПРЕЩЕНО ПОДВЕШИВАТЬ СВАРОЧНЫЙ АППАРАТ
APARELHO DE SOLDAR - (NL) DE HANDGREEP MAG NIET WORDEN GEBRUIKT OM
ΒΗΣ ΣΑΝ ΜΕΣΟ ΑΝΥΨΩΣΗΣ ΤΗΣ ΣΥΓΚΟΛΛΗΤΗΤΙΚΗΣ ΣΥΣΚΕΥΗΣ - (RO) SE INTERZICE
DET ÄR FÖRBJUDET ATT ANVÄNDA HANDTAGET FÖR ATT HÄNGA UPP SVETSEN -
HO PŘÍSTROJE - (HR-SR) ZABRANJENO JE UPOTREBLJAVATI RUČKU ZA PODIZANJE
IESZANIA SPAWARKI - (FI) ON KIELLETTYÄ KÄYTTÄÄ KÄSIKAHVAA HITSAUSLAITTEEN
E SVEJSEMASKINEN - (NO) DET ER FORBUDT Å BRUKE HÅNDTAKET FOR Å HENGE
IEGA APARATA - (SK) JE ZAKÁZANÉ VEŠAŤ ZVÁRACÍ PRÍSTROJ ZA RUKOVÄŤ - (HU)
OŽIAMA NAUDOTI RANKENĄ KAIP PRIEMONĘSUVIRINIMO APARATO SUSTABDYMUI
- (LV) IR AIZLIEGTS IZMANTOT ROKTURI METINĀŠANAS APARĀTA PIEKĀRŠANAI
НЕ НА ЗАВАРЪЧНИЯ АПАРАТ - (AR) يحظر استخدام المقبض كوسيلة لتعليق أداة اللحام

TION ORGANES EN MOUVEMENT - (ES) ATENCIÓN ÓRGANOS EN MOVIMIENTO - (DE)
UIDADO ÓRGÃOS EM MOVIMENTO - (NL) OPGELET ORGANEN IN BEWEGING - (EL)
ORGAN I RÖRELSE - (CS) POZOR NA POHYBUJÍCÍ SE SOUČÁSTI - (HR-SR) POZOR
VIA OSIA - (DA) PAS PÅ DELE I BEVÆGELSE - (NO) ADVARSEL: BEVEGELIGE DELER
) VIGYÁZAT: GÉPALKATRÉSZEK MOZGÁSBAN VANNAK - (LT) DĖMESIO! JUDANČIOS
DAĻAS - (BG) ВНИМАНИЕ ДВИЖЕЩИ СЕ МЕХАНИЗМИ - (AR) إنتبه أجزاء متحركة

IMENTO - (FR) ATTENTION AUX MAINS, ORGANES EN MOUVEMENT - (ES) ATENCIÓN A
LEMENTE - (RU) ОПАСНОСТЬ ДЛЯ РУК, ЧАСТИ В ДВИЖЕНИИ - (PT) CUIDADO COM AS
EGING - (EL) ΠΡΟΣΟΧΗ ΣΤΑ ΧΕΡΙΑ, ΟΡΓΑΝΑ ΣΕ ΚΙΝΗΣΗ - (RO) ATENȚIE LA MÂINI, PIESE
JÍCÍ SE SOUČÁSTI - (HR-SR) POZOR SA RUKAMA, DIJELOVI U POKRETU - (PL) CHRONIĆ
LTA - (DA) PAS PÅ HÆNDERNE, DELE I BEVÆGELSE - (NO) FORSIKTIG MED HENDENE,
RUKY, POHYBUJÚCE SA SÚČASTI - (HU) VIGYÁZAT A KEZEKRE, GÉPALKATRÉSZEK
NU KÄTELE, LIIKUVAD MASINAOSAD - (LV) UZMANĪBU KUSTĪGĀS DAĻAS - UZMANĪBU
АЗЕТЕ РЪЦЕТЕ ОТ ДВИЖЕЩИТЕ СЕ МЕХАНИЗМИ - (AR) انتبه إلى اليدين، أجزاء متحركة

(EN) EYE PROTECTIONS MUST BE WORN - (IT) OBBLIGO DI INDOSSARE OCCHIALI PROTETTIVI - (FR) PORT DES LUNETTES DE PROTECTION OBLIGATOIRE - (ES) OBLIGACIÓN DE USAR GAFAS DE PROTECCIÓN - (DE) DAS TRAGEN EINER SCHUTZBRILLE IST PFLICHT - (RU) ОБЯЗАННОСТЬ НОСИТЬ ЗАЩИТНЫЕ ОЧКИ - (PT) OBRIGAÇÃO DE VESTIR ÓCULOS DE PROTECÇÃO - (NL) VERPLICHT DRAGEN VAN BESCHERMENDE BRIL - (EL) ΥΠΟΧΡΕΩΣΗ ΝΑ ΦΟΡΑΤΕ ΠΡΟΣΤΕΤΕΥΤΙΚΑ ΓΥΑΛΙΑ - (RO) ESTE OBLIGATORIE PURTAREA OCHELARILOR DE PROTECȚIE - (SV) OBLIGATORISKT ATT ANVÄNDA SKYDDSGLASÖGON - (CS) POVINNOST POUŽÍVÁNÍ OCHRANNÝCH BRÝLÍ - (HR-SR) OBAVEZNA UPOTREBA ZAŠTITNIH NAOČALA - (PL) NAKAZ NOSZENIA OKULARÓW OCHRONNYCH - (FI) SUOJALASIEN KÄYTTÖ PAKOLLISTA - (DA) PLIGT TIL AT ANVENDE BESKYTTELSESBRILLER - (NO) DET ER OBLIGATORISK Å HA PÅ SEG VERNEBRILLEN - (SL) OBVEZNA UPORABA ZAŠČITNIH OČAL - (SK) POVINNOSŤ POUŽÍVANIA OCHRANNÝCH OKULIAROV - (HU) VÉDŐSZEMÜVEG VISELETE KÖTELEZŐ - (LT) PRIVALOMA DIRBTI SU APSAUGINIAIS AKINIAIS - (ET) KOHUSTUS KANDA KAITSEPRILLE - (LV) PIENĀKUMS VILKT AIZSARGBRILLES - (BG) ЗАДЪЛЖИТЕЛНО ДА СЕ НОСЯТ ПРЕДПАЗНИ ОЧИЛА - (AR) الالتزام بارتداء نظارات واقية

(EN) NO ENTRY FOR UNAUTHORISED PERSONNEL - (IT) DIVIETO DI ACCESSO ALLE PERSONE NON AUTORIZZATE - (FR) ACCÈS INTERDIT AUX PERSONNES NON AUTORISÉES - (ES) PROHIBIDO EL ACCESO A PERSONAS NO AUTORIZADAS - (DE) UNBEFUGTEN PERSONEN IST DER ZUTRITT VERBOTEN - (RU) ЗАПРЕТ ДЛЯ ДОСТУПА ПОСТОРОННИХ ЛИЦ - (PT) PROIBIÇÃO DE ACESSO ÀS PESSOAS NÃO AUTORIZADAS - (NL) TOEGANGSVERBOD VOOR NIET GEAUTORISEERDE PERSONEN - (EL) ΑΠΑΓΟΡΕΥΣΗ ΠΡΟΣΒΑΣΗΣ ΣΕ ΜΗ ΕΠΙΤΕΤΡΑΜΕΝΑ ΑΤΟΜΑ - (RO) ACCESUL PERSOANELOR NEAUTORIZATE ESTE INTERZIS - (SV) TILLTRÄDE FÖRBJUDET FÖR ICKE AUKTORISERADE PERSONER - (CS) ZÁKAZ VSTUPU NEPOVOLANÝM OSOBÁM - (HR-SR) ZABRANA PRISTUPA NEOVLAŠTENIM OSOBAMA - (PL) ZAKAZ DOSTĘPU OSOBOM NIEUPOWAŻNIONYM - (FI) PÄÄSY KIELLETTY ASIATTOMILTA - (DA) ADGANG FORBUDT FOR UVEDKOMMENDE - (NO) PERSONER SOM IKKE ER AUTORISERTE MÅ IKKE HA ADGANG TIL APPARATEN - (SL) DOSTOP PREPOVEDAN NEPOOBLAŠČENIM OSEBAM - (SK) ZÁKAZ NEOPRÁVNENÉHO PRÍSTUPU K OSÔB - (HU) FEL NEM JOGOSÍTOTT SZEMÉLYEK SZÁMÁRA TILOS A BELÉPÉS - (LT) PAŠALINIAMS ĮEITI DRAUDŽIAMA - (ET) SELLEKS VOLITAMATA ISIKUTEL ON TÖÖALAS VIIBIMINE KEELATUD - (LV) NEPIEDEROŠĀM PERSONĀM IEEJA AIZLIEGTA - (BG) ЗАБРАНЕН Е ДОСТЪПЪТ НА НЕУПЪЛНОМОЩЕНИ ЛИЦА - (AR) يحظر الدخول على الاشخاص الغير مصرح لهم

