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## High pressure nozzles

## 1/4" M NPT



Impact = 100 %

|     | 0°      | 15°     | 25°     | 40°     | 65°     |
|-----|---------|---------|---------|---------|---------|
| D   | R+M Nr. | R+M Nr. | R+M Nr. | R+M Nr. | R+M Nr. |
| 02  | 610 05  | 613 05  | 617 50  | 620 30  | 625 20  |
| 025 | 610 07  | 613 07  | 617 65  | 620 35  | 625 25  |
| 03  | 610 10  | 613 10  | 617 70  | 621 00  | 625 30  |
| 034 |         | 613 20  | 617 80  |         | 625 35  |
| 035 | 610 20  |         | 617 85  | 621 20  |         |
| 04  | 610 30  | 613 30  | 617 90  | 621 30  | 625 40  |
| 045 | 610 40  | 613 40  | 618 00  | 621 40  | 625 50  |
| 05  | 610 50  | 613 50  | 618 10  | 621 50  | 625 60  |
| 055 | 610 60  | 613 60  | 618 20  | 621 60  | 625 70  |
| 06  | 610 70  | 613 70  | 618 30  | 621 70  | 625 80  |
| 065 | 610 80  | 613 80  | 618 40  | 621 80  | 625 90  |
| 07  | 610 90  | 613 90  | 618 50  | 621 90  | 626 00  |
| 075 | 611 00  | 614 00  | 618 60  | 622 00  |         |
| 08  | 611 10  | 614 10  | 618 70  | 622 10  | 626 10  |
| 085 | 611 20  | 614 20  | 618 80  | 622 20  |         |
| 09  | 611 30  | 614 30  | 618 90  | 622 30  | 626 20  |
| 10  | 611 40  | 614 40  | 619 00  | 622 40  | 626 30  |
| 11  | 611 50  | 614 50  | 619 10  | 622 50  |         |
| 12  | 611 60  | 614 60  | 619 20  | 622 60  |         |
| 13  | 611 70  | 614 70  | 619 30  | 622 70  |         |
| 14  | 611 75  | 614 75  | 619 35  |         |         |
| 15  | 611 80  | 614 80  | 619 40  | 622 80  | 626 50  |
| 20  | 611 90  | 614 90  | 619 50  | 622 90  | 626 60  |
| 25  | 612 00  | 615 00  | 619 60  | 623 00  |         |
| 30  | 612 10  | 615 10  | 619 70  | 623 20  | 626 70  |
| 35  | 612 50  | 615 20  | 619 75  | 623 25  |         |
| 40  | 612 15  | 615 25  | 619 80  | 623 30  |         |
| 50  | 612 20  | 615 35  | 619 90  | 623 32  |         |

## 1/8" M NPT



Impact = 100 %

|     | 0°      | 15°     | 25°     | 40°     | 65°     |
|-----|---------|---------|---------|---------|---------|
| D   | R+M Nr. | R+M Nr. | R+M Nr. | R+M Nr. | R+M Nr. |
| 02  | 630 08  | 632 05  | 635 00  |         |         |
| 03  | 630 10  | 632 10  | 635 10  | 638 10  |         |
| 035 |         | 632 15  | 635 15  |         |         |
| 04  | 630 20  | 632 20  | 635 20  | 638 20  | 639 591 |
| 045 | 630 30  | 632 30  | 635 30  | 638 30  |         |
| 05  | 630 40  | 632 40  | 635 40  | 638 40  | 639 60  |
| 055 | 630 50  | 632 50  | 635 50  | 638 50  |         |
| 06  | 630 60  | 632 60  | 635 60  | 638 60  | 639 61  |
| 065 | 630 70  | 632 70  | 635 70  | 638 70  |         |
| 07  | 630 80  | 632 80  | 635 80  | 638 80  |         |
| 075 | 630 90  | 632 85  | 635 90  | 638 90  |         |
| 08  | 631 00  | 633 00  | 636 00  | 639 00  |         |
| 085 | 631 10  | 633 10  | 636 10  | 639 10  |         |
| 09  | 631 20  | 633 20  | 636 20  | 639 20  |         |
| 10  | 631 30  | 633 30  | 636 30  | 639 30  | 639 65  |
| 11  | 631 40  |         | 636 40  |         |         |
| 12  | 631 50  |         |         | 639 50  |         |
| 15  |         | 633 60  | 636 80  |         |         |

## 1/4" M NPT - VVSS



Impact = 100 %

|     | 40°     | 65°     | 80°       |  |  |
|-----|---------|---------|-----------|--|--|
| D   | R+M Nr. | R+M Nr. | R+M Nr.   |  |  |
| 01  | 620 20  | 625 10  | 627 000 1 |  |  |
| 015 | 620 25  | 625 15  | 627 00    |  |  |
| 02  | 620 29  |         | 627 02    |  |  |
| 03  |         |         | 627 03    |  |  |

## 1/8" M NPT - VVSS



Impact = 100 %

|     | 40°     | 65°      |  |  |  |
|-----|---------|----------|--|--|--|
| D   | R+M Nr. | R+M Nr.  |  |  |  |
| 01  | 638 01  | 639 55 * |  |  |  |
| 015 |         | 639 56   |  |  |  |
| 02  |         | 639 57   |  |  |  |
| 03  |         | 639 58   |  |  |  |

## Power 1/4" M NPT - PMEG



Impact = 250 %

|     | 15°     | 25°     |  |  |  |
|-----|---------|---------|--|--|--|
| D   | R+M Nr. | R+M Nr. |  |  |  |
| 04  | 613 305 | 617 905 |  |  |  |
| 045 | 613 405 | 618 005 |  |  |  |
| 05  | 613 505 | 618 105 |  |  |  |
| 055 | 613 605 | 618 205 |  |  |  |
| 06  | 613 705 | 618 305 |  |  |  |
| 065 | 613 805 | 618 405 |  |  |  |

## Power 1/8" M NPT - PMEG



Impact = 250 %

|     | 15°     | 25°     |
|-----|---------|---------|
| D   | R+M Nr. | R+M Nr. |
| 04  | 632 205 | 635 205 |
| 045 | 632 305 | 635 305 |
| 05  | 632 405 | 635 405 |
| 055 | 632 505 | 635 505 |
| 06  | 632 605 | 635 605 |
| 065 | 632 705 | 635 705 |

## Nozzle filter VV



Brass. Max. 70 bar

| R+M Nr. | nozzle |
|---------|--------|
| 649 90  | 1/4"   |
| 649 95  | 1/8"   |

Symbols  nozzle

\* brass

## High pressure nozzles

### Tip nozzle



Impact = 100 %

|     | 0°      | 15°     | 25°     | 40°     | 65°     |
|-----|---------|---------|---------|---------|---------|
| D   | R+M Nr. | R+M Nr. | R+M Nr. | R+M Nr. | R+M Nr. |
| 02  | 600 02  | 602 40  | 604 90  | 607 40  | 609 052 |
| 025 |         | 602 45  | 604 95  |         |         |
| 03  | 600 05  | 602 50  | 605 00  | 607 50  | 609 053 |
| 034 | 600 06  | 602 55  | 605 05  |         | 609 34  |
| 04  | 600 10  | 602 60  | 605 10  | 607 60  | 609 10  |
| 045 | 600 20  | 602 70  | 605 20  | 607 70  |         |
| 05  | 600 30  | 602 80  | 605 30  | 607 80  | 609 30  |
| 055 | 600 40  | 602 90  | 605 40  | 607 90  | 609 305 |
| 06  | 600 50  | 603 00  | 605 50  | 608 00  |         |
| 065 | 600 60  | 603 10  | 605 60  | 608 10  |         |
| 07  | 600 70  | 603 20  | 605 70  | 608 20  |         |
| 075 | 600 75  | 603 25  | 605 75  | 608 25  |         |
| 08  | 600 80  | 603 30  | 605 80  | 608 30  | 609 008 |
| 085 | 600 90  | 603 40  | 605 90  |         |         |
| 09  | 601 00  | 603 50  | 606 00  | 608 40  |         |
| 10  | 601 10  | 603 60  | 606 10  | 608 60  | 609 100 |
| 12  |         | 603 70  | 606 20  | 608 66  |         |
| 13  | 601 30  | 603 80  | 606 30  | 608 70  |         |
| 15  | 601 40  | 603 90  | 606 40  | 608 80  |         |
| 20  | 601 50  |         | 606 50  | 609 00  | 609 200 |

## Tip cleaner



High speed steel (HSS) with aluminium shaft.

42 mm

| R+M Nr.     | Ø   |
|-------------|-----|
| 200 049 042 | 0.5 |

### Advantages of Power-MEG nozzle



## Ceramic high pressure nozzles



### 1/4" M NPT



Impact = 100 %. Max. 300 bar / 125 °C

|     | 0°       | 15°      | 25°      | 40°      |  |
|-----|----------|----------|----------|----------|--|
| D   | R+M Nr.  | R+M Nr.  | R+M Nr.  | R+M Nr.  |  |
| 02  | 610 056  | 613 056  | 617 506* | 620 306  |  |
| 025 |          | 613 076  | 617 656  | 620 356  |  |
| 03  | 610 106* | 613 106  | 617 706  | 621 006  |  |
| 035 | 610 206* | 613 206  | 617 806  | 621 206* |  |
| 04  | 610 306* | 613 306  | 617 906  | 621 306  |  |
| 045 | 610 406* | 613 406  | 618 006  | 621 406  |  |
| 05  | 610 506* | 613 506  | 618 106  | 621 506  |  |
| 055 | 610 606* | 613 606  | 618 206  | 621 606  |  |
| 06  | 610 706  | 613 706  | 618 306  | 621 706  |  |
| 065 | 610 806* |          | 618 406  | 621 806  |  |
| 07  |          | 613 906  | 618 506  |          |  |
| 075 | 611 006* | 614 006* |          | 622 006* |  |
| 08  | 611 106* | 614 106* |          | 622 106  |  |
| 09  |          |          |          | 622 306* |  |
| 10  | 611 406* | 614 406* | 619 006* | 622 406* |  |
| 11  | 611 506* | 614 506  | 619 106* | 622 506* |  |
| 12  | 611 606* | 614 606* | 619 206* | 622 606* |  |
| 15  | 611 806* | 614 806  | 619 406* | 622 806* |  |

- » Ceramic inserts provide up to 10 times the life of stainless steel inserts, maximizing your return of investment and decreasing downtime for nozzle replacement.
- » Extra long life ceramic orifice is nearly diamond-hard to resist wear.
- » The used ceramic is specially designed for high pressure and elevated temperature.
- » The extremely hard ceramic insert guarantees a more precise and stronger
- » Wedge-shaped orifice insert seats tightly as spray pressure increases.
- » The external body made out of stainless steel V2A / AISI 304 has a polished surface which is resistant to rust and slight damages.
- » The nozzles are equipped with a 1/4" M NPT connection.

### 1/4" M NPT



Impact = 100 %. Max. 500 bar / 150 °C

0°

| D   | R+M Nr.    |
|-----|------------|
| 025 | 610 076 1* |
| 03  | 610 106 1* |
| 045 | 610 406 1* |

\* limited stock

## Further information about high pressure nozzles

Output in l/min depends on pressure in bar

| Pressure in bar |      |      |      |      |       |       |       |       |       |        |        |        |        |
|-----------------|------|------|------|------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
|                 |      | 3    | 10   | 20   | 30    | 40    | 50    | 60    | 70    | 80     | 90     | 100    | 110    |
| D               | Ø*   |      |      |      |       |       |       |       |       |        |        |        |        |
| 01              | 0.59 | 0.4  | 0.7  | 1.0  | 1.3   | 1.4   | 1.6   | 1.7   | 1.8   | 2.0    | 2.1    | 2.2    | 2.3    |
| 015             | 0.71 | 0.6  | 1.0  | 1.5  | 1.8   | 2.1   | 2.4   | 2.6   | 2.8   | 3.0    | 3.2    | 3.4    | 3.6    |
| 02              | 0.84 | 0.8  | 1.4  | 2    | 2.5   | 2.8   | 3.2   | 3.5   | 3.7   | 4.0    | 4.2    | 4.5    | 4.7    |
| 025             | 0.94 | 1.0  | 1.6  | 2.5  | 3.1   | 3.5   | 4.0   | 4.3   | 4.7   | 5.0    | 5.3    | 5.6    | 5.9    |
| 03              | 1.03 | 1.2  | 2.0  | 3.1  | 3.7   | 4.3   | 4.8   | 5.3   | 5.7   | 6.1    | 6.3    | 6.8    | 7.1    |
| 035             | 1.10 | 1.4  | 2.5  | 3.6  | 4.2   | 4.9   | 5.5   | 6.0   | 6.5   | 7.0    | 7.4    | 7.8    | 8.2    |
| 04              | 1.21 | 1.6  | 2.8  | 4.1  | 5.2   | 5.9   | 6.6   | 7.3   | 7.8   | 8.4    | 8.9    | 9.4    | 9.8    |
| 045             | 1.26 | 1.8  | 3.1  | 4.5  | 5.5   | 6.4   | 7.1   | 7.8   | 8.4   | 9.0    | 9.6    | 10.2   | 10.5   |
| 05              | 1.33 | 2.0  | 3.5  | 5.1  | 6.2   | 7.1   | 8.0   | 8.7   | 9.4   | 10.0   | 10.7   | 11.3   | 11.8   |
| 055             | 1.39 | 2.2  | 3.7  | 5.6  | 6.8   | 7.8   | 8.7   | 9.6   | 10.3  | 11.1   | 11.8   | 12.4   | 13.0   |
| 06              | 1.46 | 2.4  | 4.1  | 6.1  | 7.4   | 8.6   | 9.6   | 10.4  | 11.3  | 12.1   | 12.8   | 13.6   | 14.3   |
| 065             | 1.52 | 2.6  | 4.3  | 6.6  | 8.0   | 9.3   | 10.4  | 11.3  | 12.3  | 13.2   | 14.0   | 14.7   | 15.4   |
| 07              | 1.57 | 2.8  | 5.0  | 7.1  | 8.6   | 10.0  | 11.2  | 12.2  | 13.2  | 14.1   | 15.0   | 15.8   | 16.6   |
| 075             | 1.63 | 3.0  | 5.3  | 7.6  | 9.3   | 10.7  | 12.0  | 13.1  | 14.2  | 15.2   | 16.1   | 16.9   | 17.7   |
| 08              | 1.68 | 3.2  | 5.6  | 8.2  | 9.8   | 11.3  | 12.7  | 14.0  | 15.1  | 16.1   | 17.1   | 18.0   | 18.9   |
| 085             | 1.73 | 3.4  | 6    | 8.7  | 10.4  | 12.1  | 13.5  | 14.8  | 16.0  | 17.1   | 18.1   | 19.1   | 20.0   |
| 09              | 1.78 | 3.6  | 6.5  | 9.2  | 11.1  | 12.8  | 14.3  | 15.7  | 17.0  | 18.0   | 19.2   | 20.2   | 21.2   |
| 10              | 1.88 | 3.9  | 7.0  | 10.2 | 12.3  | 14.2  | 16.0  | 17.4  | 18.9  | 20.1   | 21.4   | 22.5   | 23.6   |
| 11              | 1.96 | 4.3  | 7.8  | 11.2 | 13.4  | 15.5  | 17.3  | 19.0  | 20.5  | 22.0   | 23.3   | 24.5   | 25.7   |
| 12              | 2.05 | 4.7  | 8.4  | 12.3 | 14.6  | 16.9  | 18.9  | 20.8  | 22.4  | 24.0   | 25.4   | 26.8   | 28.1   |
| 13              | 2.13 | 5.1  | 9.5  | 13.3 | 15.9  | 18.3  | 20.5  | 22.5  | 24.3  | 26.0   | 27.5   | 29.0   | 30.4   |
| 14              | 2.21 | 5.5  | 10.2 | 14.3 | 17.1  | 19.7  | 22.1  | 24.2  | 26.1  | 28.0   | 29.6   | 31.3   | 32.8   |
| 15              | 2.30 | 5.9  | 10.8 | 15.3 | 18.5  | 21.3  | 23.9  | 26.1  | 28.3  | 30.2   | 32.1   | 33.8   | 35.3   |
| 20              | 2.66 | 7.9  | 14   | 20.5 | 24.7  | 28.5  | 31.9  | 34.9  | 37.8  | 40.3   | 42.7   | 45.1   | 47.2   |
| 30              | 3.25 | 11.8 | 21.1 | 31.0 | 37.0  | 42.7  | 47.8  | 52.4  | 56.6  | 60.5   | 64.2   | 67.6   | 70.9   |
| 40              | 3.76 | 15.8 | 28.0 | 41.0 | 49.4  | 57.0  | 63.7  | 69.8  | 75.4  | 80.7   | 85.5   | 90.2   | 94.6   |
| 50              | 4.28 | 19.7 | 35.3 | 51.0 | 61.50 | 71.00 | 80.00 | 87.00 | 94.50 | 102.50 | 107.00 | 112.50 | 118.00 |

Choosing the suitable nozzle is most important for output and smooth function of the high pressure cleaner:

Nozzle too small = machine permanently switches into bypass or off.

