

ARISTO, LUSSO, KOMBO  
and VERTICALE  
retractable stairs



JAP

# Aristo PP fire-resistant folding stairs

For passive houses



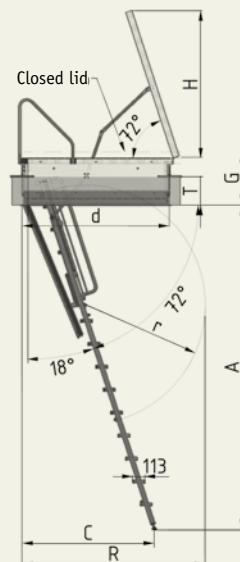
Stairs with a compactable sheet-metal lid, installed in ceiling. The lid is lined with thermal and fire-resistant insulation. Gap between the lid and frame is sealed with fireproof intumescent strip. Frame structure is fitted with a folding ladder attached with lid. Entire stair area is enclosed from above with insulated lid. Both lids are, as standard, equipped with lever mechanism for synchronous opening.

Lower lid from outer view is treated with white paint and covered with protective foil, wooden components of upper lid are treated with anti-mildew solution and plywood used, is water-resistant. Rung is fitted with anti-slip rubber tape.

The fire-resistance properties are certified by Pavus a.s., at the fire test facility in Veselí nad Lužnicí. The product is certified by the Centre for Civil Engineering, Inc., Zlín. Thermal transmittance and air permeability is certified by ift Rosenheim GmbH, Rosenheim, Germany.

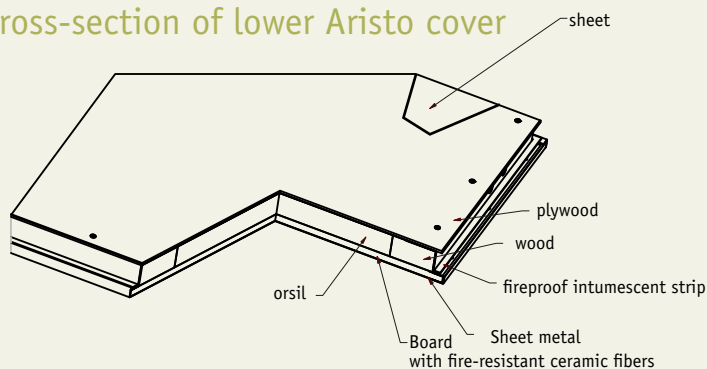
gross building opening l x w	B	A	R	H	A	C
1200 x 600	260	2100 - 2600	1520	1230	3100	1250
1200 x 700	360	2100 - 2600	1520	1230	3000	1220
1300 x 700	360	2200 - 2800	1650	1325	2900	1190
1400 x 700	360	2400 - 3100	1770	1420	2800	1160
					2700	1120
					2600	1090
					2500	1060
					2400	1030

The table shows »C« and »R« measures for various »A« heights.  
**C** – distance from where the extended stairs are placed on the floor to the end of the frame  
**R** – maximum distance of retractable stairs from frame end during retraction phase.



- B – rung width
- C – distance of ladder support leg from edge of mounting hole  
 $C = A \cdot 0.324 + 249$
- R – minimal space required for extending ladder
- G – mounting height of closed system (515, 615, atyp.)
- T – ceiling strength

## Cross-section of lower Aristo cover



EI<sub>1</sub>45/EI<sub>2</sub>45/EW45  
 U = 0,66 W/m<sup>2</sup>.K

# Kombo PP fire-resistant folding stairs

For passive houses

Kombo PP fire-resistant folding stairs meet the strict requirements of low-energy homes. Stairs with insulated wood frame sheathed in galvanized sheet-metal built into the ceiling. The inner lid has heat- and fire-resistant insulation. Gap between the lid and frame is sealed with fireproof intumescent strip. The frame structure is fitted with a folding ladder attached to the lid. The entire stair area is enclosed from above by an insulated lid.

