



Road Development Corporation Limited
Republic of Maldives
Terms of Reference for
SUPPLY AND DELIVERY OF BUTT FUSION & ELECTROFUSION MACHINE FOR RDC
PROJECTS

BACKGROUND

Road Development Corporation Limited, an incorporated limited liability company operating under the registration number C10482019 and having its registered office at MSL Buildings, First Floor, Malé, Republic of Maldives (herein after called and referred to as “the Employer”), invites sealed tender from eligible bidders for SUPPLY AND DELIVERY OF BUTT FUSION & ELECTROFUSION MACHINE FOR RDC PROJECTS (hereinafter called the “Works” or “Project”).

SCOPE OF WORK

The Employer will finance the supply and delivery of the following machines:

- Supply and delivery of Buttwelding Machines and EF Machine with industry standard quality complying with the relevant standards detailed for the individual equipment (refer to Appendix A).
- Suppliers must provide the following documents for technical evaluation.
 - Technical specifications of the equipment
 - Manufacturer’s certificates
 - Compliance standard certificates

The Machines to be supplied are listed are listed below.

#	Lab Equipment	Quantity
1	Buttwelding Machine	3
2	EF Machine	3

APPENDIX A: SPECIFICATIONS FOR BUTTWELD AND EF MACHINE

Supply and delivery of Buttweld Machines and EF Machine complying with the technical specification given below:

1- BUTTWELD MACHINE

Technical specifications (*machine size)	ECO S	TOP 2.0	CNC 4.0
Operating conditions			
Pipe diameter range [mm]	90 - 315 (*315)	90 - 315 (*315)	90 - 315 (*315)
Material	PE, PP, PB, PVDF		
Working temperature range	min. -10 °C max. +45 °C	min. -10 °C max. +45 °C	min. -10 °C max. +45 °C
Electrical data			
Input voltage (VAC)	230	230 (*160-315) 400 (*400-630)	230 (*160-315) 400 (*400-630)
Frequency range (Hz)	50 - 60	50 - 60	50 - 60
Input power (KW)	1.9 (*160) 3.3 (*250) 3.8 (*315)	1.9 (*160) 3.3 (*250) 3.8 (*315) 5.7 (*400) 7.0 (*500) 11.0 (*630)	1.9 (*160) 3.3 (*250) 3.8 (*315) 5.7 (*400) 7.0 (*500) 11.0 (*630)
Product features			
Fully closed housing for the hydraulic unit		✓	✓
One single plug to power supply		✓	✓
Control panel integrated in the hydraulic unit		✓	✓
Safety micro-switch for the planer	✓	✓	✓
Locking mechanism for the planer	✓	✓	✓
Electronic temperature controller	✓	✓	✓
Fusion data recording	Optional	Optional	✓
Automatic process control			✓
Barcode scanner			Optional
Operator's code input (ISO 12176-3)			✓
Pipes and fittings traceability (ISO 12176-4)			✓
GPS coordinates			✓
Label printer			✓
Bluetooth connection for remote data transfer			WeldinAir version
Wide reduction inserts for clamps	Optional	Optional	Optional
Narrow reduction inserts for clamps (to suit short-ended fittings)	Optional	Optional	Optional
Flange adapters clamping device	Optional	Optional	Optional
Chamfered upper clamp (to suit bend fittings with max diameter)	Optional	Optional	Optional
Automatic heater ejection system			Optional (*250-315)
Hoist unit (to lift planer and heater)		Optional (*400-630)	Optional (*400-630)
Product codes			
160	790150009	790150011	790150012 / 790150076
250	790151013	790151011	790151012 / 790151076
250 with automatic heater ejection			790151071 / 790151077
315	790152028	790152026	790152012 / 790152076
315 with automatic heater ejection			790152071 / 790152077
400		790153011	790153001 / 790153076
500		790154011	790154007 / 790154078
630		790155011	790155001 / 790155076

2- EF MACHINE

Technical specifications	MSA 330	MSA 340
Operating conditions		
Working temperature range	min. -10 °C, max. +45 °C	min. -10 °C, max. +45 °C
Electrical data		
Input voltage range [Vac]	180–265	180–265
Frequency range [Hz]	40–70	40–70
Current consumption (Max, A)	16 A	16 A
Output voltage [V ac]	8–48	8–48
Output current (max, A)	90	90
Input power [KW]	2.75	2.75
Type of protection	IP54	IP54
Protection class	I	I
Data and operation control		
Data recording capacity (Number of protocols)	500	1000
Communication interface	USB Type A	USB Type A
Buttons	5+Start+Stop	5+Start+Stop
Display	LCD20x4 s	LCD20x4 s
Display colors	Blue/White	Blue/White
GPS accuracy (average)	-	3m
Mechanical data		
Dimensions [mm]	280x480x320	280x480x320
Weight [Kg]	21.7	21.7
Case material	Aluminium	Aluminium
Mains cable length	4 m	4 m
Fusion cable length	4 m	4 m
Mains plug	Schuko 16A	Schuko 16A
Connectors	4mm	4mm
Adapters [90°]	4.0–4.0 mm/4.0–4.7 mm	4.0–4.0 mm/4.0–4.7 mm
Norms compliance		
EMC [EN61000]	✓	✓
Safety [EN60335]	✓	✓
ISO12176-2/3	✓	✓
ISO12176-4		✓
UNI 10566 2009	✓	✓