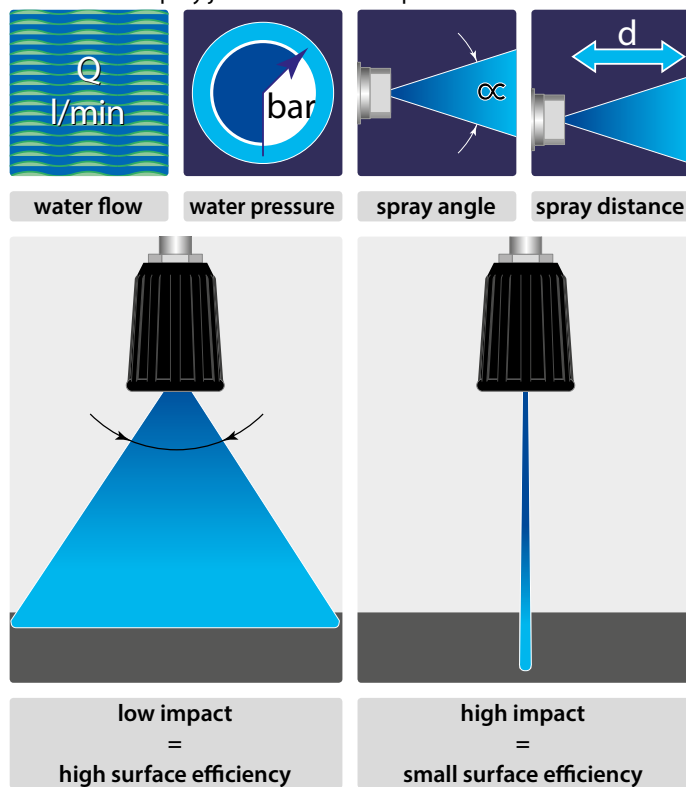
Nozzle too wide = machine has a small output, lower pressure.

## How to choose the suitable nozzle?

Attention: pressure and flow of the high pressure cleaner must be known e.g. 15 l/min (900 l/h) - working pressure of 150 bar.

1. In the first line (pressure in bar) please go to column "150".
2. Follow column "150" down to find l/min: take "15.2" (nearest to 15).
3. Turn left in line "15.2" until the first column and stop at nozzle type "055".
4. The size you need is "055"
5. On pages 264 -265 please select type of nozzle and spray angle.
6. In line "055" please find the R+M Nr. of the nozzle you need.

Important for excellent high pressure cleaning is the impact of the spray jet which is made up of 4 features.



\* hole diameter in mm

## Further information about high pressure nozzles

Output in l/min depends on pressure in bar

| Pressure in bar |      |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                 |      | 120    | 130    | 140    | 150    | 160    | 175    | 200    | 225    | 250    | 300    | 400    | 500    |
| D               | Ø    | 120    | 130    | 140    | 150    | 160    | 175    | 200    | 225    | 250    | 300    | 400    | 500    |
| 01              | 0.59 | 2.4    | 2.5    | 2.6    | 2.7    | 2.8    | 2.9    | 3.1    | 3.3    | 3.5    | 3.8    | 4.4    | 4.9    |
| 015             | 0.71 | 3.7    | 3.8    | 4.0    | 4.2    | 4.3    | 4.5    | 4.8    | 5.1    | 5.4    | 5.9    | 6.7    | 7.5    |
| 02              | 0.84 | 4.8    | 5.0    | 5.3    | 5.4    | 5.6    | 5.9    | 6.3    | 6.7    | 7.0    | 7.7    | 8.9    | 9.9    |
| 025             | 0.94 | 6.1    | 6.4    | 6.6    | 6.9    | 7.1    | 7.5    | 8.0    | 8.5    | 9.0    | 9.9    | 11.4   | 12.7   |
| 03              | 1.03 | 7.4    | 7.7    | 8.0    | 8.3    | 8.6    | 9.0    | 9.6    | 10.2   | 10.7   | 11.8   | 13.5   | 15.1   |
| 035             | 1.10 | 8.6    | 8.9    | 9.2    | 9.5    | 9.8    | 10.3   | 11.0   | 11.7   | 12.3   | 13.8   | 15.5   | 17.8   |
| 04              | 1.21 | 10.3   | 10.7   | 11.1   | 11.5   | 11.9   | 12.4   | 13.3   | 14.1   | 14.8   | 16.3   | 18.7   | 20.9   |
| 045             | 1.26 | 10.9   | 11.4   | 11.8   | 12.2   | 12.6   | 13.2   | 14.1   | 15.0   | 15.8   | 17.4   | 19.9   | 22.3   |
| 05              | 1.33 | 12.4   | 12.9   | 13.4   | 13.8   | 14.3   | 14.9   | 16.0   | 16.9   | 17.9   | 19.7   | 22.6   | 25.3   |
| 055             | 1.39 | 13.6   | 14.1   | 14.7   | 15.2   | 15.7   | 16.4   | 17.5   | 18.6   | 19.6   | 21.7   | 25.0   | 28.0   |
| 06              | 1.46 | 14.9   | 15.5   | 16.0   | 16.7   | 17.2   | 18.0   | 19.2   | 20.4   | 21.5   | 23.7   | 27.1   | 30.3   |
| 065             | 1.52 | 16.1   | 16.8   | 17.4   | 18.0   | 18.6   | 19.4   | 20.8   | 22.0   | 23.2   | 25.6   | 29.3   | 32.7   |
| 07              | 1.57 | 17.3   | 18.0   | 18.7   | 19.3   | 20.0   | 20.9   | 22.3   | 23.7   | 25.0   | 27.1   | 31.3   | 35.0   |
| 075             | 1.63 | 18.5   | 19.3   | 20.0   | 20.7   | 21.4   | 22.4   | 23.9   | 25.3   | 26.7   | 29.4   | 33.7   | 37.7   |
| 08              | 1.68 | 19.7   | 20.5   | 21.3   | 22.0   | 22.8   | 23.8   | 25.5   | 27.0   | 28.5   | 31.4   | 35.9   | 40.2   |
| 085             | 1.73 | 20.9   | 21.8   | 22.6   | 23.4   | 24.1   | 25.3   | 27.0   | 28.6   | 30.2   | 34.5   | 39.8   | 44.5   |
| 09              | 1.78 | 22.1   | 23.0   | 23.9   | 24.7   | 25.5   | 26.7   | 28.6   | 30.3   | 31.9   | 35.1   | 40.2   | 45.0   |
| 10              | 1.88 | 24.6   | 25.6   | 26.6   | 27.6   | 28.5   | 29.8   | 31.8   | 33.7   | 35.6   | 39.2   | 44.9   | 50.2   |
| 11              | 1.96 | 26.9   | 28.0   | 29.1   | 30.1   | 31.1   | 32.5   | 34.7   | 36.8   | 38.8   | 43.4   | 50.1   | 56.0   |
| 12              | 2.05 | 29.4   | 30.6   | 31.7   | 32.8   | 33.9   | 35.4   | 37.9   | 40.2   | 42.4   | 46.7   | 53.4   | 59.8   |
| 13              | 2.13 | 31.8   | 33.1   | 34.4   | 35.6   | 36.7   | 38.4   | 41.1   | 43.6   | 45.9   | 50.5   | 57.8   | 64.7   |
| 14              | 2.21 | 34.2   | 35.6   | 37.0   | 38.3   | 39.5   | 41.4   | 44.3   | 46.9   | 49.4   | 55.0   | 63.5   | 71.0   |
| 15              | 2.30 | 36.9   | 38.4   | 39.9   | 41.3   | 42.6   | 44.6   | 47.7   | 50.6   | 53.3   | 58.7   | 67.2   | 75.2   |
| 20              | 2.66 | 49.3   | 51.3   | 53.2   | 55.1   | 56.9   | 59.5   | 63.6   | 67.5   | 71.1   | 78.2   | 89.6   | 100.0  |
| 30              | 3.25 | 74.0   | 77.1   | 80.0   | 82.8   | 85.5   | 89.4   | 95.6   | 101.0  | 107.0  | 118.0  | 149.0  | 151.0  |
| 40              | 3.76 | 98.8   | 103.0  | 107.0  | 110.0  | 114.0  | 119.0  | 127.0  | 135.0  | 143.0  | 157.0  | 198.0  | 202.0  |
| 50              | 4.28 | 123.00 | 128.00 | 133.00 | 138.00 | 142.50 | 149.00 | 159.00 | 168.50 | 178.00 | 196.00 | 224.50 | 251.00 |

## Spray width depending on spray angle and distance

| Distance in cm |      |      |      |       |       |       |       |       |        |        |        |
|----------------|------|------|------|-------|-------|-------|-------|-------|--------|--------|--------|
| Angle          | 1    | 2    | 3    | 5     | 7     | 10    | 20    | 30    | 50     | 70     | 100    |
| °              |      |      |      |       |       |       |       |       |        |        |        |
| 5°             | 0.09 | 0.17 | 0.26 | 0.44  | 0.61  | 0.87  | 1.75  | 2.62  | 4.37   | 6.11   | 8.73   |
| 10°            | 0.17 | 0.35 | 0.52 | 0.87  | 1.22  | 1.75  | 3.50  | 5.25  | 8.75   | 12.25  | 17.50  |
| 15°            | 0.26 | 0.53 | 0.79 | 1.32  | 1.84  | 2.63  | 5.27  | 7.90  | 13.17  | 18.43  | 26.33  |
| 20°            | 0.35 | 0.71 | 1.06 | 1.76  | 2.47  | 3.53  | 7.05  | 10.58 | 17.63  | 24.69  | 35.27  |
| 25°            | 0.44 | 0.89 | 1.33 | 2.22  | 3.10  | 4.43  | 8.87  | 13.30 | 22.17  | 31.04  | 44.34  |
| 40°            | 0.73 | 1.46 | 2.18 | 3.64  | 5.10  | 7.28  | 14.56 | 21.84 | 36.40  | 50.96  | 72.79  |
| 65°            | 1.27 | 2.55 | 3.82 | 6.37  | 8.92  | 12.74 | 25.48 | 38.22 | 63.71  | 89.19  | 127.41 |
| 80°            | 1.68 | 3.36 | 5.03 | 8.39  | 11.75 | 16.78 | 33.56 | 50.35 | 83.91  | 117.47 | 167.82 |
| 110°           | 2.86 | 5.71 | 8.57 | 14.28 | 19.99 | 28.56 | 57.13 | 85.69 | 142.81 | 199.94 | 285.63 |

Symbols  diameter  nozzle  flow

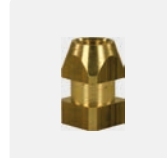
## Nozzle protector and nozzle holder

## 2-component nozzle protector ST-10

The ST-10 is the ideal combination made out of hard and soft plastics. The nozzle protector is suitable for cold and hot water applications in the car wash, agriculture and food industry. The ST-10 is unimpeachable, protects your nozzles and preserves the surfaces to be cleaned at the same time. Suitable for nozzles 1/4" M NPT. Zinc-plated steel max. 400 bar. Stainless steel max. 500 bar

|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                                                                   |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
|  |  |  |  |  |  |  |  <div>new</div> |
| Plastic. Zinc-plated steel                                                       | Plastic. Zinc-plated steel                                                        | Plastic. Zinc-plated steel                                                        | Plastic. Zinc-plated steel                                                        | Plastic. Stainless steel                                                          | Plastic. Stainless steel                                                           | For nozzles with filter. Plastic. Stainless steel.                                  | For nozzles with filter. Plastic. Stainless steel.                                                                                |
| R+M Nr.<br>200 010 500                                                           | R+M Nr.<br>200 010 510                                                            | R+M Nr.<br>200 010 520                                                            | R+M Nr.<br>200 010 530                                                            | R+M Nr.<br>200 010 770                                                            | R+M Nr.<br>200 010 760                                                             | R+M Nr.<br>200 010 745                                                              | R+M Nr.<br>200 010 725                                                                                                            |
|  |  |  |  |  |  |                                                                                     |                                                                                                                                   |
| Plastic. Stainless steel                                                         | Plastic. Stainless steel                                                          | Plastic. Stainless steel                                                          | Plastic. Stainless steel                                                          | Plastic. Stainless steel                                                          | Plastic. Stainless steel                                                           |                                                                                     |                                                                                                                                   |
| R+M Nr.<br>200 010 700                                                           | R+M Nr.<br>200 010 710                                                            | R+M Nr.<br>200 010 720                                                            | R+M Nr.<br>200 010 730                                                            | R+M Nr.<br>200 010 755                                                            | R+M Nr.<br>200 010 740                                                             |                                                                                     |                                                                                                                                   |

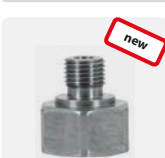
## For nozzles 1/4" M NPT

|                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                                                                    |                                                                                       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  <div>new</div> |  |
| ST-005. Plastic. Zinc-plated steel                                                 | ST-005. Plastic. Stainless steel                                                    | Rubber. Zinc-plated steel                                                           | Socket. Brass. Quadrangle                                                           | ST-12. Plastic. Zinc-plated steel                                                   | 1/4" F NPT : 3/8" F. Stainless steel. Socket                                                                                       | Socket. Round. Stainless steel                                                        |
| R+M Nr.<br>200 000 003                                                             | R+M Nr.<br>200 000 008                                                              | R+M Nr.<br>519 05                                                                   | R+M Nr.<br>518 00                                                                   | R+M Nr.<br>200 012 500                                                              | R+M Nr.<br>710 101 350                                                                                                             | R+M Nr.<br>040 004 100                                                                |