Lower lid from outer view is treated with white paint and covered with protective foil, wooden components of upper lid are treated with an anti-mildew solution and the plywood used is water-resistant.

The fire-resistance properties are certified by Pavus a.s., at the fire test facility in Veselí nad Lužnicí. The product is certified by the Centre for Civil Engineering, Inc., Zlín. Thermal transmittance and air permeability is certified by ift Rosenheim GmbH, Rosenheim, Germany.



Gross building opening l x w	B	A
1100x700	400	2200-3200
1000x700	400	2200-3200
900x700	400	2200-3200

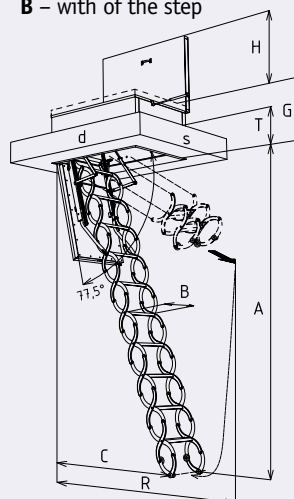
A	C	R
3200	1584	1875
3100	1584	1875
3000	1584	1875
2900	1460	1730
2800	1460	1730
2700	1335	1585
2500	1335	1585
2300	1211	1440
2200	1211	1440

The table shows the dimensions of »C« and »R« for varying heights »A«.

**C** – the distance from the place of setting the extended stairs on the floor to the end of the frame.

**R** – the maximum distance of the extended stairs from the end of the frame when collapsing.

**B** – with of the step

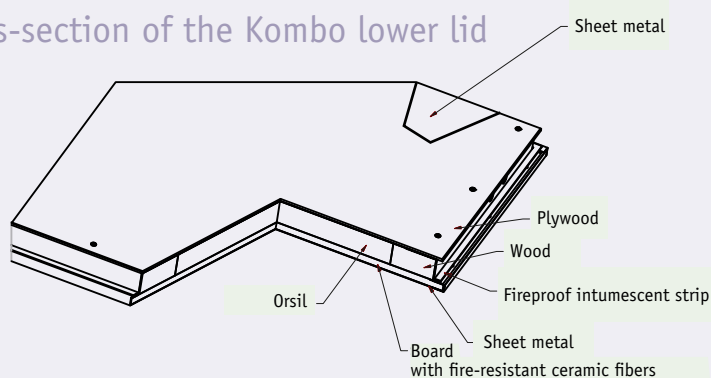


All dimensions are stated in mm.

The kombo is supplied for a maximum thickness of 405mm.

**T** – thickness of the ceiling.  
**H** – height of the opened lid is 695 mm.  
**G** – the height of the closed system is 533 mm.

## Cross-section of the Kombo lower lid



EI<sub>1</sub>30/EI<sub>2</sub>30/EW30  
 U = 0,71 W/m<sup>2</sup>.K

# LUSSO PP fire-resistant folding stairs

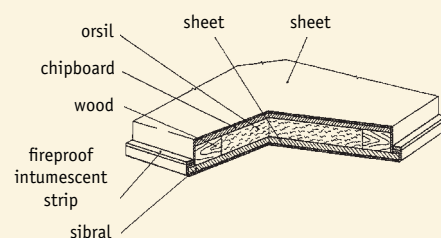
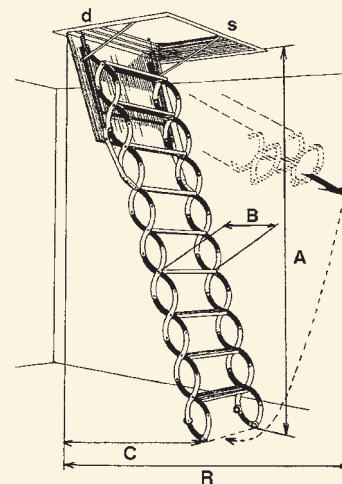
Stairs with a compactable sheet-metal lid for ceiling installation.

