

# ACS.MET 4 INITIAL & RE-ASSESSMENT EMERGENCY SERVICE PROVIDER AND GAS METER INSTALLER NON-DOMESTIC DIAPHRAGM METERS NATURAL GAS

# MET4 INITIAL and RE-ASSESSMENT

### Introduction

Tests gas safety competence to install, exchange, remove and commission diaphragm type gas meters.

Candidates who have achieved CMET1 may also install meters within the scope of MET4

Candidates successfully completing this assessment may also install LP meters of capacity  $\leq 6$  m<sup>3</sup>/h.

CBs may adopt Competence and Criteria numbering different to that used in this document.

CB documentation may adopt wording for criteria different to that used in this document, provided the meaning is unaffected.

# Range

Primary diaphragm meters of badged capacity  $\leq 40 \text{m}^3/\text{h}$ . Pipework of diameter  $\leq 2$ " (50 mm) diameter. LP only.

# **Pre-requisites**

CMA1 or CESP1 or CCN1 or COCN1 or CCCN1 or QCF or S/NVQ.

Note: If working on meters >16m³/hr or working on installations out of scope of UP/1B TPCP1 or TPCP1A is required.

Note: Work on meters with MP meter  $\leq$  6 m³/h require REGT1 , MP supplies  $\geq$  6 m³/h also require REGT 2.

### **Exclusions**

Secondary meters; meter reading; pre-payment mechanisms; meter box installation; construction of meter compartments or housings; service pipework; installation or exchange of ECV/MIV; service valves or their operation; meter removal from site and subsequent disposal; testing by OFGEM and theft of gas.

### References

- HSL56
- IGEM/GM/6 Edition 3
- IGEM/G/11 Edition 2
- GIUSP.

Where a reference point (REF) is listed in this criteria this is only a guide to where the criteria could be resourced; therefore, the REF may not be exhaustive.

ACS.SMB. 003.ACDND indicates those Normative Documents that should be held by ACs.

### **Abbreviations**

AC. Assessment Centre

ECV. Emergency control valve

GSIUR. Gas Safety (Installation & Use) Regulations

I. Initial

LP. Low pressure

MIV. Meter inlet valve

MOP. Maximum operating pressure

MOV. Meter outlet valve

MP. Medium pressure

OP. Operating pressure

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Ref. Reference.

