

Arcus 4
the definitive!



The **Arcus** - Concept

What do social pilots and occasional flyers need from a glider if they want to enjoy themselves when flying? A glider with uncomplicated and uncompromising launch behaviour, sufficiently long control travel and very balanced handling – a glider which will be forgiving if any errors are made!

Pilots who do not fly regularly often find a traditional DHV 1-2 glider too demanding. At the same time, however, they want a glider which they can use for thermals and cross-country flying. Ambitious pilots often become dissatisfied with a pure beginner's glider (DHV 1). Its performance seems adequate to them, the handling is too subdued and leaves too little scope for improving their own feeling for the glider.

All of these matters were taken into consideration when Swing was first developing the Arcus, which was released in 1999. At the time, it was completely innovative, and it was the first glider to receive DHV 1/1-2 certification (1-2 only in accelerated flight). The Arcus thus offered social pilots and occasional flyers the same level of safety of a training glider in trimmed flight, but the level of performance it offered had not been seen before in this category, and it had very balanced handling. The Arcus was therefore a milestone in the history of paragliding and, with 8,000 sold, is the best-selling glider of all time.

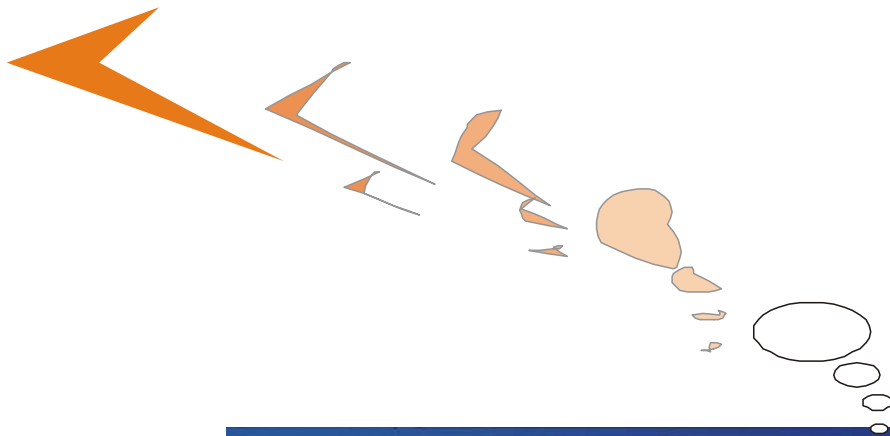




Arcus 4 - The evolution of a success story

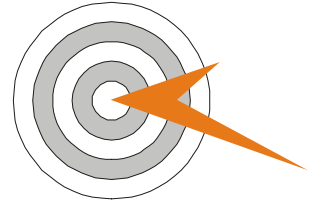
The Arcus 4 draws successfully on the same concept that was used for the Arcus. The performance of the Arcus 4 far surpasses all current DHV 1 gliders, but it nevertheless has much more good-natured flight behaviour than pure DHV 1-2 gliders. The Arcus 4 is completely suitable for use as a training glider, making it ideally suited for beginners too.

The Arcus 4 is all you need to discover the fascination of the sport of paragliding calmly and with confidence.



Arcus 4 - Target market

The Arcus 4 has great flight potential: excellent ascent behaviour and good damping for thermal flights, very good glide and high speed for relaxed cross-country flying.



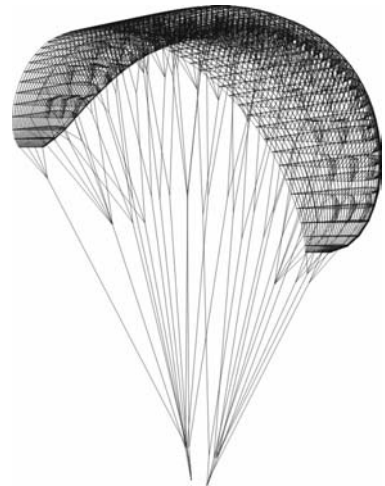
The Arcus 4 delivers what other gliders can merely promise:

Maximum safety with unparalleled good performance. This makes it suitable for beginners as well as occasional pilots and social pilots.

