

J48H

Gas Pressure Regulator



This product is discontinued!

Commissioning Instructions

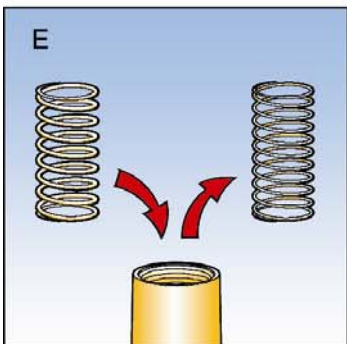
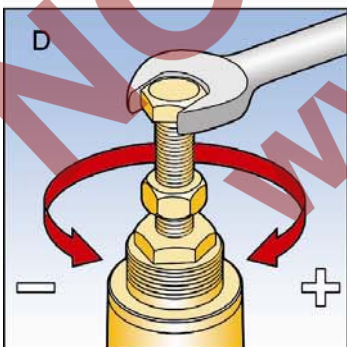
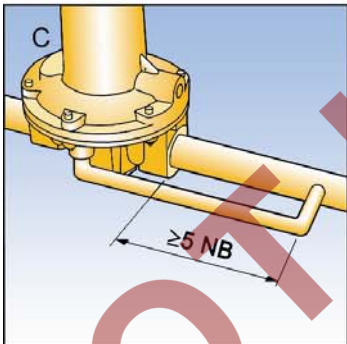
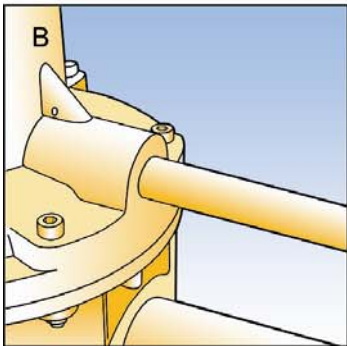
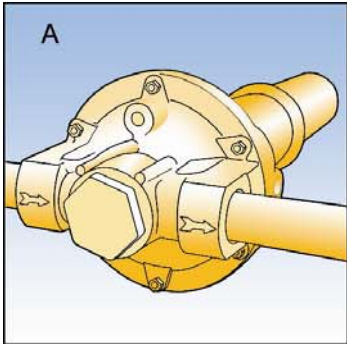
General Arrangement

Parts List

Maintenance Instructions

For: J48H Regulator $\frac{3}{4}$ " - 2"

J48H: Commissioning Instructions



OPERATING INSTRUCTIONS

- Ensure that this product is suitable for the chosen application.
- Installation, adjustment and maintenance by authorised, trained personnel only.
- When being fitted to an appliance, refer to the appliance manufacturers instructions.

Warning! Incorrect installation, adjustment, modification, operation and maintenance may cause injury or damage.
Read instructions before use. This control must be installed in accordance with the rules in force.

FITTING REGULATOR INTO PIPEWORK (A)

1. The unit should not be installed in a corrosive environment.
2. The ambient temperature (surface temperature) should be within the limits stated on the regulator catalogue.
3. Check the maximum allowable pressure on the regulator nameplate against the installation specification.
4. Remove the plastic protection plugs from inlet and outlet (and breather if applicable).
5. Ensure that installation pipework is thoroughly clean.
6. The direction of gas flow must be the same as the arrow(s) on the regulator body.
7. Install the regulator into pipework using a jointing compound approved to national standards.

INSTALLATION OF VENT LINE (B) IF REQUIRED

8. Remove the plastic protection plug.
9. Connect the vent line (1/4" connection), using a jointing compound approved to national standards, and lead to atmosphere in accordance with national standards. Ensure that no water can penetrate vent pipeline.

INSTALLATION OF EXTERNAL IMPULSE LINE (C) IF REQUIRED

10. Remove the plastic protection plug.
11. Connect the impulse line (1/8" connection), using a jointing compound approved to national standards, and lead to a point downstream not less than five times the nominal pipe diameter from the outlet.