PERF	ORMANCE CRITERIA	REF	T	R
1a.	determine pressure in service as LP	1021	<b>√</b>	
	OQ Related to service pressures > 75mbar			
1.	check ECV operates correctly		✓	
2.	note and confirm connected appliances to internal supply are of the 'standard type'		✓	
3.	check meter and installation components are fit for use and purpose and regulator		✓	✓
	has been factory set at an appropriate pressure to suit the installation and sealed			
2( .	with manufacturer's mark			<b>√</b>
3(a).	Preparation check of meter components for obstructions check pressure test records of components		<b>✓</b>	٧
3(b).	a removed		•	
4.	isolate gas supply prior to work		<b>√</b>	
5.	remove plug/cap from ECV		· /	
6.	Connect diaphragm meter , ECV/MIV and regulator via bracket, semi-rigid		·	
"	connection, fittings, washers			
7.	Correct use temporary continuity bond		✓	
7a	check the meter and associated pipework , supports and fittings / components for			$\checkmark$
	use are of the appropriate materials inc jointing agents, to MIs and normative			
	documents			
8.	re-establish gas supply		<b>√</b>	
9.	check work carried out is gas tight		<b>√</b>	<b>√</b>
10.	purge meter and re-light appliance(s)		<b>✓</b>	<b>√</b>
10a.	OQ check regulator locks up at a pressure <28 mbar with no gas flowing		<b>✓</b>	✓ ✓
11.	check regulator OP		· ·	<b>V</b>
12a	abanamia makan fan farilku amanatian		<b>√</b>	<b>√</b>
12a	observe meter for faulty operation check valves, controls, filters, regulators for correct and safe operation		\ <u>\</u>	<b>V</b> ✓
12c	identify gas safety faults on valves, controls, filters, regulators		· /	· /
12d	identify suitable unsuitable meter locations		· /	· /
12e	identify unsafe installations (AR, ID)		<b>√</b>	<b>√</b>
12.	disconnect and seal meter		✓	
13.	apply appropriate labels and complete warning notices/ certificates		✓	✓
14.	apply appropriate labels and complete warning notices/ certificates operation and use of AECV/MIV /MOV where appropriate		√ √	✓
14.		REF		√ R
14.	operation and use of AECV/MIV /MOV where appropriate	REF	✓	
14. KNO	operation and use of AECV/MIV /MOV where appropriate WLEDGE AND UNDERSTANDING	REF	✓ I	
14. KNO 1. 1a	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters	REF	I ✓	
14. <b>KNO</b> 1. 1a 1b	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation	REF	I ✓	
14. KNO 1. 1a 1b 1c	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections	REF	✓ I ✓ ✓ ✓ ✓ ✓ ✓	
14. KNO 1. 1a 1b 1c 1d	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations	REF	✓ I ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	
14. KNO 1. 1a 1b 1c 1d 2.	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient	REF	✓ I ✓ ✓ ✓ ✓ ✓ ✓	
14. KNO 1. 1a 1b 1c 1d 2. 2a	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections the use of flexible or pliable connections in meter installations determine the meter capacity is sufficient the requirements and understanding of load	REF	✓ I ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	
14. KNO 1. 1a 1b 1c 1d 2. 2a 3.	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations determine the meter capacity is sufficient the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge	REF	✓ I ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4.	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient  the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge  provision of an MOV	REF	V	
14. KNO 1. 1a 1b 1c 1d 2. 2a 3.	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations determine the meter capacity is sufficient the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge	REF	V	
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4. 5	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient  the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge  provision of an MOV  ECV types and locations	REF	V	
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4. 5 6.	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient  the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge  provision of an MOV  ECV types and locations  ECVs/MIVs when meter is installed remotely from dwelling	REF	V	
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4. 5 6. 7.	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections the use of flexible or pliable connections in meter installations determine the meter capacity is sufficient the requirements and understanding of load volume of gas which has to be passed by a meter to effect a satisfactory purge provision of an MOV  ECV types and locations  ECVs/MIVs when meter is installed remotely from dwelling where primary meters serving different parts of a building are grouped together	REF	V	R
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4. 5 6. 7. 8	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient  the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge  provision of an MOV  ECV types and locations  ECVs/MIVs when meter is installed remotely from dwelling  where primary meters serving different parts of a building are grouped together  Meter housing requirements including ventilation  safety notices and labels  providing gas supply to installation pipework/appliances for first time	REF	V	R
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4. 5 6. 7. 8 9.	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient  the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge  provision of an MOV  ECV types and locations  ECVs/MIVs when meter is installed remotely from dwelling  where primary meters serving different parts of a building are grouped together  Meter housing requirements including ventilation  safety notices and labels  providing gas supply to installation pipework/appliances for first time  procedure for meter installation when gas service is not connected to gas i.e.,	REF	V	R
14. KNO  1. 1a  1b  1c  1d  2. 2a  3. 4. 5  6. 7. 8  9. 10. 11.	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient  the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge  provision of an MOV  ECV types and locations  ECVs/MIVs when meter is installed remotely from dwelling  where primary meters serving different parts of a building are grouped together  Meter housing requirements including ventilation  safety notices and labels  providing gas supply to installation pipework/appliances for first time  procedure for meter installation when gas service is not connected to gas i.e.,  Reg.33	REF	V	R