## For nozzles 1/8" M

|                                                                                    |                                                                                     |                                                                                     |                                                                                     |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |
| ST-005. Plastic. Zinc-plated steel                                                 | Socket. Hexagon. Stainless steel                                                    | Socket. Plastic. For nozzle with hexagon 13 + 14                                    | 2-component nozzle protector ST-10. Plastic. Stainless steel                        |
| R+M Nr.<br>200 000 004                                                             | R+M Nr.<br>518 70                                                                   | R+M Nr.<br>519 32                                                                   | R+M Nr.<br>200 010 830                                                              |

## Adaptor 500 bar lances

|                                                                                                   |                                    |
|---------------------------------------------------------------------------------------------------|------------------------------------|
|  <div>new</div> | 1/4" M : M20 F.<br>Stainless steel |
| <div>K</div>                                                                                      | <div>R+M Nr.<br/>519 714 209</div> |

## Nozzle protector

|                                                                                     |                   |
|-------------------------------------------------------------------------------------|-------------------|
|  | Rubber            |
|                                                                                     | R+M Nr.<br>519 35 |

## For tip nozzles

|                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |
| 1/4" F : M18 M. Nozzle holder EG. Brass                                             | O-ring. Nozzle holder EG                                                             | M18 F. Nozzle holder EG. Stainless steel                                              | M18 F. Nozzle protector                                                               |
| R+M Nr.<br>010 000 043                                                              | R+M Nr.<br>790 25                                                                    | R+M Nr.<br>040 000 041                                                                | R+M Nr.<br>519 60                                                                     |
|  |  |  |  |
| 1/4" F. Nozzle protector complete without nozzle tip.                               | 1/4" F : M18 F. Adaptor. Brass                                                       | 1/4" M : M18 F. Adaptor 2 pieces                                                      | 3/8" M : M18 F. Adaptor. Stainless steel                                              |
| R+M Nr.<br>519 601                                                                  | R+M Nr.<br>519 40                                                                    | R+M Nr.<br>519 70                                                                     | R+M Nr.<br>040 001 125                                                                |

Symbols  nozzle  colour coding



## hydroblade® Nozzle System

new

Set consists of nozzle holder,  
6 equal nozzles and O-rings.  
Max. 400 bar / 150 °C

- » Strong and uniform flat jet with extraordinarily narrow jet depth
- » Application: High pressure and steam jet cleaning
- » Suitable for existing systems
- » Stainless steel



0°

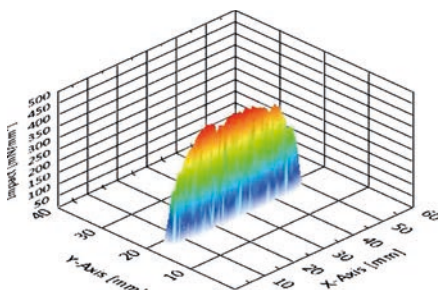
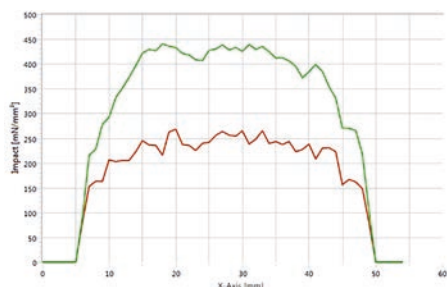
15°

25°

40°

| D   | R+M Nr.     | R+M Nr.     | R+M Nr.     | R+M Nr.     |
|-----|-------------|-------------|-------------|-------------|
| 034 |             | 126 015 034 | 126 025 034 |             |
| 040 | 126 100 040 | 126 015 040 | 126 025 040 | 126 040 040 |
| 045 | 126 100 045 | 126 015 045 | 126 025 045 | 126 040 045 |
| 050 | 126 100 050 | 126 015 050 | 126 025 050 | 126 040 050 |
| 055 | 126 100 055 | 126 015 055 | 126 025 055 | 126 040 055 |
| 060 | 126 100 060 | 126 015 060 | 126 025 060 | 126 040 060 |
| 065 |             |             | 126 025 065 |             |
| 070 |             | 126 015 070 | 126 025 070 | 126 040 070 |
| 075 | 126 100 075 | 126 015 075 | 126 025 075 |             |
| 080 |             | 126 015 080 | 126 025 080 |             |
| 090 |             |             | 126 025 090 |             |
| 100 |             |             | 126 025 100 |             |

## hydroblade® Benchmark



hydroblade® flat jet nozzles feature a homogenous liquid and pressure distribution. Highly efficient jets are achieved with spray angles of up to 40°. Thanks to the flow geometry of the nozzles, a compact and controlled jet is generated.



The hydroblade® set consists of nozzle holder, 6 equal nozzles, and corresponding O-rings.

Symbols  nozzle

## Nozzle protector and nozzle holder

For hydroblade®



1/4" F : M20 M.  
Nozzle holder.  
Stainless steel

| R+M Nr.     |
|-------------|
| 200 088 125 |



M20x1 F.  
Nozzle protector.  
Brass

| R+M Nr.     |
|-------------|
| 020 000 085 |

## Suttner rotating nozzles with ceramic insert

### ST-357.1



1/4" F. Spray angle 20°.  
100 - 250 bar. Max. 100 °C



Kit ST-357.1



M18 F. Spray angle 20°.  
100 - 250 bar. Max. 100 °C



Kit ST-357.1



1/8" M. Spray angle 20°.  
100 - 250 bar. Max. 100 °C



Kit ST-357.1

| R+M Nr.     | D  |
|-------------|----|
| 200 357 530 | 3  |
| 200 357 535 | 35 |
| 200 357 540 | 4  |
| 200 357 545 | 45 |
| 200 357 550 | 5  |
| 200 357 555 | 55 |
| 200 357 560 | 6  |
| 200 357 565 | 65 |
| 200 357 570 | 7  |
| 200 357 580 | 8  |
| 200 357 690 | 9  |
| 200 357 510 | 10 |

| R+M Nr.     |
|-------------|
| 200 357 130 |
| 200 357 135 |
| 200 357 140 |
| 200 357 145 |
| 200 357 150 |
| 200 357 155 |
| 200 357 160 |
| 200 357 165 |
| 200 357 170 |
| 200 357 280 |
| 200 357 290 |
| 200 357 110 |

| R+M Nr.     | D  |
|-------------|----|
| 200 357 330 | 3  |
| 200 357 335 | 35 |
| 200 357 340 | 4  |
| 200 357 345 | 45 |
| 200 357 350 | 5  |
| 200 357 355 | 55 |
| 200 357 360 | 6  |
| 200 357 365 | 65 |
| 200 357 370 | 7  |
| 200 357 380 | 8  |
| 200 357 390 | 9  |
| 200 357 310 | 10 |

| R+M Nr.     |
|-------------|
| 200 357 130 |
| 200 357 135 |
| 200 357 140 |
| 200 357 145 |
| 200 357 150 |
| 200 357 155 |
| 200 357 160 |
| 200 357 165 |
| 200 357 170 |
| 200 357 280 |
| 200 357 290 |
| 200 357 110 |

| R+M Nr.     | D  |
|-------------|----|
| 200 357 430 | 3  |
| 200 357 435 | 35 |
| 200 357 440 | 4  |
| 200 357 445 | 45 |
| 200 357 450 | 5  |
| 200 357 455 | 55 |
| 200 357 460 | 6  |
| 200 357 465 | 65 |
| 200 357 470 | 7  |
| 200 357 480 | 8  |
| 200 357 490 | 9  |
| 200 357 410 | 10 |

| R+M Nr.     |
|-------------|
| 200 357 130 |
| 200 357 135 |
| 200 357 140 |
| 200 357 145 |
| 200 357 150 |
| 200 357 155 |
| 200 357 160 |
| 200 357 165 |
| 200 357 170 |
| 200 357 280 |
| 200 357 290 |
| 200 357 110 |

### ST-458.1



1/4" F. Spray angle 20°. 200 - 400  
bar. Max. 100 °C



Kit ST-458.1



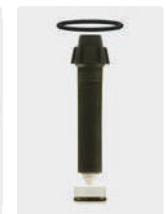
M18 F. Spray angle 20°. 200 - 400  
bar. Max. 100 °C



Kit ST-458.1



1/8" M. Spray angle 20°. 200 -  
400 bar. Max. 100 °C



Kit ST-458.1

| R+M Nr.     | D  |
|-------------|----|
| 200 458 630 | 3  |
| 200 458 635 | 35 |
| 200 458 640 | 4  |
| 200 458 645 | 45 |
| 200 458 650 | 5  |
| 200 458 655 | 55 |
| 200 458 660 | 6  |
| 200 458 665 | 65 |
| 200 458 670 | 7  |
| 200 458 680 | 8  |
| 200 458 690 | 9  |
| 200 458 610 | 10 |

| R+M Nr.     |
|-------------|
| 200 458 230 |
| 200 458 235 |
| 200 458 240 |
| 200 458 245 |
| 200 458 250 |
| 200 458 255 |
| 200 458 260 |
| 200 458 265 |
| 200 458 270 |
| 200 458 280 |
| 200 458 290 |
| 200 458 210 |

| R+M Nr.     | D  |
|-------------|----|
| 200 458 331 | 3  |
| 200 458 335 | 35 |
| 200 458 340 | 4  |
| 200 458 345 | 45 |
| 200 458 350 | 5  |
| 200 458 355 | 55 |
| 200 458 360 | 6  |
| 200 458 365 | 65 |
| 200 458 370 | 7  |
| 200 458 380 | 8  |
| 200 458 390 | 9  |
| 200 458 310 | 10 |

| R+M Nr.     |
|-------------|
| 200 458 230 |
| 200 458 235 |
| 200 458 240 |
| 200 458 245 |
| 200 458 250 |
| 200 458 255 |
| 200 458 260 |
| 200 458 265 |
| 200 458 270 |
| 200 458 280 |
| 200 458 290 |
| 200 458 210 |

| R+M Nr.     | D  |
|-------------|----|
| 200 458 430 | 3  |
| 200 458 435 | 35 |
| 200 458 440 | 4  |
| 200 458 445 | 45 |
| 200 458 450 | 5  |
| 200 458 455 | 55 |
| 200 458 460 | 6  |
| 200 458 465 | 65 |
| 200 458 470 | 7  |
| 200 458 480 | 8  |
| 200 458 490 | 9  |
| 200 458 410 | 10 |

| R+M Nr.     |
|-------------|
| 200 458 230 |
| 200 458 235 |
| 200 458 240 |
| 200 458 245 |
| 200 458 250 |
| 200 458 255 |
| 200 458 260 |
| 200 458 265 |
| 200 458 270 |
| 200 458 280 |
| 200 458 290 |
| 200 458 210 |



## Suttner rotating nozzles with ceramic insert

## ST-456



1/4" F. Spray angle 20°. 200 - 350 bar. Max. 100 °C

| R+M Nr.     | D   | C           |
|-------------|-----|-------------|
| 200 456 530 | 03  | yellow      |
| 200 456 535 | 035 | purple      |
| 200 456 540 | 04  | brown       |
| 200 456 545 | 045 | light green |
| 200 456 550 | 05  | black       |
| 200 456 555 | 055 | light blue  |
| 200 456 560 | 06  | red         |
| 200 456 565 | 065 | nature      |
| 200 456 570 | 07  | pink        |
| 200 456 580 | 08  | orange      |



Kit ST-456

| R+M Nr.     | D | C |
|-------------|---|---|
| 200 456 130 |   |   |
| 200 456 135 |   |   |
| 200 456 140 |   |   |
| 200 456 145 |   |   |
| 200 456 150 |   |   |
| 200 456 155 |   |   |
| 200 456 160 |   |   |
| 200 456 165 |   |   |
| 200 456 170 |   |   |
| 200 456 180 |   |   |



M18 F. Spray angle 20°. 200 - 350 bar. Max. 100 °C

| R+M Nr.       | D   | C           |
|---------------|-----|-------------|
| 200 456 630   | 03  | yellow      |
| 200 456 635   | 035 | purple      |
| 200 456 640   | 04  | brown       |
| 200 456 645   | 045 | light green |
| 200 456 650   | 05  | black       |
| 200 456 655   | 055 | light blue  |
| 200 456 660   | 06  | red         |
| 200 456 665   | 065 | nature      |
| 200 456 670   | 07  | pink        |
| 200 456 680   | 08  | orange      |
| 200 456 690 * | 09  | green       |



Kit ST-456

| R+M Nr.     | D | C |
|-------------|---|---|
| 200 456 130 |   |   |
| 200 456 135 |   |   |
| 200 456 140 |   |   |
| 200 456 145 |   |   |
| 200 456 150 |   |   |
| 200 456 155 |   |   |
| 200 456 160 |   |   |
| 200 456 165 |   |   |
| 200 456 170 |   |   |
| 200 456 180 |   |   |
| 200 456 190 |   |   |

## ST-558



1/4" F. 300 - 500 bar. Max. 90 °C

| R+M Nr.     | D  | C     |
|-------------|----|-------|
| 200 558 540 | 04 | brown |
|             |    |       |
|             |    |       |
|             |    |       |
|             |    |       |
|             |    |       |
|             |    |       |
|             |    |       |
|             |    |       |
|             |    |       |



Kit ST-558

| R+M Nr.     | D | C |
|-------------|---|---|
| 200 558 140 |   |   |
|             |   |   |
|             |   |   |
|             |   |   |
|             |   |   |
|             |   |   |
|             |   |   |
|             |   |   |
|             |   |   |
|             |   |   |

## ST-458.1



1/4" F. Spray angle 20°. 120 - 250 bar. Max. 100 °C

| R+M Nr.     | D  | C |
|-------------|----|---|
| 200 458 811 | 11 |   |
| 200 458 812 | 12 |   |
| 200 458 813 | 13 |   |
| 200 458 815 | 15 |   |
| 200 458 818 | 18 |   |
| 200 458 820 | 20 |   |
| 200 458 825 | 25 |   |
| 200 458 830 | 30 |   |



Kit ST-458.1

| R+M Nr.     | D | C |
|-------------|---|---|
| 200 458 311 |   |   |
| 200 458 312 |   |   |
| 200 458 313 |   |   |
| 200 458 315 |   |   |
| 200 458 318 |   |   |
| 200 458 320 |   |   |
| 200 458 325 |   |   |
| 200 458 330 |   |   |



1/2" F. Spray angle 20°. 120 - 250 bar. Max. 100 °C

| R+M Nr.     | D  | C |
|-------------|----|---|
| 200 458 712 | 12 |   |
| 200 458 715 | 15 |   |
| 200 458 720 | 20 |   |
| 200 458 730 | 30 |   |
|             |    |   |
|             |    |   |
|             |    |   |
|             |    |   |



