

# The AirCheck™-White List 2019

Fans for Highly Efficient and Resource Friendly Crop Protection in 3D-Crops

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 Constituted on November 30, 2018

Fan Type	Maximum working height at 3,0 m row distance m	Maximum angle of the airstream at maximum working height Degree	Usable air flow $m^3_{eff} h^{-1}$	Usable air flow per metre maximum working height $m^3_{eff} h^{-1} m^{-1}$	Power consumption at PTO kW	Diesel consumption $l h^{-1}$	CO <sub>2</sub> -emissions $kg h^{-1}$	Energy efficiency Diesel consumption per $m^3$ usable air flow per hour $ml m^{-3} eff h^{-1}$	Noise emission dB(A)	Drift reduction Classification (JKI)* %	AirCheck® Air distribution quality classification
Zupan DT-V	2,4	20	45.120	18.800	7,7	2,6	6,9	0,057	84	75	Air Distribution
Weber Q15	2,5	-1	31.181	12.472	5,4	1,8	4,8	0,058	79	90 / 75*	HEAT-Technology
Lochmann 80UQW 2	2,6	-4	51.013	19.620	11,0	3,7	9,8	0,072	84	75	Air Distribution
Weber Q16	2,8	5	38.256	13.663	7,7	2,6	6,9	0,068	78	90	Low Loss Spray Application
Wanner ZA28	2,8	38	41.341	14.765	3,1	1,0	2,8	0,025	83	90	Low Loss Spray Application
Zupan DT-O	3,2	44	42.636	13.324	8,7	2,9	2,3	0,069	80	75 / 95 (LMR) / 75*	Low Loss Spray Application
Weber Q15,5-12	3,3	1	47.011	14.246	9,3	3,1	8,3	0,066	78	90	Low Loss Spray Application
Weber Q17	3,3	8	43.376	13.144	7,7	2,6	6,9	0,060	79	75	Air Distribution
Zupan DT CR-O	3,4	39	53.009	15.591	19,2	6,5	17,1	0,122	87	75	Air Distribution
Wanner H63	3,5	18	41.221	11.777	7,0	2,4	6,3	0,057	83	95	Low Loss Spray Application
Wanner ZA32	3,5	39	59.197	16.913	8,6	2,9	7,6	0,049	84	90 / 75*	HEAT-Technology
Zupan DT MAXI-O	3,5	44	78.844	22.527	18,1	6,1	16,1	0,077	85	75	Air Distribution
Waibl Q / 09	3,5	49	61.482	17.566	11,0	3,7	9,8	0,060	87	75	Air Distribution
Wanner 36GA nA	3,8	40	74.800	19.684	11,8	4,0	10,5	0,053	84	90	Low Loss Spray Application
Lochmann 80UQ 2	3,8	50	60.820	16.005	11,1	3,7	9,9	0,061	85	75	Air Distribution
Lochmann 90UQ 2	3,9	54	81.449	20.884	17,3	5,8	15,4	0,072	86	75	Air Distribution
Lochmann 90Q 2	3,9	55	69.774	17.891	17,3	5,8	15,4	0,083	86	90	Low Loss Spray Application
Wanner 36GA mhA	4,0	42	74.046	18.512	11,8	4,0	10,5	0,053	84	75	Air Distribution
Wanner 42GA	4,0	56	107.871	26.968	16,7	5,6	14,9	0,052	89	95	Low Loss Spray Application
Lochmann 90QB 2	4,0	58	75.184	18.796	19,6	6,6	17,5	0,088	87	75	Air Distribution
Lochmann 90UQH 2	4,1	50	74.521	18.176	16,4	5,5	14,6	0,074	87	75	Air Distribution

\* Recognised spray drift reduction only with nozzles listed in the assortment for fruit growing (OFD75, OIFD75-1 and OIFD75-2) as well as for grape vines (WIFD50-1 WIFD75-3, WIFD90-4 and WIFD75-2) and fan specific provisions (z. B. switching off air support in the first 3 or 5 tree rows in direction of a surface water, reduction of fan speed e.g. left/right and a reduction of liquid pressure) depending on the spray drift reduction class of the fan used and the corresponding buffer zone of the individual product.

Details see at "Verzeichnis verlustmindernde Geräte" of JKI at Braunschweig, Germany.

\*\* Dosing according JKI specification

AFC = Air flow control

- ◆ Fans sorted by maximum working height, maximum vertical angle of the airstream and manufacturer.
- ◆ All figures based on testing PTO speed  $460 \text{ min}^{-1}$  at high gear, resp. 75% of the usable range of PTO speed between  $300 \text{ min}^{-1}$  low gear and  $540 \text{ min}^{-1}$  high gear as well as a measuring distance of 1,5 m, corresponding to a row distance of 3,0 m. For a group of orchards that is going to be treated with the desired fan, adjustment will be done indirectly to the orchard block requiring the highest vertical angle of the airstream.
- ◆ Figures related to power consumption are recorded at the drive unit, figures related to Diesel consumption are calculated from these values with an energy efficiency of the tractor of 30% from the fuel tank.