

(1) **EC-TYPE EXAMINATION CERTIFICATE**

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) EC-Type Examination Certificate Number: **KEMA 04ATEX2252 X** Issue Number: **3**

(4) Equipment: **Submersible Pumps Series RW61, RM60, RT60, RV60, RD61, D 8061.xxx, D 8063.xxx, D 8064.xxx and H 8064.xxx**

(5) Manufacturer: **ITT Water & Wastewater Alphen B.V.**

(6) Address: **Produktieweg 5, 2404 CC Alphen a/d Rijn, The Netherlands**

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the directive.

The examination and test results are recorded in confidential test report number 212086600-3.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0 : 2006
EN 13463-1 : 2001

EN 60079-1 : 2007
EN 13463-5 : 2003

EN 60079-7 : 2007

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:



II 2 G Ex d e IIB c T4

This certificate is issued on 19 December 2008 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

KEMA Quality B.V.



H.J.G. de Wild
Certification Manager



(13) **SCHEDULE**

(14) **to EC-Type Examination Certificate KEMA 04ATEX2252 X** Issue No. 3

(15) **Description**

Submersible Pumps series RW61, RM60, RT60, RV60, RD61, D 8061.xxx, D 8063.xxx, D 8064.xxx and H 8064.xxx, powered by a three-phase motor of a type as listed below, made of cast iron, with permanently connected cable. The submersible pumps can be provided with an additional intrinsically safe external water detector.

<u>Motor type</u>	<u>Pump type</u>		
MSF240-FR:	RW6141FR, RV6040/41/42/43/44/45FR	RT6040FR,	RT6050FR,
MSF240-FZ:	RW6141FZ, RD6140FZ,	RT6040FZ, RV6040/41/42/43/44/45FZ	RT6050FZ,
MSF240-LD:	RW6141LD, RD6140LD, D 8061.091 16 kW,	RW6111LD, RM60LD, D 8064.091 16 kW	RT6040LD, RV6040/41/42/43/44/45LD,
MSF240-LF:	RW6141LF, RM60LF, H 8064.090 22 kW	RT6040LF, RV6040/41/42/43/44/45LF,	RD6140LF, D 8064.091 22 kW,
MSF240-JE:	RW6111JE,	RW6130JE,	D 8063.090 22 kW
MSF270-NE:	RT6050NE,	RV6040/41/42/43/44/45NE,	RV6060/61/62/63NE
MSF270-JG:	RW6111JG, D 8061.091 29 kW,	RW6130JG, D 8063.090 29 kW	RW6132JG,
MSF270-LI:	RW6141LI, RM60LI, H 8064.090 34 kW	RT6050LI, RV6040/41/42/43/44/45LI,	RD6140LI, D 8064.091 34 kW,
MSF300-JL:	RW6111JL, D 8061.091 48 kW,	RW6130JL, D 8063.090 48 kW	RW6132JL,
MSF300-LL:	RW6141LL, RM60LL, D 8064.091 48 kW,	RT6050LL, RV6040/41/42/43/44/45LL, H 8064.090 48 kW	RD6140LL, RV6060/61/62/63LL,
MSF300-NG:	RV6060/61/62/63NG,	RV6040/41/42/43/44/45NG	

Ambient temperature range -20 °C to +40 °C.

Electrical data

Motor type	MSF 240-FR			MSF 240-FZ		
	Rated output (kW)	10,7 (50 Hz) / 12,7 (60 Hz)		15,1 (50 Hz) / 17,9 (60 Hz)		
Rated voltage (V)	220	380	660	220	380	660
Rated current (A)	32,3 (50 Hz)	18,7 (50 Hz)	10,7 (50 Hz)	47,8 (50 Hz)	27,7 (50 Hz)	15,0 (50 Hz)
	38,4 (60 Hz)	22,3 (60Hz)	12,8 (60 Hz)	56,5 (60 Hz)	32,7 (60 Hz)	18,8 (60 Hz)

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Motor type	MSF 240-LD			MSF 240-LF		
Rated output (kW)	18,8 (50 Hz) / 21,8 (60 Hz)			26,2 (50 Hz) / 29,8 (60 Hz)		
Rated voltage (V)	220	380	660	220	380	660
Rated current (A)	63,3 (50 Hz)	36,7 (50 Hz)	21,1 (50 Hz)	83,8 (50 Hz)	48,5 (50 Hz)	27,9 (50 Hz)
	73,2 (60 Hz)	42,4 (60Hz)	24,4 (60 Hz)	95,2 (60 Hz)	55,2 (60 Hz)	31,7 (60 Hz)

Motor type	MSF 240-JE			MSF 270-NE		
Rated output (kW)	22,7 (50 Hz) / 25,8 (60 Hz)			22,4 (50 Hz) / 27,3 (60 Hz)		
Rated voltage (V)	220	380	660	220	380	660
Rated current (A)	67,0 (50 Hz)	38,8 (50 Hz)	22,3 (50 Hz)	69,4 (50 Hz)	40,2 (50 Hz)	23,1 (50 Hz)
	76,1 (60 Hz)	44,0 (60 Hz)	25,3 (60 Hz)	82,0 (60 Hz)	47,5 (60Hz)	27,3 (60 Hz)

Motor type	MSF 270-JG			MSF 270-LI		
Rated output (kW)	23,6 (50 Hz) / 37,0 (60 Hz)			39,5 (50 Hz) / 45,4 (60 Hz)		
Rated voltage (V)	220	380	660	220	380	660
Rated current (A)	92,9 (50 Hz)	53,8 (50 Hz)	31,0 (50 Hz)	121 (50 Hz)	69,8 (50 Hz)	40,2 (50 Hz)
	106 (60 Hz)	61,4 (60 Hz)	35,3 (60 Hz)	138 (60 Hz)	80,1 (60Hz)	46,1 (60 Hz)

Motor type	MSF 300-JL			MSF 300-LL		
Rated output (kW)	52,7 (50 Hz) / 59,1 (60 Hz)			54,5 (50 Hz) / 62,5 (60 Hz)		
Rated voltage (V)	220	380	660	220	380	660
Rated current (A)	149 (50 Hz)	86,2 (50 Hz)	49,6 (50 Hz)	166 (50 Hz)	96,4 (50 Hz)	55,5 (50 Hz)
	166 (60 Hz)	96,1 (60 Hz)	55,3 (60 Hz)	180 (60 Hz)	104,2 (60Hz)	60,0 (60 Hz)



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Motor type	MSF 300-NG		
Rated output (kW)	30,0 (50 Hz) / 34,8 (60 Hz)		
Rated voltage (V)	220	380	660
Rated current (A)	92,0 (50 Hz)	53,0 (50 Hz)	30,5 (50 Hz)
	113 (60 Hz)	65,3 (60 Hz)	37,6 (60 Hz)

Any voltage from 220 V up to and including 660 V is allowed. The rated current shall be calculated proportionally to the rated voltage.

Routine tests

Each motor shall be submitted to a dielectric strength test according to EN 60079-7 clause 6.1 using a test voltage of 1000 V + twice the rated voltage with a minimum of 1500 V during 60 seconds between the electrical connections and the enclosure of the motor.

(16) **Test Report**

KEMA No. 212086600-3.

(17) **Special conditions for safe use**

The electrical connection of the permanently connected unterminated cable shall be made in a certified enclosure in type of protection flameproof enclosure "d" or increased safety "e".

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 212086600-3.