



Photo © Paul Upward



Play value

A floating water supply often is the central feature of water play. A great way of moving water from a lower to a higher level is the Archimedes Screw, the old principle of water screws. Its turning draws water from the lower basin as it travels upwards with the movement of the spiral and pours it into the upper basin. This physical process is precisely observed and used with great pleasure as a means of transporting water. The open spiral makes the procedure visible and it is even possible to use it for transporting solid materials e.g. gravel.



Photo © Daniel Perales

Archimedes Screws with different drive mechanisms

Fundamental characteristics

- High-quality design
- Surprising old principle
- Encourages co-operation and communication
- Incentive for playing: appealing design, curiosity
- Movement: physical effort, turning

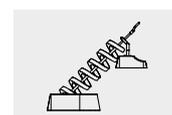
Recommended for

- School children
- Young people
- Water play areas without supervision
- Public play areas without supervision such as playgrounds, parks or similar
- Swimming pools without supervision, such as outdoor pools, adventure pools or similar



Barrier-free

- Independent play



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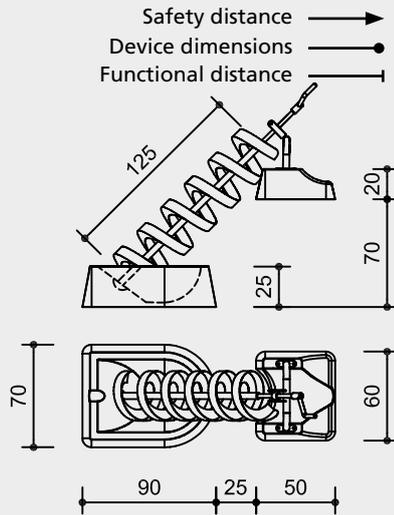


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Order No. 5.20500

Archimedes Screw with Crank

Open, made of stainless steel, with 2 basins
 Concrete basin at the bottom
 Open screw, flank height 7 cm
 Length 1.25 m
 Drive mechanism with crank
 Fixing with support bow
 Run-out at the top into concrete basin



Order No. 5.20800

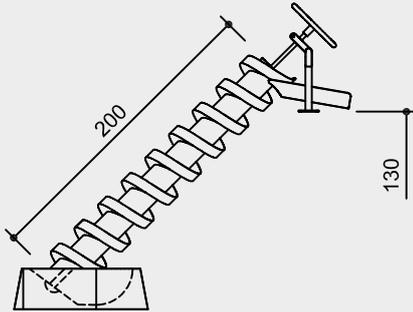
Archimedes Screw, open

made of stainless steel, special version (on request)

Examples with 45° inclination

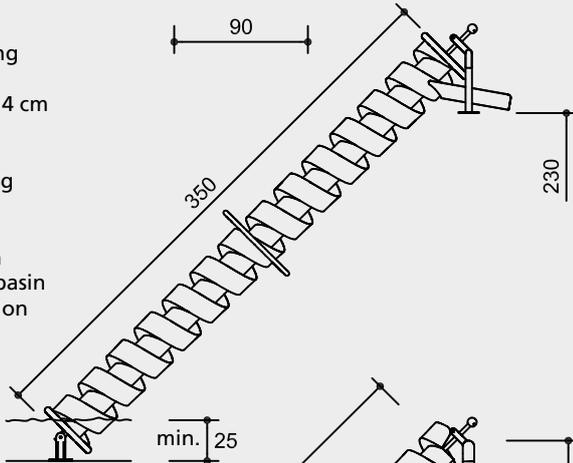
Example 1:

Concrete basin at the bottom
 Open screw, flank height 7 cm
 Length 2.00 m
 Drive mechanism with hand wheel, Ø 40 cm
 Fixing at the top with high support bow on channel or similar built on site



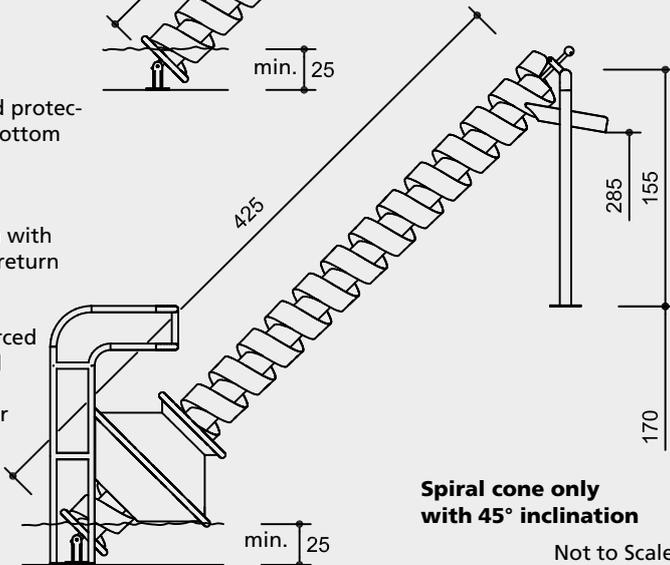
Example 2:

Fixing flange and protecting disc at the bottom
 Open screw, flank height 14 cm
 Length 3.50 m
 With strong axle
 Drive mechanism w. turning ring Ø 60 cm
 Return stop
 Fixing at the top with high support bow and run-out basin on channel or similar built on site



Example 3:

Fixing flange and protecting disc at the bottom
 Open screw
 Length 4.25 m
 With strong axle
 Drive mechanism with spiral cone, incl. return stop and frame
 Fixing at the top with high reinforced support bow and run-out basin on channel or similar built on site



Spiral cone only with 45° inclination

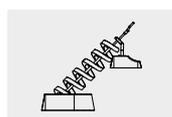
Not to Scale

Safety check according to DIN EN 1176

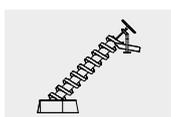
Attention:

Exact measurements may vary; for all installation dimensions refer to current assembly instructions.

Technical changes reserved.



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Technical information

All Archimedes Screws are provided with self-lubricating bearings.

Order No. 5.20500

Archimedes Screw with Crank

Open, stainless steel, glass bead blasted, see sketch

Order No. 5.20800

Archimedes Screw, open

Stainless steel, glass bead blasted, lengths up to 5 m are possible at request, see examples

Open screw with two flank heights:
 7 cm for conveying approx. 0.3 l/rotation, min. water level 20 cm
 14 cm for conveying approx. 1.5 l/rotation, min. water level 25 cm

Dimensions (See sketches)

(small deviations possible)

Optimum conveyance is achieved at 45° inclination.

The Archimedes Screws have been designed as a modular system – suitable bearings, drive mechanisms and fixing elements can be combined as desired.

- | | |
|---------------|---|
| Lower bearing | - Concrete basin
- Fixing flange with protecting disc |
| Drive | - Crank mechanism (up to length 1.75 m)
- Hand wheel Ø 40 / 60 cm
- Turning ring Ø 60 cm, ex works in any axial position
- Spiral cone, ex works in any axial position |
| Top fixing | - Bow with concrete basin
- High support bow with / without run-out basin
- High reinforced support bow tube diameter 60.3 mm, variable height up to 1 m
- High reinforced support bow tube diameter 76 mm, variable height from 1 to 2 m
- Support bow for round water basins,
Order No. 5.24200 / 5.24400 |

Weight and included components depending on equipment type.

Installation information

Surfacing requirements
 no fall height according to standard
 Recommendation: underground adequate for heavy duty bolting with drainage
 Water supply as well as reservoir and collecting basin, if applicable, to be provided on site (by customer).

Foundation – depending on type

For use in aggressive environments such as salt or chlorine water, the equipment is also available in marine grade steel (V4A).

Design

We have developed different screws and drive mechanisms in order to enlarge the scope of use for the designer. The open screw with high or low rim can surmount large differences in height and demonstrates in an impressive way the physical effect of the Archimedean principle. The use of various drive mechanisms such as crank, turning ring and hand wheel is closely linked to the length of the spiral and the required effort for turning it.

Planning information

We gladly offer our support during your planning process, to help you find the right accessories. To do so, we need information on the levels of the lower water basin and the run-out, the desired water output and the type of water supply. A sketch of the installation location in plan and section would be very helpful for us.

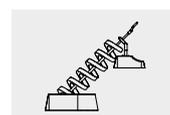


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Archimedes Screws with different drive mechanisms



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David and Goliath

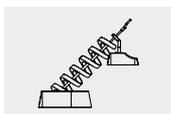
You have to use all your physical strength to be able to transport water from a low level to a much higher one using the spiral cone. The running drum can be positioned at different heights; at the bottom to "screw" water upwards or at the top to convey water from the bottom to the top. This special Archimedes Screw therefore has a similar effect to "David versus Goliath": David's strength is concealed; the screw reaches far down into a well while Goliath impressively displays his entire strength.



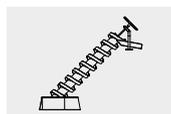
Photo © Ross Gilmore



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