(EN) WEARING A PROTECTIVE MASK IS COMPULSORY - (IT) OBBLIGO USARE MASCHERA PROTETTIVA - (FR) PORT DU MASQUE DE PROTECTION OBLIGATOIRE - (ES) OBLIGACIÓN DE USAR MÁSCARA DE PROTECCIÓN - (DE) DER GEBRAUCH EINER SCHUTZMASKE IST PFLICHT - (RU) ОБЯЗАННОСТЬ ПОЛЬЗОВАТЬСЯ ЗАЩИТНОЙ МАСКОЙ - (PT) OBRIGATÓRIO O USO DE MÁSCARA DE PROTEÇÃO - (NL) VERPLICHT GEBRUIK VAN BESCHERMEND MASKER - (EL) ΥΠΟΧΡΕΩΣΗ ΝΑ ΦΟΡΑΤΕ ΠΡΟΣΤΑΤΕΥΤΙΚΗ ΜΑΣΚΑ - (RO) FOLOSIREA MĂȘTII DE PROTECȚIE OBLIGATORIE - (SV) OBLIGATORISKT ATT BÄRA SKYDDSMASK - (CS) POVINNÉ POUŽITÍ OCHRANNÉHO ŠTÍTU - (HR-SR) OBAVEZNO KORIŠTENJE ZAŠTITNE MASKE - (PL) NAKAZ UŻYWANIA MASKI OCHRONNEJ - (FI) SUOJAMASKIN KÄYTTÖ PAKOLLISTA - (DA) PLIGT TIL AT ANVENDE BESKYTTELSESMASKE - (NO) FORPLIKTELSE Å BRUKE VERNEBRILLER - (SL) OBVEZNOST UPORABI ZAŠČITNE MASKE - (SK) POVINNÉ POUŽITIE OCHRANNÉHO ŠTÍTU - (HU) VÉDŐMASZK HASZNÁLATA KÖTELEZŐ - (LT) PRIVALOMA UŽSIDĖTI APSAUGINĘ KAUKĘ - (ET) KOHUSTUSLIK KANDA KAITSEMASKI - (LV) PIENĀKUMS IZMANTOT AIZSARGMASKU - (BG) ЗАДЪЛЖИТЕЛНО ИЗПОЛЗВАНЕ НА ПРЕДПАЗНА ЗАВАРЪЧНА МАСКА - (AR) الالتزام باستخدام قناع واقٍ

(EN) WEARING EAR PROTECTORS IS COMPULSORY - (IT) OBBLIGO PROTEZIONE DELL'UDITO - (FR) PROTECTION DE L'OUÏE OBLIGATOIRE - (ES) OBLIGACIÓN DE PROTECCIÓN DEL OÍDO - (DE) DAS TRAGEN VON GEHÖRSCHUTZ IST PFLICHT - (RU) ОБЯЗАННОСТЬ ЗАЩИЩАТЬ СЛУХ - (PT) OBRIGATÓRIO PROTEGER O OUVIDO - (EL) ΥΠΟΧΡΕΩΣΗ ΠΡΟΣΤΑΣΙΑΣ ΑΚΟΗΣ - (NL) VERPLICHTE OORBESCHERMING - (HU) HALLÁSVÉDELEM KÖTELEZŐ - (RO) PROTECȚIA AUZULUI OBLIGATORIE - (SV) OBLIGATORISKT ATT SKYDDA HÖRSELN - (DA) PLIGT TIL AT ANVENDE HØREVÆRN - (NO) FORPLIKTELSE Å BRUKE HØRSELVERN - (FI) KUULOSUOJAUS PAKOLLINEN - (CS) POVINNOST OCHRANY SLUCHU - (SK) POVINNÁ OCHRANA SLUCHU - (SL) OBVEZNA UPORABA GLUŠNIKOV - (HR-SR) OBAVEZNA ZAŠTITA SLUHA - (LT) PRIVALOMOS APSAUGOS PRIEMONĖS KLAUSOS ORGANAMS - (ET) KOHUSTUS KANDA KUULMISKAITSEVAHENDEID - (LV) PIENĀKUMS AIZSARGĀT DZIRDES ORGĀNUS - (BG) ЗАДЪЛЖИТЕЛНО ДА СЕ НОСЯТ ПРЕДПАЗНИ СРЕДСТВА ЗА СЛУХА - (PL) NAKAZ OCHRONY SŁUCHU - (AR) الالزام بحماية الاذن

(EN) USERS OF VITAL ELECTRICAL AND ELECTRONIC APPARATUS MUST NEVER USE THE MACHINE - (IT) VIETATO L'USO DELLA MACCHINA AI PORTATORI DI APPARECCHIATURE ELETTRICHE ED ELETTRONICHE VITALI - (FR) L'UTILISATION DE LA MACHINE EST DÉCONSEILLÉE AUX PORTEURS D'APPAREILS ÉLECTRIQUES OU ÉLECTRONIQUES MÉDICAUX - (ES) PROHIBIDO EL USO DE LA MÁQUINA A LOS PORTADORES DE APARATOS ELÉCTRICOS Y ELECTRÓNICOS VITALES - (DE) TRÄGERN LEBENSERHALTENDER ELEKTRISCHER UND ELEKTRONISCHER GERÄTE IST DER GEBRAUCH DER MASCHINE UNTERSAGT - (RU) ИСПОЛЬЗОВАНИЕ УСТАНОВКИ ЗАПРЕЩЕНО ЛИЦАМ, ИСПОЛЬЗУЮЩИМ ЭЛЕКТРОННУЮ И ЭЛЕКТРОАППАРАТУРУ ОБЕСПЕЧЕНИЯ ЖИЗНЕДЕЯТЕЛЬНОСТИ - (PT) É PROIBIDO O USO DA MÁQUINA AOS PORTADORES DE APARELHAGENS ELÉCTRICAS E ELECTRÓNICAS VITAIS - (NL) HET GEBRUIK VAN DE MACHINE IS VERBODEN AAN DRAGERS VAN ELEKTRISCHE EN ELEKTRONISCHE VITALE APPARATUUR - (EL) ΑΠΑΓΟΡΕΥΕΤΑΙ Η ΧΡΗΣΗ ΤΟΥ ΜΗΧΑΝΗΜΑΤΟΣ ΣΕ ΑΤΟΜΑ ΠΟΥ ΦΕΡΟΥΝ ΗΛΕΚΤΡΙΚΕΣ ΚΑΙ ΗΛΕΚΤΡΟΝΙΚΕΣ ΣΥΣΚΕΥΕΣ ΖΩΤΙΚΗΣ ΣΗΜΑΣΙΑΣ - (RO) SE INTERZICE FOLOSIREA MAȘINII DE CĂTRE PERSOANELE PURTĂTOARE DE APARATE ELECTRICE ȘI ELECTRONICE VITALE - (SV) FÖRBJUDET FÖR ANVÄNDARE AV LIVSUPPEHÅLLANDE ELEKTRISKA ELLER ELEKTRONISKA APPARATER ATT ANVÄNDA DENNA MASKIN - (CS) ZÁKAZ POUŽITÍ STROJE NOSITELŮM ELEKTRICKÝCH A ELEKTRONICKÝCH ŽIVOTNĚ DŮLEŽITÝCH ZAŘÍZENÍ - (HR-SR) ZABRANJENO JE UPOTREBLJAVATI STROJ OSOBAMA KOJE IMAJU UGRAĐENE VITALNE ELEKTRIČNE ILI ELEKTRONIČKE UREĐAJE - (PL) ZABRONIONE JEST UŻYWANIE URZĄDZENIA OSOBOM STOSUJĄCYM ELEKTRYCZNE I ELEKTRONICZNE URZĄDZENIA WSPOMAGAJĄCE FUNKCJE ŻYCIOWE - (FI) KONEEN KÄYTTÖKIELTO SÄHKÖISTEN JA ELEKTRONISTEN HENKILÖNSUOJALAITTEIDEN KÄYTTÄJILLE - (DA) DET ER FORBUDT FOR PERSONER, DER ANVENDER LIVSVIGTIGT ELEKTRISK OG ELEKTRONISK APPARATUR, AT ANVENDE MASKINEN - (NO) DET ER FORBUDT FOR PERSONER SOM BRUKER LIVSVIKTIGE ELEKTRISKE ELLER ELEKTRONISKE APPARATER Å BRUKE MASKINEN - (SL) PREPOVEDANA UPORABA STROJA ZA UPORABNIKE ŽIVLJENJSKO POMEMBNIH ELEKTRIČNIH IN ELEKTRONSKIH NAPRAV - (SK) ZÁKAZ POUŽÍVANIA STROJA OSOBÁM SO ŽIVOTNE DÔLEŽITÝMI ELEKTRICKÝMI A ELEKTRONICKÝMI ZARIADENIAMI - (HU) TILOS A GÉP HASZNÁLATA MINDAZOK SZÁMÁRA, AKIK SZERVEZETÉBEN ÉLETFENNTARTÓ ELEKTROMOS VAGY ELEKTRONIKUS KÉSZÜLÉK VAN BEÉPÍTVE - (LT) GRIEŽTAI DRAUDŽIAMA SU ĮRANGA DIRBTI ASMENIMS, BESINAUDOJANTIEMS GYVYBIŠKAI SVARBIAIS ELEKTRINIAIS AR ELEKTRONINIAIS PRIETAISAIS - (ET) SEADET EI TOHI KASUTADA ISIKUD, KES KASUTAVAD MEDITSIINILISI ELEKTRI-JA ELEKTROONIKASEADMEID - (LV) ELEKTRISKO VAI ELEKTRONISKO MEDICĪNISKO IERĪČU LIETOTĀJIEM IR AIZLIEGTS IZMANTOT MAŠĪNU - (BG) ЗАБРАНЕНО Е ПОЛЗВАНЕТО НА МАШИНАТА ОТ ЛИЦА, НОСИТЕЛИ НА ЕЛЕКТРИЧЕСКИ И ЕЛЕКТРОННИ МЕДИЦИНСКИ УСТРОЙСТВА - (AR) يحظر استخدام الالة لحاملي الاجهزة الكهربائية والالكترونية الحيوية

