

## Ruby nozzle 6407

The high-performance nozzles for paper cutting from mvt AG are characterized by their service life, efficiency and quality. The extensive range of nozzles offers the right type for most commercially available paper cutting systems. The ruby insert used in particular guarantees a long service life and consistent jet quality.

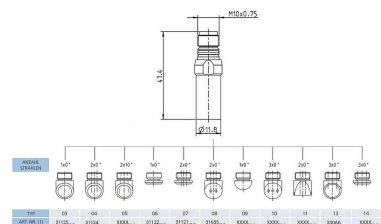
### Features and advantages

- Long service life
- Constant jet quality
- Highly concentrated water jet
- Point jet with high energy density
- Easy installation and removal
- Good price-performance ratio
- Swiss Quality

### Applications

**MVT AG** is a Swiss supplier of high-quality and precise components and systems for the industrial sector.

- Pulp and paper industry
- Industrial cleaning
- Corrugated board



| Connection thread | Type | ART. NO. (1) | Number of beams |
|-------------------|------|--------------|-----------------|
| M10x0.75          | 03   | 31125.00     | 1               |
| M10x0.75          | 04   | 31124.00     | 2               |
| M10x0.75          | 06   | 31122.00     | 1               |
| M10x0.75          | 07   | 31121.00     | 2               |
| M10x0.75          | 08   | 31655.00     | 2               |
| M10x0.75          | 13   | 33066.00     | 3               |

# Specifications



**Operating pressure (bar)  
max.**

110



**Operating temperature (°C)  
max.**

150

| ART.<br>NO. | NOZZLE<br>SIZE in<br>US Gal/<br>min at 40<br>psi | NOZZL<br>ES Ød<br>mm | Numbe<br>r of<br>jets | PRESSURE in psi / bar |        |        |             |             |             |             |             |
|-------------|--------------------------------------------------|----------------------|-----------------------|-----------------------|--------|--------|-------------|-------------|-------------|-------------|-------------|
|             |                                                  |                      |                       | psi580                | psi725 | psi870 | psi101<br>5 | psi116<br>0 | psi130<br>5 | psi145<br>0 | psi159<br>5 |
|             |                                                  |                      |                       | bar40                 | bar50  | bar60  | bar70       | bar80       | bar90       | bar100      | bar110      |
|             |                                                  |                      |                       | FLOW RATE in l/min    |        |        |             |             |             |             |             |
| 31125.0300  | 0018                                             | 0.30                 | 1                     | 0.257                 | 0.288  | 0.315  | 0.340       | 0.364       | 0.386       | 0.407       | 0.426       |
| 31125.0350  | 0024                                             | 0.35                 | 1                     | 0.350                 | 0.392  | 0.429  | 0.463       | 0.495       | 0.525       | 0.553       | 0.580       |
| 31125.0400  | 0031                                             | 0.40                 | 1                     | 0.458                 | 0.512  | 0.560  | 0.605       | 0.647       | 0.686       | 0.723       | 0.758       |
| 31125.0500  | 0049                                             | 0.50                 | 1                     | 0.715                 | 0.799  | 0.875  | 0.945       | 1.010       | 1.072       | 1.129       | 1.184       |
| 31125.0600  | 0071                                             | 0.60                 | 1                     | 1.030                 | 1.151  | 1.261  | 1.361       | 1.455       | 1.543       | 1.626       | 1.705       |
| 31125.0800  | 0126                                             | 0.80                 | 1                     | 1.830                 | 2.046  | 2.241  | 2.420       | 2.587       | 2.743       | 2.891       | 3.032       |
| 31125.0900  | 0159                                             | 0.90                 | 1                     | 2.317                 | 2.590  | 2.836  | 3.063       | 3.274       | 3.472       | 3.659       | 3.837       |
| 31125.1000  | 0197                                             | 1.00                 | 1                     | 2.860                 | 3.197  | 3.501  | 3.781       | 4.042       | 4.286       | 4.517       | 4.737       |
| 31124.0300  | 0018                                             | 0.30                 | 2                     | 0.514                 | 0.576  | 0.630  | 0.680       | 0.728       | 0.772       | 0.814       | 0.852       |
| 31124.0350  | 0024                                             | 0.35                 | 2                     | 0.700                 | 0.784  | 0.858  | 0.926       | 0.990       | 1.050       | 1.106       | 1.160       |
| 31124.0400  | 0031                                             | 0.40                 | 2                     | 0.916                 | 1.024  | 1.120  | 1.210       | 1.294       | 1.372       | 1.446       | 1.516       |
| 31124.0500  | 0049                                             | 0.50                 | 2                     | 1.430                 | 1.598  | 1.750  | 1.890       | 2.020       | 2.144       | 2.258       | 2.368       |
| 31124.0600  | 0071                                             | 0.60                 | 2                     | 2.060                 | 2.302  | 2.522  | 2.722       | 2.910       | 3.086       | 3.252       | 3.410       |
| 31124.0800  | 0126                                             | 0.80                 | 2                     | 3.660                 | 4.092  | 4.482  | 4.840       | 5.174       | 5.486       | 5.782       | 6.064       |
| 31124.0900  | 0159                                             | 0.90                 | 2                     | 4.634                 | 5.180  | 5.672  | 6.126       | 6.548       | 6.944       | 7.318       | 7.674       |
| 31124.1000  | 0197                                             | 1.00                 | 2                     | 5.720                 | 6.394  | 7.002  | 7.562       | 8.084       | 8.572       | 9.034       | 9.474       |
| 31122.0300  | 0018                                             | 0.30                 | 1                     | 0.257                 | 0.288  | 0.315  | 0.340       | 0.364       | 0.386       | 0.407       | 0.426       |
| 31122.0350  | 0024                                             | 0.35                 | 1                     | 0.350                 | 0.392  | 0.429  | 0.463       | 0.495       | 0.525       | 0.553       | 0.580       |
| 31122.0400  | 0031                                             | 0.40                 | 1                     | 0.458                 | 0.512  | 0.560  | 0.605       | 0.647       | 0.686       | 0.723       | 0.758       |
| 31122.0500  | 0049                                             | 0.50                 | 1                     | 0.715                 | 0.799  | 0.875  | 0.945       | 1.010       | 1.072       | 1.129       | 1.184       |
| 31122.0600  | 0071                                             | 0.60                 | 1                     | 1.030                 | 1.151  | 1.261  | 1.361       | 1.455       | 1.543       | 1.626       | 1.705       |
| 31122.0800  | 0126                                             | 0.80                 | 1                     | 1.830                 | 2.046  | 2.241  | 2.420       | 2.587       | 2.743       | 2.891       | 3.032       |

