# **Anhang 6.6 Leistungsfähigkeit von Rohrdurchlässen (Kreisprofil)**

**Vollfüllung - Manning-Strickler-Rauheitsbeiwert kSt = 65 m1/3/s**

## Tabelle A6.6.1: Leistungsfähigkeit von Rohrdurchlässen (Kreisprofil)

## Durchlasslänge = 5,00 m

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| d in mm | | Q (m³/s) | Δh in m | | | | | | | | | |
| v (m/s) | 0,05 | 0,10 | 0,15 | 0,20 | 0,25 | 0,30 | 0,40 | 0,50 | 0,60 | 0,70 |
| DN | 400 | Q (m³/s) | 0,088 | 0,124 | 0,152 | 0,176 | 0,197 | 0,216 | 0,249 | 0,278 | 0,305 | 0,329 |
|  |  | v (m/s) | 0,70 | 0,99 | 1,21 | 1,40 | 1,57 | 1,72 | 1,98 | 2,21 | 2,43 | 2,62 |
| DN | 500 | Q (m³/s) | 0,142 | 0,201 | 0,246 | 0,284 | 0,318 | 0,348 | 0,402 | 0,450 | 0,492 | 0,532 |
|  |  | v (m/s) | 0,72 | 1,02 | 1,25 | 1,45 | 1,62 | 1,77 | 2,05 | 2,29 | 2,51 | 2,71 |
| DN | 600 | Q (m³/s) | 0,209 | 0,296 | 0,362 | 0,418 | 0,468 | 0,513 | 0,592 | 0,662 | 0,725 | 0,783 |
|  |  | v (m/s) | 0,74 | 1,05 | 1,28 | 1,48 | 1,65 | 1,81 | 2,09 | 2,34 | 2,56 | 2,77 |
| DN | 700 | Q (m³/s) | 0,289 | 0,409 | 0,501 | 0,578 | 0,647 | 0,708 | 0,818 | 0,915 | 1,002 | 1,082 |
|  |  | v (m/s | 0,75 | 1,06 | 1,30 | 1,50 | 1,68 | 1,84 | 2,13 | 2,38 | 2,60 | 2,81 |
| DN | 800 | Q (m³/s) | 0,382 | 0,540 | 0,662 | 0,764 | 0,854 | 0,936 | 1,080 | 1,208 | 1,323 | 1,429 |
|  |  | v (m/s) | 0,76 | 1,07 | 1,32 | 1,52 | 1,70 | 1,86 | 2,15 | 2,40 | 2,63 | 2,84 |
| DN | 900 | Q (m³/s) | 0,488 | 0,690 | 0,845 | 0,975 | 1,090 | 1,194 | 1,379 | 1,542 | 1,689 | 1,825 |