(EN) PEOPLE WITH METAL PROSTHESES ARE NOT ALLOWED TO USE THE MACHINE - (IT) VIETATO L'USO DELLA MACCHINA AI PORTATORI DI PROTESI METALLICHE - (FR) UTILISATION INTERDITE DE LA MACHINE AUX PORTEURS DE PROTHÈSES MÉTALLIQUES - (ES) PROHIBIDO EL USO DE LA MÁQUINA A LOS PORTADORES DE PRÓTESIS METÁLICAS - (DE) TRÄGERN VON METALLPROTHESEN IST DER UMGANG MIT DER MASCHINE VERBOTEN - (RU) ИСПОЛЬЗОВАНИЕ МАШИНЫ ЗАПРЕЩАЕТСЯ ЛЮДЯМ, ИМЕЮЩИМ МЕТАЛЛИЧЕСКИЕ ПРОТЕЗЫ - (PT) PROIBIDO O USO DA MÁQUINA AOS PORTADORES DE PRÓTESES METÁLICAS - (NL) HET GEBRUIK VAN DE MACHINE IS VERBODEN AAN DE DRAGERS VAN METALEN PROTHESEN - (EL) ΑΠΑΓΟΡΕΥΕΤΑΙ Η ΧΡΗΣΗ ΤΗΣ ΜΗΧΑΝΗΣ ΣΕ ΑΤΟΜΑ ΠΟΥ ΦΕΡΟΥΝ ΜΕΤΑΛΛΙΚΕΣ ΠΡΟΣΘΗΚΕΣ - (RO) SE INTERZICE FOLOSIREA MAȘINII DE CĂTRE PERSOANELE PURTĂTOARE DE PROTEZE METALICE - (SV) FÖRBJUDET FÖR PERSONER SOM BÄR METALLPROTES ATT ANVÄNDA MASKINEN - (CS) ZÁKAZ POUŽITÍ STROJE NOSITELŮM KOVOVÝCH PROTÉZ - (HR-SR) ZABRANJENA UPOTREBA STROJA OSOBAMA KOJE NOSE METALNE PROTEZE - (PL) ZAKAZ UŻYWANIA URZĄDZENIA OSOBOM STOSUJĄCYM PROTEZY METALOWE - (FI) KONEEN KÄYTTÖ KIELLETTY METALLIPROTEESIEN KANTAJILTA - (DA) DET ER FORBUDT FOR PERSONER MED METALPROTESER AT BENYTTE MASKINEN - (NO) BRUK AV MASKINEN ER IKKE TILLATT FOR PERSONER MED METALLPROTESER - (SL) PREPOVEDANA UPORABA STROJA ZA NOSILCE KOVINSKIH PROTEZ - (SK) ZÁKAZ POUŽITIA STROJA OSOBÁM S KOVOVÝMI PROTÉZAMI - (HU) TILOS A GÉP HASZNÁLATA FÉMPROTÉZIST VISELŐ SZEMÉLYEK SZÁMÁRA - (LT) SU SUVIRINIMO APARATU DRAUDŽIAMA DIRBTI ASMENIMS, NAUDOJANTIEMS METALINIUS PROTEZUS - (ET) SEADET EI TOHI KASUTADA ISIKUD, KES KASUTAVAD METALLPROTEESE - (LV) CILVĒKIEM AR METĀLA PROTĒZĒM IR AIZLIEGTS LIETOT IERĪCI - (BG) ЗАБРАНЕНА Е УПОТРЕБАТА НА МАШИНАТА ОТ НОСИТЕЛИ НА МЕТАЛНИ ПРОТЕЗИ - (AR) يحظر استخدام الالة على مستخدمي اجهزة السمع المعدنية

(EN) DO NOT WEAR OR CARRY METAL OBJECTS, WATCHES OR MAGNETISED CARDS - (IT) VIETATO INDOSSARE OGGETTI METALLICI, OROLOGI E SCHEDE MAGNETICHE - (FR) INTERDICTION DE PORTER DES OBJETS MÉTALLIQUES, MONTRES ET CARTES MAGNÉTIQUES - (ES) PROHIBIDO LLEVAR OBJETOS METÁLICOS, RELOJES, Y TARJETAS MAGNÉTICAS - (DE) DAS TRAGEN VON METALLOBJEKTEN, UHREN UND MAGNETKARTEN IST VERBOTEN - (RU) ЗАПРЕЩАЕТСЯ НОСИТЬ МЕТАЛЛИЧЕСКИЕ ПРЕДМЕТЫ, ЧАСЫ ИЛИ МАГНИТНЫЕ ПЛАТЫЮ - (PT) PROIBIDO VESTIR OBJECTOS METÁLICOS, RELÓGIOS E FICHAS MAGNÉTICAS - (NL) HET IS VERBODEN METALEN VOORWERPEN, UURWERKEN EN MAGNETISCHE FICHES TE DRAGEN - (EL) ΑΠΑΓΟΡΕΥΕΤΑΙ ΝΑ ΦΟΡΑΤΕ ΜΕΤΑΛΛΙΚΑ ΑΝΤΙΚΕΙΜΕΝΑ, ΡΟΛΟΓΙΑ ΚΑΙ ΜΑΓΝΗΤΙΚΕΣ ΠΛΑΚΕΤΕΣ - (RO) ESTE INTERZISĂ PURTAREA OBIECTELOR METALICE, A CEASURILOR ȘI A CARTELELOR MAGNETICE - (SV) FÖRBJUDET ATT BÄRA METALLFÖREMÅL, KLOCKOR OCH MAGNETKORT - (CS) ZÁKAZ NOŠENÍ KOVOVÝCH PŘEDMĚTŮ, HODINEK A MAGNETICKÝCH KARET - (HR-SR) ZABRANJENO NOŠENJE METALNIH PREDMETA, SATOVA I MAGNETSKIH ČIPOVA - (PL) ZAKAZ NOSZENIA PRZEDMIOTÓW METALOWYCH, ZEGARKÓW I KART MAGNETYCZNYCH - (FI) METALLISTEN ESINEIDEN, KELLOJEN JA MAGNEETTIKORTTIEN MUKANA PITÄMINEN KIELLETTY - (DA) FORBUD MOD AT BÆRE METALGENSTANDE, URE OG MAGNETISKE KORT - (NO) FORBUDT Å HA PÅ SEG METALLFORMÅL, KLOKKER OG MAGNETISKE KORT - (SL) PREPOVEDANO NOŠENJE KOVINSKIH PREDMETOV, UR IN MAGNETNIH KARTIC - (SK) ZÁKAZ NOSENIA KOVOVÝCH PREDMETOV, HODINIEK A MAGNETICKÝCH KARIET - (HU) TILOS FÉMTÁRGYAK, KARÓRÁK VISELETE ÉS MÁGNESES KÁRTYÁK MAGUKNÁL TARTÁSA - (LT) DRAUDŽIAMA PRIE SAVĘS TURĖ TI METALINIŲ DAIKTŲ, LAIKRODŽIŲ AR MAGNETINIŲ PLOKŠTELIŲ - (ET) KEELATUD ON KANDA METALLESEMEID, KELLASID JA MAGENTKAARTE - (LV) IR AIZLIEGTS VILKT METĀLA PRIEKŠMETUS, PULKSTEŅUS UN ŅEMT LĪDZI MAGNĒTISKĀS KARTES - (BG) ЗАБРАНЕНО Е НОСЕНЕТО НА МЕТАЛНИ ПРЕДМЕТИ, ЧАСОВНИЦИ И МАГНИТНИ СХЕМИ - (AR) يحظر استخدام أشياء معدنية، ساعات وبطاقات ممغنطة

(EN) NOT TO BE USED BY UNAUTHORISED PERSONNEL - (IT) VIETATO L'USO ALLE PERSONE NON AUTORIZZATE - (FR) UTILISATION INTERDITE AU PERSONNEL NON AUTORISÉ - (ES) PROHIBIDO EL USO A PERSONAS NO AUTORIZADAS - (DE) DER GEBRAUCH DURCH UNBEFUGTE PERSONEN IST VERBOTEN - (RU) ИСПОЛЬЗОВАНИЕ ЗАПРЕЩАЕТСЯ ЛЮДЯМ, НЕ ИМЕЮЩИМ РАЗРЕШЕНИЯ - (PT) PROIBIDO O USO ÀS PESSOAS NÃO AUTORIZADAS - (NL) HET GEBRUIK IS VERBODEN AAN NIET GEAUTORISEERDE PERSONEN - (EL) ΑΠΑΓΟΡΕΥΣΗ ΧΡΗΣΗΣ ΣΕ ΜΗ ΕΠΙΤΕΤΡΑΜΕΝΑ ΑΤΟΜΑ - (RO) FOLOSIREA DE CĂTRE PERSOANELE NEAUTORIZATE ESTE INTERZISĂ - (SV) FÖRBJUDET FÖR ICKE AUKTORISERADE PERSONER ATT ANVÄNDA APPARATEN - (CS) ZÁKAZ POUŽITÍ NEPOVOLANÝM OSOBÁM - (HR-SR) ZABRANJENA UPOTREBA NEOVLAŠTENIM OSOBAMA - (PL) ZAKAZ UŻYWANIA OSOBOM NIEAUTORYZOWANYM - (FI) KÄYTTÖ KIELLETTY VALTUUTTAMATTOMILTA HENKILÖILTÄ - (DA) DET ER FORBUDT FOR UVEDKOMMENDE AT ANVENDE MASKINEN - (NO) BRUK ER IKKE TILLATT FOR UAUTORISERTE PERSONER - (SL) NEPOOBLAŠČENIM OSEBAM UPORABA PREPOVEDANA - (SK) ZÁKAZ POUŽITIA NEPOVOLANÝM OSOBÁM - (HU) TILOS A HASZNÁLATA A FEL NEM JOGOSÍTOTT SZEMÉLYEK SZÁMÁRA - (LT) PAŠALINIAMS NAUDOTIS DRAUDŽIAMA - (ET) SELLEKS VOLITAMATA ISIKUTEL ON SEADME KASUTAMINE KEELATUD - (LV) NEPILNVAROTĀM PERSONĀM IR AIZLIEGTS IZMANTOT APARĀTU - (BG) ЗАБРАНЕНО Е ПОЛЗВАНЕТО ОТ НЕУПЪЛНОМОЩЕНИ ЛИЦА - (AR) يحظر الاستخدام من قبل الاشخاص الغير مصرح لهم