FOR PRE - SET REGULATORS

12. Turn off downstream valves.
13. Slowly turn on inlet supply.
14. Commission downstream appliance(s).

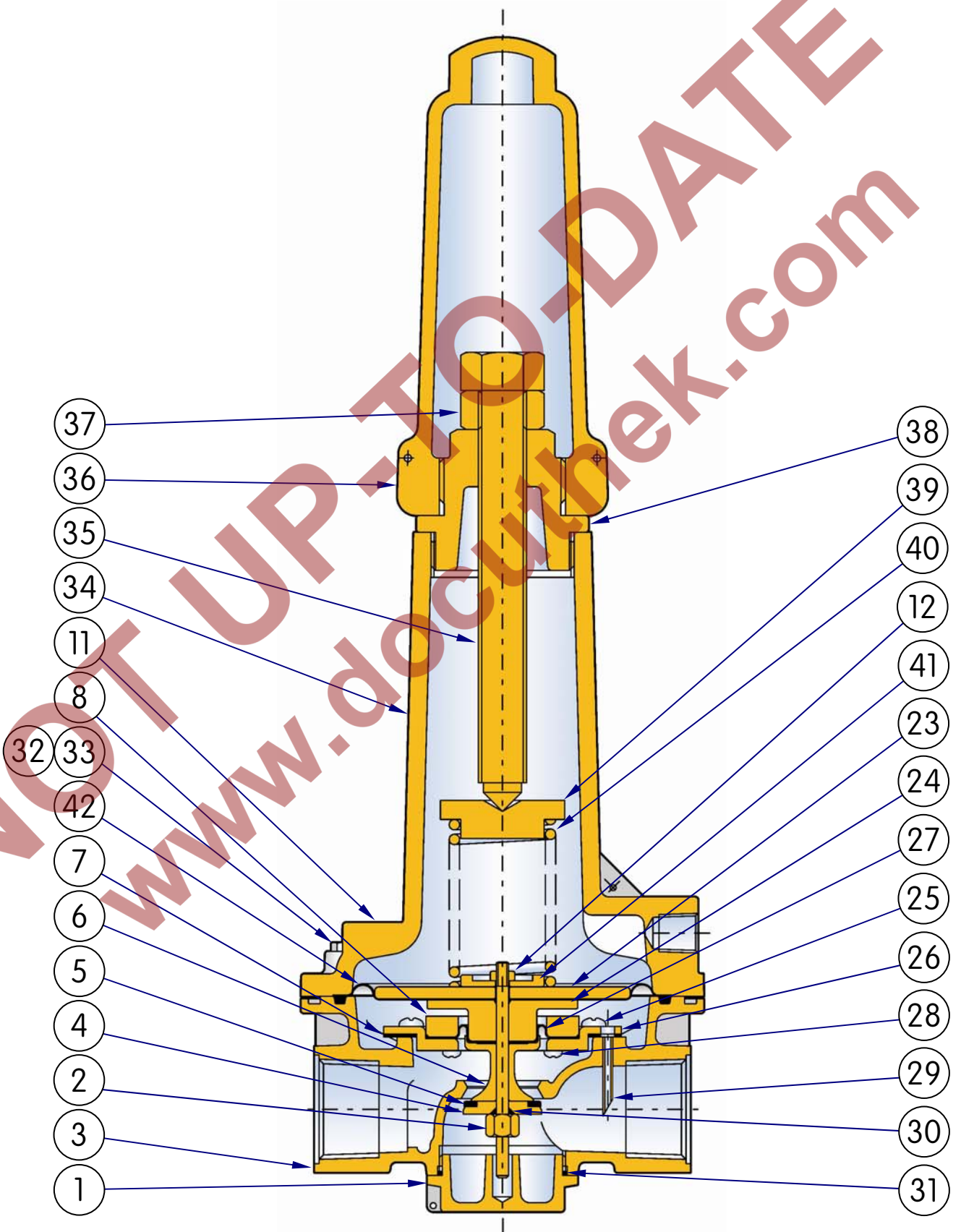
SETTING OF OUTLET PRESSURE (D)

15. Turn off downstream valves.
16. Remove the top cap.
17. Loosen locknut and attach suitable spanner to hexagon on top of spring adjusting screw.
18. Turn anticlockwise to reduce pressure on the loading spring.
19. Slowly turn on inlet supply.
20. Increase loading on the spring by turning the spring adjusting screw clockwise until the required outlet pressure, plus approximately 2.5mbar, is obtained.
21. Commission downstream appliance(s).
22. Trim the outlet pressure of the regulator, if necessary, when normal working flow rates have been achieved.
23. Tighten locknut.
24. Replace the top cap (and seal if necessary).

IF REQUIRED OUTLET PRESSURE CANNOT BE ACHIEVED WITH SPRING FITTED. (E) & (F).

