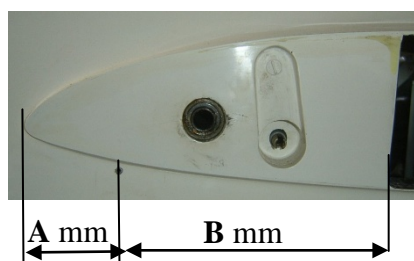




Retrofitting / Upgrading by new FLEXI – Bug Wipers

List of gliders with recommended retrieval line below the wing :

Recommended hole in fuselage	Corresponding hole in bugwiper
Position of hole in fuselage for outlet tube (nipple)	Mounting of tilting element and holes in the bug wiper for retrieval line, see figure, for example: here 5th hole counted from front



hole for bugwiper

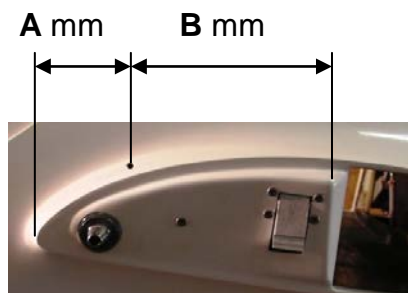
For retrieval line below the wing:

dimensions for hole in fuselage			holes for bug wiper
glider	A mm	B mm	for retrieval line and tilting part
VENTUS	70	--	7 th hole from front, no tilting part
LS8	60	--	5 th - " -
Discus	70	--	7 th
DUO-Discus	70	--	7 th
LS4	65		6 th
LS3	50	--	4 th
Nimbus 3	105	170	12 th
Antares	65	--	6 th - " - , no tilting part
DG 80x, DG400	50	--	4 th
Nimbus 4	70	--	According to manual
Arcus	ca.60-80	--	7 th
Libelle	ca.60-80	--	According to manual
Pik 20	Ca.60-80	--	According to manual
Janus	70	--	7 th hole from front

List of gliders with recommended bore holes for the retrieval line above the wing:



Recommended hole in fuselage	Corresponding hole in bugwiper
Position of hole in fuselage for outlet tube (nipple)	Mounting of tilting element and holes in the bug wiper for retrieval line, see figure, for example: here 5th hole counted from front



dimensions for hole in fuselage			holes for bug wiper
glider	A mm	B mm	for retrieval line and tilting part
ASW15	?		According to manual
ASW 19	--	180	12 th hole from front
ASW 24	110		12 th - " -
ASW 27/28	110	--	12 th - " -
ASG 29	110	--	12 th - " -
ASW 20	80	--	12 th - " -
ASW 22	80	--	12 th - " -
ASH 26 E	65	--	9 th - " -
EB29	?	--	According to manual
Mi31	55		6 th hole from front

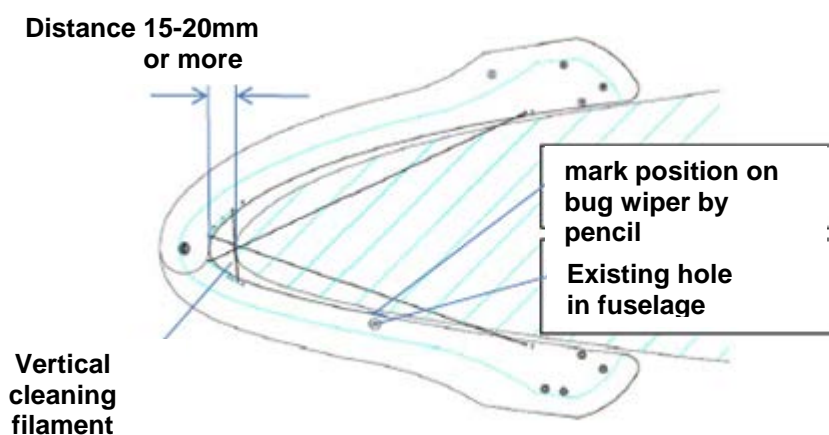


Do you want to retrofit / upgrade your bug wiper system by new BWS Flexi-Bugwipers?

And do you want to use the already drilled holes for the retrieval line in the fuselage?

If yes, then drill the corresponding hole into the BWS-Flexi Bugwipers in the following manner:

Place the collapsed bug wiper on the fairing or wing root (see figure) in such a manner that there is a space of about 15-20mm (or more) between bug wiper and wing leading edge. The vertical part of the cleaning filament shall touch the wing leading edge only slightly, so that the filament does not get caught by the taped gap between wing and fuselage. Then mark on the bug wiper the proper position of the hole and by using one of the small marking holes in the small bow drill the hole for the retrieval line through both the small and big bow at the same time.



If there is no hole yet for the retrieval line in the fuselage or if the hole does not match the BWS Flexi Bugwiper, then use one of the following lists down below to find and drill the recommended hole into the fuselage. First drill recommended holes for the retrieval line into both bows of the collapsed bug wiper, then set the collapsed bug wiper on the fairing or wing root (see figure) and proceed in the same manner as described above.

Note that the holes in the list are only recommended and might be **not** appropriate for your glider. Therefore, always verify position before drilling.