|  |  | v (m/s) | 0,77 | 1,08 | 1,33 | 1,53 | 1,71 | 1,88 | 2,17 | 2,42 | 2,66 | 2,87 |
| DN | 1000 | Q (m³/s) | 0,606 | 0,857 | 1,050 | 1,212 | 1,355 | 1,485 | 1,714 | 1,917 | 2,099 | 2,268 |
|  |  | v (m/s) | 0,77 | 1,09 | 1,34 | 1,54 | 1,73 | 1,89 | 2,18 | 2,44 | 2,67 | 2,89 |
| DN | 1100 | Q (m³/s) | 0,737 | 1,043 | 1,277 | 1,475 | 1,649 | 1,806 | 2,085 | 2,332 | 2,554 | 2,759 |
|  |  | v (m/s) | 0,78 | 1,10 | 1,34 | 1,55 | 1,73 | 1,90 | 2,19 | 2,45 | 2,69 | 2,90 |
| DN | 1200 | Q (m³/s) | 0,881 | 1,246 | 1,526 | 1,763 | 1,971 | 2,159 | 2,493 | 2,787 | 3,053 | 3,297 |
|  |  | v (m/s) | 0,78 | 1,10 | 1,35 | 1,56 | 1,74 | 1,91 | 2,20 | 2,46 | 2,70 | 2,92 |
| DN | 1400 | Q (m³/s) | 1,208 | 1,708 | 2,092 | 2,415 | 2,700 | 2,958 | 3,416 | 3,819 | 4,183 | 4,518 |
|  |  | v (m/s) | 0,78 | 1,11 | 1,36 | 1,57 | 1,75 | 1,92 | 2,22 | 2,48 | 2,72 | 2,94 |
| DN | 1600 | Q (m³/s) | 1,585 | 2,241 | 2,745 | 3,170 | 3,544 | 3,882 | 4,483 | 5,012 | 5,490 | 5,930 |
|  |  | v (m/s) | 0,79 | 1,11 | 1,37 | 1,58 | 1,76 | 1,93 | 2,23 | 2,49 | 2,73 | 2,95 |
| DN | 1800 | Q (m³/s) | 2,013 | 2,847 | 3,487 | 4,026 | 4,502 | 4,931 | 5,694 | 6,366 | 6,974 | 7,533 |
|  |  | v (m/s) | 0,79 | 1,12 | 1,37 | 1,58 | 1,77 | 1,94 | 2,24 | 2,50 | 2,74 | 2,96 |
| DN | 2000 | Q (m³/s) | 2,492 | 3,525 | 4,317 | 4,985 | 5,573 | 6,105 | 7,050 | 7,882 | 8,634 | 9,326 |
|  |  | v (m/s) | 0,79 | 1,12 | 1,37 | 1,59 | 1,77 | 1,94 | 2,24 | 2,51 | 2,75 | 2,97 |