Kit ST-458.1

| R+M Nr.     | D | C |
|-------------|---|---|
| 200 458 312 |   |   |
| 200 458 315 |   |   |
| 200 458 320 |   |   |
| 200 458 330 |   |   |
|             |   |   |
|             |   |   |
|             |   |   |
|             |   |   |



1/2" F. Spray angle 20°. 120 - 250 bar. Max. 100 °C

| R+M Nr.     | D   | C           |
|-------------|-----|-------------|
| 200 458 745 | 045 | light green |
| 200 458 755 | 055 | light blue  |
| 200 458 770 | 07  | pink        |
| 200 458 791 | 09  | green       |
|             |     |             |
|             |     |             |
|             |     |             |
|             |     |             |



Kit ST-458.1

| R+M Nr.     | D | C |
|-------------|---|---|
| 200 458 245 |   |   |
| 200 458 255 |   |   |
| 200 458 270 |   |   |
| 200 458 290 |   |   |
|             |   |   |
|             |   |   |
|             |   |   |
|             |   |   |

## ST-559 Suttner rotating nozzles with carbide insert

## ST-559



1/4" F. 300-600 bar. Max. 90 °C

| R+M Nr.     | D   |
|-------------|-----|
| 200 559 520 | 02  |
| 200 559 530 | 03  |
| 200 559 540 | 04  |
| 200 559 550 | 05  |
| 200 559 555 | 055 |
| 200 559 560 | 06  |



M20x1 F. 300-600 bar. Max. 90 °C

| R+M Nr.     | D  |
|-------------|----|
| 200 559 320 | 02 |
| 200 559 330 | 03 |
| 200 559 340 | 04 |
|             |    |
|             |    |
|             |    |



Kit ST-559

| R+M Nr.     | D |
|-------------|---|
| 200 559 120 |   |
| 200 559 130 |   |
| 200 559 140 |   |
| 200 559 150 |   |
| 200 559 155 |   |
| 200 559 160 |   |

\* limited stock

## Suttner rotating nozzles without plastic cap

### ST-357.1



1/4" F. Spray angle 20°.  
100 - 250 bar. Max. 100 °C

| R+M Nr.     | D  |
|-------------|----|
| 200 357 632 | 3  |
| 200 357 637 | 35 |
| 200 357 642 | 4  |
| 200 357 647 | 45 |
| 200 357 652 | 5  |
| 200 357 657 | 55 |
| 200 357 662 | 6  |
| 200 357 667 | 65 |
| 200 357 672 | 7  |
| 200 357 682 | 8  |
| 200 357 692 | 9  |
| 200 357 612 | 10 |



Kit ST-357.1

### ST-458.1



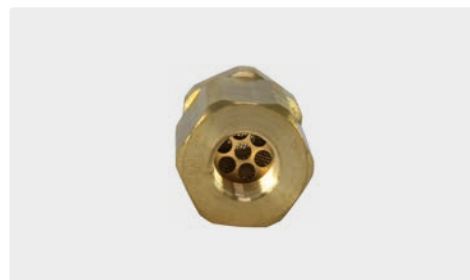
1/4" F. Spray angle 20°. 200 - 400 bar. Max. 100 °C

| R+M Nr.     | D  |
|-------------|----|
| 200 458 632 | 3  |
| 200 458 637 | 35 |
| 200 458 642 | 4  |
| 200 458 647 | 45 |
| 200 458 652 | 5  |
| 200 458 657 | 55 |
| 200 458 662 | 6  |
| 200 458 667 | 65 |
| 200 458 672 | 7  |
| 200 458 682 | 8  |
| 200 458 692 | 9  |
| 200 458 612 | 10 |



Kit ST-458.1

## ST-33 High Pressure Filter



Brass with stainless steel filter. Bidirectional.  
Max. 400 bar / 40 l/min. / 150 °C

| R+M Nr.     | I       | ⊙      | ⊙      |
|-------------|---------|--------|--------|
| 200 033 855 | 45.6 mm | 1/4" M | 1/4" F |

## Suttner rotating nozzles in different colours

With effect from today we enlarge the choice of colours of the plastic plugs for our rotating nozzles ST-357, ST-456 and ST-458. In addition to the standard colour black, you are invited to take the nozzle in blue, red, yellow and green, now. The decision is up to you as it is possible now to adapt the rotating nozzles individually to your company's colour or to the one of your customers.

By using different colours the affiliation to a certain unit (rental business), user or application is possible in an easy way. Moreover, classifications regarding different areal divisions within the HACCP can be realized.

What would you like to mark? Please find it out and test it!



### Plastic caps for rotating nozzles ST-357

| R+M Nr.     | C      |
|-------------|--------|
| 020 007 405 | black  |
| 020 007 406 | blue   |
| 020 007 409 | yellow |
| 020 007 411 | green  |
| 020 007 412 | red    |

### Plastic caps for rotating nozzles ST-456

| R+M Nr.     | C      |
|-------------|--------|
| 020 001 022 | black  |
| 020 001 041 | blue   |
| 020 001 046 | yellow |
| 020 001 047 | green  |
| 020 001 048 | red    |

### Plastic caps for rotating nozzles ST-458

| R+M Nr.     | C      |
|-------------|--------|
| 020 001 025 | black  |
| 020 001 026 | blue   |
| 020 001 029 | yellow |
| 020 001 031 | green  |
| 020 001 032 | red    |

Symbols D nozzle C colour coding I height ⊙ thread

## Suttner rotating nozzles with ceramic insert



M22 F. Lance with rotating nozzle ST-357.1. Spray angle 20°. 100 - 250 bar. Max. 100 °C

| R+M Nr.    | D   | C           | ↔      | M*                |
|------------|-----|-------------|--------|-------------------|
| 653 030 04 | 03  | yellow      | 430 mm | zinc-plated steel |
| 653 035 04 | 035 | purple      | 430 mm | zinc-plated steel |
| 653 040 04 | 04  | brown       | 430 mm | zinc-plated steel |
| 653 045 04 | 045 | light green | 430 mm | zinc-plated steel |
| 653 050 04 | 05  | black       | 430 mm | zinc-plated steel |
| 653 055 04 | 055 | light blue  | 430 mm | zinc-plated steel |
| 653 060 04 | 06  | red         | 430 mm | zinc-plated steel |
| 653 065 04 | 065 | nature      | 430 mm | zinc-plated steel |
| 653 070 04 | 07  | pink        | 430 mm | zinc-plated steel |

M22 F. Lance with rotating nozzle ST-357.1. Spray angle 20°. 100 - 250 bar. Max. 100 °C

| R+M Nr.     | D   | C           | ↔      | M*              |
|-------------|-----|-------------|--------|-----------------|
| 653 030 049 | 03  | yellow      | 430 mm | stainless steel |
| 653 035 049 | 035 | purple      | 430 mm | stainless steel |
| 653 040 049 | 04  | brown       | 430 mm | stainless steel |
| 653 045 049 | 045 | light green | 430 mm | stainless steel |
| 653 050 049 | 05  | black       | 430 mm | stainless steel |
| 653 055 049 | 055 | light blue  | 430 mm | stainless steel |
| 653 060 049 | 06  | red         | 430 mm | stainless steel |
| 653 065 049 | 065 | nature      | 430 mm | stainless steel |
| 653 070 049 | 07  | pink        | 430 mm | stainless steel |



K

M22 F. Lance with vented handle ST-9 380 mm and rotating nozzle ST-458.1. Spray angle 20°. 200 - 400 bar. Max. 100 °C

| R+M Nr.     | D   | C           | ↔        | M*                |
|-------------|-----|-------------|----------|-------------------|
| 653 835 012 | 035 | purple      | 1,000 mm | zinc-plated steel |
| 653 840 012 | 04  | brown       | 1,000 mm | zinc-plated steel |
| 653 845 012 | 045 | light green | 1,000 mm | zinc-plated steel |
| 653 850 012 | 05  | black       | 1,000 mm | zinc-plated steel |
| 653 855 012 | 055 | light blue  | 1,000 mm | zinc-plated steel |
| 653 860 012 | 06  | red         | 1,000 mm | zinc-plated steel |
| 653 865 012 | 065 | nature      | 1,000 mm | zinc-plated steel |
| 653 870 012 | 07  | pink        | 1,000 mm | zinc-plated steel |
| 653 880 012 | 08  | orange      | 1,000 mm | zinc-plated steel |

M22 F. Lance with vented handle ST-9 380 mm and rotating nozzle ST-458.1. Spray angle 20°. 200 - 400 bar. Max. 100 °C

| R+M Nr.     | D   | C           | ↔        | M*              |
|-------------|-----|-------------|----------|-----------------|
| 653 835 021 | 035 | purple      | 1,000 mm | stainless steel |
| 653 840 021 | 04  | brown       | 1,000 mm | stainless steel |
| 653 845 021 | 045 | light green | 1,000 mm | stainless steel |
| 653 850 021 | 05  | black       | 1,000 mm | stainless steel |
| 653 855 021 | 055 | light blue  | 1,000 mm | stainless steel |
| 653 860 021 | 06  | red         | 1,000 mm | stainless steel |
| 653 865 021 | 065 | nature      | 1,000 mm | stainless steel |
| 653 870 021 | 07  | pink        | 1,000 mm | stainless steel |
| 653 880 021 | 08  | orange      | 1,000 mm | stainless steel |

\* lance

## Suttner rotating nozzles with ceramic insert


**K**

Plug K. Lance with rotating nozzle ST-357.1. Spray angle 20°. 100 - 250 bar.  
Max. 100 °C

| R+M Nr.     | D   | C           | ↔      | M*                |
|-------------|-----|-------------|--------|-------------------|
| 653 030 011 | 03  | yellow      | 430 mm | zinc-plated steel |
| 653 035 011 | 035 | purple      | 430 mm | zinc-plated steel |
| 653 040 011 | 04  | brown       | 430 mm | zinc-plated steel |
| 653 045 011 | 045 | light green | 430 mm | zinc-plated steel |
| 653 050 011 | 05  | black       | 430 mm | zinc-plated steel |
| 653 055 011 | 055 | light blue  | 430 mm | zinc-plated steel |
| 653 060 011 | 06  | red         | 430 mm | zinc-plated steel |
| 653 065 011 | 065 | nature      | 430 mm | zinc-plated steel |
| 653 070 011 | 07  | pink        | 430 mm | zinc-plated steel |

Plug K. Lance with rotating nozzle ST-357.1. Spray angle 20°. 100 - 250 bar.  
Max. 100 °C

| R+M Nr.     | D   | C           | ↔      | M*              |
|-------------|-----|-------------|--------|-----------------|
| 653 030 019 | 03  | yellow      | 430 mm | stainless steel |
| 653 035 019 | 035 | purple      | 430 mm | stainless steel |
| 653 040 019 | 04  | brown       | 430 mm | stainless steel |
| 653 045 019 | 045 | light green | 430 mm | stainless steel |
| 653 050 019 | 05  | black       | 430 mm | stainless steel |
| 653 055 019 | 055 | light blue  | 430 mm | stainless steel |
| 653 060 019 | 06  | red         | 430 mm | stainless steel |
| 653 065 019 | 065 | nature      | 430 mm | stainless steel |
| 653 070 019 | 07  | pink        | 430 mm | stainless steel |


**Kr**

M22 M. Lance with rotating nozzle ST-357.1. Spray angle 20°. 100 - 250 bar.  
Max. 100 °C

| R+M Nr.    | D   | C *         | ↔      | M **              |
|------------|-----|-------------|--------|-------------------|
| 653 030 03 | 03  | yellow      | 430 mm | zinc-plated steel |
| 653 035 03 | 035 | purple      | 430 mm | zinc-plated steel |
| 653 040 03 | 04  | brown       | 430 mm | zinc-plated steel |
| 653 045 03 | 045 | light green | 430 mm | zinc-plated steel |
| 653 050 03 | 05  | black       | 430 mm | zinc-plated steel |
| 653 055 03 | 055 | light blue  | 430 mm | zinc-plated steel |
| 653 060 03 | 06  | red         | 430 mm | zinc-plated steel |
| 653 065 03 | 065 | nature      | 430 mm | zinc-plated steel |
| 653 070 03 | 07  | pink        | 430 mm | zinc-plated steel |

M22 M. Lance with rotating nozzle ST-357.1. Spray angle 20°. 100 - 250 bar.  
Max. 100 °C

| R+M Nr.     | D   | C *         | ↔      | M *             |
|-------------|-----|-------------|--------|-----------------|
| 653 030 039 | 03  | yellow      | 430 mm | stainless steel |
| 653 035 039 | 035 | purple      | 430 mm | stainless steel |
| 653 040 039 | 04  | brown       | 430 mm | stainless steel |
| 653 045 039 | 045 | light green | 430 mm | stainless steel |
| 653 050 039 | 05  | black       | 430 mm | stainless steel |
| 653 055 039 | 055 | light blue  | 430 mm | stainless steel |
| 653 060 039 | 06  | red         | 430 mm | stainless steel |
| 653 065 039 | 065 | nature      | 430 mm | stainless steel |
| 653 070 039 | 07  | pink        | 430 mm | stainless steel |

## Lance clips

The lance clips are easily clamped onto every 1/4" lance thus informing the user about the nozzle size or the affiliation to a certain unit, user or application.

Moreover, classifications regarding different areal divisions within the HACCP can be realized. The marking of various spray angles is also possible.

