



Test Report No. 212086600-2

**Submersible Pumps series RC41, RD40, RM40, RT40, RW40,
D 8042.xxx, D 8043.xxx, H 8043.xxx, D 8044.xxx and H 8044.xxx**

**Laboratory: KEMA Quality B.V.
Utrechtseweg 310
6812 AR Arnhem
The Netherlands**

**By order of: ITT Water & Wastewater Alphen B.V.
Produktieweg 5
2404 CC, Alphen aan de Rijn
The Netherlands**

Author : H.B.A. Vleeming 19.12.2008 Reviewer : H.J.G. de Wild 19.12.2008
KEMA project no. : 212086600

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This Test Report contains the test results related to the sample(s) tested. The tests results cannot be used for any statement related to the quality of the equipment from running production.

1 Standards applied

Samples of the equipment as described under (2) below were subjected to the requirements and tests of the following standards:

EN 60079-0 : 2006
EN 60079-1 : 2007
EN 60079-7 : 2007
EN 13463-1 : 2001
EN 13463-5 : 2003

The assessment was conducted from November 2008 to December 2008.

2 Description of the equipment

Submersible Pumps series RC41, RD40, RM40, RT40, RW40, D 8042.xxx, D 8043.xxx, H 8043.xxx, D 8044.xxx and H 8044.xxx powered by three-phase motors of a type as listed below, made of cast iron with permanently connected cable. The submersible pumps can be provided with the facility for connecting a certified water detection transmitter in type of protection intrinsic safety EEx i.

Motor type	Pump type		
MSF170-DG:	RW4020DG, RT4030DG, D 8043.090 3.5kW,	RW4030DG, RT4031DG, D 8044.090 3.5kW,	RW4040DG, D 8042.090 3.5kW, H 8043.090 3.5kW
MSF170-DJ:	RW4020DJ, RT4040DJ, D 8044.090 5kW	RW4030DJ, D 8042.090 5kW,	RW4040DJ, D 8043.090 5kW,
MSF170-DL:	RW4030DL, RM40DL,	RW4040DL, D 8043.090 6kW,	RT4040DL, D 8044.090 6kW,
MSF170-DO:	RW4030DO, RD4030DO, D 8044.091 7.5kW,	RW4041DO, RM40DO, H 8043.090 7.5kW	RT4040DO, D 8043.090 7.5kW,
MSF170-FH:	RT4040FH		
MSF170-BJ:	RW4020BJ, RC4115BJ,	RW4021BJ, D 8042.090 5kW	RD4021BJ,
MSF200-DU:	RW4030DU, H 8044.091 10.5kW	RW4041DU,	D 8044.091 10.5kW,
MSF200-BO:	RW4020BO, RW4033BO,	RW4021BO, RD4021BO,	RW4032BO, RC4115BO
MSF200-BR:	RW4020BR, RW4033BR, D 8042.090 9kW	RW4021BR, RD4021BR,	RW4032BR, RC4115BR,
MSF200-DZ:	RW4041DZ, D 8044.091 13kW,	RD4030DZ, H 8044.091 13kW	RD4041DZ
MSF200-BZ:	RW4020BZ, RW4033BZ,	RW4021BZ, RD4021BZ,	RW4032BZ, D 8042.090 13kW

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

Electrical data (at 50Hz)

Motor type	MSF 170-DG			MSF 170-DJ			MSF 170-DL		
Rated output (kW)	4,5			6,3			7,7		
Rated voltage (V)	220	380	660	220	380	660	220	380	660
Rated current (A)	16,4	9,5	5,5	20,5	11,8	6,8	24	13,8	8

Motor type	MSF 170-DO			MSF 170-FH			MSF 170-BJ		
Rated output (kW)	9,2			5,3			6,1		
Rated voltage (V)	220	380	660	220	380	660	220	380	660
Rated current (A)	27,5	16	9,2	18,7	10,8	6,2	17,8	10,3	5,9

Motor type	MSF 200-DU			MSF 200-BO			MSF 200-BR		
Rated output (kW)	12,5			9,2			10,6		
Rated voltage (V)	220	380	660	220	380	660	220	380	660
Rated current (A)	38	22	12,7	24,7	14,3	8,2	31,2	18,1	10,4

Motor type	MSF 200-DZ			MSF 200-BZ		
Rated output (kW)	15,1			14,5		
Rated voltage (V)	220	380	660	220	380	660
Rated current (A)	47,5	27,5	15,8	44	25,5	14,7

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

3 Marking of the equipment
 II 2 G Ex d e IIB c T4

4 Test documentation

Project no. 2022167 (initial certification)

EC-type Examination certificate PTB 00ATEX1034U
PTB 97ATEX1047U
Certificate of conformity PTB Nr. Ex-87/4054X
PTB Nr. Ex-84/3271X
PTB Nr. Ex-84/3272X
PTB Nr. Ex-84/3359X
PTB Nr. Ex-84/3358X
PTB Nr. Ex-84/3615X
PTB Nr. Ex-84/3616X
PTB Nr. Ex-84/3614X

dated

Drawing no. ATEX9151-1 24.06.2003
ATEX9151-2 08.04.2003
Hazard analysis according to EN13463-1 15.07.2003

Project no. 2074632 (Amendment 1)

EC-type Examination certificate PTB 00ATEX1034U

dated

Drawing no. ATEX9151-1 17.05.2004
ATEX9151-4 17.05.2004

Project no. 2085329 (Amendment 2)

Drawing no. 713-210 11.2004
713-212 11.2004
ATEX9151-1, rev. B 06.2005

Project no. 2105278

Drawing no. ATEX9151-6 07.2006
713-220 08.2007

Project no. 212086600

EC-type Examination Certificate KEMA 07ATEX0169 X

Drawing no. 713-208, rev. E 09.2008
713-210, rev. A 09.2008

5 Instructions for installation and use

The manual provided with the equipment shall be followed in detail to assure proper and safe operation.

6 Test results

The detailed test results are laid down in confidential files nos. 2022167, 2074632, 2085329, 2105278-2 and 212086600. There were no deviations from, additions to or exclusions from the applicable test methods as described in the standards mentioned under (1) above. Where applicable, the estimated uncertainty of measurement meets the requirements of IECEx Operational Document OD012.

7 Conclusion

The equipment as described under (2) above met all applicable requirements of the standards as mentioned under (1) above. Certification of this equipment is therefore recommended.

Author:

A stylized signature consisting of several overlapping, sweeping lines that form a shape resembling a long, thin arrow or a stylized 'V'.

H.B.A. Vleeming

Reviewer:

A handwritten signature in cursive script, appearing to read "H.J.G. de Wild", written over a horizontal line.

H.J.G. de Wild

END OF TEST REPORT