DIN EN 1048:2014-11 (E)

Heat exchangers - Air cooled liquid coolers ('dry coolers') - Test procedures for establishing the performance

Contents

Page

Foreword 3

Introduction 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 5

4 Symbols 6
4.1 Letters 7
4.2 Superscripts 7

5 Standard capacity 8
5.1 Basis for standard capacity date 8
5.2 Standard conditions for dry cooler capacity 8
5.3 Operating conditions for the nominal air flow 8

6 Manufacturer's data 8

7 Measurements 9
7.1 Uncertainty of measurement 9
7.2 Measurement criteria 10

8 Testing methods and equipment 11
8.1 General 11
8.2 Test principals 11
8.3 Testing equipment 11

9 Test procedure 12
9.1 Physical arrangement 12
9.2 Capacity measurements 12
9.3 Measurement of air flow rate and fan capacity 13

10 Capacity calculations 13

11 Conversion to standard conditions 14
11.1 Capacity 14
11.2 Liquid side pressure drop 14
11.3 Nominal air flow 15
11.4 Nominal fan power consumption 15

12 Test report 16

Annex A (normative) Flow meter method 17

Bibliography 18