The lance clips suitable for all 1/4" lances are made out of polypropylene which is intended to come into contact with foodstuffs.



| R+M Nr.     | C           |
|-------------|-------------|
| 020 004 230 | yellow      |
| 020 004 235 | purple      |
| 020 004 240 | brown       |
| 020 004 245 | light green |
| 020 004 250 | black       |
| 020 004 255 | light blue  |
| 020 004 260 | red         |
| 020 004 265 | nature      |
| 020 004 270 | pink        |
| 020 004 280 | orange      |
| 020 004 290 | green       |
| 020 004 300 | grey        |

\* lance

**Symbols** D nozzle C colour coding ↔ length M material

## Suttner rotating nozzles with ceramic insert



Kr

M22 M. Lance with rotating nozzle ST-456. Spray angle 20°. 200 - 350 bar.  
Max. 100 °C

| R+M Nr.     | D   | C           | ↔      | M)*               |
|-------------|-----|-------------|--------|-------------------|
| 653 135 018 | 035 | purple      | 600 mm | zinc-plated steel |
| 653 140 018 | 04  | brown       | 600 mm | zinc-plated steel |
| 653 145 018 | 045 | light green | 600 mm | zinc-plated steel |
| 653 150 018 | 05  | black       | 600 mm | zinc-plated steel |
| 653 155 018 | 055 | light blue  | 600 mm | zinc-plated steel |
| 653 160 018 | 06  | red         | 600 mm | zinc-plated steel |
| 653 165 018 | 065 | nature      | 600 mm | zinc-plated steel |
| 653 170 018 | 07  | pink        | 600 mm | zinc-plated steel |
| 653 180 018 | 08  | orange      | 600 mm | zinc-plated steel |

M22 M. Lance with rotating nozzle ST-456. Spray angle 20°. 200 - 350 bar.  
Max. 100 °C

| R+M Nr.       | D   | C           | ↔      | M)*             |
|---------------|-----|-------------|--------|-----------------|
| 653 135 018 9 | 035 | purple      | 600 mm | stainless steel |
| 653 140 018 9 | 04  | brown       | 600 mm | stainless steel |
| 653 145 018 9 | 045 | light green | 600 mm | stainless steel |
| 653 150 018 9 | 05  | black       | 600 mm | stainless steel |
| 653 155 018 9 | 055 | light blue  | 600 mm | stainless steel |
| 653 160 018 9 | 06  | red         | 600 mm | stainless steel |
| 653 165 018 9 | 065 | nature      | 600 mm | stainless steel |
| 653 170 018 9 | 07  | pink        | 600 mm | stainless steel |
| 653 180 018 9 | 08  | orange      | 600 mm | stainless steel |



Kr

M22 M. Lance with rotating nozzle ST-458.1. Spray angle 20°. 200 - 400 bar.  
Max. 100 °C

| R+M Nr.     | D   | C           | ↔      | M)*               |
|-------------|-----|-------------|--------|-------------------|
| 653 835 016 | 035 | purple      | 430 mm | zinc-plated steel |
| 653 840 016 | 04  | brown       | 430 mm | zinc-plated steel |
| 653 845 016 | 045 | light green | 430 mm | zinc-plated steel |
| 653 850 016 | 05  | black       | 430 mm | zinc-plated steel |
| 653 855 016 | 055 | light blue  | 430 mm | zinc-plated steel |
| 653 860 016 | 06  | red         | 430 mm | zinc-plated steel |
| 653 865 016 | 065 | nature      | 430 mm | zinc-plated steel |
| 653 870 016 | 07  | pink        | 430 mm | zinc-plated steel |
| 653 880 016 | 08  | orange      | 430 mm | zinc-plated steel |

M22 M. Lance with rotating nozzle ST-458.1. Spray angle 20°. 200 - 400 bar.  
Max. 100 °C

| R+M Nr.     | D   | C           | ↔      | M)*             |
|-------------|-----|-------------|--------|-----------------|
| 653 835 019 | 035 | purple      | 430 mm | stainless steel |
| 653 840 019 | 04  | brown       | 430 mm | stainless steel |
| 653 845 019 | 045 | light green | 430 mm | stainless steel |
| 653 850 019 | 05  | black       | 430 mm | stainless steel |
| 653 855 019 | 055 | light blue  | 430 mm | stainless steel |
| 653 860 019 | 06  | red         | 430 mm | stainless steel |
| 653 865 019 | 065 | nature      | 430 mm | stainless steel |
| 653 870 019 | 07  | pink        | 430 mm | stainless steel |
| 653 880 019 | 08  | orange      | 430 mm | stainless steel |

\* lance

## Suttner rotating nozzles with ceramic insert



M22 M. Lance with vented handle ST-9 380 mm and rotating nozzle ST-458.1. Spray angle 20°. 200 - 400 bar. Max. 100 °C

| R+M Nr.     | D   | C           | ↔        | M*                |
|-------------|-----|-------------|----------|-------------------|
| 653 835 015 | 035 | purple      | 1,000 mm | zinc-plated steel |
| 653 840 015 | 04  | brown       | 1,000 mm | zinc-plated steel |
| 653 845 015 | 045 | light green | 1,000 mm | zinc-plated steel |
| 653 850 015 | 05  | black       | 1,000 mm | zinc-plated steel |
| 653 855 015 | 055 | light blue  | 1,000 mm | zinc-plated steel |
| 653 860 015 | 06  | red         | 1,000 mm | zinc-plated steel |
| 653 865 015 | 065 | nature      | 1,000 mm | zinc-plated steel |
| 653 870 015 | 07  | pink        | 1,000 mm | zinc-plated steel |
| 653 880 015 | 08  | orange      | 1,000 mm | zinc-plated steel |

M22 M. Lance with vented handle ST-9 380 mm and rotating nozzle ST-458.1. Spray angle 20°. 200 - 400 bar. Max. 100 °C

| R+M Nr.     | D   | C           | ↔        | M*              |
|-------------|-----|-------------|----------|-----------------|
| 653 835 020 | 035 | purple      | 1,000 mm | stainless steel |
| 653 840 020 | 04  | brown       | 1,000 mm | stainless steel |
| 653 845 020 | 045 | light green | 1,000 mm | stainless steel |
| 653 850 020 | 05  | black       | 1,000 mm | stainless steel |
| 653 855 020 | 055 | light blue  | 1,000 mm | stainless steel |
| 653 860 020 | 06  | red         | 1,000 mm | stainless steel |
| 653 865 020 | 065 | nature      | 1,000 mm | stainless steel |
| 653 870 020 | 07  | pink        | 1,000 mm | stainless steel |
| 653 880 020 | 08  | orange      | 1,000 mm | stainless steel |



Plug KW. Lance with rotating nozzle ST-357.1. Spray angle 20°. 100 - 250 bar. Max. 100 °C

| R+M Nr.    | D   | C           | ↔      | M*                |
|------------|-----|-------------|--------|-------------------|
| 653 030 17 | 03  | yellow      | 430 mm | zinc-plated steel |
| 653 035 17 | 035 | purple      | 430 mm | zinc-plated steel |
| 653 040 17 | 04  | brown       | 430 mm | zinc-plated steel |
| 653 045 17 | 045 | light green | 430 mm | zinc-plated steel |
| 653 050 17 | 05  | black       | 430 mm | zinc-plated steel |
| 653 055 17 | 055 | light blue  | 430 mm | zinc-plated steel |
| 653 060 17 | 06  | red         | 430 mm | zinc-plated steel |
| 653 065 17 | 065 | nature      | 430 mm | zinc-plated steel |
| 653 070 17 | 07  | pink        | 430 mm | zinc-plated steel |

Plug KW. Lance with rotating nozzle ST-357.1. Spray angle 20°. 100 - 250 bar. Max. 100 °C

| R+M Nr.     | D   | C           | ↔      | M*              |
|-------------|-----|-------------|--------|-----------------|
| 653 030 179 | 03  | yellow      | 430 mm | stainless steel |
| 653 035 179 | 035 | purple      | 430 mm | stainless steel |
| 653 040 179 | 04  | brown       | 430 mm | stainless steel |
| 653 045 179 | 045 | light green | 430 mm | stainless steel |
| 653 050 179 | 05  | black       | 430 mm | stainless steel |
| 653 055 179 | 055 | light blue  | 430 mm | stainless steel |
| 653 060 179 | 06  | red         | 430 mm | stainless steel |
| 653 065 179 | 065 | nature      | 430 mm | stainless steel |
| 653 070 179 | 07  | pink        | 430 mm | stainless steel |

\* lance

Symbols **D** nozzle **C** colour coding **↔** length **M** material



## Suttner rotating nozzles with ceramic insert



A Kr

Plug KW. Lance with rotating nozzle ST-456. Spray angle 20°. 200 - 350 bar.  
Max. 100 °C

| R+M Nr.     | D   | C           | ↔      | M)*               |
|-------------|-----|-------------|--------|-------------------|
| 653 135 017 | 035 | purple      | 600 mm | zinc-plated steel |
| 653 140 017 | 04  | brown       | 600 mm | zinc-plated steel |
| 653 145 017 | 045 | light green | 600 mm | zinc-plated steel |
| 653 150 017 | 05  | black       | 600 mm | zinc-plated steel |
| 653 155 017 | 055 | light blue  | 600 mm | zinc-plated steel |
| 653 160 017 | 06  | red         | 600 mm | zinc-plated steel |
| 653 165 017 | 065 | nature      | 600 mm | zinc-plated steel |
| 653 170 017 | 07  | pink        | 600 mm | zinc-plated steel |
| 653 180 017 | 08  | orange      | 600 mm | zinc-plated steel |

Plug KW. Lance with rotating nozzle ST-456. Spray angle 20°. 200 - 350 bar.  
Max. 100 °C

| R+M Nr.       | D   | C           | ↔      | M)*             |
|---------------|-----|-------------|--------|-----------------|
| 653 135 017 9 | 035 | purple      | 600 mm | stainless steel |
| 653 140 017 9 | 04  | brown       | 600 mm | stainless steel |
| 653 145 017 9 | 045 | light green | 600 mm | stainless steel |
| 653 150 017 9 | 05  | black       | 600 mm | stainless steel |
| 653 155 017 9 | 055 | light blue  | 600 mm | stainless steel |
| 653 160 017 9 | 06  | red         | 600 mm | stainless steel |
| 653 165 017 9 | 065 | nature      | 600 mm | stainless steel |
| 653 170 017 9 | 07  | pink        | 600 mm | stainless steel |
| 653 180 017 9 | 08  | orange      | 600 mm | stainless steel |



A Kr

Plug KW. Lance with rotating nozzle ST-458.1. Spray angle 20°.  
200 - 400 bar. Max. 100 °C

| R+M Nr.     | D   | C           | ↔      | M)*               |
|-------------|-----|-------------|--------|-------------------|
| 653 835 024 | 035 | purple      | 600 mm | zinc-plated steel |
| 653 840 024 | 04  | brown       | 600 mm | zinc-plated steel |
| 653 845 024 | 045 | light green | 600 mm | zinc-plated steel |
| 653 850 024 | 05  | black       | 600 mm | zinc-plated steel |
| 653 855 024 | 055 | light blue  | 600 mm | zinc-plated steel |
| 653 860 024 | 06  | red         | 600 mm | zinc-plated steel |
| 653 865 024 | 065 | nature      | 600 mm | zinc-plated steel |
| 653 870 024 | 07  | pink        | 600 mm | zinc-plated steel |
| 653 880 024 | 08  | orange      | 600 mm | zinc-plated steel |

Plug KW. Lance with rotating nozzle ST-458.1. Spray angle 20°.  
200 - 400 bar. Max. 100 °C

| R+M Nr.     | D   | C           | ↔      | M)*             |
|-------------|-----|-------------|--------|-----------------|
| 653 835 025 | 035 | purple      | 600 mm | stainless steel |
| 653 840 025 | 04  | brown       | 600 mm | stainless steel |
| 653 845 025 | 045 | light green | 600 mm | stainless steel |
| 653 850 025 | 05  | black       | 600 mm | stainless steel |
| 653 855 025 | 055 | light blue  | 600 mm | stainless steel |
| 653 860 025 | 06  | red         | 600 mm | stainless steel |
| 653 865 025 | 065 | nature      | 600 mm | stainless steel |
| 653 870 025 | 07  | pink        | 600 mm | stainless steel |
| 653 880 025 | 08  | orange      | 600 mm | stainless steel |

\* lance

## Suttner rotating nozzles with ceramic insert



A Kr

Plug KW. Lance with vented handle ST-9 380 mm and rotating nozzle ST-458.1. Spray angle 20°. 200 - 400 bar. Max. 100 °C

| R+M Nr.     | D   | C           | ↔        | M*                |
|-------------|-----|-------------|----------|-------------------|
| 653 835 014 | 035 | purple      | 1,000 mm | zinc-plated steel |
| 653 840 014 | 04  | brown       | 1,000 mm | zinc-plated steel |
| 653 845 014 | 045 | light green | 1,000 mm | zinc-plated steel |
| 653 850 014 | 05  | black       | 1,000 mm | zinc-plated steel |
| 653 855 014 | 055 | light blue  | 1,000 mm | zinc-plated steel |
| 653 860 014 | 06  | red         | 1,000 mm | zinc-plated steel |
| 653 865 014 | 065 | nature      | 1,000 mm | zinc-plated steel |
| 653 870 014 | 07  | pink        | 1,000 mm | zinc-plated steel |
| 653 880 014 | 08  | orange      | 1,000 mm | zinc-plated steel |

Plug KW. Lance with vented handle ST-9 380 mm and rotating nozzle ST-458.1. Spray angle 20°. 200 - 400 bar. Max. 100 °C

| R+M Nr.     | D   | C           | ↔        | M*              |
|-------------|-----|-------------|----------|-----------------|
| 653 835 023 | 035 | purple      | 1,000 mm | stainless steel |
| 653 840 023 | 04  | brown       | 1,000 mm | stainless steel |
| 653 845 023 | 045 | light green | 1,000 mm | stainless steel |
| 653 850 023 | 05  | black       | 1,000 mm | stainless steel |
| 653 855 023 | 055 | light blue  | 1,000 mm | stainless steel |
| 653 860 023 | 06  | red         | 1,000 mm | stainless steel |
| 653 865 023 | 065 | nature      | 1,000 mm | stainless steel |
| 653 870 023 | 07  | pink        | 1,000 mm | stainless steel |
| 653 880 023 | 08  | orange      | 1,000 mm | stainless steel |

## Cleantecs rotating nozzles with carbide insert

### HM 500


Kit  
HM 500


G9/16". Spray angle 20°. Max. 500 bar / 90 °C

| R+M Nr.     | D  |
|-------------|----|
| 655 500 630 | 03 |

| R+M Nr.     | D |
|-------------|---|
| 655 500 130 |   |

### HM 500


Kit  
HM 500


M20x1. Spray angle 20°. Max. 500 bar / 90 °C

| R+M Nr.     | D   |
|-------------|-----|
| 655 500 640 | 028 |

| R+M Nr.     | D |
|-------------|---|
| 655 500 130 |   |

### HM 500


Kit  
HM 500


M20x1. Spray angle 20°. Max. 500 bar / 90 °C

| R+M Nr.     | D  |
|-------------|----|
| 655 500 650 | 05 |

| R+M Nr.     | D |
|-------------|---|
| 655 500 150 |   |

### HM 500


Kit  
HM 500


1/4" F. Spray angle 20°. Max. 500 bar / 90 °C

| R+M Nr.     | D   |
|-------------|-----|
| 655 500 520 | 02  |
| 655 500 525 | 025 |
| 655 500 530 | 03  |
| 655 500 535 | 035 |
| 655 500 540 | 04  |
| 655 500 545 | 045 |
| 655 500 550 | 05  |
| 655 500 555 | 055 |
| 655 500 560 | 06  |
| 655 500 570 | 07  |

| R+M Nr.     | D |
|-------------|---|
| 655 500 120 |   |
| 655 500 125 |   |
| 655 500 130 |   |
| 655 500 135 |   |
| 655 500 140 |   |
| 655 500 145 |   |
| 655 500 155 |   |
| 655 500 160 |   |
| 655 500 170 |   |

### HM 700


Kit  
HM 700


1/4" F. Spray angle 20°. Max. 700 bar / 90 °C. Delivery time of approx. 1 week

| R+M Nr.     | D   |
|-------------|-----|
| 655 700 520 | 02  |
| 655 700 525 | 025 |
| 655 700 530 | 03  |
| 655 700 535 | 035 |
| 655 700 540 | 04  |
| 655 700 545 | 045 |
| 655 700 550 | 05  |
| 655 700 555 | 055 |
| 655 700 560 | 06  |
| 655 700 570 | 07  |

| R+M Nr.     | D |
|-------------|---|
| 655 700 120 |   |
| 655 700 125 |   |
| 655 700 130 |   |
| 655 700 135 |   |
| 655 700 140 |   |
| 655 700 145 |   |
| 655 700 150 |   |
| 655 700 155 |   |
| 655 700 160 |   |
| 655 700 170 |   |

