MC | Quick-Repeat-Clip QR

Characteristics

Uniform flat fan spray pattern,
jet with high force of impact,
clog-resistant,
dirt-resistant due to closed system,
short design.
Big selection of flat fan,
full cone and hollow cone nozzles.

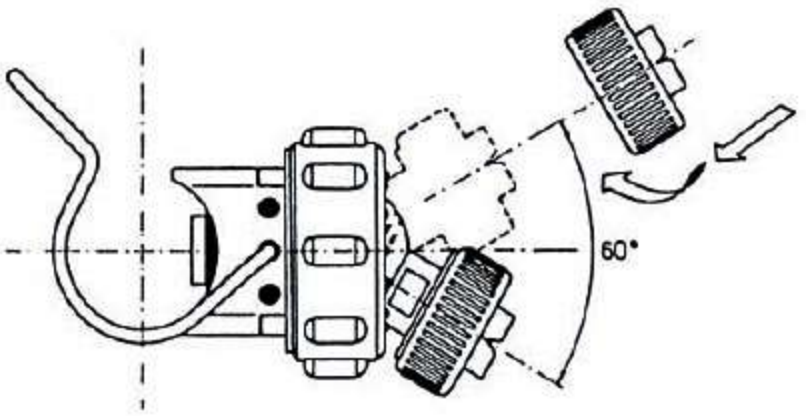
Application

Washing, cleaning,
rinsing, phosphating,
cooling, coating,
misting, process engineering

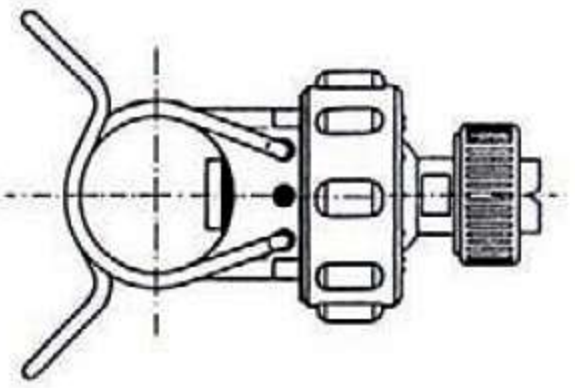
Material

PP glass fiber reinforced,
Bracket in V2A or
V4A if desired

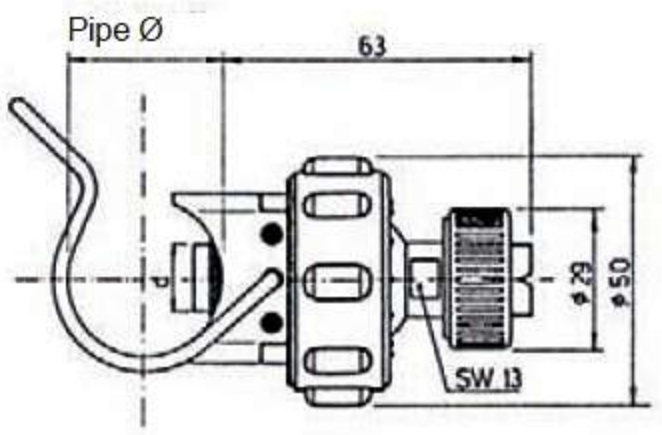
Main advantages of the system:
- There are no seals required for the extremely fast exchange of the bayonet flat fan nozzles.
- No change in the spray direction set.
- Clamping of ball with help of a bayonet cap nut. Reduces installation time.
- Markings on the ball facilitate the adjustment of the spray direction.



Illu. 1 Standard design **QR**
swivel range 60°
max. pressure 4 bar
max. temperature 80°



Illu. 2 Double-bracket design **QRB**
max. pressure 6 bar



Illu. 3 Dimensions (ball = Ø 28.7 mm)

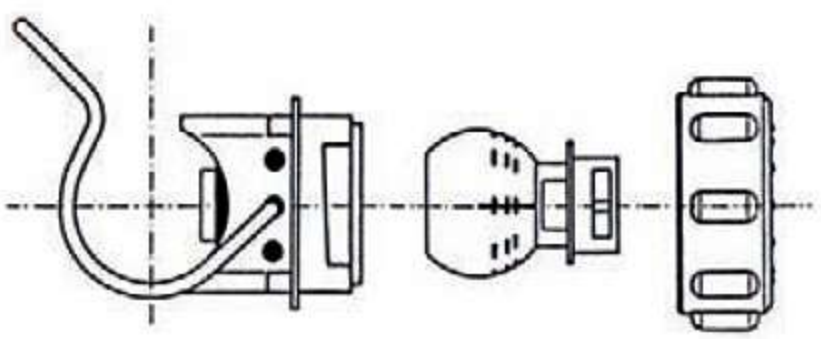
Basic body - color-coding				
Pipe Ø in inch	Pipe Ø in mm	d = MC-pipe bore standard	d = for the exchange of other makes and products	
1/2“ *	20 - 22	Ø 7 purple		
3/4“ *	25 - 27	Ø 10 brown		
1“	32 - 34	Ø 14 white		
1 1/4“	41 - 43	Ø 14 grey	Ø 17 yellow*	Ø 20 red
1 1/2“	46 - 49	Ø 14 green	Ø 17 blue*	Ø 20 black
2“ *	58 - 62	Ø 14 orange	Ø 17 golden*	