**Tabelle A6.6.2: Leistungsfähigkeit von Rohrdurchlässen (Kreisprofil)**

**Durchlasslänge = 10,00 m**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| d in mm | | Q (m³/s) | Δh in m | | | | | | | | | |
| v (m/s) | 0,05 | 0,10 | 0,15 | 0,20 | 0,25 | 0,30 | 0,40 | 0,50 | 0,60 | 0,70 |
| DN | 400 | Q (m³/s) | 0,079 | 0,111 | 0,136 | 0,157 | 0,176 | 0,193 | 0,223 | 0,249 | 0,273 | 0,295 |
|  |  | v (m/s) | 0,63 | 0,89 | 1,08 | 1,25 | 1,40 | 1,53 | 1,77 | 1,98 | 2,17 | 2,34 |
| DN | 500 | Q (m³/s) | 0,130 | 0,184 | 0,225 | 0,260 | 0,290 | 0,318 | 0,367 | 0,411 | 0,450 | 0,486 |
|  |  | v (m/s) | 0,66 | 0,94 | 1,15 | 1,32 | 1,48 | 1,62 | 1,87 | 2,09 | 2,29 | 2,47 |
| DN | 600 | Q (m³/s) | 0,194 | 0,274 | 0,336 | 0,388 | 0,434 | 0,475 | 0,549 | 0,614 | 0,672 | 0,726 |
|  |  | v (m/s) | 0,69 | 0,97 | 1,19 | 1,37 | 1,53 | 1,68 | 1,94 | 2,17 | 2,38 | 2,57 |
| DN | 700 | Q (m³/s) | 0,271 | 0,384 | 0,470 | 0,543 | 0,607 | 0,664 | 0,767 | 0,858 | 0,940 | 1,015 |
|  |  | v (m/s | 0,70 | 1,00 | 1,22 | 1,41 | 1,58 | 1,73 | 1,99 | 2,23 | 2,44 | 2,64 |
| DN | 800 | Q (m³/s) | 0,361 | 0,511 | 0,626 | 0,723 | 0,808 | 0,885 | 1,022 | 1,143 | 1,252 | 1,352 |
|  |  | v (m/s) | 0,72 | 1,02 | 1,25 | 1,44 | 1,61 | 1,76 | 2,03 | 2,27 | 2,49 | 2,69 |
| DN | 900 | Q (m³/s) | 0,465 | 0,657 | 0,805 | 0,929 | 1,039 | 1,138 | 1,314 | 1,469 | 1,609 | 1,738 |
|  |  | v (m/s) | 0,73 | 1,03 | 1,26 | 1,46 | 1,63 | 1,79 | 2,07 | 2,31 | 2,53 | 2,73 |
| DN | 1000 | Q (m³/s) | 0,581 | 0,821 | 1,006 | 1,161 | 1,298 | 1,422 | 1,642 | 1,836 | 2,011 | 2,173 |
|  |  | v (m/s) | 0,74 | 1,05 | 1,28 | 1,48 | 1,65 | 1,81 | 2,09 | 2,34 | 2,56 | 2,77 |
| DN | 1100 | Q (m³/s) | 0,710 | 1,003 | 1,229 | 1,419 | 1,587 | 1,738 | 2,007 | 2,244 | 2,458 | 2,655 |
|  |  | v (m/s) | 0,75 | 1,06 | 1,29 | 1,49 | 1,67 | 1,83 | 2,11 | 2,36 | 2,59 | 2,79 |
| DN | 1200 | Q (m³/s) | 0,851 | 1,204 | 1,475 | 1,703 | 1,904 | 2,085 | 2,408 | 2,692 | 2,949 | 3,185 |
|  |  | v (m/s) | 0,75 | 1,06 | 1,30 | 1,51 | 1,68 | 1,84 | 2,13 | 2,38 | 2,61 | 2,82 |
| DN | 1400 | Q (m³/s) | 1,173 | 1,659 | 2,032 | 2,347 | 2,624 | 2,874 | 3,319 | 3,711 | 4,065 | 4,391 |
|  |  | v (m/s) | 0,76 | 1,08 | 1,32 | 1,52 | 1,70 | 1,87 | 2,16 | 2,41 | 2,64 | 2,85 |
| DN | 1600 | Q (m³/s) | 1,547 | 2,187 | 2,679 | 3,094 | 3,459 | 3,789 | 4,375 | 4,891 | 5,358 | 5,788 |
|  |  | v (m/s) | 0,77 | 1,09 | 1,33 | 1,54 | 1,72 | 1,88 | 2,18 | 2,43 | 2,66 | 2,88 |
| DN | 1800 | Q (m³/s) | 1,971 | 2,788 | 3,414 | 3,943 | 4,408 | 4,829 | 5,576 | 6,234 | 6,829 | 7,376 |
|  |  | v (m/s) | 0,77 | 1,10 | 1,34 | 1,55 | 1,73 | 1,90 | 2,19 | 2,45 | 2,68 | 2,90 |
| DN | 2000 | Q (m³/s) | 2,447 | 3,461 | 4,238 | 4,894 | 5,472 | 5,994 | 6,921 | 7,738 | 8,477 | 9,156 |
|  |  | v (m/s) | 0,78 | 1,10 | 1,35 | 1,56 | 1,74 | 1,91 | 2,20 | 2,46 | 2,70 | 2,91 |