(EN) Symbol indicating separation of electrical and electronic appliances for refuse collection. The user is not allowed to dispose of these appliances as solid, mixed urban refuse, and must do it through authorised refuse collection centres. - (IT) Simbolo che indica la raccolta separata delle apparecchiature elettriche ed elettroniche. L'utente ha l'obbligo di non smaltire questa apparecchiatura come rifiuto municipale solido misto, ma di rivolgersi ai centri di raccolta autorizzati. - (FR) Symbole indiquant la collecte différenciée des appareils électriques et électroniques. L'utilisateur ne peut éliminer ces appareils avec les déchets ménagers solides mixtes, mais doit s'adresser à un centre de collecte autorisé. - (ES) Símbolo que indica la recogida por separado de los aparatos eléctricos y electrónicos. El usuario tiene la obligación de no eliminar este aparato como desecho urbano sólido mixto, sino de dirigirse a los centros de recogida autorizados. - (DE) Symbol für die getrennte Erfassung elektrischer und elektronischer Geräte. Der Benutzer hat pflichtgemäß dafür zu sorgen, daß dieses Gerät nicht mit dem gemischt erfaßten festen Siedlungsabfall entsorgt wird. Stattdessen muß er eine der autorisierten Entsorgungsstellen einschalten. - (RU) Символ, указывающий на раздельный сбор электрического и электронного оборудования. Пользователь не имеет права выбрасывать данное оборудование в качестве смешанного твердого бытового отхода, а обязан обращаться в специализированные центры сбора отходов. - (PT) Símbolo que indica a reunião separada das aparelhagens eléctricas e electrónicas. O utente tem a obrigação de não eliminar esta aparelhagem como lixo municipal sólido misto, mas deve procurar os centros de recolha autorizados. - (NL) Symbool dat wijst op de gescheiden inzameling van elektrische en elektronische toestellen. De gebruiker is verplicht deze toestellen niet te lozen als gemengde vaste stadsafval, maar moet zich wenden tot de geautoriseerde ophaalcentra. - (EL) Σύμβολο που δείχνει τη διαφοροποιημένη συλλογή των ηλεκτρικών κια ηλεκτρονικών συσκευών. Ο χρήστης υποχρεούται να μην διοχετεύει αυτή τη συσκευή σαν μικτό στερεό αστικό απόβλητο, αλλά να απευθύνεται σε εγκεκριμένα κέντρα συλλογής. - (RO) Simbol ce indică depozitarea separată a aparatelor electrice și electronice. Utilizatorul este obligat să nu depoziteze acest aparat împreună cu deșeurile solide mixte ci să-l predea într-un centru de depozitare a deșeurilor autorizat. - (SV) Symbol som indikerar separat sopsortering av elektriska och elektroniska apparater. Användaren får inte sortera denna anordning tillsammans med blandat fast hushållsavfall, utan måste vända sig till en auktoriserad insamlingsstation. - (CS) Symbol označující separovaný sběr elektrických a elektronických zařízení. Uživatel je povinen nezlikvidovat toto zařízení jako pevný smíšený komunální odpad, ale obrátit se s ním na autorizované sběrny. - (HR-SR) Simbol koji označava posebno sakupljanje električnih i elektronskih aparata. Korisnik ne smije odložiti ovaj aparat kao običan kruti otpad, već se mora obratiti ovlaštenim centrima za sakupljanje. - (PL) Symbol, który oznacza sortowanie odpadów aparatury elektrycznej i elektronicznej. Zabrania się likwidowania aparatury jako mieszanych odpadów miejskich stałych, obowiązkiem użytkownika jest skierowanie się do autoryzowanych ośrodków gromadzących odpady - (FI) Symboli, joka ilmoittaa sähkö- ja elektroniikkalaitteiden erillisen keräyksen. Käyttäjän velvollisuus on kääntyä valtuutettujen keräyspisteiden puoleen eikä välittää laitetta kunnallisena sekajätteenä. - (DA) Symbol, der står for særlig indsamling af elektriske og elektroniske apparater. Brugeren har pligt til ikke at bortskaffe dette apparat som blandet, fast byaffald; der skal rettes henvendelse til et autoriseret indsamlingscenter. - (NO) Symbol som angir separat sortering av elektriske og elektroniske apparater. Brukeren må oppfylle forpliktelsen å ikke kaste bort dette apparatet sammen med vanlige hjemmeavfallet, uten henvende seg til autoriserte oppsamlingssentraler. - (SL) Simbol, ki označuje ločeno zbiranje električnih in elektronskih aparatov. Uporabnik tega aparata ne sme zavreči kot navaden gospodinjski trden odpadek, ampak se mora obrniti na pooblaščene centre za zbiranje. - (SK) Symbol označujúci separovaný zber elektrických a elektronických zariadení. Užívateľ nesmie likvidovať toto zariadenie ako pevný zmiešaný komunálny odpad, ale je povinný doručiť ho do autorizovaný zberní. - (HU) Jelölés, mely az elektromos és elektronikus felszerelések szelektív hulladékgyűjtését jelzi. A felhasználó köteles ezt a felszerelést nem a városi törmelékhulladékkal együttesen gyűjteni, hanem erre engedéllyel rendelkező hulladékgyűjtő központhoz fordulni. - (LT) Simbolis, nurodantis atskirų nebenaudojamų elektrinių ir elektroninių prietaisų surinkimą. Vartotojas negali išmesti šių prietaisų kaip mišrių kietųjų komunalinių atliekų, bet privalo kreiptis į specializuotus atliekų surinkimo centrus. - (ET) Sümbol, mis tähistab elektri-ja elektroonikaseadmete eraldi kogumist. Kasutaja kohustuseks on pöörduda volitatud kogumiskeskuste poole ja mitte käsitleda seda aparaati kui munitsipaalne segajääde. - (LV) Simbols, kas norāda uz to, ka utilizācija ir jāveic atsevišķi no citām elektriskajām un elektroniskajām ierīcēm. Lietotāja pienākums ir neizmest šo aparatūru municipālajā cieto atkritumu izgāztuvē, bet nogādāt to pilnvarotajā atkritumu savākšanas centrā. - (BG) Символ, който означава разделно събиране на електрическата и електронна апаратура. Ползвателят се задължава да не изхвърля тази апаратура като смесен твърд отпадък в контейнерите за смет, поставени от общината, а трябва да се обърне към специализираните за това центрове - (AR) رمز يُشير إلى التجميع المنفصل للأجهزة الكهربائية والإلكترونية. يجب على المستخدم عدم التخلص من هذا الجهاز وكأنه نفايات البلدية الصلبة المختلطة، بل عليه التوجه إلى مراكز تجميع النفايات المُصرح بها

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CONTINUOUS WIRE WELDING MACHINE FOR MIG-MAG AND FLUX, TIG, MMA WELDING FOR PROFESSIONAL AND INDUSTRIAL USE.
Note: The term "welding machine" will be used in the text that follows.

1. GENERAL SAFETY CONSIDERATIONS FOR ARC WELDING

The operator should be properly trained to use the welding machine safely and should be informed about the risks related to arc welding procedures, the associated protection measures and emergency procedures.
(Please refer to the applicable standard "EN 60974-9: Arc welding equipment. Part 9: Installation and Use).

- **Avoid direct contact with the welding circuit: the no-load voltage supplied by the welding machine can be dangerous under certain circumstances.**
- **When the welding cables are being connected or checks and repairs are carried out the welding machine should be switched off and disconnected from the power supply outlet.**
- **Switch off the welding machine and disconnect it from the power supply outlet before replacing consumable torch parts.**
- **Make the electrical connections and installation according to the safety rules and legislation in force.**
- **The welding machine should be connected only and exclusively to a power source with the neutral lead connected to earth.**
- **Make sure that the power supply plug is correctly connected to the earth protection outlet.**
- **Do not use the welding machine in damp or wet places and do not weld in the rain.**
- **Do not use cables with worn insulation or loose connections.**

- **Do not weld on containers or piping that contains or has contained flammable liquid or gaseous products.**
- **Do not operate on materials cleaned with chlorinated solvents or near such substances.**
- **Do not weld on containers under pressure.**
- **Remove all flammable materials (e.g. wood, paper, rags etc.) from the working area.**
- **Provide adequate ventilation or facilities for the removal of welding fumes near the arc; a systematic approach is needed in evaluating the exposure limits for the welding fumes, which will depend on their composition, concentration and the length of exposure itself.**
- **Keep the gas bottle (if used) away from heat sources, including direct sunlight.**

- **Use electric insulation that is suitable for the torch, the workpiece and any metal parts that may be placed on the ground and nearby (accessible).**
  This can normally be done by wearing gloves, footwear, head protection and clothing that are suitable for the purpose and by using insulating boards or mats.
- **Always protect your eyes with the relative filters, which must comply with UNI EN 169 or UNI EN 379, mounted on masks or use helmets that comply with UNI EN 175.**

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Use the relative fire-resistant clothing (compliant with UNI EN 11611) and welding gloves (compliant with UNI EN 12477) without exposing the skin to the ultraviolet and infrared rays produced by the arc; the protection must extend to other people who are near the arc by way of screens or non-reflective sheets.