* after consultation

Order example:
(indicate basic body - type - pipe-Ø - pipe bore-Ø d - color-coding and nozzle type + size + spray angle - color-coding)

QR clip 1 1/4“ - Ø 14 mm - grey,
with nozzle QRF 30-65° - yellow, entirely

Single parts



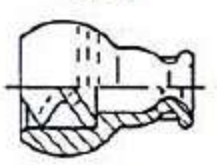
Illu. 4
Basic body **Q**
(for color-coding see table)

Illu. 5
Bayonet ball **QR** (yellow) for bayonet flat fan nozzle

Illu. 6
Bayonet cap nut **QÜ** (blue)

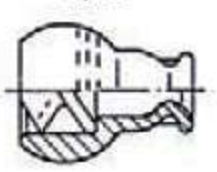
Illu. 7
Bayonet flat fan nozzle **QRF** in connection with bayonet ball **QR** (yellow)

Ball full cone nozzle
QVX



Illu. 8 of **QVX** 25-40
swivel range 40°

Hollow cone nozzle
QHK



Illu. 9 of **QHX** 25-50
swivel range 40°

O-Ring in NBR Ø 14x3 mm or **flat gasket** NBR Ø 14x3x4 mm high, especially suitable for sealing of plastic pipes!

1. Bayonet flat fan nozzles QRF made from PP A = equivalent bore-Ø

Type	Color-coding	A Ø (mm)	Spray angle in degree							Flow rate V̇ (l/min.) at pressure p (bar)								
			25°	35°	45°	**65°**	80°	95°	120°	bar 0.35	bar 0.5	bar 0.7	bar 1	bar 1.5	bar 2	bar 2.5	bar 3	bar 4
QRF 5	white	1.5				*		*	*	0.67	0.81	0.95	1.14	1.40	1.61	1.80	1.97	2.28
QRF 10	black	2.0				*		*	*	1.35	1.61	1.91	2.28	2.79	3.22	3.60	3.95	4.56
QRF 15	golden	2.4	*	*	*	*	*	*	*	2.02	2.42	2.86	3.42	4.19	4.84	5.41	5.92	6.84
QRF 20	purple	2.8	*	*	*	*	*	*		2.70	3.22	3.81	4.56	5.58	6.45	7.21	7.90	9.12
QRF 25	brown	3.2	*	*	*	*	*	*		3.37	4.03	4.77	5.70	6.98	8.06	9.01	9.87	11.4
QRF 30	yellow	3.6	*	*	*	*	*	*		4.05	4.84	5.72	6.84	8.37	9.67	10.8	11.8	13.7
QRF 35	grey	3.8	*	*	*	*	*	*		4.72	5.64	6.67	7.98	9.77	11.3	12.6	13.8	16.0
QRF 40	red	4.0	*	*	*	*	*	*		5.39	6.45	7.63	9.12	11.2	12.9	14.4	15.8	18.2
QRF 50	green	4.4	*	*	*	*	*	*		6.74	8.06	9.54	11.4	14.0	16.1	18.0	19.7	22.8
QRF 60	blue	4.8	*	*	*	*	*	*		8.09	9.67	11.4	13.7	16.8	19.3	21.6	23.7	27.4
QRF 70	light blue	5.2	*	*	*	*	*	*		9.44	11.3	13.4	16.0	19.5	22.6	25.2	27.6	31.9
QRF 80	ecru	5.6	*	*	*	*	*	*		10.8	12.9	15.3	18.2	22.3	25.8	28.8	31.6	36.5

Colored rings mark the nozzle's spray angle: light blue = **25°**, orange = **35°**,
light green = **45°**, ecru = **65°- standard**, bright red = **80°**, light grey = **95°**, golden = **120°**

Colored ring marking the spray angle

2. Full cone ball nozzles QVX made from PP with clog-resistant X-swirler
B = outlet bore E = smallest section

Type	Color-coding	B Ø (mm)	E Ø (mm)	Flow rate V̇ (l/min.) at pressure p (bar)									Spray angle		
				bar 0.35	bar 0.5	bar 0.7	bar 1	bar 1.5	bar 2	bar 2.5	bar 3	bar 4	bar 0.5	bar 1.5	bar 4
QVX 16	red	4.8	3.2	6.37	8.16	9.53	11.2	13.6	15.5	17.6	18.7	21.3	64°	67°	61°
QVX 20	green	5.2	3.6	8.15	10.4	12.2	14.4	17.3	19.8	21.8	23.9	27.3	72°	75°	68°
QVX 25	blue	6.4	3.6	10.2	13.1	15.3	18.0	21.7	24.8	27.3	29.9	34.1	88°	91°	83°
QVX 31	light blue	6.8	4.0	12.7	16.3	19.1	22.5	27.1	31.0	34.0	37.3	42.6	91°	94°	86°