**Tabelle A6.6.3: Leistungsfähigkeit von Rohrdurchlässen (Kreisprofil)**

**Durchlasslänge = 20,00 m**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| d in mm | | Q (m³/s) | Δh in m | | | | | | | | | |
| v (m/s) | 0,05 | 0,10 | 0,15 | 0,20 | 0,25 | 0,30 | 0,40 | 0,50 | 0,60 | 0,70 |
| DN | 400 | Q (m³/s) | 0,067 | 0,094 | 0,115 | 0,133 | 0,149 | 0,163 | 0,188 | 0,210 | 0,230 | 0,249 |
|  |  | v (m/s) | 0,53 | 0,75 | 0,92 | 1,06 | 1,18 | 1,30 | 1,50 | 1,67 | 1,83 | 1,98 |
| DN | 500 | Q (m³/s) | 0,113 | 0,159 | 0,195 | 0,225 | 0,252 | 0,276 | 0,318 | 0,356 | 0,390 | 0,421 |
|  |  | v (m/s) | 0,57 | 0,81 | 0,99 | 1,15 | 1,28 | 1,40 | 1,62 | 1,81 | 1,99 | 2,14 |
| DN | 600 | Q (m³/s) | 0,172 | 0,243 | 0,297 | 0,343 | 0,384 | 0,420 | 0,485 | 0,542 | 0,594 | 0,642 |
|  |  | v (m/s) | 0,61 | 0,86 | 1,05 | 1,21 | 1,36 | 1,49 | 1,72 | 1,92 | 2,10 | 2,27 |
| DN | 700 | Q (m³/s) | 0,244 | 0,344 | 0,422 | 0,487 | 0,545 | 0,597 | 0,689 | 0,770 | 0,844 | 0,911 |
|  |  | v (m/s | 0,63 | 0,90 | 1,10 | 1,27 | 1,42 | 1,55 | 1,79 | 2,00 | 2,19 | 2,37 |
| DN | 800 | Q (m³/s) | 0,329 | 0,465 | 0,569 | 0,657 | 0,735 | 0,805 | 0,930 | 1,039 | 1,139 | 1,230 |
|  |  | v (m/s) | 0,65 | 0,92 | 1,13 | 1,31 | 1,46 | 1,60 | 1,85 | 2,07 | 2,27 | 2,45 |
| DN | 900 | Q (m³/s) | 0,427 | 0,604 | 0,739 | 0,854 | 0,955 | 1,046 | 1,207 | 1,350 | 1,479 | 1,597 |
|  |  | v (m/s) | 0,67 | 0,95 | 1,16 | 1,34 | 1,50 | 1,64 | 1,90 | 2,12 | 2,32 | 2,51 |
| DN | 1000 | Q (m³/s) | 0,538 | 0,761 | 0,932 | 1,076 | 1,203 | 1,318 | 1,522 | 1,702 | 1,864 | 2,013 |
|  |  | v (m/s) | 0,69 | 0,97 | 1,19 | 1,37 | 1,53 | 1,68 | 1,94 | 2,17 | 2,37 | 2,56 |
| DN | 1100 | Q (m³/s) | 0,662 | 0,937 | 1,147 | 1,325 | 1,481 | 1,622 | 1,873 | 2,095 | 2,295 | 2,478 |
|  |  | v (m/s) | 0,70 | 0,99 | 1,21 | 1,39 | 1,56 | 1,71 | 1,97 | 2,20 | 2,41 | 2,61 |
| DN | 1200 | Q (m³/s) | 0,800 | 1,131 | 1,385 | 1,599 | 1,788 | 1,959 | 2,262 | 2,529 | 2,770 | 2,992 |
|  |  | v (m/s) | 0,71 | 1,00 | 1,22 | 1,41 | 1,58 | 1,73 | 2,00 | 2,24 | 2,45 | 2,65 |
| DN | 1400 | Q (m³/s) | 1,113 | 1,574 | 1,928 | 2,226 | 2,489 | 2,726 | 3,148 | 3,520 | 3,856 | 4,165 |
|  |  | v (m/s) | 0,72 | 1,02 | 1,25 | 1,45 | 1,62 | 1,77 | 2,05 | 2,29 | 2,50 | 2,71 |
| DN | 1600 | Q (m³/s) | 1,478 | 2,090 | 2,560 | 2,956 | 3,305 | 3,621 | 4,181 | 4,674 | 5,120 | 5,531 |
|  |  | v (m/s) | 0,74 | 1,04 | 1,27 | 1,47 | 1,64 | 1,80 | 2,08 | 2,32 | 2,55 | 2,75 |
| DN | 1800 | Q (m³/s) | 1,895 | 2,680 | 3,282 | 3,790 | 4,237 | 4,641 | 5,359 | 5,992 | 6,564 | 7,090 |
|  |  | v (m/s) | 0,74 | 1,05 | 1,29 | 1,49 | 1,67 | 1,82 | 2,11 | 2,35 | 2,58 | 2,79 |
| DN | 2000 | Q (m³/s) | 2,363 | 3,342 | 4,093 | 4,726 | 5,284 | 5,788 | 6,683 | 7,472 | 8,186 | 8,841 |
|  |  | v (m/s) | 0,75 | 1,06 | 1,30 | 1,50 | 1,68 | 1,84 | 2,13 | 2,38 | 2,61 | 2,81 |