25. Choose a loading spring from the catalogue that will give the required outlet pressure range.
26. Turn spring adjusting screw anticlockwise (to reduce loading on spring).
27. Fully unscrew and remove spring adjusting bush.
28. Remove top spring holder and loading spring.
29. Insert the new spring – take the label from the spares kit bag and stick it below the nameplate of the regulator.
30. Place top spring holder over spring ensuring that spigot is located in loading spring.
31. Screw spring adjusting bush into top cover making sure that the end of the adjusting screw is located in the recess in the top of the spring holder.
32. Adjust the outlet pressure, as described above, until the required setting is found.
33. Tighten locknut.
34. Replace the top cap (and seal if necessary).

J48H Regulator: General Arrangement



J48H: Parts List

¾" and 1" sizes

ITEM	DESCRIPTION	¾"	No. Off	1"	No. Off
1	BOTTOM PLUG	J4806-017Z03	1	J4806-017Z03	1
2	VALVE SPINDLE	J4806-054	1	J4806-054	1
3	BODY	J4805-005+	1	J4806-094+	1
4	VALVE DISC HOLDER	J4806-053	1	J4806-053	1
5	VALVE DISC	J4806-025	* 1	J4806-025	* 1
6	VALVE SPACER	J4806-051	1	J4806-051	1
7	SEC DIAPHRAGM CLAMP PLATE GASKET	J4806-087	* 1	J4806-087	* 1
8	SEC DIAPHRAGM CLAMPING PLATE	J4806-086	1	J4806-086	1
11	NAMEPLATE	J8112-124	1	J8112-124	1
12	FULL NUT	JNA4FZ	1	JNA4FZ	1
23	TOP DIAPHRAGM PLATE	J4806-055	1	J4806-055	1
24	DIAPHRAGM SPACER	J4806-052	1	J4806-052	1
25	SCREW	JSA410XPTZ	6	JSA410XPTZ	6
26	SEC DIAP MOUNTING PLATE	J4806-085	1	J4806-085	1
27	SECONDARY DIAPHRAGM	J4806-088	* 1	J4806-088	* 1
28	SCREW	JSA38XPNZ	6	JSA38XPNZ	6
29	IMPULSE TUBE	J4706-072	1	J4706-072	1
30	"O" RING SEAL	JORM0031-16	* 1	JORM0031-16	* 1
31	"O" RING SEAL	JORM0376-24	* 1	JORM0376-24	* 1
32	CAP SCREW	JSA430SANSS	6	JSA430SANSS	6
33	FULL NUT	JNA4FZ	6	JNA4FZ	6
34	TOP COVER	J4806-050+	1	J4806-050+	1
35	SPRING ADJUSTING STEM	J3309-016	1	J3309-016	1
36	TOP CAP	JC085-017Z01	1	JC085-017Z01	1
37	FULL NUT	JNA16FZD	1	JNA16FZD	1
38	ADJUSTING BUSH	J3309-017Z01	1	J3309-017Z01	1
39	TOP SPRING HOLDER	J3309-013	1	J3309-013	1
40	LOADING SPRING	SEE TABLE	1	SEE TABLE	1
41	LOADING SPRING WASHER	J4806-056	1	J4806-056	1
42	MAIN DIAPHRAGM	J4806-062	* 1	J4806-062	* 1