3. Hollow cone nozzles QHX made from PP with clog-resistant X-swirler
B = outlet bore E = smallest section

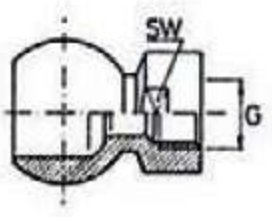
Type	Color-coding	B Ø (mm)	E Ø (mm)	Fow rate V̇ (l/min.) at pressure p (bar)								
				bar 0.35	bar 0.5	bar 0.7	bar 1	bar 1.5	bar 2	bar 2.5	bar 3	bar 4
QHX 16	white	5.5	2.5	6.48	7.80	9.17	11.0	13.5	16.0	17.3	19.0	22.5
QHX 20	black	6.4	2.5	8.35	10.0	11.8	14.0	17.5	20.0	22.3	24.5	28.0
QHX 25	purple	6.6	3.0	10.4	12.5	14.7	18.0	21.5	25.0	27.8	30.5	36.0
QHX 31	brown	7.0	3.5	12.7	16.3	19.1	22.5	27.1	31.0	34.0	37.3	42.6

Spray angles available
60° - 90° - 120°

The low force of impact of droplets from QHX nozzles results in a more consistant crystalline structure in phosphating processes.

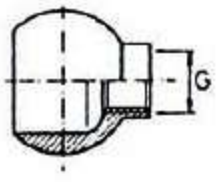
4. Ball recordings for metal and plastic nozzles (see general catalog)

Illu. 10
Thread ball **QL**
long with SW 22
as screw-in tool



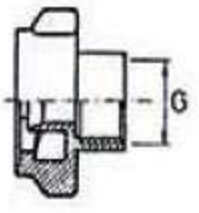
1/8" light blue
1/4" blue
3/8" green
1/2" orange

Illu. 11
Thread ball **QK**
short type

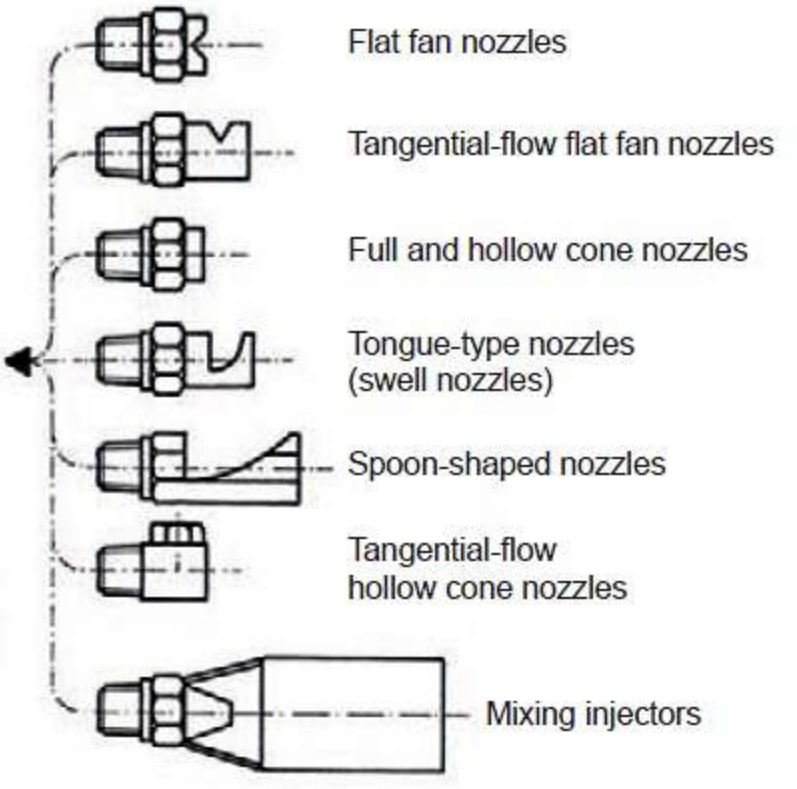


1/8" white
1/4" yellow
3/8" brown

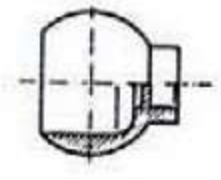
Illu. 12
Bayonet nut **QM**
with female thread,
exchange of nozzle
does not alter spray
direction.



1/8" black
1/4" light blue
3/8" red



Illu. 13
Blind ball **QS** (white)



Illu. 14
Blind cap **QO**

Registered design!