The lid is lined with thermal and fire-resistant insert. Fire-resistance properties are certified by the Centre for Civil Engineering, Inc., Zlín. Lid opening system with dimensions  $d \geq 1\,000$  mm equipped with braking mechanism to prevent abrupt opening. **Compactable lid:** wood frame filled with insulation is sheathed with galvanized sheet-metal. Visible part is painted in white and covered with protective foil. Fire closures may also be supplied separately, without retractable stairs. The staircase is designed for residential garrets where the temperature difference does not exceed:  $10^\circ\text{C}$ .

gross building opening l x w	B	A	A	C	R
700 x 500	300	3 200 - 2 200	3 200	1 400	2 100
800 x 500	300	3 200 - 2 200	3 100	1 300	2 000
900 x 500	300	3 200 - 2 200	3 000	1 200	1 850
1 000 x 500	300	3 200 - 2 200	2 900	1 300	1 800
700 x 600	320	3 200 - 2 200	2 800	1 450	1 750
800 x 600	320	3 200 - 2 200	2 700	1 650	1 700
900 x 600	320	3 200 - 2 200	2 600	1 400	1 650
1 000 x 600	320	3 200 - 2 200	2 500	1 350	1 600
1 100 x 600	320	3 200 - 2 200	2 400	1 000	1 650
1 200 x 600	320	3 200 - 2 200	2 300	1 250	1 600
800 x 700	400	3 200 - 2 200	2 200	1 350	1 550
900 x 700	400	3 200 - 2 200			
1 000 x 700	400	3 200 - 2 200			
1 100 x 700	400	3 200 - 2 200			
1 200 x 700	400	3 200 - 2 200			

All dimensions are specified in mm.

The table shows »C« and »R« measures for various »A« heights.  
C - distance from where the extended stairs are placed on the floor to the frame end  
R - maximum distance of retractable stairs from frame end during retraction phase.



$EI_{1,20}/EI_{2,60}/EW60$   
 $U = 1,8 \text{ W/m}^2.\text{K}$

# LUSSO ZP insulated folding stairs

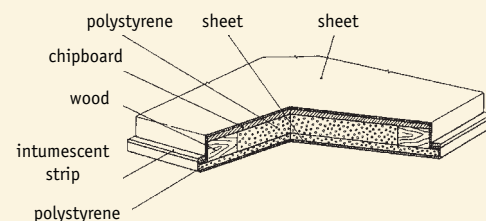
Stairs with compactable sheet-metal lid for ceiling installation.

Lid fitted with thermal insulation. Lid opening system with dimensions  $d \geq 1\,000$  mm equipped with braking mechanism to prevent abrupt opening. **Compactable lid:** wood frame filled with insulation is sheathed with galvanized sheet-metal. Visible part is painted in white and covered with protective foil. Thermal closure may be provided separately without retractable stairs. The staircase is designed for residential garrets where the temperature difference does not exceed:  $10^\circ\text{C}$ .

gross building opening l x w	B	A	gross building opening l x w	B	A	A	C	R
700 x 500	300	3 200 - 2 200	1 100 x 600	320	3 200 - 2 200	3 200	1 400	2 100
800 x 500	300	3 200 - 2 200	1 200 x 600	320	3 200 - 2 200	3 100	1 300	2 000
900 x 500	300	3 200 - 2 200	800 x 700	400	3 200 - 2 200	3 000	1 200	1 850
1 000 x 500	300	3 200 - 2 200	900 x 700	400	3 200 - 2 200	2 900	1 300	1 800
700 x 600	320	3 200 - 2 200	1 000 x 700	400	3 200 - 2 200	2 800	1 450	1 750
800 x 600	320	3 200 - 2 200	1 100 x 700	400	3 200 - 2 200	2 700	1 650	1 700
900 x 600	320	3 200 - 2 200	1 200 x 700	400	3 200 - 2 200	2 600	1 400	1 650
1 000 x 600	320	3 200 - 2 200				2 500	1 350	1 600
						2 400	1 000	1 650
						2 300	1 250	1 600
						2 200	1 350	1 550

All dimensions are specified in mm.