### HM 1000


Kit  
HM 1000


1/4" F. Spray angle 20°. Max. 1,000 bar / 90 °C. Delivery time of approx. 1 week

| R+M Nr.     | D   |
|-------------|-----|
| 655 100 520 | 02  |
| 655 100 525 | 025 |
| 655 100 530 | 03  |
| 655 100 535 | 035 |
| 655 100 540 | 04  |
| 655 100 545 | 045 |
| 655 100 550 | 05  |
| 655 100 555 | 055 |
| 655 100 560 | 06  |
| 655 100 570 | 07  |

| R+M Nr.     | D |
|-------------|---|
| 655 100 120 |   |
| 655 100 125 |   |
| 655 100 130 |   |
| 655 100 135 |   |
| 655 100 140 |   |
| 655 100 145 |   |
| 655 100 150 |   |
| 655 100 155 |   |
| 655 100 160 |   |
| 655 100 170 |   |

\* lance

Symbols D nozzle C colour coding ↔ length M material

## Rotating nozzles

R+M 150



K

Plug K. Lance with rotating nozzle R+M 150. Spray angle 17°. 50 - 150 bar. Max. 60 °C

| R+M Nr.     | D   | C          | ⇄      | M)*               | R+M Nr. |
|-------------|-----|------------|--------|-------------------|---------|
| 653 325 011 | 025 | green      | 430 mm | zinc-plated steel |         |
| 653 330 011 | 03  | yellow     | 430 mm | zinc-plated steel |         |
| 653 335 011 | 035 | black      | 430 mm | zinc-plated steel |         |
| 653 340 011 | 04  | blue       | 430 mm | zinc-plated steel |         |
| 653 345 011 | 045 | dark green | 430 mm | zinc-plated steel |         |



A

Plug KW. Lance with rotating nozzle R+M 150. Spray angle 17°. 50 - 150 bar. Max. 60 °C

| R+M Nr.    | D   | C          | ⇄      | M)*               | R+M Nr. |
|------------|-----|------------|--------|-------------------|---------|
| 653 325 05 | 025 | green      | 430 mm | zinc-plated steel |         |
| 653 330 05 | 03  | yellow     | 430 mm | zinc-plated steel |         |
| 653 335 05 | 035 | black      | 430 mm | zinc-plated steel |         |
| 653 340 05 | 04  | blue       | 430 mm | zinc-plated steel |         |
| 653 345 05 | 045 | dark green | 430 mm | zinc-plated steel |         |



Kr

M22 M. Lance with rotating nozzle R+M 150. Spray angle 17°. 50 - 150 bar. Max. 60 °C

| R+M Nr.    | D   | C          | ⇄      | M)*               | R+M Nr. |
|------------|-----|------------|--------|-------------------|---------|
| 653 325 03 | 025 | green      | 430 mm | zinc-plated steel |         |
| 653 330 03 | 03  | yellow     | 430 mm | zinc-plated steel |         |
| 653 335 03 | 035 | black      | 430 mm | zinc-plated steel |         |
| 653 340 03 | 04  | blue       | 430 mm | zinc-plated steel |         |
| 653 345 03 | 045 | dark green | 430 mm | zinc-plated steel |         |

\* lance

Symbols D nozzle C colour coding ⇄ length M material DN nominal diameter ⇄ flow

## Rotating nozzles

### R+M 150



1/4" F. Spray angle 17°. 50 - 150 bar. Max. 60 °C

| R+M Nr. | D   | C          |
|---------|-----|------------|
| 653 325 | 025 | green      |
| 653 330 | 03  | yellow     |
| 653 335 | 035 | black      |
| 653 340 | 04  | blue       |
| 653 345 | 045 | dark green |

### IP ROTOMAX



1/4" F. Housing black. Nozzle and seal kit ceramic. Adjustable spray angle. 100 - 250 bar. Max. 80 °C

| R+M Nr.    | DN     | ↔             | C     |
|------------|--------|---------------|-------|
| 996 050 01 | 1.4 mm | 10 - 16 l/min | red   |
| 996 050 02 | 1.6 mm | 12 - 18 l/min | blue  |
| 996 050 03 | 2.0 mm | 14 - 21 l/min | black |

## Vario nozzles and triple nozzles

### Vario nozzles



M22 M. Lance with vario nozzle. Zinc-plated steel. Max. 200 bar / 150 °C

| R+M Nr.    | D   | C      | ↔      | M*                |
|------------|-----|--------|--------|-------------------|
| 658 103 03 | 03  | yellow | 430 mm | zinc-plated steel |
| 658 103 53 | 035 | white  | 430 mm | zinc-plated steel |
| 658 104 03 | 04  | blue   | 430 mm | zinc-plated steel |
| 658 104 53 | 045 | orange | 430 mm | zinc-plated steel |
| 658 105 03 | 05  | green  | 430 mm | zinc-plated steel |
| 658 105 53 | 055 | black  | 430 mm | zinc-plated steel |
| 658 106 03 | 06  | grey   | 430 mm | zinc-plated steel |



1/4" F. Housing black. Max. 200 bar / 150 °C

| R+M Nr.   | D   | C      |
|-----------|-----|--------|
| 658 103 0 | 03  | yellow |
| 658 103 5 | 035 | white  |
| 658 104 0 | 04  | blue   |
| 658 104 5 | 045 | orange |
| 658 105   | 05  | green  |
| 658 105 5 | 055 | black  |
| 658 106   | 06  | grey   |

M22 M. Lance with vario nozzle. Stainless steel Max. 200 bar / 150 °C

| R+M Nr.     | D   | C      | ↔      | M*              |
|-------------|-----|--------|--------|-----------------|
| 658 103 039 | 03  | yellow | 430 mm | stainless steel |
| 658 103 539 | 035 | white  | 430 mm | stainless steel |
| 658 104 039 | 04  | blue   | 430 mm | stainless steel |
| 658 104 539 | 045 | orange | 430 mm | stainless steel |
| 658 105 039 | 05  | green  | 430 mm | stainless steel |
| 658 105 539 | 055 | black  | 430 mm | stainless steel |
| 658 106 039 | 06  | grey   | 430 mm | stainless steel |



M18 F. Housing black. Max. 200 bar / 150 °C

| R+M Nr.    | D   | C      |
|------------|-----|--------|
| 658 103 04 | 03  | yellow |
| 658 103 54 | 035 | white  |
| 658 104 04 | 04  | blue   |
| 658 104 54 | 045 | orange |
| 658 105 04 | 05  | green  |
| 658 105 54 | 055 | black  |
| 658 106 04 | 06  | grey   |

\* lance

### Functional principle vario nozzles



high pressure zero angle



high pressure broad angle



low pressure broad angle

## Vario nozzles and triple nozzles

## Triple nozzles



Kr

M22 M. Lance with triple nozzle. Max. 250 bar / 80 °C

| R+M Nr.    | D   | C     | ↔      | M*                |
|------------|-----|-------|--------|-------------------|
| 657 545 03 | 045 | blue  | 430 mm | zinc-plated steel |
| 657 555 03 | 055 | red   | 430 mm | zinc-plated steel |
| 657 560 03 | 06  | green | 430 mm | zinc-plated steel |

| R+M Nr. |
|---------|
|         |
|         |
|         |



K

1/4" F. Housing black. Max. 250 bar / 80 °C

| R+M Nr. | D   | C     |
|---------|-----|-------|
| 657 545 | 045 | blue  |
| 657 555 | 055 | red   |
| 657 560 | 06  | green |

M18 F. Housing black. Max. 250 bar / 80 °C

| R+M Nr.   | D   | C     |
|-----------|-----|-------|
| 657 545 1 | 045 | blue  |
| 657 555 1 | 055 | red   |
| 657 560 1 | 06  | green |

## Functional principle triple nozzles



high pressure zero angle



high pressure broad angle 25°



low pressure broad angle 40°

## Adjustable nozzles



Kr

M22 M. Lance with adjustable nozzle. Spray angle 25°. Max. 200 bar / 150 °C

| R+M Nr.    | D   | ↔      | M*                |
|------------|-----|--------|-------------------|
| 657 340 30 | 04  | 430 mm | zinc-plated steel |
| 657 345 30 | 045 | 430 mm | zinc-plated steel |
| 657 350 30 | 05  | 430 mm | zinc-plated steel |
| 657 355 30 | 055 | 430 mm | zinc-plated steel |
| 657 370 30 | 07  | 430 mm | zinc-plated steel |

| R+M Nr.     | D   | ↔      | M*              |
|-------------|-----|--------|-----------------|
| 657 340 309 | 04  | 430 mm | stainless steel |
| 657 345 309 | 045 | 430 mm | stainless steel |
| 657 350 309 | 05  | 430 mm | stainless steel |
| 657 355 309 | 055 | 430 mm | stainless steel |
| 657 370 309 | 07  | 430 mm | stainless steel |



A Kr

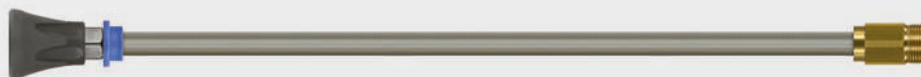
Plug KW. Lance with adjustable nozzle. Without nozzle. Max. 200 bar / 150 °C

| R+M Nr.   | ↔      | M*                |
|-----------|--------|-------------------|
| 657 300 7 | 600 mm | zinc-plated steel |

| R+M Nr.    | ↔      | M*              |
|------------|--------|-----------------|
| 657 300 79 | 600 mm | stainless steel |

\* lance

## Flat jet lances



Kr

M22 M. Lance with nozzle protector ST-10 and nozzle. Max. 400 bar / 150 °C

| R+M Nr.    | D     | ↔      | (M)*              |
|------------|-------|--------|-------------------|
| 512 903 03 | 2503  | 430 mm | zinc-plated steel |
| 512 904 03 | 2504  | 430 mm | zinc-plated steel |
| 512 904 53 | 25045 | 430 mm | zinc-plated steel |
| 513 103 03 | 2503  | 500 mm | zinc-plated steel |
| 513 104 03 | 2504  | 500 mm | zinc-plated steel |
| 513 104 53 | 25045 | 500 mm | zinc-plated steel |
| 513 107 53 | 2507  | 500 mm | zinc-plated steel |
| 513 203 53 | 25035 | 600 mm | zinc-plated steel |
| 513 204 03 | 2504  | 600 mm | zinc-plated steel |
| 513 204 53 | 25045 | 600 mm | zinc-plated steel |
| 513 205 03 | 2505  | 600 mm | zinc-plated steel |
| 513 206 03 | 2506  | 600 mm | zinc-plated steel |
| 513 207 03 | 2507  | 600 mm | zinc-plated steel |
| 513 208 03 | 2508  | 600 mm | zinc-plated steel |
| 513 210 03 | 2510  | 600 mm | zinc-plated steel |
| 513 211 03 | 2511  | 600 mm | zinc-plated steel |
| 513 212 53 | 25125 | 600 mm | zinc-plated steel |

M22 M. Lance with nozzle protector ST-10 and nozzle. Max. 400 bar / 150 °C

| R+M Nr.     | D     | ↔      | (M)*            |
|-------------|-------|--------|-----------------|
| 512 903 039 | 2503  | 430 mm | stainless steel |
| 512 904 039 | 2504  | 430 mm | stainless steel |
| 512 904 539 | 25045 | 430 mm | stainless steel |
| 513 103 039 | 2503  | 500 mm | stainless steel |
| 513 104 039 | 2504  | 500 mm | stainless steel |
| 513 104 539 | 25045 | 500 mm | stainless steel |
| 513 107 539 | 2507  | 500 mm | stainless steel |
| 513 203 539 | 25035 | 600 mm | stainless steel |
| 513 204 039 | 2504  | 600 mm | stainless steel |
| 513 204 539 | 25045 | 600 mm | stainless steel |
| 513 205 039 | 2505  | 600 mm | stainless steel |
| 513 206 039 | 2506  | 600 mm | stainless steel |
| 513 207 039 | 2507  | 600 mm | stainless steel |
| 513 208 039 | 2508  | 600 mm | stainless steel |
| 513 210 039 | 2510  | 600 mm | stainless steel |
| 513 211 039 | 2511  | 600 mm | stainless steel |
| 513 212 539 | 25125 | 600 mm | stainless steel |



A Kr

Plug KW. Lance with protector ST-10 without nozzle. Max. 400 bar / 150 °C

| R+M Nr.    | ↔      | (M)*              |
|------------|--------|-------------------|
| 513 100 07 | 500 mm | zinc-plated steel |
| 513 200 07 | 600 mm | zinc-plated steel |

Plug KW. Lance with protector ST-10 without nozzle. Max. 400 bar / 150 °C

| R+M Nr.     | ↔      | (M)*            |
|-------------|--------|-----------------|
| 513 100 079 | 500 mm | stainless steel |
| 513 200 079 | 600 mm | stainless steel |

\* lance

Symbols D nozzle C colour coding ↔ length M material



## Quick connect spray nozzles by Spraying Systems

limited stock

- » Original Spraying Systems nozzles exclusively for R+M / Suttner
- » High strength plastic. Highly impact resistant.
- » Long lifetime and excellently thermal and chemical stability. Resistant to mineral acids and alkaline solutions.
- » Nipple stainless steel. Nipple at black nozzle plastic.
- » Suitable for applications requiring a frequent and quick change of the spraying angle.
- » Max. 210 bar



Blasting nozzle. Delivers a very concentrated stream of water. **Care should be used to avoid gouging wood or damaging fragile surfaces.**

Chiseling nozzle. The spray should be directed at a 45° angle to the surface and used like a scraper to remove paint, grease and dirt.

Flushing nozzle. Best suited for flushing dirt, mud and grime.

Wash nozzle. Recommended for rinsing and moderate washing.

