Spray table for
Air-injector nozzles ID 90
Air-injector compact nozzles IDK 90
Anti-drift nozzles AD 90
Hollow cone nozzles TR 80
Air-injector hollow cone nozzles ITR 80

ID/IDK/AD	TR/ITR		l/min																	
			[bar]																		
			2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	19.0	20.0
TR 80-005		60 M	0.16	0.20	0.23	0.25	0.28	0.30	0.32	0.34	0.36	0.38	0.39	0.41	0.42	0.44	0.45	0.47	0.49	0.51
TR 80-0067		60 M	0.22	0.27	0.31	0.35	0.38	0.41	0.44	0.47	0.49	0.52	0.54	0.56	0.58	0.60	0.62	0.64	0.68	0.70
ID/IDK 90/120-01 TR/ITR 80-01		60 M	0.32	0.39	0.45	0.51	0.55	0.60	0.64	0.68	0.72	0.75	0.78	0.82	0.85	0.88	0.91	0.93	0.99	1.01
ID/IDK 90/120-015 TR/ITR 80-015		60 M	0.48	0.59	0.68	0.76	0.83	0.90	0.96	1.02	1.07	1.13	1.18	1.22	1.27	1.31	1.36	1.40	1.48	1.52
ID/IDK/AD 90/120-02 TR/ITR 80-02		60 M	0.65	0.80	0.92	1.03	1.13	1.22	1.30	1.38	1.45	1.53	1.60	1.67	1.73	1.79	1.85	1.90	2.01	2.07
ID/IDK 90/120-025		60 M	0.81	0.99	1.15	1.28	1.40	1.52	1.62	1.71	1.81	1.90	1.98	2.06	2.14	2.21	2.29	2.36	2.49	2.56
ID/IDK/AD 90/120-03 TR 80-03		60 M	0.97	1.19	1.37	1.53	1.68	1.81	1.94	2.06	2.17	2.28	2.38	2.48	2.57	2.66	2.75	2.83	2.99	3.07
ID/AD 90/120-04 TR 80-04		60 M	1.29	1.58	1.82	2.04	2.23	2.41	2.58	2.74	2.88	3.03	3.16	3.29	3.41	3.53	3.65	3.76	3.98	4.08
ID 90/120-05 TR 80-05		25 M	1.61	1.97	2.28	2.55	2.79	3.01	3.22	3.42	3.60	3.77	3.94	4.10	4.26	4.41	4.55	4.69	4.96	5.09
ID 90/120-06		25 M	1.93	2.36	2.73	3.05	3.34	3.61	3.86	4.09	4.32	4.52	4.72	4.91	5.10	5.28	5.45	5.62	5.94	6.09

■ The stated liter-per-hectare rates apply to water ■ Prior to each spraying season, verify the table data by gauging the flow rates ■ Spray pressure at the nozzle tip (gauged with a diaphragm valve)

Using nozzles of the same size

The total nozzle output of the sprayer is calculated by the following formula:

$$\dot{V} = \frac{M \times v_F \times B}{600}$$

$\dot{V}$ = Total nozzle output, l/min

M = Liter-per-hectare rate, l/ha

v_F = Sprayer speed, km/h

B = Working width, m

The flow rate of a single nozzle is calculated by dividing the total nozzle output by the number of working nozzles.

Nozzle size and pressure are determined by the flow rate indicated in the table above.

The working width corresponds to the distance of the rows, i.e. the row spacing when every row is driven on. If only every second row is driven along, the working width is obtained from double the row spacing.

Using nozzles of different sizes

If nozzles of different sizes are used in a sprayer, the first rating determined derives from the assumption that nozzles of the same size are fitted.

The number of nozzles of the next smallest size is taken into account according to the total number of nozzles.

In order to obtain the specified liquid output (setpoint), the pressure must be increased in accordance with the formula beside.

$$\text{Pressure-setpoint} = \text{Pressure-actual value} \times \left[\frac{\text{Total nozzle output setpoint}}{\text{Total nozzle output actual value}} \right]^2$$

Example
At a sprayer speed of 6.5 km/h, 600 l/ha should be applied. The working width is 2.0 m. The total nozzle output is then:

$$\frac{600 \times 6.5 \times 2.0}{600} = 13.0 \text{ l/min}$$

If 10 nozzles of the same size are used, the flow rate of each nozzle is
13.0 : 10 = 1.3 l/min.
→ nozzle/pressure as per Table see above:

ID 90-02 / yellow at 8 bar

Instead of nozzle ID 90-02, the lower and two upper nozzles with the next smaller size

6 x ID 90-015 / green should be fitted on both sides of the sprayer. The total nozzle output (actual value) is as follows at 8 bar (actual value):

(6 x 0.96 + 4 x 1.30) l/min = 10.96 l/min.
The pressure setpoint to be set for 600 l/ha (setpoint) is then:

$$8 \times \left[\frac{13.0}{11.0} \right]^2 = 11.2 \text{ bar}$$