- **Noise: If the daily personal noise exposure (LEPd) is equal to or higher than 85 dB(A) because of particularly intensive welding operations, suitable personal protective means must be used**

E M F
SAFE
ELECTROMAGNETIC FIELDS

- **The flow of the welding current generates electromagnetic fields (EMF) around the welding circuit.**

Electromagnetic fields can interfere with certain medical equipment (e.g. Pace-makers, respiratory equipment, metallic prostheses etc.).
Adequate protective measures must be adopted for persons with these types of medical apparatus. For example, they must be forbidden access to the area in which welding machines are in operation.
This welding machine conforms to technical product standards for exclusive use in an industrial environment for professional purposes. It does not assure compliance with the basic limits relative to human exposure to electromagnetic fields in the domestic environment.

The operator must adopt the following procedures in order to reduce exposure to electromagnetic fields:

- **Fasten the two welding cables as close together as possible.**
- **Keep head and trunk as far away as possible from the welding circuit.**
- **Never wind welding cables around the body.**
- **Avoid welding with the body within the welding circuit. Keep both cables on the same side of the body.**
- **Connect the welding current return cable to the piece being welded, as close as possible to the welding joint.**
- **Do not weld while close to, sitting on or leaning against the welding machine (keep at least 50 cm away from it).**
- **Do not leave objects in ferromagnetic material in proximity of the welding circuit.**
- **Minimum distance d= 20 cm**

- **Class A equipment:**

This welding machine conforms to technical product standards for exclusive use in an industrial environment and for professional purposes. It does not assure compliance with electromagnetic compatibility in domestic dwellings and in premises directly connected to a low-voltage power supply system feeding buildings for domestic use.

EXTRA PRECAUTIONS

- **WELDING OPERATIONS:**
  - **In environments with increased riskof electric shock;**
  - **In confined spaces;**
  - **In the presence of flammable or explosive materials;**

  MUST BE evaluated in advance by an "Expert supervisor" and must always be carried out in the presence of other people trained to intervene in emergencies.
  All protective technical measures MUST be taken as provided in 7.10; A.8; A.10 of the applicable standard EN 60974-9: Arc welding equipment. Part 9: Installation and Use".
- **Welding MUST NOT be allowed if the welding machine or wire feeder is supported by the operator (e.g. using belts).**
- **The operator MUST NOT BE ALLOWED to weld in raised positions unless safety platforms are used.**
- **VOLTAGE BETWEEN ELECTRODE HOLDERS OR TORCHES: working with more than one welding machine on a single piece or on pieces that are connected electrically may generate a dangerous accumulation of no-load voltage between two different electrode holders or torches, the value of which may reach double the allowed limit.**
  An expert coordinator must be designated to measuring the apparatus to determine if any risks subsist and suitable protection measures can be adopted, as foreseen by section 7.9 of the applicable standard "EN 60974-9: Arc welding equipment. Part 9: Installation and Use".

RESIDUAL RISKS

- **OVERTURNING: position the welding machine on a horizontal surface that is able to support the weight: otherwise (e.g. inclined or uneven floors etc.) there is danger of overturning.**

- **IMPROPER USE: it is hazardous to use the welding machine for any work other than that for which it was designed (e.g. de-icing mains water pipes).**

- **IMPROPER USE: the use the welding machine by more than one operator at the same time may be dangerous.**

- **MOVING THE WELDING MACHINE: Always secure the gas bottle, taking suitable precautions so that it cannot fall accidentally (if used).**

- **Do not use the handle to hang the welding machine.**

The safety guards and moving parts of the covering of the welding machine and of the wire feeder should be in their proper positions before connecting the welding machine to the power supply.

WARNING! Any manual operation carried out on the moving parts of the wire feeder, for example:
- **Replacing rollers and/or the wire guide;**
- **Inserting wire in the rollers;**
- **Loading the wire reel;**
- **Cleaning the rollers, the gears and the area underneath them;**
- **Lubricating the gears.**

SHOULD BE CARRIED OUT WITH THE WELDING MACHINE SWITCHED OFF AND DISCONNECTED FROM THE POWER SUPPLY OUTLET.

2. INTRODUCTION AND GENERAL DESCRIPTION

This welding machine is a source of current for arc welding, made specifically for MAG welding carbon steel or weak alloys with CO_2 protective gas or Argon/CO_2 mixes, using tubular full or core electrode wires.
It is also ideal for MIG welding stainless steel with Argon gas containing + 1-2% oxygen and aluminium and CuSi3, CuAl8 (brazing) with Argon gas, using electrode wires that are suitable for the workpiece to be welded.
Suitable core wires can be used without Flux protection gas, adapting torch polarity according to the indications of the wire producer (versions 180A and 200A only).
It is particularly suitable for light metalwork fabrication and in body shops, for welding galvanized plates, high stress stainless steel and aluminium. SYNERGIC operation ensures fast and easy welding parameter setting, always guaranteeing high arc control and welding quality (OneTouch Technology).

The welding machine, where available (see Tab. 1), can be used for TIG welding in direct current (DC), with arc striking upon contact (LIFT ARC mode). It welds all types of steel (carbon, low- and high-alloy) and heavy metals (copper, nickel, titanium and their alloys) with a gas shield of pure (99.9%) Ar or, for special uses, with an Argon/Helium mix. It can also be used for MMA electrode welding in direct current (DC) using coated electrodes (rutile, acid, basic).

2.1 MAIN CHARACTERISTICS

MIG-MAG
- Synergic (automatic) or manual operation;
- Pre-set synergic curves;
- Wire speed, welding voltage and welding current shown on an LCD screen;
- 2T, 4T and spot operation selection;
- Adjustments: wire up slope, electronic reactance, wire burn-back time, post gas;
- Polarity change for GAS MIG-MAG/BRAZING welding or NO GAS/FLUX (versions 180A and 200A only).
- Setting the metric or UK system.

TIG
- Start LIFT;
- Wire speed and welding current shown on an LCD screen.

MMA
- Arc force, hot start and anti-stick devices preset;
- Indication of recommended electrode diameter based on welding current;
- Wire speed and welding current shown on an LCD screen.

PROTECTION
- Thermostatic safeguard;
- Protection against accidental short-circuits caused by contact between torch and earth;

Protection against irregular voltage (power supply voltage too high or too low);
- Anti-stick (MMA).

2.2 STANDARD ACCESSORIES
- Torch;
- Return cable complete with earth clamp;
- Torch holder support (where available).

2.3 OPTIONAL ACCESSORIES
- Argon bottle adapter;
- Trolley (versions 180A and 200A only);
- Self darkening helmet;
- MIG MAG welding kit;
- MMA welding kit;
- TIG welding kit.

3. TECHNICAL DATA
3.1 DATA PLATE
The most important data regarding use and performance of the welding machine are summarised on the rating plate and have the following meaning:

1- EUROPEAN standard of reference, for safety and construction of arc welding machines.
2- Symbol for internal structure of the welding machine.
3- Symbol for welding procedure provided.
4- Symbol **S**: indicates that welding operations may be carried out in environments with heightened risk of electric shock (e.g. very close to large metallic volumes).
5- Symbol for power supply line:
1~ : single phase alternating voltage;
3~ : 3-phase alternating voltage.
6- Protection rating of the covering.
7- Technical specifications for power supply line:
- U_1 : Alternating voltage and power supply frequency of welding machine (allowed limit ±10%).
- $I_{1\,max}$: Maximum current absorbed by the line.
- I_{1eff} : effective current supplied.

8- Performance of the welding circuit:
- U_0 : maximum no-load voltage (open welding circuit).
- I_2/U_2 : current and corresponding normalised voltage that the welding machine can supply during welding.
- **X** : Duty cycle: indicates the time for which the welding machine can supply the corresponding current (same column). It is expressed as %, based on a 10 min. cycle (e.g. 60% = 6 minutes working, 4 minutes pause, and so on).
  If the usage factors (on the plate, referring to a 40°C environment) are exceeded, the thermal safeguard will trigger (the welding machine will remain in standby until its temperature returns within the allowed limits).
- **A/V-A/V** : shows the range of adjustment for the welding current (minimum maximum) at the corresponding arc voltage.

9- Manufacturer's serial number for welding machine identification (indispensable for technical assistance, requesting spare parts, discovering product origin).
10- ─▭─ : Size of delayed action fuses to be used to protect the power line.
11- Symbols referring to safety regulations, whose meaning is given in chapter 1 "General safety considerations for arc welding".

Note: The data plate shown above is an example to give the meaning of the symbols and numbers; the exact values of technical data for the welding machine in your possession must be checked directly on the data plate of the welding machine itself.

4. WELDING MACHINE DESCRIPTION
4.1 CONTROL, ADJUSTMENT AND CONNECTING DEVICES.

4.1.1 WELDING MACHINE
At the front:
1- Control panel.
2- Welding cable and torch.
3- Earth return cable and clamp.
4- Torch coupling.
5- Positive (+) fast coupling for connecting the welding cable.
6- Negative (-) fast coupling for connecting the welding cable.
7- Fast coupling plug connected to the torch coupling.
8- Touch coupling
9- SPOOL GUN torch coupling.
10- SPOOL GUN control cable connector.
11- Welding cable and torch
12- SPOOL GUN (optional).

At the back:
13- Main ON/OFF switch.
14- Hose connector for protective gas.
15- Power cable.
16- Hose connector for torch protective gas.
17- Hose connector for SPOOL GUN torch protective gas.

On the reel area (where available):
18- Positive clamp (+).
19- Negative clamp (-).
NB: Polarity inversion for FLUX welding (no gas).

4.1.2 WELDING MACHINE CONTROL PANEL (Fig. C)
1- selection, if pressed, of MIG-MAG welding (SYNERGIC or MANUAL), TIG or MMA
   SYNERGIC MIG-MAG:
   - Adjustment of welding power.

   MANUAL MIG-MAG:
   - Adjustment of wire feed speed.

   TIG (where available):
   - Adjustment of welding current.

   MMA (where available):
   - Adjustment of welding current.