The table shows »C« and »R« measures for various »A« heights.  
C - distance from where the extended stairs are placed on the floor to the frame end  
R - maximum span of retractable stairs from frame end during retraction phase.



$U=1,92 \text{ W/m}^2.\text{K}$

# LUSSO folding stairs

Stairs equipped with simple chipboard lid for ceiling installation. The stair frame (passage) may also be made in atypical dimensions.

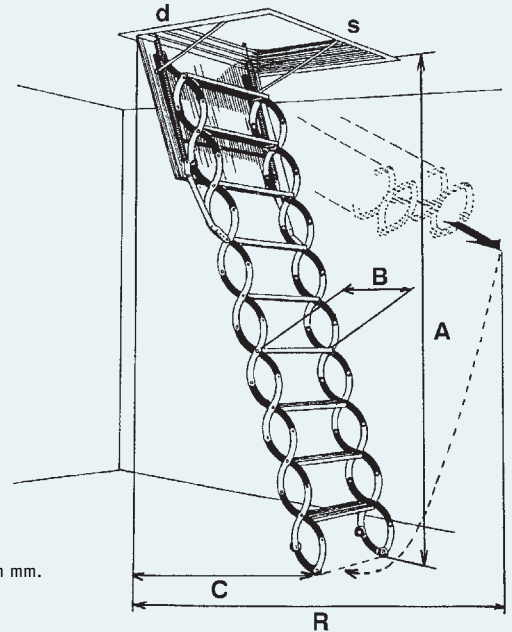
The minimum size of the gross building opening: 700 × 500 mm (l×w)

The maximum size of the gross building opening: 1400 × 1000 mm (l×w)

gross building opening l x w	B	A
700 × 500	300	3 200 – 2 200
800 × 500	300	3 200 – 2 200
900 × 500	300	3 200 – 2 200
1 000 × 500	300	3 200 – 2 200
700 × 600	320	3 200 – 2 200
800 × 600	320	3 200 – 2 200
900 × 600	320	3 200 – 2 200
1 000 × 600	320	3 200 – 2 200
1 100 × 600	320	3 200 – 2 200
1 200 × 600	320	3 200 – 2 200
800 × 700	400	3 200 – 2 200
900 × 700	400	3 200 – 2 200
1 000 × 700	400	3 200 – 2 200
1 100 × 700	400	3 200 – 2 200
1 200 × 700	400	3 200 – 2 200

A	C	R
3 200	1 400	2 100
3 100	1 300	2 000
3 000	1 200	1 850
2 900	1 300	1 800
2 800	1 450	1 750
2 700	1 650	1 700
2 600	1 400	1 650
2 500	1 350	1 600
2 400	1 000	1 650
2 300	1 250	1 600
2 200	1 350	1 550

All dimensions are specified in mm.



The table specifies measures »C« and »R« for various heights of »A«.

C – distance from placement of extended stairs on the floor to the end of the frame

R – maximum span of retractable stairs from the frame end during the retraction phase.

The staircase is designed for residential garrets where the temperature difference does not exceed: 5°C.

# VERTICALE folding stairs

Stairs equipped with simple chipboard lid for ceiling installation.

gross building opening l x w	B	A
900 × 700	400	3 200 – 2 200
1 000 × 700	400	3 200 – 2 200
1 100 × 700	400	3 200 – 2 200
1 200 × 700	400	3 200 – 2 200

A	C	R
3 200	1 700	2 100
3 100	1 800	2 000
3 000	1 400	1 900
2 900	1 500	1 850
2 800	1 600	1 800
2 700	1 300	1 750
2 600	1 400	1 700
2 500	1 500	1 650
2 400	1 100	1 550
2 300	1 200	1 500
2 200	1 300	1 400