Low pressure soap nozzle. Designed for prespraying detergents on all kinds of surfaces. Low pressure rinsing.

|     | 0°      | 15°     | 25°     | 40°     | 65°     |
|-----|---------|---------|---------|---------|---------|
| D   | R+M Nr. | R+M Nr. | R+M Nr. | R+M Nr. | R+M Nr. |
| 03  | 610 107 |         |         |         |         |
| 035 | 610 207 | 613 207 | 617 807 | 621 207 |         |
| 04  | 610 307 | 613 307 | 617 907 | 621 307 |         |
| 045 | 610 407 | 613 407 | 618 007 | 621 407 |         |
| 40  |         |         |         |         | 626 807 |

## Quick connect spray nozzles with hardened stainless steel insert

limited stock

- » High strength plastic. Highly impact resistant
- » Long lifetime and excellently thermal stability.
- » Nipple stainless steel. Nipple at black nozzle made out of brass.
- » Suitable for applications requiring a frequent and quick change of the spraying angle.
- » Max. 210 bar



|     | 0°      | 15°     | 25°     | 40°     |
|-----|---------|---------|---------|---------|
| D   | R+M Nr. | R+M Nr. | R+M Nr. | R+M Nr. |
| 035 |         | 613 208 |         |         |
| 045 | 610 408 |         |         |         |
| 05  | 610 508 |         | 618 108 | 621 508 |
| 055 | 610 608 | 613 608 | 618 208 | 621 608 |
| 06  |         | 613 708 | 618 308 |         |

## Accessories quick connect spray nozzles



Coupling 1/4" F NPT

Nipple 1/4" M NPT

Nozzle holder for quick connect spray nozzles. Suitable for 1/4" lances. Without accessories

| R+M Nr.    | R+M Nr.    | R+M Nr.     |
|------------|------------|-------------|
| 550 001 40 | 550 011 40 | 020 002 510 |

## Coupling-system ST-245

### Nipple ST-245



☞ 1/4" M.  
Stainless steel.  
Max. 350 bar

| R+M Nr.     | ☞    |
|-------------|------|
| 040 005 447 | 27.5 |



☞ 1/4" M.  
Stainless steel.  
Max. 350 bar

| R+M Nr.     | ☞    |
|-------------|------|
| 040 005 446 | 33.5 |



☞ 1/4" M. Stainless  
steel. Max. 350 bar.  
For wear cone

| R+M Nr.     | ☞      |
|-------------|--------|
| 040 005 445 | 3 42.0 |

### ST-245 Coupling / wear cone ST-245



| R+M Nr.     | ☞        |
|-------------|----------|
| 200 245 500 | 1 1/4" F |



| R+M Nr.     | ☞        |
|-------------|----------|
| 200 245 510 | 1 3/8" M |

For 040 005 445



| R+M Nr.     | ☞ |
|-------------|---|
| 040 005 431 | 2 |

4

Suitable for all  
1/4" F nozzles for  
sewer cleaning.

4

3

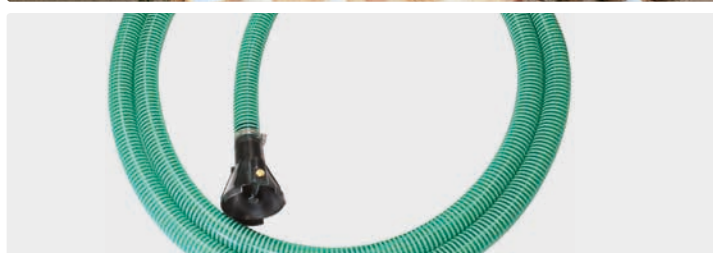
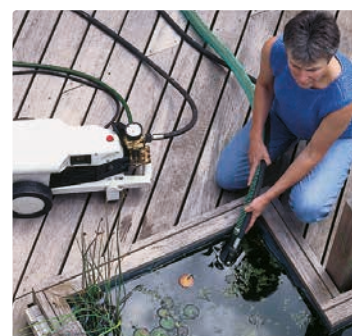
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1

## Mud suckers

### The high-performance mud sucker for all standard pressure washers

extracts stones (up to 20 mm), mud, dirt, sand, algae & sediment.  
Operating pressure min. 80 bar at 7 l/min. Suction power of approx.  
8,000 to 18,000 l/h. Spiral hose: DN 38 mm, length 5 m



A

M22 M

M21 M

1/2" M

M18 M

Plug KW

| D   | R+M Nr.   | R+M Nr.   | R+M Nr.   | R+M Nr.   |
|-----|-----------|-----------|-----------|-----------|
| 04  | 545 504 0 | 545 514 0 | 545 524 0 | 545 534 0 |
| 045 | 545 504 5 | 545 514 5 | 545 524 5 | 545 534 5 |
| 05  | 545 505 0 | 545 515 0 | 545 525 0 | 545 535 0 |
| 055 | 545 505 5 | 545 515 5 | 545 525 5 | 545 535 5 |
| 06  | 545 506 0 | 545 516 0 | 545 526 0 | 545 536 0 |
| 065 | 545 506 5 | 545 516 5 | 545 526 5 | 545 536 5 |
| 07  | 545 507 0 | 545 517 0 | 545 527 0 | 545 537 0 |
| 08  | 545 508 0 | 545 518 0 | 545 528 0 | 545 538 0 |
| 10  | 545 501 0 |           |           |           |

| R+M Nr.   | D   | HP hose ☞ |
|-----------|-----|-----------|
| 545 545 5 | 055 | 5 m       |
| 545 546 0 | 06  | 5 m       |

### Performance chart

high pressure cleaner

capacity of mud sucker

| P       | ☞        | capacity      | capacity       |
|---------|----------|---------------|----------------|
| 100 bar | 10 l/min | ca. 170 l/min | ca. 10,000 l/h |
| 150 bar | 12 l/min | ca. 220 l/min | ca. 13,000 l/h |
| 200 bar | 15 l/min | ca. 300 l/min | ca. 18,000 l/h |

Symbols P pressure ☞ flow D nozzle ☞ inlet ☞ length

## Telescopic lances and wash brushes

## Telescopic lances with coarse thread



Telescopic lances with coarse thread. Telescopic handle without water flow

| R+M Nr. |  |
|---------|-----------------------------------------------------------------------------------|
| 525 050 | 900 - 1,800 mm                                                                    |
| 525 070 | 1,800 - 3,600 mm                                                                  |
| 525 085 | 1,800 - 5,400 mm                                                                  |
| 525 100 | 2,400 - 7,200 mm                                                                  |



Telescopic lances with coarse thread. Telescopic handle with water flow

| R+M Nr. |  |  |
|---------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 525 200 | 900 - 1,800 mm                                                                     | coupler plug "universal"                                                             |
| 525 300 | 1,800 - 3,600 mm                                                                   | coupler plug "universal"                                                             |

## Wash brushes with coarse thread



Bristles 60 mm. Soft. 250 x 80 mm

| R+M Nr. |  |
|---------|-------------------------------------------------------------------------------------|
| 525 000 | 1                                                                                   |



Bristles 60 mm. Hard. 250 x 80 mm

| R+M Nr. |  |
|---------|-------------------------------------------------------------------------------------|
| 525 010 | 1                                                                                   |

## R+M EcoLine with coarse thread



Bristles 60 mm. Hard. 250 x 80 mm

| R+M Nr. |  |
|---------|---------------------------------------------------------------------------------------|
| 525 015 | 1                                                                                     |
| 525 016 | 6                                                                                     |

## Accessories telescopic lances with coarse thread



Screw connection

| R+M Nr. |
|---------|
| 525 901 |



Angle adaptor

| R+M Nr. |
|---------|
| 525 040 |



Spare valve, 3/4" M : 3/4" F

| R+M Nr. |
|---------|
| 726 420 |

Further telescopic lances are on page 290 and further wash brushes are on pages 285-287.

Symbols  length  packing unit  inlet  thread



## easywash365+ wash brushes - large areas are completely clean from now on!

By means of a very wide work surface of approx. 260 x 80 mm the easywash365+ wash brush is especially designed for the efficient cleaning of large areas such as railway carriages, tramcars, omnibuses, caravans, trucks, boats and ships, facades, greenhouses as well as vehicles, motorcycles and many more.

Fine and extremely soft natural bristles with split ends ensure an especially gentle cleaning of sensitive surfaces such as windows and car finish. The solid body of the easywash365+ wash brush consists of 152 bristle bundles which are attached undetachably by means of multi-component synthetic resin.

Our easywash365+ wash brush convinces all users working in the self-service foam- and prewash of an ideal and very easy handling.

The soft coating of the body made out of thermoplastic elastomer demonstrably protects sensitive surfaces from damages.

The inlet of the easywash365+ wash brush is equipped with a brass insert with 1/4" female thread which is fixed in the body. By means of an additional grub screw the high pressure lances available at self-service bays are safe from twisting and theft. Therefore, the grub screw needs to be screwed to the lance tube. **Further fastening plates or protection against theft are not required.**

13 outlet ports at the bottom of the easywash365+ wash brush enable the required water flow and guarantee a convincingly good foam quality at the same time.



### Wash brushes



A= 270. B= 260 x 80 mm. Hog hair.  
Max. 40 l/min / 60 °C

| R+M Nr.     | C     |        |
|-------------|-------|--------|
| 200 023 550 | 60 mm | 1/4" F |



A= 270. B= 260 x 80 mm. Hog hair.  
Max. 40 l/min / 60 °C

| R+M Nr.     | C     |        |
|-------------|-------|--------|
| 200 023 650 | 90 mm | 1/4" F |



A= 270. B= 260 x 80 mm. Hog hair / synthetic.  
Max. 40 l/min / 60 °C

| R+M Nr.     | C     |        |
|-------------|-------|--------|
| 200 023 660 | 90 mm | 1/4" F |

### Wash brushes

#### Wash brushes



A= 260. B= 230 x 80 mm. Hog hair.  
Max. 50 °C

| R+M Nr.     | C     |
|-------------|-------|
| 200 023 500 | 60 mm |
| 200 023 600 | 90 mm |

#### Wash brush with cover



A= 260. B= 230 x 80 mm. Hog hair.  
Max. 50 °C

| R+M Nr.     | C     |        |
|-------------|-------|--------|
| 200 023 710 | 60 mm | 1/4" F |



A= 260. B= 230 x 80 mm. Hog hair.  
With stainless steel frame.  
Max. 50 °C

| R+M Nr.     | C     |        |
|-------------|-------|--------|
| 200 023 735 | 60 mm | 1/4" F |



A= 260. B= 230 x 80 mm. Hog hair.  
With stainless steel frame.  
Max. 50 °C

| R+M Nr.     | C     |        |
|-------------|-------|--------|
| 200 023 736 | 90 mm | 1/4" F |

#### Covers



Cover suitable as theft protection for wash brushes. Plastic. Max. 50 °C

| R+M Nr.     | B      |
|-------------|--------|
| 020 001 540 | 230 mm |

#### Frames for wash brushes



Frame with fixing bolts. Stainless steel.  
Max. 60 °C

| R+M Nr.     | B      |        |
|-------------|--------|--------|
| 200 023 560 | 230 mm | 1/4" F |



Frame. Stainless steel.  
Max. 60 °C

| R+M Nr.     | B      |        |
|-------------|--------|--------|
| 200 023 570 | 230 mm | 1/4" F |

## Wash brushes



A

A= 260. B= 230 x 80 mm. Hog hair.  
Max. 50 °C

| R+M Nr. | C     |        |
|---------|-------|--------|
| 523 703 | 60 mm | 1/8" M |



A= 260. B= 230 x 80 mm. Hog hair.  
Max. 50 °C

| R+M Nr.     | C     |        |
|-------------|-------|--------|
| 200 023 700 | 60 mm | 1/4" F |



A= 260. B= 230 x 80 mm. Hog hair. With stainless steel frame. Max. 50 °C

| R+M Nr.     | C     |        |
|-------------|-------|--------|
| 200 023 730 | 60 mm | 1/4" F |



K

A= 260. B= 230 x 80 mm. Hog hair.  
Max. 50 °C

| R+M Nr. | C     |             |
|---------|-------|-------------|
| 523 701 | 60 mm | M18 x 1.5 F |

The original

## Vorwerk lances &amp; wash brushes



Extension pipe with water flow

| R+M Nr.   | ↔        | ⊗      | ⊙      |
|-----------|----------|--------|--------|
| 523 790 1 | 1,000 mm | 1/4" M | 1/4" F |
| 523 790 2 | 1,500 mm | 1/4" M | 1/4" F |
| 523 790 3 | 2,000 mm | 1/4" M | 1/4" F |

## Vorwerk wash brushes



A= 300. B= 300 x 100 mm. Nylon

| R+M Nr. | C     |        |
|---------|-------|--------|
| 523 780 | 60 mm | 1/4" F |



A= 240. B= 230 x 80 mm. Hog hair

| R+M Nr. | C     |        |
|---------|-------|--------|
| 523 70  | 60 mm | 1/4" F |
| 523 75  | 90 mm | 1/4" F |

## Adaptor



Adaptor for lances with coarse thread.  
Coarse thread : 1/4" M

| R+M Nr.     |
|-------------|
| 010 003 610 |



Brush. A= 260. B= 230 x 80 mm.  
Hog hair

| R+M Nr. | C     |
|---------|-------|
| 523 72  | 60 mm |
| 523 73  | 90 mm |



Frame. 260 mm.  
Aluminium

| R+M Nr. | ⊙      |
|---------|--------|
| 523 76  | 1/4" F |

## Air injector



1/4" F : 1/4" M.  
Flow at 100 bar

| R+M Nr.    | ↔        | ⊙   |
|------------|----------|-----|
| 108 290 60 | 13 l/min | 1.5 |
| 108 290 20 | 34 l/min | 2.5 |

Symbols ↔ length ⊙ inlet ⊗ outlet ∅ diameter ⊙ thread D nozzle ↔ flow

## Rotating brushes

### Brushes without hinge



1/4" M. Natural. Max. 50 bar / 50 °C

R+M Nr.

522 10



1/4" M. Nylon. Max. 50 bar / 50 °C

R+M Nr.

522 30



M18 F. Natural. Max. 50 bar / 50 °C

R+M Nr.

522 20



M18 F. Nylon. Max. 50 bar / 50 °C

R+M Nr.

522 40

### Brushes with hinge



1/4" F. Natural. Max. 50 bar / 50 °C

R+M Nr.

522 50



1/4" F. Nylon. Max. 50 bar / 50 °C

R+M Nr.

522 60



M18 F. Natural. Max. 50 bar / 50 °C

R+M Nr.

523 001



1/4" F. Perlon. Max. 50 bar / 50 °C

R+M Nr.

200 021 121

### Brushes with hinge and lance



R+M Nr.

522 504



M22 M

lance

430 mm

### Replacement brushes



Natural

R+M Nr.

524 10



Nylon

R+M Nr.

524 20

## Accessories wash brushes

### Brush with air injector turbofoam365+



Retrofit kit for lances. Air injector turbofoam365+ and brush with cover plate.  
20-150 bar. Max. 50 °C

Bristles 60 mm

| R+M Nr.     |        |      |  |
|-------------|--------|------|--|
| 500 023 101 | 1/4" F | 1.20 |  |
| 500 023 102 | 1/4" F | 1.35 |  |
| 500 023 105 | 1/4" F | 1.60 |  |

Bristles 90 mm

| R+M Nr.     |        |      |  |
|-------------|--------|------|--|
| 500 023 201 | 1/4" F | 1.20 |  |
| 500 023 202 | 1/4" F | 1.35 |  |
| 500 023 205 | 1/4" F | 1.60 |  |

### Air injector



1/4" F : 1/4" M. l/min at 100 bar

| R+M Nr.    |          |     |  |
|------------|----------|-----|--|
| 108 290 60 | 13 l/min | 1.5 |  |
| 108 290 20 | 34 l/min | 2.5 |  |

### Brush holder



With snap fit. Only works with nozzle holder 108 290 18 + 108 290 19

| R+M Nr.    |        |  |  |
|------------|--------|--|--|
| 108 290 15 | 1/4" M |  |  |

### Nozzle holder



1/4" F. For brush holder 108 290 15

| R+M Nr.    |        |  |  |
|------------|--------|--|--|
| 108 290 18 | 1/8" F |  |  |
| 108 290 19 | 1/4" F |  |  |

## Brush holder



Suitable for all brushes. Hole spacing 202 mm.