2- access, if pressed, to the parameter setting menus of the MIG-MAG welding processes
   SYNERGIC MIG-MAG:
   - Adjustment of the welding seam (arc length)

   MANUAL MIG-MAG:
   - Adjustment of the welding seam (welding voltage)

   TIG:
   - Not enabled.

   MMA:
   - Not enabled

3- LCD display

5. INSTALLATION

ATTENTION! THE WELDING MACHINE MUST BE TURNED OFF AND DISCONNECTED FROM THE MAINS BEFORE COMMENCING ANY INSTALLATION AND POWER CONNECTION OPERATIONS.
THE ELECTRICAL CONNECTIONS MUST ONLY BE CARRIED OUT BY EXPERT OR QUALIFIED TECHNICIANS.

Unpack the welding machine and assemble the separate parts included in the package.

Assembling the return cable-clamp

Assembling the welding cable-electrode-holder clamp

Assembling the torch holder hook (where available)

5.1 POSITIONING THE WELDING MACHINE
Choose the place where the welding machine is to be installed so that there are no obstructions to the cooling air inlets and outlets; at the same time make sure that conductive dust, corrosive vapours, humidity etc. cannot be drawn into the machine.
Leave at least 250 mm of free space all around the welding machine.

WARNING! Position the welding machine on a level surface with sufficient load-bearing capacity, so that it cannot be tipped over or shift dangerously.

5.2 CONNECTION TO THE MAIN POWER SUPPLY
- Before making any electrical connection, check the rating plate data on the welding machine to make sure they correspond to the voltage and frequency of the available power supply where the machine is to be installed.
- The welding machine must be connected only and exclusively to a power supply with the neutral conductor connected to earth.
- To guarantee protection against indirect contact use the following types of residual current devices:
  - Type A (∿) for single-phase machines.
  - Type B (∿ ⎓) for 3-phase machines.
- In order to satisfy the requirements of the EN 61000-3-11 (Flicker) standard we recommend connecting the welding machine to the interface points of the main power supply that have an impedance of less than Zmax = 0.24 ohm.
- The IEC/EN 61000-3-12 Standard does not apply to the welding machine.
  If the welding machine is connected to an electrical grid, the installer or user must make sure that the machine can indeed be connected (if necessary, consult the company that manages the electrical grid).

5.2.1 Plug and outlet
(1~)
Connect the power supply plug to a mains socket fitted with fuses or an automatic circuit-breaker; the corresponding earth terminal should be connected to the (yellow-green) earth conductor of the power supply.

(3~)
Connect a normalised plug (3P + P.E) - having sufficient capacity- to the power cable and prepare a mains outlet fitted with fuses or an automatic circuit-breaker; the special earth terminal should be connected to the earth conductor (yellow-green) of the power supply line.

WARNING! Non-compliance with the above regulations renders the manufacturer's safety system (class I) inefficient, with resulting serious risks to people (e.g. electric shock) and things (e.g. fire).

5.3 WELDING CIRCUIT CONNECTION
5.3.1 Recommendations

ATTENTION! BEFORE CARRYING OUT THE FOLLOWING CONNECTIONS, MAKE SURE THE WELDING MACHINE IS OFF AND DISCONNECTED FROM THE MAINS.

- Fully rotate the welding cable connectors in the quick couplings (if present), to guarantee perfect electric contact; if this is not the case the connectors will overheat with consequent fast deterioration and loss of efficiency.
- Use the shortest welding cables possible.
- Do not use metal structures that are not part of the workpiece to replace the welding current return cable; this can endanger safety and give unsatisfactory welding results.

5.3.2 WELDING CIRCUIT CONNECTIONS IN MIG-MAG MODE
5.3.2.1 Gas cylinder connection (if used)
- Loadable gas cylinder on the support surface of the trolley: max 30kg (where available).
- Screw the pressure reducer (*) onto the cylinder gas valve, inserting the specific reduction supplied as an accessory, when Argon gas or an Argon/CO_2 mix is used.
- Connect the input hose of the gas reducer and tighten with the strip.
- Loosen the adjustment ring nut of the pressure reducer before opening the cylinder valve.

(*) Accessory to purchase separately if not supplied with the product.

5.3.2.2 Connecting the welding current return cable
Connect the cable to the piece to be welded or the metal bench on which the workpiece is placed, as close as possible to the joint being worked.

5.3.2.3 Torch
Prepare the torch to receive the wire for the first time, removing the nozzle and the contact pipe, to make exiting easier.

5.3.2.4 Internal polarity change (where available)

- Open the reel area door.
- MIG/MAG welding (gas):
  - Connect the torch cable to the red clamp (+)
  - Connect the clamp return cable to the negative fast coupling (-)
- FLUX welding (no gas):
  - Connect the torch cable to the black clamp (-)
  - Connect the clamp return cable to the positive fast coupling (+)
- Close the reel area door.

5.3.2.5 External polarity change (where available)

- MIG/MAG welding (gas):
- Connect the torch cable to the torch coupling
- Connect the fast coupling plug to the positive coupling plug
- Connect the clamp return cable to the negative fast coupling (-)
- FLUX welding (no gas):
- Connect the torch cable to the torch coupling
- Connect the fast coupling plug to the negative coupling (-)
- Connect the clamp return cable to the positive fast coupling (+)

5.3.3 WELDING CIRCUIT CONNECTION IN TIG MODE
5.3.3.1 Connecting the gas bottle
- Screw the pressure reducer onto the gas bottle valve, placing the relative reduction supplied as an accessory between them;
- Connect the gas input hose to the pressure reducing valve and tighten the supplied strip.
- Loosen the adjustment ring nut of the pressure reducing valve before opening the gas bottle valve.
- Open the gas bottle and adjust the quantity of gas (l/min.) according to the recommended usage data, the gas flow can be adjusted while welding, always using the ring nut of the pressure reducer. Check the seal of the hoses and connections.

⚠ **ATTENTION! Always close the gas bottle valve when you have finished working.**

5.3.3.2 Connecting the welding current return cable
- Connect the cable to the piece to be welded or the metal bench on which the workpiece is placed, as close as possible to the joint being worked. Connect this cable to the clamp with the symbol (+)

5.3.3.3 Torch
- Insert the current cable in the specific fast clamp (-) Connect the gas hose of the torch to the cylinder.

5.3.4 WELDING CIRCUIT CONNECTIONS IN MMA MODE
Almost all the coated electrodes should be connected to the positive pole (+) of the generator; an exception is the negative pole (-) for electrodes with acid coating.

5.3.4.1 Connection of the electrode-holder clamp welding cable
Bring a special clamp on the clamp used to tighten the exposed part of the electrode. Connect this cable to the clamp with the symbol (+)

5.3.4.2 Connecting the welding current return cable
- Connect the cable to the piece to be welded or the metal bench on which the workpiece is placed, as close as possible to the joint being worked. Connect this cable to the clamp with the symbol (-)

5.4 LOADING THE WIRE SPOOL

⚠ **WARNING! BEFORE STARTING THE OPERATIONS TO LOAD THE WIRE MAKE SURE THE WELDING MACHINE IS SWITCHED OFF AND DISCONNECTED FROM THE MAIN POWER SUPPLY OUTLET.**

MAKE SURE THAT THE WIRE FEEDER ROLLERS, THE WIRE GUIDE HOSE AND THE CONTACT TIP OF THE TORCH MATCH THE DIAMETER AND TYPE OF WIRE TO BE USED AND MAKE SURE THAT THESE ARE FITTED CORRECTLY. WHEN INSERTING AND THREADING THE WIRE DO NOT WEAR PROTECTIVE GLOVES.
- Open the reel compartment door.
- Position the wire reel on the spindle, holding the end of the wire upwards; make sure the tab for pulling the spindle is correctly seated in its hole
- Release the pressure counter-roller(s) and move them away from the lower roller(s)

- Make sure that the towing roller(s) is suited to the wire used
- Free the end of the wire and remove the distorted end with a clean cut and no burr; turn the reel anti-clockwise and thread the end of the wire into the wire-guide infeed, pushing it 50-100mm into the wire guide of the torch fitting
- Re-position the counter-roller(s), adjusting the pressure to an intermediate value, and make sure that the wire is correctly positioned in the groove of the lower roller(s)

- Remove the nozzle and contact tip

- Insert the welding machine plug in the power supply outlet, switch on the welding machine, press the torch button and wait for the end of the wire to pass through the whole of the wire guide hose and protrude by 10-15 cm from the front part of the torch, release the button.

⚠ **WARNING! During these operations the wire is live and subject to mechanical stress; therefore if adequate precautions are not taken the wire could cause hazardous electric shock, injury and striking of electric arcs:**
- Do not direct the mouthpiece of the torch towards parts of the body.
- Keep the torch away from the gas bottle.
- Re-fit the contact tip and the nozzle onto the torch
- Check that wire feed is regular; set the roller and spindle braking pressure to the minimum possible values making sure that the wire does not slide in the groove and when feed is halted the loops of wire are not loosened by excessive reel inertia.
- Cut the end of the wire so that 10-15 mm protrude from the nozzle.
- Close the reel compartment door.