Arcus 4 - Design concept

Michael Hartmann from SWING's development team explains:

“Our aim was to create a glider with DHV 1 certification in trimmed flight. We achieved this in the end after much expenditure on development. We drew on the profile of the successful MISTRAL 3 for the ARCUS 4. The challenge then was to modify the profile of a high-performance intermediate glider in such a way that the glider had uncompromising good-natured flight behaviour. The main difficulties lay in optimising the way it turns after an asymmetric tuck. We went through a few prototypes before we had fine-tuned the profile and the trim. The end result, the ARCUS 4, exceeded our expectations. I believe that the ARCUS 4 is the best glider available for beginners and occasional pilots.”



Arcus 4 - Flight behaviour



Calmness and performance:

The launch behaviour of the Arcus 4 is perfectly tuned, particularly for pilots with minimal experience: clear and simple, with no tendency to overshoot. The canopy rises quickly and evenly above the pilot with low momentum. Even if there are unfavourable side winds, the inexperienced pilot too can easily make corrections.

The glider conveys a very calm feeling during flight, so it is ideal for beginners and for pilots for whom calmness in the air is important. The control pressure is in the mid-range and increases progressively to ensure that there is an adequate safety margin. The Arcus 4 can be turned accurately in thermals, without much banking.

One of the most important criteria in developing the glider was to attain absolutely good-natured flight behaviour in extreme flying conditions. The Arcus 4 turns only slowly and slightly even after a major collapse and can be stabilised with ease. The Arcus 4 also creates a feeling of confidence if one of the quick descent methods is used. In a spiral turn, the glider stabilises automatically after releasing the outside brakes. Turn and sink rate in the spiral can be varied with a little pressure on the brakes.



Arcus 4 - Technical Data

ARCUS 4	22	24	26	28	30
DHV Homologation DHV Zulassung homologation DHV	1/1-2	1/1-2	1/1-2	1/1-2	1/1-2
Take off weight Startgewicht (kg) min. max. Poids pilote avec équipement	55 80	65 90	80 105	90 115	105 130
Cells Zellen Caissons	44	44	44	44	44
Wing area Flügelfläche (m²) Surface	26,0	28,0	30,0	31,5	33,5
Wing area projected Flügelfläche projiziert (m²) Surface projetée	22,8	23,8	25,6	26,8	28,5
Wing span Spannweite (m) Envergure	11,6	12,1	12,5	12,8	13,2
Projected wing span Spannweite projiziert (m) Envergure projetée	9,2	9,45	9,75	10	10,3
Aspect ratio Streckung Allongement	5,2	5,2	5,2	5,2	5,2
Projected aspect ratio Streckung projiziert Allongement projetée	3,71	3,71	3,71	3,71	3,71
Canopy weight Schirmgewicht (kg) Poids de l'aile	6	6,25	6,55	6,9	7,3
Min. sink rate Min. Sinkgeschwindigkeit (m/s) Taux de chute min	1,05	1,05	1,05	1,05	1,05
Max speed Max. Geschwindigkeit (km/h) Vitesse avec accélérateur	50	50	50	50	50
Trim speed Trimmgeschwindigkeit (km/h) Vitesse bras hauts	37	37	37	37	37

Änderungen vorbehalten



Arcus 4 - Colours

Important!

Please specify both colours when placing an order. The first colour is for the leading edge and the second colour is for the trailing edge.

Lagerfarben

orange / gelb



rot / orange



rot / rot



blau / turkis



Sonderfarben - nur auf Bestellung (ohne Aufpreis)

grau / orange



blau / gelb



blau / rot



blau / blau





Arcus 4 - Optimum weight ranges

The chart below shows the weight ranges for the five sizes of the Arcus 4.