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4. 5 6. 7. 8 9. 10. 11.	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient  the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge  provision of an MOV  ECV types and locations  ECVs/MIVs when meter is installed remotely from dwelling  where primary meters serving different parts of a building are grouped together  Meter housing requirements including ventilation  safety notices and labels  providing gas supply to installation pipework/appliances for first time  procedure for meter installation when gas service is not connected to gas i.e.,  Reg. 33  unsafe meter installations	REF	V	R
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4. 5 6. 7. 8 9. 10. 11.	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient the requirements and understanding of load volume of gas which has to be passed by a meter to effect a satisfactory purge provision of an MOV  ECV types and locations  ECVs/MIVs when meter is installed remotely from dwelling where primary meters serving different parts of a building are grouped together Meter housing requirements including ventilation safety notices and labels providing gas supply to installation pipework/appliances for first time procedure for meter installation when gas service is not connected to gas i.e., Reg. 33 unsafe meter installations Adjacent electrical services	REF	V	R
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4. 5 6. 7. 8 9. 10. 11. 12. 13 14.	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient  the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge  provision of an MOV  ECV types and locations  ECVs/MIVs when meter is installed remotely from dwelling  where primary meters serving different parts of a building are grouped together  Meter housing requirements including ventilation  safety notices and labels  providing gas supply to installation pipework/appliances for first time  procedure for meter installation when gas service is not connected to gas i.e.,  Reg. 33  unsafe meter installations  Adjacent electrical services  HSL56:	REF	V	R
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4. 5 6. 7. 8 9. 10. 11. 12. 13 14. (i)	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections the use of flexible or pliable connections in meter installations determine the meter capacity is sufficient the requirements and understanding of load volume of gas which has to be passed by a meter to effect a satisfactory purge provision of an MOV ECV types and locations ECVs/MIVs when meter is installed remotely from dwelling where primary meters serving different parts of a building are grouped together Meter housing requirements including ventilation safety notices and labels providing gas supply to installation pipework/appliances for first time procedure for meter installation when gas service is not connected to gas i.e., Reg.33 unsafe meter installations Adjacent electrical services  HSL56: Reg.12 Meters – General provisions 12 (1) to (6)	REF	V	R
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4. 5 6. 7. 8 9. 10. 11. 12. 13 14. (i) (ii)	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections the use of flexible or pliable connections in meter installations determine the meter capacity is sufficient the requirements and understanding of load volume of gas which has to be passed by a meter to effect a satisfactory purge provision of an MOV ECV types and locations ECVs/MIVs when meter is installed remotely from dwelling where primary meters serving different parts of a building are grouped together Meter housing requirements including ventilation safety notices and labels providing gas supply to installation pipework/appliances for first time procedure for meter installation when gas service is not connected to gas i.e., Reg.33 unsafe meter installations Adjacent electrical services  HSL56: Reg.12 Meters – General provisions 12 (1) to (6) Reg.13 Meter Housings 13 (1) to (4)	REF	V	R
14. KNO 1. 1a 1b 1c 1d 2. 2a 3. 4. 5 6. 7. 8 9. 10. 11. 12. 13 14. (i) (ii) (iii)	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient  the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge  provision of an MOV  ECV types and locations  ECVs/MIVs when meter is installed remotely from dwelling  where primary meters serving different parts of a building are grouped together  Meter housing requirements including ventilation  safety notices and labels  providing gas supply to installation pipework/appliances for first time  procedure for meter installations  Adjacent electrical services  HSL56:  Reg.12 Meters – General provisions 12 (1) to (6)  Reg.13 Meter Housings 13 (1) to (4)  Reg.16 Primary meters 16 (1) and (2)	REF	V	R
14. KNO  1. 1a  1b  1c  1d  2. 2a  3. 4. 5  6. 7. 8  9. 10. 11. 12. 13  14. (i) (ii) (iii) 15	operation and use of AECV/MIV /MOV where appropriate  WLEDGE AND UNDERSTANDING  Incorrect meter locations  Provisions and clearances required around meters  Permission requirements for meter installation  Meter design and connections  the use of flexible or pliable connections in meter installations  determine the meter capacity is sufficient  the requirements and understanding of load  volume of gas which has to be passed by a meter to effect a satisfactory purge  provision of an MOV  ECV types and locations  ECVs/MIVs when meter is installed remotely from dwelling  where primary meters serving different parts of a building are grouped together  Meter housing requirements including ventilation safety notices and labels  providing gas supply to installation pipework/appliances for first time  procedure for meter installation when gas service is not connected to gas i.e.,  Reg.33  unsafe meter installations  Adjacent electrical services  HSL56:  Reg.12 Meters – General provisions 12 (1) to (6)  Reg.13 Meter Housings 13 (1) to (4)  Reg.16 Primary meters 16 (1) and (2)  completion of commissioning reports	REF	V	R
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	(iii) outside pressure and design capacity scopes having non-standard appliances fitted downstream		
17.	Maintenance obligations	✓	<b>√</b>
18.	Replacement or removal of meters and safety checks required	✓	<b>√</b>