| ART.<br>NO. | NOZZLE<br>SIZE in<br>US Gal/<br>min at 40<br>psi | NOZZLE<br>ES Ød<br>mm | Number<br>of<br>jets | PRESSURE in psi / bar |        |        |         |         |         |         |         |
|-------------|--------------------------------------------------|-----------------------|----------------------|-----------------------|--------|--------|---------|---------|---------|---------|---------|
|             |                                                  |                       |                      | psi580                | psi725 | psi870 | psi1015 | psi1160 | psi1305 | psi1450 | psi1595 |
|             |                                                  |                       |                      | bar40                 | bar50  | bar60  | bar70   | bar80   | bar90   | bar100  | bar110  |
|             |                                                  |                       |                      | FLOW RATE in l/min    |        |        |         |         |         |         |         |
| 31122.0900  | 0159                                             | 0.90                  | 1                    | 2.317                 | 2.590  | 2.836  | 3.063   | 3.274   | 3.472   | 3.659   | 3.837   |
| 31122.1000  | 0197                                             | 1.00                  | 1                    | 2.860                 | 3.197  | 3.501  | 3.781   | 4.042   | 4.286   | 4.517   | 4.737   |
| 31121.0300  | 0018                                             | 0.30                  | 2                    | 0.514                 | 0.576  | 0.630  | 0.680   | 0.728   | 0.772   | 0.814   | 0.852   |
| 31121.0350  | 0024                                             | 0.35                  | 2                    | 0.700                 | 0.784  | 0.858  | 0.926   | 0.990   | 1.050   | 1.106   | 1.160   |
| 31121.0400  | 0031                                             | 0.40                  | 2                    | 0.916                 | 1.024  | 1.120  | 1.210   | 1.294   | 1.372   | 1.446   | 1.516   |
| 31121.0500  | 0049                                             | 0.50                  | 2                    | 1.430                 | 1.598  | 1.750  | 1.890   | 2.020   | 2.144   | 2.258   | 2.368   |
| 31121.0600  | 0071                                             | 0.60                  | 2                    | 2.060                 | 2.302  | 2.522  | 2.722   | 2.910   | 3.086   | 3.252   | 3.410   |
| 31121.0800  | 0126                                             | 0.80                  | 2                    | 3.660                 | 4.092  | 4.482  | 4.840   | 5.174   | 5.486   | 5.782   | 6.064   |
| 31121.0900  | 0159                                             | 0.90                  | 2                    | 4.634                 | 5.180  | 5.672  | 6.126   | 6.548   | 6.944   | 7.318   | 7.674   |
| 31121.1000  | 0197                                             | 1.00                  | 2                    | 5.720                 | 6.394  | 7.002  | 7.562   | 8.084   | 8.572   | 9.034   | 9.474   |
| 31655.0300  | 0018                                             | 0.30                  | 2                    | 0.514                 | 0.576  | 0.630  | 0.680   | 0.728   | 0.772   | 0.814   | 0.852   |
| 31655.0350  | 0024                                             | 0.35                  | 2                    | 0.700                 | 0.784  | 0.858  | 0.926   | 0.990   | 1.050   | 1.106   | 1.160   |
| 31655.0400  | 0031                                             | 0.40                  | 2                    | 0.916                 | 1.024  | 1.120  | 1.210   | 1.294   | 1.372   | 1.446   | 1.516   |
| 31655.0500  | 0049                                             | 0.50                  | 2                    | 1.430                 | 1.598  | 1.750  | 1.890   | 2.020   | 2.144   | 2.258   | 2.368   |