**Tabelle A6.6.4: Leistungsfähigkeit von Rohrdurchlässen (Kreisprofil)**

## Durchlasslänge = 30,00 m

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| d in mm | | Q (m³/s) | Δh in m | | | | | | | | | |
| v (m/s) | 0,05 | 0,10 | 0,15 | 0,20 | 0,25 | 0,30 | 0,40 | 0,50 | 0,60 | 0,70 |
| DN | 400 | Q (m³/s) | 0,059 | 0,083 | 0,102 | 0,117 | 0,131 | 0,144 | 0,166 | 0,186 | 0,203 | 0,219 |
|  |  | v (m/s) | 0,47 | 0,66 | 0,81 | 0,93 | 1,04 | 1,14 | 1,32 | 1,48 | 1,62 | 1,75 |
| DN | 500 | Q (m³/s) | 0,101 | 0,142 | 0,174 | 0,201 | 0,225 | 0,247 | 0,285 | 0,318 | 0,349 | 0,377 |
|  |  | v (m/s) | 0,51 | 0,73 | 0,89 | 1,03 | 1,15 | 1,26 | 1,45 | 1,62 | 1,78 | 1,92 |
| DN | 600 | Q (m³/s) | 0,155 | 0,220 | 0,269 | 0,311 | 0,347 | 0,381 | 0,440 | 0,491 | 0,538 | 0,581 |
|  |  | v (m/s) | 0,55 | 0,78 | 0,95 | 1,10 | 1,23 | 1,35 | 1,55 | 1,74 | 1,90 | 2,06 |
| DN | 700 | Q (m³/s) | 0,223 | 0,315 | 0,386 | 0,446 | 0,499 | 0,546 | 0,631 | 0,705 | 0,772 | 0,834 |
|  |  | v (m/s | 0,58 | 0,82 | 1,00 | 1,16 | 1,30 | 1,42 | 1,64 | 1,83 | 2,01 | 2,17 |
| DN | 800 | Q (m³/s) | 0,303 | 0,429 | 0,526 | 0,607 | 0,679 | 0,743 | 0,858 | 0,960 | 1,051 | 1,136 |
|  |  | v (m/s) | 0,60 | 0,85 | 1,05 | 1,21 | 1,35 | 1,48 | 1,71 | 1,91 | 2,09 | 2,26 |
| DN | 900 | Q (m³/s) | 0,397 | 0,562 | 0,688 | 0,794 | 0,888 | 0,973 | 1,123 | 1,256 | 1,376 | 1,486 |
|  |  | v (m/s) | 0,62 | 0,88 | 1,08 | 1,25 | 1,40 | 1,53 | 1,77 | 1,97 | 2,16 | 2,34 |
| DN | 1000 | Q (m³/s) | 0,504 | 0,712 | 0,873 | 1,008 | 1,126 | 1,234 | 1,425 | 1,593 | 1,745 | 1,885 |
|  |  | v (m/s) | 0,64 | 0,91 | 1,11 | 1,28 | 1,43 | 1,57 | 1,81 | 2,03 | 2,22 | 2,40 |
| DN | 1100 | Q (m³/s) | 0,623 | 0,882 | 1,080 | 1,247 | 1,394 | 1,527 | 1,764 | 1,972 | 2,160 | 2,333 |
|  |  | v (m/s) | 0,66 | 0,93 | 1,14 | 1,31 | 1,47 | 1,61 | 1,86 | 2,07 | 2,27 | 2,45 |
| DN | 1200 | Q (m³/s) | 0,756 | 1,070 | 1,310 | 1,513 | 1,691 | 1,853 | 2,139 | 2,392 | 2,620 | 2,830 |
|  |  | v (m/s) | 0,67 | 0,95 | 1,16 | 1,34 | 1,50 | 1,64 | 1,89 | 2,11 | 2,32 | 2,50 |
| DN | 1400 | Q (m³/s) | 1,061 | 1,501 | 1,838 | 2,122 | 2,373 | 2,599 | 3,001 | 3,355 | 3,676 | 3,970 |
|  |  | v (m/s) | 0,69 | 0,97 | 1,19 | 1,38 | 1,54 | 1,69 | 1,95 | 2,18 | 2,39 | 2,58 |
| DN | 1600 | Q (m³/s) | 1,418 | 2,005 | 2,456 | 2,836 | 3,170 | 3,473 | 4,010 | 4,484 | 4,912 | 5,305 |
|  |  | v (m/s) | 0,71 | 1,00 | 1,22 | 1,41 | 1,58 | 1,73 | 1,99 | 2,23 | 2,44 | 2,64 |
| DN | 1800 | Q (m³/s) | 1,827 | 2,583 | 3,164 | 3,653 | 4,084 | 4,474 | 5,166 | 5,776 | 6,327 | 6,834 |
|  |  | v (m/s) | 0,72 | 1,02 | 1,24 | 1,44 | 1,61 | 1,76 | 2,03 | 2,27 | 2,49 | 2,69 |
| DN | 2000 | Q (m³/s) | 2,287 | 3,234 | 3,961 | 4,574 | 5,114 | 5,602 | 6,469 | 7,232 | 7,923 | 8,557 |
|  |  | v (m/s) | 0,73 | 1,03 | 1,26 | 1,46 | 1,63 | 1,78 | 2,06 | 2,30 | 2,52 | 2,72 |