H x W x D = 90 x 250 x 100 mm

| R+M Nr.    | (M)             |
|------------|-----------------|
| 108 290 30 | stainless steel |



Container with overflow and lateral drain for cleaning. For wall and floor mounting. H x W x D = 670 x 340 x 143 mm

| R+M Nr. | (M)             |
|---------|-----------------|
| 105 810 | stainless steel |

## easywash365+ brush holder

Wash brush holder, two-piece. For floor mounting and positioning for different length of lances. Pipe Ø 42 mm



| R+M Nr. | (M)             |
|---------|-----------------|
| 105 820 | stainless steel |



## Self-service lances

## Self-service lances with brush longitudinal

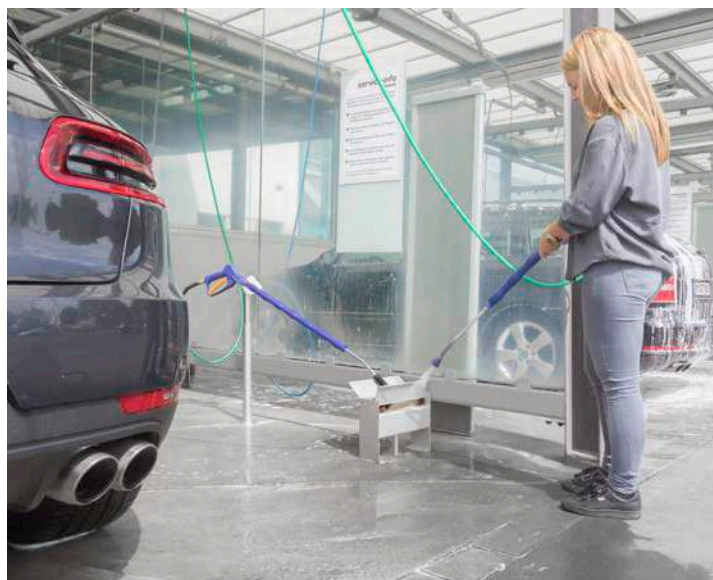


Brush hog hair.

| R+M Nr.     | bristles |
|-------------|----------|
| 200 023 500 | 60 mm    |

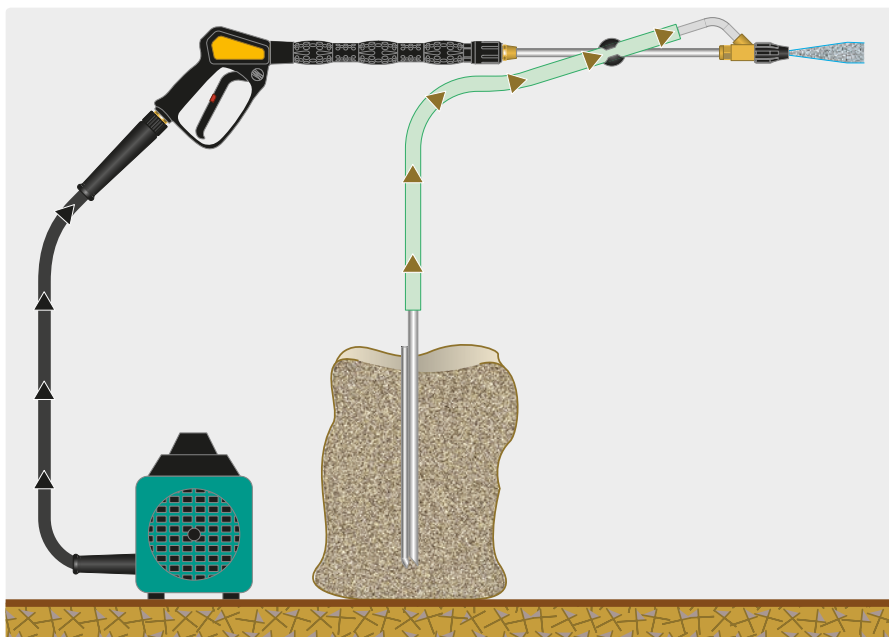
Brush with nozzle protector for nozzle 1/8" M. Without high pressure nozzle

| R+M Nr. | (C)               |
|---------|-------------------|
| 523 960 | 1/8" M            |
| 523 961 | 1/4" M            |
| 523 962 | M22 M             |
| 523 963 | M22 F long nipple |



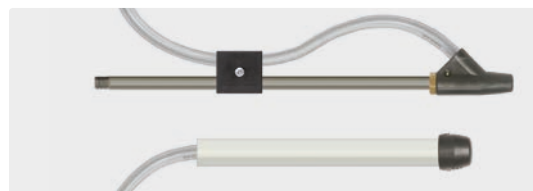
## Sandblast kits

## Principle of function sandblast kit

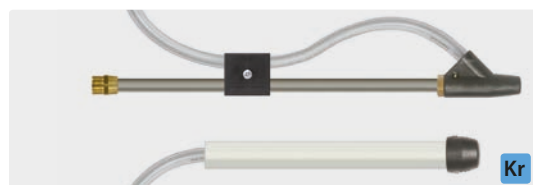


## ST-355 hobby

Grain size of the sand 0.2 - 0.8 mm. Lance 300 mm. Suction hose 3 m. Max. 150 bar



| R+M Nr.     | (C)    |
|-------------|--------|
| 200 355 500 | 1/4" m |



| R+M Nr. | (C)   |
|---------|-------|
| 520 93  | M22 M |



## Sandblast kits

### Sandblaster ST-555

M22 M. Stainless steel. Grain size of the sand 0.4 - 0.8 mm for DN 12 and 0.6 - 1.2 mm for DN 19.  
Pipe with suction quantity control and hose 4 m.  
Max. 500 bar / 100 °C



### Rep. kits Sandblaster ST-555



3 nozzles M4. Hardened stainl. steel

| D   | R+M Nr.     |
|-----|-------------|
| 03  | 200 555 430 |
| 04  | 200 555 440 |
| 055 | 200 555 455 |
| 065 | 200 555 465 |
| 075 | 200 555 475 |



Sand blasting nozzle

| R+M Nr.     |
|-------------|
| 200 555 410 |



| R+M Nr.     | G     | S     |
|-------------|-------|-------|
| 561 922 200 | M20 F | M22 F |



| R+M Nr.     | G     | S     |
|-------------|-------|-------|
| 561 922 220 | M22 F | M22 F |

### One tool, six blasting agents, numerous applications:

The sandblaster is suitable for dust-free blasting of the following solids with a grain size ranging from 0.4 to 1.2 mm:

- » **Glass beads**  
for cleaning of copper and bronze as well as polishing of stainless steel
- » **Glass powder**  
for cleaning of stainless steel and natural stone or for removal of graffiti from light surfaces
- » **Slag (fine)**  
for cleaning of sandstone or brick as well as removal of graffiti from dark surfaces
- » **Slag (coarse)**  
removal of rust from metals or of old coatings and paintings. cleaning and grinding of concrete surfaces
- » **Sodium carbonate (water-soluble)**  
cleaning of sensitive surfaces such as aluminium, glass, plastics, stainless steel
- » **Mineral blasting agent (sand)**  
removal of rust from metals or of old coatings and paintings. Cleaning and grinding of concrete surfaces. Varnish removal.



### Sandblast head ST-55 with regulator

#### Sand nozzle ST-55



Grain size of the sand 0.2 - 0.8 mm.  
Lance 500 / 600 mm.  
Suction hose 4 / 5 m.  
With or without grip aside.  
Max. 200 bar

Hardened stainless steel

| R+M Nr.     |
|-------------|
| 200 055 495 |

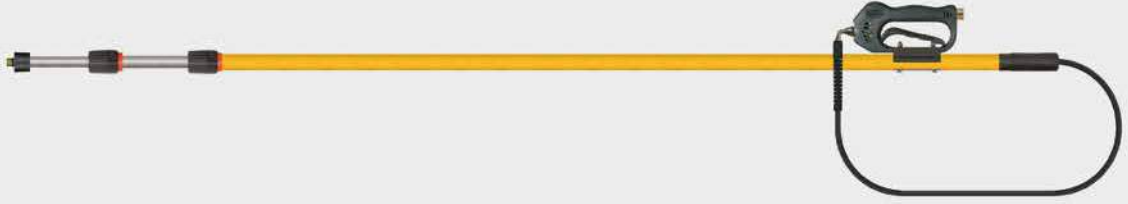
|     | 1/4" M lance 500 mm without grip hose 4 m | 1/4" M lance 600 mm with grip hose 5 m | M22 F lance 600 mm with grip hose 5 m | M21 F lance 600 mm with grip hose 5 m | M22 M lance 600 mm with grip hose 5 m | Nippel KW lance 600 mm with grip hose 5 m | M22 M lance 430 mm without grip hose 5 m | M18 F without lance without grip hose 5 m |
|-----|-------------------------------------------|----------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------------|------------------------------------------|-------------------------------------------|
| D   | R+M Nr.                                   | R+M Nr.                                | R+M Nr.                               | R+M Nr.                               | R+M Nr.                               | R+M Nr.                                   | R+M Nr.                                  | R+M Nr.                                   |
| 04  | new<br>200 055 606                        | 520 824 0                              | 520 844 0                             | 520 834 0                             | 520 814 0                             | 520 874 0                                 | 520 804 0                                | 520 854 0                                 |
| 045 |                                           | 520 824 5                              | 520 844 5                             | 520 834 5                             | 520 814 5                             | 520 874 5                                 | 520 804 5                                | 520 854 5                                 |
| 05  |                                           | 520 825 0                              | 520 845 0                             | 520 835 0                             | 520 815 0                             | 520 875 0                                 | 520 805 0                                | 520 855 0                                 |
| 055 |                                           | 520 825 5                              | 520 845 5                             | 520 835 5                             | 520 815 5                             | 520 875 5                                 | 520 805 5                                | 520 855 5                                 |
| 06  |                                           | 520 826 0                              | 520 846 0                             | 520 836 0                             | 520 816 0                             | 520 876 0                                 | 520 806 0                                | 520 856 0                                 |
| 065 |                                           | 520 826 5                              | 520 846 5 <b>K</b>                    | 520 836 5 <b>W</b>                    | 520 816 5                             | 520 876 5 <b>A</b>                        | 520 806 5 <b>Kr</b>                      | 520 856 5 <b>K</b>                        |

Symbols length inlet material nozzle thread weight DN nominal diameter

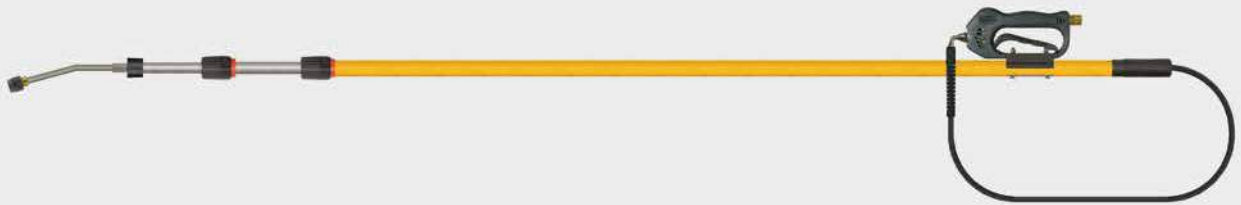
## High pressure telescopic lances

- » Light and handy. Length easily adjustable. Adjustable from 2.3 m to 7.4 m.
- » Lance with embedded high pressure hose and mounted Suttner gun ST-601. Lance without high pressure nozzle.
- » Max. 275 bar / 100 °C

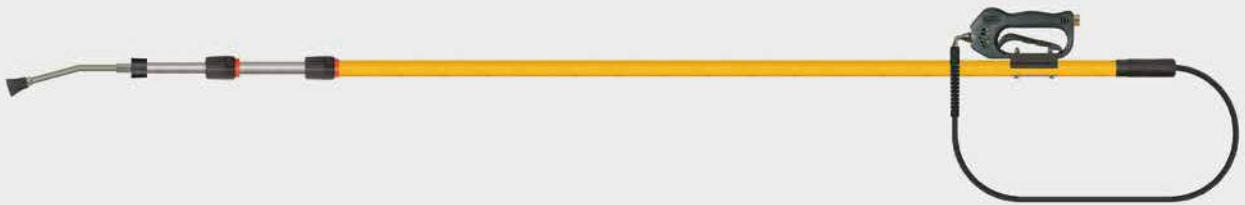
Our telescopic high pressure lances are up to  
30 % lighter than comparable lances.



| R+M Nr.   | ⌀      | ↺      | ↔           | Ⓒ      |
|-----------|--------|--------|-------------|--------|
| 525 070 8 | 2.4 kg | 1/4" M | 2.3 - 3.8 m | 3/8" F |
| 525 085 8 | 4.3 kg | 1/4" M | 2.3 - 5.6 m | 3/8" F |
| 525 100 8 | 5.4 kg | 1/4" M | 2.9 - 7.4 m | 3/8" F |



| R+M Nr.   | ⌀      | ↺                            | ↔           | Ⓒ     |
|-----------|--------|------------------------------|-------------|-------|
| 525 070 1 | 2.6 kg | nozzle protector without tip | 2.3 - 3.8 m | M22 M |
| 525 085 1 | 4.5 kg | nozzle protector without tip | 2.3 - 5.6 m | M22 M |
| 525 100 1 | 5.6 kg | nozzle protector without tip | 2.9 - 7.4 m | M22 M |



| R+M Nr.   | ⌀      | ↺                                   | ↔           | Ⓒ      |
|-----------|--------|-------------------------------------|-------------|--------|
| 525 070 2 | 2.6 kg | nozzle protector ST-10 - 1/4" F NPT | 2.3 - 3.8 m | 3/8" F |
| 525 085 2 | 4.5 kg | nozzle protector ST-10 - 1/4" F NPT | 2.3 - 5.6 m | 3/8" F |
| 525 100 2 | 5.6 kg | nozzle protector ST-10 - 1/4" F NPT | 2.9 - 7.4 m | 3/8" F |

## Wall cleaner



turbodevil



with brush strips



with rubberlip

- » Rotating wall cleaner suitable for telescopic lances
- » Splash guard stainless steel with rubberlip or brush strips
- » Splash guard ⌀ 300 mm
- » Without nozzles. 2 nozzles 1/4" M with 15° spray angle are required
- » Max. 250 bar / 90 °C.

| R+M Nr.     | Ⓒ      | TYP                   | ⌀      |
|-------------|--------|-----------------------|--------|
| 521 032 251 | M22 M  | rubberlip             | 1.9 kg |
| 521 032 254 | M22 M  | brush strips          | 1.9 kg |
| 521 032 256 | M18 F  | <b>K</b> rubberlip    | 1.9 kg |
| 521 032 255 | M18 F  | <b>K</b> brush strips | 1.9 kg |
| 521 032 258 | 1/4" F | rubberlip             | 1.9 kg |
| 521 032 257 | 1/4" F | brush strips          | 1.9 kg |



## Screw connections

R+M Nr.  
525 901

Symbols Ⓒ inlet ↺ outlet TYP type ↔ length ⌀ weight