| 31655.0600  | 0071                                             | 0.60                  | 2                    | 2.060                 | 2.302  | 2.522  | 2.722   | 2.910   | 3.086   | 3.252   | 3.410   |
| 31655.0800  | 0126                                             | 0.80                  | 2                    | 3.660                 | 4.092  | 4.482  | 4.840   | 5.174   | 5.486   | 5.782   | 6.064   |
| 31655.0900  | 0159                                             | 0.90                  | 2                    | 4.634                 | 5.180  | 5.672  | 6.126   | 6.548   | 6.944   | 7.318   | 7.674   |
| 31655.1000  | 0197                                             | 1.00                  | 2                    | 5.720                 | 6.394  | 7.002  | 7.562   | 8.084   | 8.572   | 9.034   | 9.474   |
| 33066.0300  | 0018                                             | 0.30                  | 3                    | 0.771                 | 0.864  | 0.945  | 1.020   | 1.092   | 1.158   | 1.221   | 1.278   |
| 33066.0350  | 0024                                             | 0.35                  | 3                    | 1.050                 | 1.176  | 1.287  | 1.389   | 1.485   | 1.575   | 1.659   | 1.740   |
| 33066.0400  | 0031                                             | 0.40                  | 3                    | 1.374                 | 1.536  | 1.680  | 1.815   | 1.941   | 2.058   | 2.169   | 2.274   |
| 33066.0500  | 0049                                             | 0.50                  | 3                    | 2.145                 | 2.397  | 2.625  | 2.835   | 3.030   | 3.216   | 3.387   | 3.552   |
| 33066.0600  | 0071                                             | 0.60                  | 3                    | 3.090                 | 3.453  | 3.783  | 4.083   | 4.365   | 4.629   | 4.878   | 5.115   |
| 33066.0800  | 0126                                             | 0.80                  | 3                    | 5.490                 | 6.138  | 6.723  | 7.260   | 7.761   | 8.229   | 8.673   | 9.096   |
| 33066.0900  | 0159                                             | 0.90                  | 3                    | 6.951                 | 7.770  | 8.508  | 9.189   | 9.822   | 10.416  | 10.977  | 11.511  |
| 33066.1000  | 0197                                             | 1.00                  | 3                    | 8.580                 | 9.591  | 10.503 | 11.343  | 12.126  | 12.858  | 13.551  | 14.211  |

# FAQ

## 1. What is the ruby nozzle 6407 used for?

The 6407 ruby nozzle is mainly used in the pulp and paper industry, especially for precise paper cutting with waterjet technology. It is also suitable for applications in corrugated board production and for various industrial cleaning processes.

## 2. What are the advantages of the ruby insert in the nozzle?

The high-quality ruby insert ensures a particularly long service life and consistently high jet quality. This keeps the water jet precisely focused and enables efficient and consistent cutting performance over a long period of time.

## 3. What operating conditions are suitable for the Ruby nozzle 6407?

The 6407 ruby nozzle is designed for operating pressures of up to **110 bar** and operating temperatures of up to **150 °C**. This makes it suitable for demanding industrial applications with high reliability and performance requirements.

## 4. What connection options are available?

The 6407 ruby nozzle has an **M10 × 0.75 connection thread** and is available in different versions with **one, two or three water jets**. This allows it to be flexibly adapted to different systems and process requirements.

## 5. Why are mvt high-performance nozzles particularly economical?

Thanks to the durable materials, precise manufacturing and consistent jet quality, the nozzles offer excellent value for money. The long service life reduces maintenance requirements and replacement intervals, thus ensuring economical operation.