

Pressure equipment directive 97/23/CE establishes the procedure of design, manufacturing and testing of pressure containing equipment.

Fluids that are considered are divided in two groups.

GROUP 1 Dangerous fluids; explosive, extremely flammable, highly flammable, flammable, very toxic, toxic, oxidizing.

GROUP 2 Non dangerous fluids; all fluids not included in 1.

In the Directive there are 9 tables where different scope of action from the manufactureer are stipulated. The tables of interest for Electromagnetic Flow Meters are 6, 7, 8 and 9.

TABLE 6 Piping systems for dangerous gases and liquids as defined in GROUP 1

TABLE 7 Piping systems for non dangerous gases and liquids as defined in GROUP 2

TABLE 8 Piping systems for dangerous liquids as defined in GROUP 1

TABLE 9 Piping systems for non dangerous liquids as defined in GROUP 2

Another consideration is given on the vapour tension of the liquid.

That is if the process is generating a vapour tension of the liquid > 0.5 bar then the applicable tables are 6 & 7. If the process is generating a vapour tension \leq 0.5 bar then the applicable tables are 8 & 9.

For water based application this means that in processes where the temperature is \leq 109 °C table 9 shall be used.

When process water temperature is > 109°C then table 7 shall be used.

Each table stipulates which is the type of CATEGORY in which the products fall according to size, pressure and temperature.

CATEGORIES of interest for the Electromagnetic Flow Meters are:

CATEGORY 1 Module A :Internal production control

CATEGORY 2 Module A1 :Internal production control and internal manufacturing checks with monitoring

of the final assessment (notified body)

Module D1: Production quality assurance (notified body)

Module E1 :Production quality assurance (notified body)

CATEGORY 3 Module B1+D : EC design-examination + production quality assurance (notified body)

Module B1+F: EC design-examination + product verification (notified body)
Module B+E: EC type-examination + product quality assurance (notified body)
Module B+C1: EC type-examination + conformity to type (notified body)

Module D+O1. LO type-examination + combining to type (notined bo

Module H: full quality assurance (notified body)

According to point 3.2 of Directive are excluded from its scope: networks for the supply, distribution and discharge of water and associated equipment.

EUROMAG INTERNATIONAL is providing Conformity Certification on products falling in the scope of the Directive according to the following.

Conformity declaration is provided under CATEGORY 1.

Special process conditions may be accomodated under CATEGORY 2&3 only upon request.



TABLE 6 - DANGEROUS GAS, LIQUID GASES, VAPOURS, LIQUIDS

PED is not applicable on DN ≤ 25; no CE marking required

- Category 1: if DN ≤ 100 and PSxDN ≤ 1000
- Category 2: if 25 < DN ≤ 350 and PSxDN ≤ 3500
- Category 3: if DN > 350 up to PS=10 bar; for PS < 10 bar PSxDN > 3500

PS											Nom	inal [Diam	eter (DN)	[mm]										
[bar]	≤ 25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600	1800	2000
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25	NO																									
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TABLE 7 - NON DANGEROUS GAS, LIQUID GASES, VAPOURS, LIQUIDS

PED is not applicable on DN < 32 if PSxDN ≤ 1000; no CE marking required

- Category 1: if DN > 32 and PSxDN ≤ 3500

- Category 2: if DN > 100 and PSxDN ≤ 5000

- Category 3: if DN > 250 and PSxDN > 5000

PS											Nom	inal l	Diam	eter (DN)	[mm]										
[bar]	≤ 25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600	1800	2000
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TABLE 8 - DANGEROUS LIQUIDS

PED is not applicable on DN \leq 25 if PSxDN \leq 2000; no CE marking required

- Category 1: up to 10 bar if PSxDN > 2000

- Category 2: up to 500 bar if PSxDN > 2000

PS											Nom	inal l	Diam	eter ((DN)	[mm]										
[bar]	≤ 25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600	1800	2000
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TABLE 9 - NON DANGEROUS LIQUIDS

PED is not applicable on DN \leq 200 and if PSxDN \leq 5000; no CE marking required - Category 1: up to 500 bar if PSxDN > 5000

PS											Nom	inal l	Diam	eter (DN)	[mm]										
[bar]	≤ 25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600	1800	2000
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