**Tabelle A6.6.5: Leistungsfähigkeit von Rohrdurchlässen (Kreisprofil)**

**Durchlasslänge = 40,00 m**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| d in mm | | Q (m³/s) | Δh in m | | | | | | | | | |
| v (m/s) | 0,05 | 0,10 | 0,15 | 0,20 | 0,25 | 0,30 | 0,40 | 0,50 | 0,60 | 0,70 |
| DN | 400 | Q (m³/s) | 0,053 | 0,075 | 0,092 | 0,106 | 0,119 | 0,130 | 0,150 | 0,168 | 0,184 | 0,199 |
|  |  | v (m/s) | 0,42 | 0,60 | 0,73 | 0,84 | 0,94 | 1,03 | 1,19 | 1,34 | 1,46 | 1,58 |
| DN | 500 | Q (m³/s) | 0,092 | 0,130 | 0,159 | 0,184 | 0,206 | 0,225 | 0,260 | 0,291 | 0,319 | 0,344 |
|  |  | v (m/s) | 0,47 | 0,66 | 0,81 | 0,94 | 1,05 | 1,15 | 1,32 | 1,48 | 1,62 | 1,75 |
| DN | 600 | Q (m³/s) | 0,143 | 0,202 | 0,248 | 0,286 | 0,320 | 0,350 | 0,405 | 0,452 | 0,496 | 0,535 |
|  |  | v (m/s) | 0,51 | 0,72 | 0,88 | 1,01 | 1,13 | 1,24 | 1,43 | 1,60 | 1,75 | 1,89 |
| DN | 700 | Q (m³/s) | 0,207 | 0,292 | 0,358 | 0,414 | 0,462 | 0,507 | 0,585 | 0,654 | 0,716 | 0,774 |
|  |  | v (m/s | 0,54 | 0,76 | 0,93 | 1,07 | 1,20 | 1,32 | 1,52 | 1,70 | 1,86 | 2,01 |
| DN | 800 | Q (m³/s) | 0,283 | 0,401 | 0,491 | 0,567 | 0,633 | 0,694 | 0,801 | 0,896 | 0,981 | 1,060 |
|  |  | v (m/s) | 0,56 | 0,80 | 0,98 | 1,13 | 1,26 | 1,38 | 1,59 | 1,78 | 1,95 | 2,11 |
| DN | 900 | Q (m³/s) | 0,373 | 0,527 | 0,646 | 0,746 | 0,834 | 0,913 | 1,054 | 1,179 | 1,291 | 1,395 |
|  |  | v (m/s) | 0,59 | 0,83 | 1,01 | 1,17 | 1,31 | 1,44 | 1,66 | 1,85 | 2,03 | 2,19 |
| DN | 1000 | Q (m³/s) | 0,475 | 0,672 | 0,823 | 0,950 | 1,063 | 1,164 | 1,344 | 1,503 | 1,646 | 1,778 |
|  |  | v (m/s) | 0,61 | 0,86 | 1,05 | 1,21 | 1,35 | 1,48 | 1,71 | 1,91 | 2,10 | 2,26 |