5.5 LOADING THE WIRE SPOOL ONTO THE SPOOL GUN

⚠ **ATTENTION! BEFORE LOADING THE WIRE, MAKE SURE THE WELDING MACHINE IS OFF AND DISCONNECTED FROM THE MAINS.**

MAKE SURE THE WIRE FEEDERS, THE WIRE GUIDE HOSE AND THE TORCH CONTACT PIPE CORRESPOND WITH THE DIAMETER AND NATURE OF THE WIRE TO BE USED AND THAT THEY ARE CORRECTLY MOUNTED. DO NOT WEAR PROTECTIVE GLOVES WHEN THREADING THE WIRE.
- Remove the cover by unscrewing the relative screw
- Position the wire coil onto the reel.
- Release the pressure counter-roller and distance it from the lower rolle
- Free the wire end, cut off the misshaped end by cutting it cleanly and without leaving a burr; rotate the reel counter-clockwise and position the wire end into the wire feed input, pushing it by 50-100 mm into the torch swan neck
- Reposition the counter-roller, adjusting the pressure at an intermediate value, make sure the wire is positioned correctly in the hollow of the lower roller
- Gently stop the reel, using the relative adjustment screw.
- With the **SPOOL GUN** connected, insert the welding machine plug into the mains socket, switch on the welding machine, press the spool gun push-button and wait for the end of the wire which is running along the whole wire feed casing, to exit by 100-50mm from the front of the torch, then release the torch push-button.

6. MIG-MAG WELDING: PROCESS DESCRIPTION
6.1 SHORT ARC
Wire welding and detachment of the drop takes place via subsequent short-circuits of the wire tip and weld pool (up to 200 times per second). The stick-out length of the wire is normally between 5 and 12mm.

Carbon, low-alloy steel
- Usable wire diameter: 0.6 - 0.8 - 1.0 mm (1.2 mm version 270A only)
- Usable gas: CO_2 or Ar/CO_2 mixtures

Stainless steel
- Usable wire diameter: 0.8 - 1.0 mm (1.2 mm version 270A only)
- Usable gas: Ar/O_2 or Ar/CO_2 mixtures (1-2%)

Aluminium and CuSi/CuAl
- Usable wire diameter: 0.8 - 1.0 mm (1.2 mm version 270A only)
- Usable gas: Ar

Core wire
- Usable wire diameter: 0.8 - 0.9 - 1.2mm
- Usable gas: None

6.2 PROTECTION GAS
The protective gas flow rate must be 8-14 l/min.

7. MIG-MAG OPERATION MODEE

7.1 SYNERGIC operating mode SYN
Defined by the user, the parameters such as material, wire diameter Ø, gas type i, the welding machine is automatically set in optimal operating conditions established by the various synergic curves saved. The user only has to select the material thickness to begin welding (OneTouch Technology).

7.1.1 LCD display in SYNERGIC mode
NB: All the values which be displayed and selected depend on the type of set welding.

1- Synergic operating mode SYN;
2- Material to weld. Types available: Fe (steel), Ss (stainless steel), $AlMg_5$ $AlSi_5$ (aluminium), CuSi/CuAl (zinc-plated sheet metal - brazing), Flux (core wire - NO GAS welding);
3- Diameter of wire to use;
4- Recommended safety gas;
5- Thickness of material to weld;
6- Graphic indicator of thickness of material;
7- Graphic indicator of welding seam shape;
8- Welding values:
   wire feed speed;
   U welding voltage;
   I welding current.
9- ATC (Advanced Thermal Control).

7.1.2 Parameters setting
Pressing button C-2 for at least 1 second, you can access the preset programs on the machine.
Turning the knob C-2 you can slide all the programs (PRG 01, 02, etc.). Select the program chosen by pressing and releasing the same knob. The welding machine sets itself automatically in the best operation conditions established by the different synergy curves that are saved. The user only has to select the material thickness using knob C-1 to begin welding. The welding voltage and current is shown on the display only during welding.

7.1.3 Adjustment of the welding seam shape
Adjustment of the shape of the seam takes place using the knob that regulates the arc length thereby establishing the greater or lesser welding temperature input.
The settings scale varies from -10 ÷ 0 ÷ +10; in most cases, the knob in the intermediate position (0,) has an optimal base setting (the value is shown on the LCD display on the left of the graphic symbol of the welding seam and disappears after a set time).
Using the knob (Fig. C-2), the graphic indication on the display of the shape of the welding changes showing a more convex, flat or concave result.
Convex shape. It means there is a low thermal load, therefore welding is "cold", with little penetration; therefore, turning the knob clockwise you obtain more thermal load with the effect of welding with greater melting.
Concave shape. It means there is a high thermal load, therefore welding is too "hot", with excessive penetration; then, turn the knob anti-clockwise to obtain greater melting.

7.1.4 ATC Mode (Advanced Thermal Control)
This is enabled automatically when the thickness selected is less or equal to 1.5mm.
Description: the particular instantaneous control of the welding arc and the ultra rapid correcting of parameters minimize current spikes, something that is characteristic of Short Arc transfer procedures, to the advantage of a low thermal load on the piece to be welded. The result, on the one hand, is reduced deformation of materials and, on the other, a fluid and accurate transfer of the weld material and the creation of a welding seam that is easy to model.

Advantages:
- easy welding of thin materials;
- decreased deformation of material;
- stable arc even when working with low currents;
- rapid and accurate spot welding;
- easier coupling of spaced sheets.

7.1.5 Using the spool gun (where available)
All the settings procedures (material, wire diameter, gas type) are described above.
The spool gun knob (Fig. I-5) adjusts the wire speed (and the welding current and thickness simultaneously). The user only has to adjust the arc voltage via the display (if necessary).

7.1.6 Advanced parameter setting: MENU 1 (Fig. M)
Press the knobs (Fig. C1) and (Fig. C2) for at least 1 second and release to access the advanced parameter settings menu. When MENU 1 appears, again press. Each parameter can be set to the desired value by rotating/pressing the knob (Fig. C2) until you exit the menu.

: trailing wire ramp correction (Fig. M-1)
Use to correct the trailing wire starting ramp to prevent any initial accumulation in the welding seam. Settings from - 10 % to + 10 %. Factory value: 0 %

: electronic reactance correction (Fig. M-2)
A higher value determines a hotter welding bath. Settings from - 10 % (low reactance machines) to + 10 % (high reactance machines). Factory value: 0 %

: burn-back correction. (Fig. M-3)
Use to adjust the wire burn-back time when welding is stopped. Settings from - 10 % to + 10 %. Factory value: 0 %

: Post gas. (Fig. M-4)
Use to adapt the protective gas outflow starting from when welding is stopped. Settings from 0 to 10 seconds. Factory value: 1 sec.

7.2 MANUAL operating mode MAN
The user can customise all the welding parameters.

7.2.1 LCD display in MANUAL mode (Fig. N)
1- MANUAL operating mode MAN;

2- Welding values:
   wire feed speed;
   U welding voltage;
   I welding current.

7.2.2 Parameters setting
In manual mode, the wire feeding speed and the welding voltage are adjusted separately. The knob (Fig. C-1) adjusts the wire speed, the knob (Fig. C-2) adjusts the welding voltage (which determines the welding power and influences the seam shape). The welding current is shown on the display (Fig. N-2) only during welding.

7.2.3 Setting of spool gun parameters (where available)
In manual mode, the wire feeding speed and the welding voltage are adjusted separately. The spool gun knob (Fig. L-5) adjusts the wire speed, whilst the welding voltage is adjusted via the display.

7.2.4 Advanced parameter setting: MENU 1 (Fig. M)
Press the knobs (Fig. C1) and (Fig. C2) for at least 1 second and release to access the advanced parameter settings menu. When MENU 1 appears, again press. Each parameter can be set to the desired value by rotating/pressing the knob (Fig. C2) until you exit the menu.

: Trailing wire ramp (Fig. M-1).
Use to adjust wire feed rate as welding starts, in order to optimise arc strike. Settings from 20 to 100 % (start in % of full capacity speed). Factory value: 50 %

: Electronic reactance (Fig. M-2)
A higher value determines a hotter welding bath. Settings from 10 % (low reactance machines) to 100 % (high reactance machines). Factory value: 50 %

: Burn-back. (Fig. M-3)
Use to adjust the wire burn-back time when welding is stopped. Settings from 0 sec. Factory value: 0.08 sec.

: Post gas. (Fig. M-4)
Use to adapt the protective gas outflow starting from when welding is stopped. Sett from 0 to 10 seconds. Factory value: 1 sec.

8. CONTROLLING THE TORCH PUSH-BUTTON
8.1 Setting the torch push-button control mode (Fig. O)
Both in manual and synergic mode to access the menu, simultaneously press knobs (Fig. C1) and (Fig. C2) for at least 1 second and release them. Turn the k (Fig. C2) until menu 2 appears. Confirm selection by pressing the knob again.

8.2 Torch push-button control mode
It is possible to set 3 different torch push-button control modes:

2T mode: 2t
welding begins when the torch push-button is pressed and ends when the push-bu is released.

4T mode: 4t
welding begins when the torch push-button is pressed and released, and ends when the torch push-button is pressed and released a second time. This moc useful for long welding operations.

Spot welding mode: ••••
used for MIG/MAG spot welding with control of welding duration.

9. UNIT OF MEASUREMENT MENU (Fig. O)
Both in manual and synergic mode to access the menu, simultaneously press knobs (Fig. C1) and (Fig. C2) for at least 1 second and release them. Turn the k (Fig. C2) until menu 3 appears. Confirm selection by pressing the knob again. you can set the metric or imperial units of measurement. Pressing knob C-2 again, return to manual (or synergic) mode.

10. INFO MENU (Fig. O)
Both in manual and synergic mode to access the menu, simultaneously press knobs (Fig. C1) and (Fig. C2) for at least 1 second and release them. Turn the k (Fig. C2) until menu 4 appears. Confirm selection by pressing the knob again; tur the knob C-2 you can obtain information on the software installed. Pressing knob again, you return to manual (or synergic) mode.