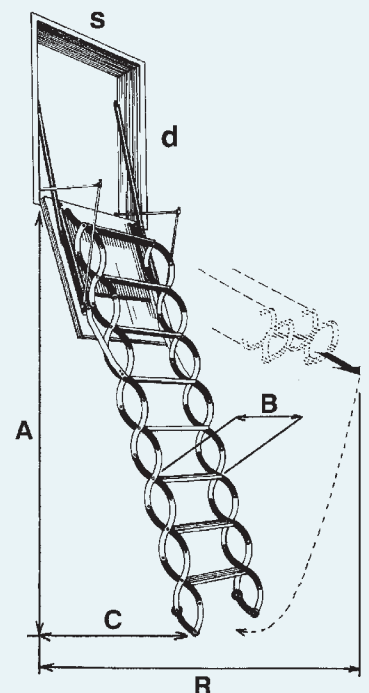
All dimensions are specified in mm.

The table specifies measures »C« and »R« for various heights of »A«.

C – distance from placement of extended stairs on the floor to the end of the frame

R – maximum span of retractable stairs from the frame end during the retraction phase.

The staircase is designed for residential garrets where the temperature difference does not exceed: 5°C.



# Technical parameters

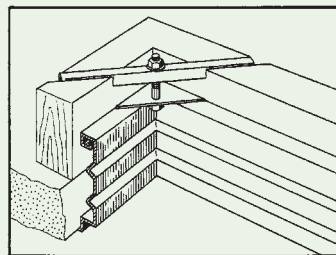
<b>Frame</b>	is welded from rolled section sheet-metal with comaxite (white) treatment
<b>Stair body</b>	<b>LUSSO</b> and <b>KOMBO</b> rungs – rolled section welded with „S-shaped” sheet-metal stampings, with comaxite (black) surface treatment sleeves – S-shaped galvanized (yellow chromate) sheet-metal stampings. <b>ARISTO</b> – corrugated frame with sheet-metal stampings.
<b>Lid</b>	a) <b>simple</b> – 16 mm raw chipboard , untreated. b) <b>compactable</b> – wooden frame lined with insulation is sheathed in galvanized sheet-metal; visible part is painted white and covered with protective foil.
<b>Fittings and connectors</b>	are made from strength material, with galvanized surface treatment.
<b>Hinges</b>	<b>LUSSO</b> – made of stainless steel in insulated and fire-resistant covers. <b>KOMBO</b> and <b>ARISTO</b> – bottom lids are made of stainless steel, present in upper lid.

If the ceiling thickness, into which the staircase is installed is less than 230 mm, the length of the screws provided shall suffice for fastening.

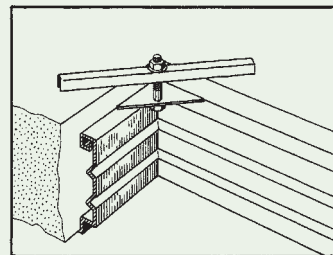
**Otherwise, if the ceiling is 230 mm thick or more, then longer screws must be used.**

Mention this fact during your order and we will provide you with longer screws.