J48H: Parts List

1¼", 1½" and 2" sizes

ITEM	DESCRIPTION	1¼"	No. Off	1½"	No. Off	2"	No. Off
1	BOTTOM PLUG	J4808-017Z03	1	J4808-017Z03	1	J4809-017Z03	1
2	VALVE SPINDLE	J4808-058	1	J4808-058	1	J4809-050	1
3	BODY	J4807-011+	1	J4808-084+	1	J4809-071+	1
4	VALVE DISC HOLDER	J4808-057	1	J4808-057	1	J4809-049	1
5	VALVE DISC	J4808-035	* 1	J4808-035	* 1	J4809-027	* 1
6	VALVE SPACER	J4808-055	1	J4808-055	1	J4809-047	1
7	SEC DIAPHRAGM CLAMP PLATE GASKET	J4808-068	* 1	J4808-068	* 1	J4809-062	* 1
8	SEC DIAPHRAGM CLAMPING PLATE	J4808-067	1	J4808-067	1	J4809-061	1
11	NAMEPLATE	J8112-124	1	J8112-124	1	J8112-124	1
12	FULL NUT	JNA6FZD	1	JNA6FZD	1	JNA8FZD	1
23	TOP DIAPHRAGM PLATE	J9812-024	1	J9812-024	1	J4809-051	1
24	DIAPHRAGM SPACER	J4808-056	1	J4808-056	1	J4809-048	1
25	SCREW	JSA512XPTZ	6	JSA512XPTZ	6	JSA516XPTZ	8
26	SEC DIAP MOUNTING PLATE	J4808-066	1	J4808-066	1	J4809-060	1
27	SECONDARY DIAPHRAGM	J4808-069	* 1	J4808-069	* 1	J4809-059	* 1
28	SCREW	JSA412XPNZ	6	JSA412XPNZ	6	JSA410XPNZ	6
29	IMPULSE TUBE	J4808-076	1	J4808-076	1	J4709-060	1
30	"O" RING SEAL	JORM0051-16	1	JORM0051-16	* 1	JORM0076-24	* 1
31	"O" RING SEAL	JORM0546-24	* 1	JORM0546-24	* 1	JORM0745-32	* 1
32	CAP SCREW	JSA430SANSS	8	JSA430SANSS	8	JSA435SANZI	8
33	FULL NUT	JNA4FZ	8	JNA4FZ	8	JNA4FZ	8
34	TOP COVER	J4808-054+	1	J4808-054+	1	J4809-046+	1
35	SPRING ADJUSTING STEM	J3309-016	1	J3309-016	1	J3309-016	1
36	TOP CAP	JC085-017Z01	1	JC085-017Z01	1	JC085-017Z01	1
37	FULL NUT	JNA16FZD	1	JNA16FZD	1	JNA16FZD	1
38	ADJUSTING BUSH	J3309-017Z01	1	J3309-017Z01	1	J3309-017Z01	1
39	TOP SPRING HOLDER	J3309-013	1	J3309-013	1	J3309-013	1
40	LOADING SPRING	SEE TABLE	1	SEE TABLE	1	SEE TABLE	1
41	LOADING SPRING WASHER	J4808-059	1	J4808-059	1	J4809-052	1
42	MAIN DIAPHRAGM	J4808-062	* 1	J4808-062	* 1	J4809-057	* 1

Note: Part numbers marked + require connection thread to be specified with order.

J48H: Spares and Loading Springs

SPARES KITS

Spares kit contents are marked * on parts list

SPARES KIT CODE	SIZE
SK4806-06	¾" – 1"
SK4808-06	1¼" – 1½"
SK4809-06	2"

Springs for J48H

Spring Range		Part Number and Colour Code.		
mbar	PSIG	¾" & 1"	1¼" & 1½"	2"
69 – 207	1 – 3	J4806-076 Light Green / Gold	J4808-063 Grey	J4806-078 Light Green / Pink
207 – 350	3 – 5	J4806-077 Light Green / Silver	J4806-078 Light Green / Pink	J4809-058 White / Gold
350 - 759	5 – 11	J4806-078 Light Green / Pink	J4808-064 Grey / Yellow	

J48H: Maintenance Instructions

Dismantling Procedure:

1. Unscrew top cap (36).
2. Using two suitable spanners restrain full nut (37) and unscrew spring adjusting stem (35) (to reduce loading on spring).
3. Unscrew the adjusting bush assembly (38) from the top cover (34).
4. Remove the top spring holder (39) and loading spring (40) from the top cover (34).
5. Using suitable spanners restrain nuts (33) and unscrew bolts (32). Carefully lift off the top cover (34).
6. Unscrew bottom plug (1) and remove from body (3).
7. Remove "O" ring (31) from bottom plug (1).
8. Restrain valve spindle (2) with suitable box spanner through bottom plug opening in body (3).
9. Unscrew full nut (12).
10. Remove the spring location washer (41).
11. Remove top diaphragm plate (23).
12. Carefully remove main diaphragm (42).
13. Remove diaphragm spacer (24).
14. Withdraw the valve spindle (2) through the bottom plug opening in body (3).
15. Remove "O" ring seal (30) from the valve spindle (2).
16. Withdraw valve disc holder (4) complete with valve disc (5) through bottom plug opening in body (3).
17. Unscrew the secondary diaphragm screws (25) then lift off the secondary diaphragm assembly (8), (26), (27) & (28) through the top of the body (3).
18. Remove valve spacer (6) from secondary diaphragm assembly.
19. Remove secondary diaphragm mounting plate gasket (7).
20. Unscrew secondary diaphragm clamping plate screws (28).
21. Remove secondary diaphragm clamping plate (8).
22. Carefully remove the secondary diaphragm (27).
23. Check that hole in impulse tube (29) is clear. DO NOT REMOVE FROM BODY.
24. Wipe valve seat and body clean of any dirt particles, taking care not to damage sealing surface in body.
25. Inspect all diaphragms and soft seals and replace where necessary (a spares kit is available for this purpose).

