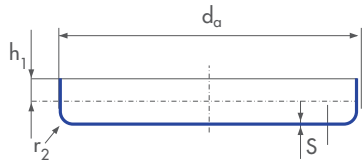


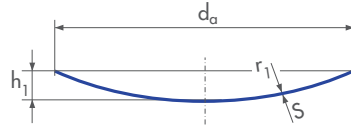
■ FLAT HEADS



$$r_2 = 30 - 50\text{mm or acc. to your specification}$$

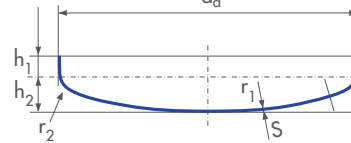
$$h_1 = \sim 20 - 30\text{mm or acc. to your specification}$$

■ CURVED DISCS



$$r_1 = \text{acc. to your specification}$$

■ NORMAL CONVEX AND FLAT CONVEX BOILER ENDS

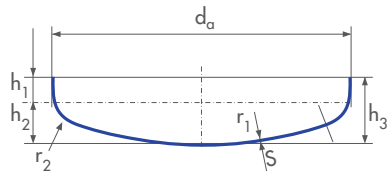


$$r_1 = d_a - 1,4d_a \text{ or acc. to your specification}$$

$$r_2 = 30 - 50\text{mm or acc. to your specification}$$

$$h_1 = \sim 20 - 30\text{mm or acc. to your specification}$$

■ TORISPHERICAL HEADS ACC. TO DIN 28011



$$r_1 = d_a$$

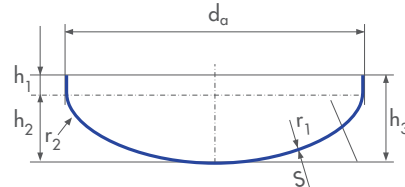
$$r_2 = 0,1d_a$$

$$h_1 = 3,5s \text{ or acc. to your specification}$$

$$h_2 = 0,1935d_a - 0,455s$$

$$h_3 = h_1 + h_2$$

■ SEMI-ELLIPTICAL HEADS ACC. TO DIN 28013



$$r_1 = 0,8d_a$$

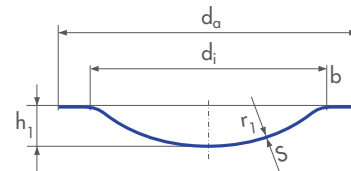
$$r_2 = 0,154d_a$$

$$h_1 = 3s$$

$$h_2 = 0,255d_a - 0,635s$$

$$h_3 = h_1 + h_2$$

■ FLANGED DISCS

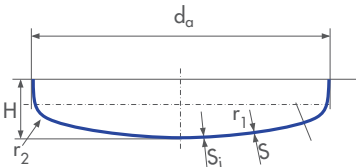


$$r_1 = d_i$$

$$b = 70\text{mm}$$

$$d_a = d_a - d_i$$

■ TANK ENDS

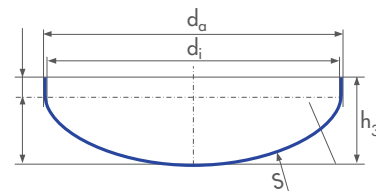


for single skin tanks EN 12285 bzw. DIN 6608/6616
for double skin tanks EN 12285 bzw. DIN 6608/2 | 6616/2

$$r_1 = d_a$$

$$r_2 \geq \sim 1/30 d_a$$

■ ELLIPTICAL HEADS 1,9 : 1



$$d_i = d_a - 2 \times s$$

$$r_1 = d_i / 1,16$$

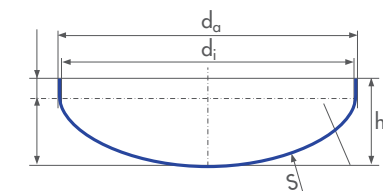
$$r_2 = d_i / 5,39$$

$$h_1 = \text{acc. to NFE 81-103}$$

$$h_2 = d_i / 3,8$$

$$h_3 = h_1 + h_2$$

■ ELLIPTICAL HEADS 2 : 1



$$d_i = d_a - 2 \times s$$

$$r_1 = 0,9 \times d_i$$

$$r_2 = 0,17 \times d_i$$

$$h_1 = \text{acc. to your specification}$$

$$h_2 = 0,25 \times d_i$$

$$h_3 = h_1 + h_2$$

■ TECHNICAL EXPLANATIONS

d_a = external diameter
 d_i = internal diameter
 r_1 = crown radius
 r_2 = knuckle radius

h_1 = straight flange
 h_2 = height of crown radius
 h_3 = total internal height
 s = wall thickness

Slawinski heads and custom-pressed units are in great demand in European markets. Materials, designs and individual heads not included in the normal programme are subject of special orders.

Material specification and calculation of wall thickness is the customer's responsibility.

Method: cold worked (dishing and flanging or pressing)

Material: ferritic, austenitic and non ferritic metals, if they can be cold worked

Dimensions: up to 5400 mm diameter depending upon thickness of material and wall thickness up to 32 mm depending upon material and diameter; custom forms and dimensions on request

Half tube spiral: either tacked or permanently welded as required

Surface treatment:

- Polishing: internally and externally to 0,2 μm surface smoothness for diameters up to 5200mm
- Pickling: for stainless steel heads
- Blasting: sand-blasting for ferritic steels and glass granulate blasting for austenitic steels

Edge preparation: if required

Jogging: heads of 1000 mm to 2500 mm diameter with wall thickness up to 8 mm

Approvals: for Material Manufacturer acc. to European Directive 97/23/EC, ASME U, AD 2000 - W 0/TRD 100 and AD 2000 - HP 0/TRD 201 by TÜV, SVDB 501 by SVTI and DIN EN ISO 9001:2000

Inspections: by TÜV or other inspection companies

Testing of materials: non-destructive or destructive with certificate

Welding of circular blanks: by means of high-tech welding plant operated by qualified staff

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