The considerable overlap between the weight ranges means that all pilots will find the ideal size glider. Whether soaring over flat land or flying in the toughest conditions in high mountains, there is enough leeway for adjustment to individual needs.

Important information about the Arcus 4.26 and Arcus 4.28:

Swing has consciously designed the Arcus 4.28 with a large overlap in relation to the Arcus 4.26 (15 kg). Experience shows that a large number of pilots with a take-off weight of about 100kg find it difficult to decide which size is the most suitable for them. For this reason, the surface area of the Arcus 4.28 is somewhat smaller than is normal. In this case, the flat wing area of the 26 is only 1.5m² different instead of 2m² as is the case with the other sizes.

ARCUS 4	22	24	26	28	30
DHV Zulassung	1/1-2	1/1-2	1/1-2	1/1-2	1/1-2
55 - 60	55				
60 - 65					
65 - 70		65			
70 - 75					
75 - 80	80				
80 - 85			80		
85 - 90		90			
90 - 95				90	
95- 100					
100- 105			105		
105- 110					105
110- 115				115	
115 - 120					
120 - 125					
125 - 130					130



Materials – Many years of development experience:

Lines:

Main lines and intermediate lines: Tecnora

Tecnora is notable because it has little tendency to stretch or shrink. Extensive tests have shown us that, in contrast, the length of Dyneema lines, used by many manufacturers, can change by up to 1% if they get wet or as a result of strain.

The performance of gliders has been increased greatly over recent years and, as a result, the level of tolerance in the trimming has also reduced considerably. We have overcome this problem by using Tecnora lines.

With the Arcus 4, the line strengths were adjusted to the various loads. Thus the main and intermediate lines on the A and B levels have heavier than those on the C and D levels, which take less stress.

Brake lines and top lines: Dyneema

Experience shows that these lines take the greatest stress on launch. They can catch on roots or sharp stones and are the most likely to be damaged. For this reason, we use Dyneema, a material which is extremely strong.

The higher stretch and shrinkage rates are of less relevance here. The top lines of SWING sliders are so short that, if their length did change by 1%, it would be of little consequence. The brake lines have a leeway of 10 cm for safety reasons (brake travel before the profile of the glider changes). This means we can exclude the possibility of stretch or shrinkage affecting flying safety.

Fabric:

For the top surface, we use a 46g/m² silicone-coated fabric. Silicone-coated fabrics have good UV-resistance. It is true that silicone fabrics currently available have the disadvantage of being heavy and rating poorly when it comes to tear-resistance and diagonal stretch. SWING therefore has an exclusive fabric manufactured, which is very expensive which combines the various features. The SWING top surface fabric is therefore lighter, more tear-resistant and stretch-resistant, and more durable than traditional silicone fabrics.

For the bottom surface and the ribs, a highly tear-resistant 44 g/m² fabric is used because there is much less exposure to UV light.

Load tests have shown that the fabric used by SWING is extremely tear-resistant. For example, there is no damage to the MISTRAL 3 with a load of more than 12G! In comparison, the maximum load in a spiral is about 3G.



Arcus 4

In summary

- 1. Suitable for occasional flyers, social pilots and beginners**
- 2. Suitable for training**
- 3. Extremely simple launch behaviour with no tendency to overshoot**
- 4. Ideal increase in control pressure for this category**
- 5. Good damping in turbulence**
- 6. Very good-natured turn behaviour after collapses**
- 7. Very good-natured behaviour in extreme conditions, simple and automatic recovery from spirals**
- 8. High-performance: Vmax 50 km/h, min. sink rate 1.05 m**
- 9. Very durable thanks to the exclusive and practical choice of materials**
- 10. Detailed design features: e.g. split A-risers, load-bearing tapes, V-ribs**
- 11. Versatile all-rounder: The Arcus 4 is also certified for use with risers suitable for motors**
- 12. Attractive plan-form and appealing design – 8 colour combinations are available to suit all customers**
- 13. Ideal first glider for beginners**
- 14. High resale value**
- 15. It's a SWING!**

Arcus 4

what else!