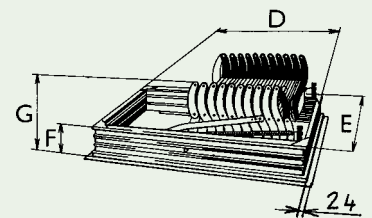
## Installation on thick ceiling



## Installation on thin ceiling

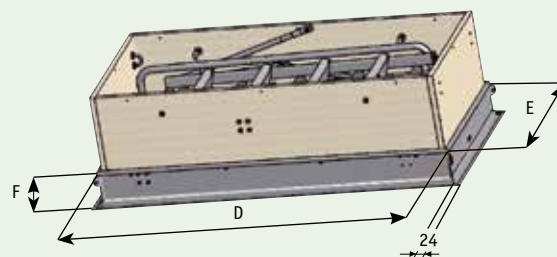


## Mounting dimensions LUSSO



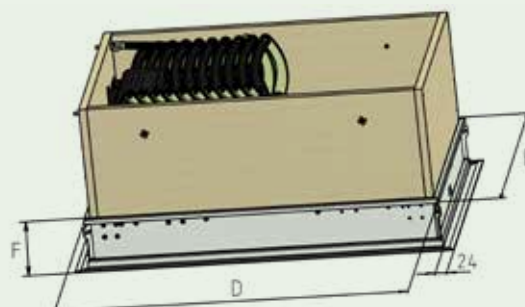
G = 400 mm      D = d - 15 mm  
F = 140 mm      E = s - 20 mm

## ARISTO mounting dimensions



F = 140 mm  
D = d - 15 mm  
E = s - 20 mm

## KOMBO mounting dimensions



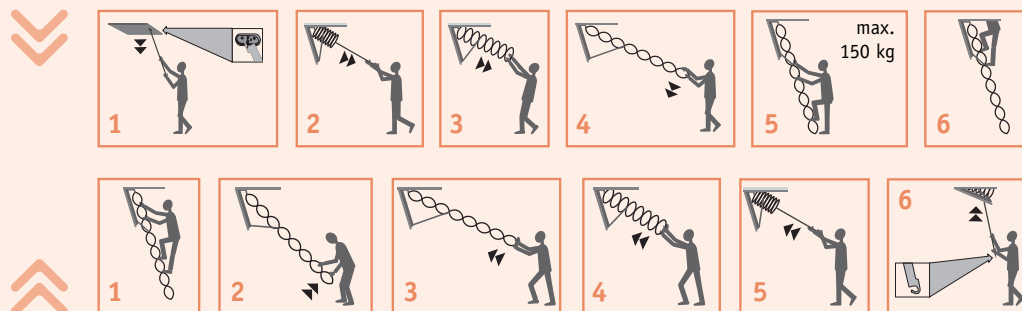
F = 140 mm  
D = d - 20 mm  
E = s - 20 mm

# Demonstration of practical use

## ARISTO retractable stairs



## LUSSO & KOMBO retractable stairs



## Accessories



Upper handrail can be added to all retractable stairs **LUSSO**, which have a gross building opening width of 700 mm. **LUSSO ZP** and **LUSSO PP** types automatically include the handrail from these dimensions in the price. **ARISTO** stairs include the handrail with the product.

An upper chipboard superstructure with insulated lid can be subsequently added to all **LUSSO** folding stairs. Lateral opening simplifies work with the upper lid. The hinges have a safety catch. We deliver it unassembled. Not equipped for synchronous opening of both lids; the handle is higher.



# JAP

· **Headquarter**  
· **of the company:**  
· Nivky č. p. 67, 750 02  
· Přerov III – Lověšice  
· Tel.: +420 581 587 811  
· Fax: +420 581 587 871 E-  
· email: [jap@japcz.cz](mailto:jap@japcz.cz)  
· [www.stahovaci-schody.eu](http://www.stahovaci-schody.eu)



1/2019

Company JAP FUTURE reserves the right to make changes.

## SHOWROOMS : PRAGUE

· **JAP FUTURE**  
· Bassova 12  
· 190 00 Prague 9 – Vysočany  
· Tel.: +420 283 89 00 88  
· E-mail: [obchod@japcz.cz](mailto:obchod@japcz.cz)  
· [www.jap-praha.cz](http://www.jap-praha.cz)

## : SLOVAK REPUBLIC

· **J.A.P. Slovakia s.r.o.**  
· Zadunajská cesta 12  
· 851 01 Bratislava  
· Tel.: +421 263 530 368  
· Fax: +421 263 530 366  
· E-mail: [obchod@jap.sk](mailto:obchod@jap.sk)  
· [www.jap.sk](http://www.jap.sk)