Rebuilding procedure:

1. Replace "O" ring seal (30) over threaded end of valve spindle (2) until it rests against shoulder of spindle.
2. Assemble valve disc (5) onto valve disc holder (4) with bead uppermost.
3. Replace valve disc assembly (4) & (5) over threaded end of valve spindle (2) with chamfer around centre facing downward.
4. Load valve spindle assembly (2) through bottom plug opening in body (3). This will ease assembly of valve spacer (6) and secondary diaphragm.
5. Replace bottom plug (1) in bottom aperture of body ensuring that the valve spindle assembly (2) is located correctly.
6. Load the valve spacer (6) through the top of the body (counter bore upwards) onto the valve spindle assembly (2) (see drawing).
7. Place the secondary diaphragm (27) on top of the secondary diaphragm clamping plate (8) with the internal radii on the secondary diaphragm clamping plate (8) facing upward. Ensure the holes in each component line up correctly.

J48H: Maintenance Instructions

Rebuilding procedure continued:

8. Place the secondary diaphragm mounting plate (26), with counter bore facing downward, onto the secondary diaphragm (27) and secondary diaphragm clamping plate (8). Ensure the holes in each component line up correctly.
9. Secure secondary diaphragm mounting plate (26) to the secondary diaphragm (27) and secondary diaphragm clamping plate (8) using screws (28) and tighten.
10. Place secondary diaphragm mounting plate gasket (7) in position on top of flange in body (3).
11. With heads of screws (28) on underside, place the secondary diaphragm assembly over valve spindle (2), ensure the secondary diaphragm fits into the counter bore of the valve spacer (6). Orientate the secondary diaphragm assembly so that the holes for screws (25) and impulse tube (29) are in line.
12. Insert the screws (25) through the secondary diaphragm assembly and gasket (7) and tighten.
13. Place the diaphragm spacer (24) over the valve spindle (2), with the boss facing downward, fitting onto the counterbore of the valve spacer (6) around the secondary diaphragm (27).
14. Place the main diaphragm (42) with the convolution uppermost in position ensuring that the bead is located in the groove in the body (3).
15. Position the top diaphragm plate (23) and spring location washer (41) onto valve spindle (2), then screw nut (12) onto spindle. DO NOT TIGHTEN.
16. Remove the bottom plug (1).
17. Restrain valve spindle (2) with a suitable box spanner and tighten full nut (12).
18. Place "O" ring seal (31) into "O" ring seal groove in bottom plug (1).
19. Replace bottom plug (1) over centre shaft of valve spindle (2) into body (3) and screw tightly into position.
20. Carefully place top cover (34) onto body (3) with vent facing the outlet (unless alternative position required).
21. Fasten top cover (34) to body (3) using bolts (32) and nuts (33).
22. Place loading spring (40) over spring location washer (41).
23. Place small diameter of top spring holder (39) inside loading spring (40).
24. Screw adjusting bush (38) into top cover (34).
25. Screw full nut (37) onto spring adjusting stem (35) right to the end.
26. Screw spring adjusting stem (35) into the adjusting bush (38) so that it locates with the top spring holder (39).
27. Commission regulator.
28. Lock nut (37) against adjusting stem bush (38).
29. Screw top cap (36) onto the adjusting stem bush (38).

Elster Jeavons is committed to a programme of continuous quality enhancement. All equipment designed by Elster Jeavons and manufactured within the Elster-Instromet Group benefits from the groups quality assurance standards, which are approved to EN ISO9001:2008.

Elster Jeavons has a programme of continuous product development and improvement and in consequence the information in this leaflet may be subject to change or modification without notice.

Contacts

United Kingdom
Elster Jeavons
Paton Drive, Tollgate Business Park,
Beaconside, Stafford, Staffs. ST16 3EF
T +44 1785 275200
F +44 1785 275305
www.elster-instromet.com
info.jeavons@gb.elster.com

Germany
Elster GmbH
Steinern Str. 19 - 21
55252 Mainz-Kastel
T +49 6134 605 0
F +49 6134 605 223
www.elster-instromet.com
info@elster-instromet.com

USA
Elster American Meter
2221 Industrial Road
Nebraska City, NE 68410-6889
T +1 402 873 8200
F +1 402 873 7616
www.elster-meterservices.com

M48HIEN03

A22.12.2009