

DIN 11864-2:2021-06 (E)

Stainless steel components for aseptic applications in the chemical and the pharmaceutical industries - Part 2: Flange connections

Contents	Page
Foreword	4
1 Scope	6
2 Normative references	6
3 Terms and definitions.....	7
4 Dimensions, designations.....	7
4.1 General	7
4.2 Flange connection (assembly)	7
4.3 Individual components.....	11
4.3.1 Flange with groove (NF).....	11
4.3.2 Flange with collar (BF)	13
4.3.3 Blind flange with groove (BNF).....	15
4.3.4 Blind flange with collar (BBF)	16
4.3.5 O-rings (R)	21
5 Materials	23
6 Tolerances	23
7 Surfaces	24
7.1 Internal and external surface finish.....	24
7.2 Acceptance criteria	24
8 Requirements on elastomers	26
9 Marking	26
10 Testing and documentation	27
10.1 General	27
10.2 Testing	28
11 Packaging.....	28
Annex A (informative) Information on requirements on elastomers	29
A.1 Additional approvals/conformities	29
A.2 Hardness measurement	29
A.3 Further physical characteristics.....	29
A.4 Storage conditions	30
A.4.1 General	30
Annex B (informative) Delta ferrite content.....	31
Annex C (informative) Comparison of materials.....	32
Bibliography.....	33
Figures	
Figure 1 — Flange connection (F).....	8
Figure 2 — Flange with groove.....	12

Figure 3 — Flange with collar	14
Figure 4 — Blind flange with groove.....	16
Figure 5 — Blind flange with collar.....	17
Figure 6 — O-ring (R).....	21

Tables

Table 1 — Dimensions of flange connections for tubes with dimensions as in DIN 11866, series A.....	9
Table 2 — Dimensions of flange connections for tubes with dimensions as in DIN 11866, series B....	10
Table 3 — Dimensions of flange connections for tubes with dimensions as in DIN 11866, series C	10
Table 4 — Dimensions of flanges with groove, blind flanges with groove, flanges with collar, blind flanges with collar for tubes with dimensions as in DIN 11866, series A.....	18
Table 5 — Dimensions of flanges with groove, blind flanges with groove, flanges with collar, blind flanges with collar for tubes with dimensions as in DIN 11866, series B.....	19
Table 6 — Dimensions of flanges with groove, blind flanges with groove, flanges with collar, blind flanges with collar for tubes with dimensions as in DIN 11866, series C	20
Table 7 — O-ring dimensions for Table 4	21
Table 8 — O-ring dimensions for Table 5	22
Table 9 — O-ring dimensions for Table 6	22
Table 10 — Steel grades.....	23
Table 11 — Internal and external surface finish	24
Table 12 — Acceptance criteria for the internal surface	25
Table 13 — Additional acceptance criteria for electropolished internal surfaces.....	26
Table 14 — Marking.....	27
Table 15 — Scope of testing per test unit.....	28
Table A.1 — Storage time for elastomer seals as in ISO 2230	30
Table B.1 — δ ferrite classes for materials 1.4404 and 1.4435 (DF classes).....	31
Table C.1 — Comparison of materials according to DIN EN 10088-1 and the Unified Numbering System (UNS).....	32