11. TIG DC WELDING: PROCESS DESCRIPTION
11.1 GENERAL PRINCIPLES
TIG DC welding is suitable for all types of low-alloy and high carbon steel, and he metals such as copper, nickel, titanium and their alloys An electrode with Cerium (grey band) is normally used for TIG DC welding with electrode at the (-) p The tungsten electrode must be axially sharpened using a grinding wheel, see FIG make sure the tip is perfectly concentric to prevent arc deviation. The electrode r be ground along its length. This operation must be repeated periodically accor to the use and wear state of the electrode, or when the electrode itself has b accidentally contaminated, oxidised or used incorrectly. For the welding to be g the exact diameter of the electrode must be used with the exact current, The electrode normally projects from the ceramic nozzle by 2-3 mm, but reach 8 mm for welding edges.
The weld is created by the edges that melt. Filler metal is not needed when wel suitably prepared thin material (up to about 1 mm) A greater thickn requires rods made from the same material as the basic material and with a suitable diameter, with edges that have been suitably prepared
For welding to be successful, the pieces must be carefully cleaned and free f oxide, grease, oil, solvent, etc.

11.2 PROCEDURE (LIFT STRIKE)
- Use the knob C-1 to adjust the welding current at the required value;
  Adjust the current during welding to the true thermal ratio that is required.
- Make sure the gas is flowing correctly.
  The arc ignites through contact, distancing the tungsten electrode from workpiece. Igniting in this manner causes less electric-irradiated disturbances reduces tungsten inclusions and electrode wear to a minimum.
- Place the tip of the electrode on the workpiece, pressing gently.
- Immediately lift the electrode by 2-3 mm to obtain the ark strike.
  The welding machine initially supplies reduced current. After a few seconds, the welding current is issued.
- Quickly lift the electrode from the workpiece to interrupt welding.

11.3 LCD DISPLAY IN TIG MODE (Fig. C)
- TIG operation mode;

  Welding values;
  U welding voltage;
  I welding current.

12. MMA WELDING: PROCESS DESCRIPTION
12.1 GENERAL PRINCIPLES
- It is essential to follow the recommendations provided by the manufacturer on electrode packaging which indicates the correct electrode polarity and relative r current.
- Welding current is regulated to suit the diameter of the electrode being used and type of soldering to be performed; an example of the currents used for the var

electrode diameters can be seen below:

Ø Electrode (mm)	Welding current (A)	
	Min.	Max.
1.6	25	50
2.0	40	80
2.5	60	110
3.2	80	150
4.0	140	200
5.0	180	250
6.0	240	270

- One can see that for the same diameter electrode, high levels of current will be used for flat welding, whilst lower current levels will be used for vertical or overhead welding.
- The mechanical characteristics of the welded joint are determined by the intensity of the selected current and also other welding parameters such as the length of the arc, the operating speed and position, the diameter and quality of the electrodes (to ensure correct conservation, use special packaging or containers to store and protect the electrodes against humidity).

WARNING:
Instability of the arc due to the composition of the electrode can occur, depending on the brand, type and thickness of the electrode coatings.

12.2 Procedure

- Hold the mask IN FRONT OF THE FACE, then lightly scratch the electrode tip on the piece to be welded as if you were trying to strike a match; this is the correct way of striking the arc.
  WARNING: DO NOT TAP the electrode against the piece; this can damage the coating and make it difficult to strike the arc.
- A soon as the arc is struck, try to maintain a distance from the piece which is equivalent to the diameter of the electrode being used, and try to maintain this distance as constant as possible during the welding operations; remember that the angle of the electrode as it moves forwards should be about 20-30 degrees.
- At the end of the welding seam, move the electrode tip backwards slightly, above the crater, and fill it in; now quickly lift the electrode from the weld pool to extinguish the arc (Examples of welding seams -

12.3 LCD DISPLAY IN MMA MODE (Fig. C)

- MMA operation mode;
- Welding values;
  - U welding voltage;
  - I welding current;
- Ø recommended electrode diameter.

13. RESET FACTORY SETTINGS
The welding machine can be taken back to the factory settings by keeping the two knobs (Fig.C-1) and (Fig.C-2) pressed during starting operation.

14. ALARM WARNINGS
Reset is automatic when the reason for alarm activation stops.
Alarm messages that can appear on the display:

- **ALARM 01 and " 🌡 ":** Welding primary thermal switch has tripped. Operations come to a halt until the machine has cooled down sufficiently.
- **ALARM 02 and " 🌡 ":** Welding secondary thermal switch has tripped. Operations come to a halt until the machine has cooled down sufficiently.
- **ALARM 03:** overvoltage switch has tripped. Check the power supply voltage.
- **ALARM 04:** undervoltage switch has tripped. Check the power supply voltage.
- **ALARM 10:** welding circuit overcurrent switch has tripped. Make sure the feeder speed and/or welding current are not too high.
- **ALARM 11:** torch and earthing short-circuit switch has tripped. Make sure the welding circuit has not short-circuited.
- **ALARM 13:** no internal communication switch has tripped. If the alarm continues, contact an authorised repair centre.
- **ALARM 18:** auxiliary voltage alarm switch has tripped. If the alarm continues, contact an authorised repair centre.

When the welding machine is switched off, the signal ALARM 04 may appear for a few seconds.

15. MAINTENANCE

WARNING! BEFORE CARRYING OUT MAINTENANCE OPERATIONS MAKE SURE THE WELDING MACHINE IS SWITCHED OFF AND DISCONNECTED FROM THE MAIN POWER SUPPLY.

15.1 ROUTINE MAINTENANCE:
ROUTINE MAINTENANCE OPERATIONS CAN BE CARRIED OUT BY THE OPERATOR.

15.1.1 Torch

- Do not put the torch or its cable on hot pieces; this would cause the insulating materials to melt, making the torch unusable after a very short time.
- Make regular checks on the gas pipe and connector seals.
- Accurately match collet and collet body with the selected electrode diameter in order to avoid overheating, bad gas diffusion and poor performance.
- At least once a day check the terminal parts of the torch for wear and make sure they are assembled correctly: nozzle, electrode, electrode-holder clamp, gas diffuser.
- Before using the welding machine, always check the terminal parts of the torch for wear and make sure they are assembled correctly: nozzle, electrode, electrode-holder clamp, gas diffuser.

15.1.2 Wire feeder

- Make frequent checks on the state of wear of the wire feeder rollers, regularly remove the metal dust deposited in the feeder area (rollers and wire-guide infeed and outfeed).

15.2 EXTRAORDINARY MAINTENANCE
EXTRAORDINARY MAINTENANCE MUST ONLY BE CARRIED OUT BY TECHNICIANS WHO ARE EXPERT OR QUALIFIED IN THE ELECTRIC-MECHANICAL FIELD, AND IN FULL RESPECT OF THE IEC/EN 60974-4 TECHNICAL DIRECTIVE.

WARNING! BEFORE REMOVING THE WELDING MACHINE PANELS AND WORKING INSIDE THE MACHINE MAKE SURE THE WELDING MACHINE IS SWITCHED OFF AND DISCONNECTED FROM THE MAIN POWER SUPPLY OUTLET.
If checks are made inside the welding machine while it is live, this may cause serious electric shock due to direct contact with live parts and/or injury due to direct contact with moving parts.

- Inspect the welding machine regularly, with a frequency depending on use and the dustiness of the environment, and remove the dust deposited on the transformer, reactance and rectifier using a jet of dry compressed air (max. 10 bar).
- Do not direct the jet of compressed air on the electronic boards; these can be cleaned with a very soft brush or suitable solvents.
- At the same time make sure the electrical connections are tight and check the wiring for damage to the insulation.
- At the end of these operations re-assemble the panels of the welding machine and screw the fastening screws right down.
- Never, ever carry out welding operations while the welding machine is open.
- After having carried out maintenance or repairs, restore the connections and wiring as they were before, making sure they do not come into contact with moving parts or parts that can reach high temperatures. Tie all the wires as they were before, being careful to keep the high voltage connections of the primary transformer separate from the low voltage ones of the secondary transformer.
  Use all the original washers and screws when closing the casing.

16. TROUBLESHOOTING
IN CASE OF UNSATISFACTORY FUNCTIONING, BEFORE SERVICING MACHINE OR REQUESTING ASSISTANCE, CARRY OUT THE FOLLOWING CHECK:

- Check that when general switch is ON the relative lamp is ON. If this is not the case then the problem is located on the mains (cables, plugs, outlets, fuses, etc.)
- There is no alarm signalling intervention of the thermostat safeguard, over or undervoltage or short-circuit.
- Check that the nominal intermittance ratio is correct. In case there is a thermal protection interruption, wait for the machine to cool down, check that the fan is working properly.
- Check the mains voltage: if the value is too high or too low the welding machine will be stopped.
- Check that there is no short-circuit at the output of the machine: if this is the case eliminate the incovenience.
- Check that all connections of the welding circuit are correct, particularly that the work clamp is well attached to the workpiece, with no interferring material or surface-coverings (ie. Paint).
- Protective gas must be of appropriate type and quantity.

FIG. L

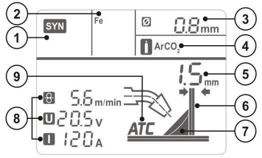


FIG. M

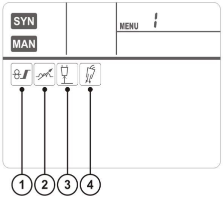


FIG. N

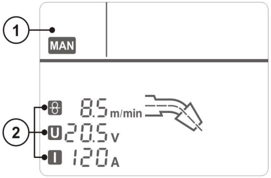
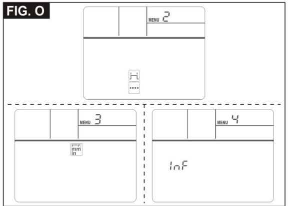
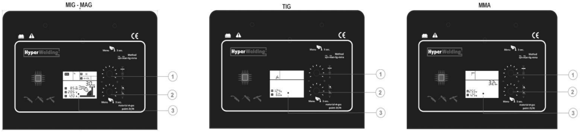


FIG. O



FIG. C