| DN | 1100 | Q (m³/s) | 0,591 | 0,835 | 1,023 | 1,182 | 1,321 | 1,447 | 1,671 | 1,868 | 2,046 | 2,210 |
|  |  | v (m/s) | 0,62 | 0,88 | 1,08 | 1,24 | 1,39 | 1,52 | 1,76 | 1,97 | 2,15 | 2,33 |
| DN | 1200 | Q (m³/s) | 0,719 | 1,017 | 1,246 | 1,439 | 1,609 | 1,762 | 2,035 | 2,275 | 2,492 | 2,692 |
|  |  | v (m/s) | 0,64 | 0,90 | 1,10 | 1,27 | 1,42 | 1,56 | 1,80 | 2,01 | 2,20 | 2,38 |
| DN | 1400 | Q (m³/s) | 1,016 | 1,437 | 1,759 | 2,032 | 2,271 | 2,488 | 2,873 | 3,212 | 3,519 | 3,801 |
|  |  | v (m/s) | 0,66 | 0,93 | 1,14 | 1,32 | 1,48 | 1,62 | 1,87 | 2,09 | 2,29 | 2,47 |
| DN | 1600 | Q (m³/s) | 1,364 | 1,930 | 2,363 | 2,729 | 3,051 | 3,342 | 3,859 | 4,315 | 4,726 | 5,105 |
|  |  | v (m/s) | 0,68 | 0,96 | 1,18 | 1,36 | 1,52 | 1,66 | 1,92 | 2,15 | 2,35 | 2,54 |
| DN | 1800 | Q (m³/s) | 1,765 | 2,496 | 3,057 | 3,530 | 3,947 | 4,324 | 4,993 | 5,582 | 6,115 | 6,605 |
|  |  | v (m/s) | 0,69 | 0,98 | 1,20 | 1,39 | 1,55 | 1,70 | 1,96 | 2,19 | 2,40 | 2,60 |
| DN | 2000 | Q (m³/s) | 2,218 | 3,137 | 3,842 | 4,436 | 4,960 | 5,433 | 6,273 | 7,014 | 7,683 | 8,299 |
|  |  | v (m/s) | 0,71 | 1,00 | 1,22 | 1,41 | 1,58 | 1,73 | 2,00 | 2,23 | 2,45 | 2,64 |

**Tabelle A6.6.6: Leistungsfähigkeit von Rohrdurchlässen (Kreisprofil)**

**Durchlasslänge = 50,00 m**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| d in mm | | Q (m³/s) | Δh in m | | | | | | | | | |
| v (m/s) | 0,05 | 0,10 | 0,15 | 0,20 | 0,25 | 0,30 | 0,40 | 0,50 | 0,60 | 0,70 |
| DN | 400 | Q (m³/s) | 0,049 | 0,069 | 0,085 | 0,098 | 0,109 | 0,120 | 0,138 | 0,154 | 0,169 | 0,183 |
|  |  | v (m/s) | 0,39 | 0,55 | 0,67 | 0,78 | 0,87 | 0,95 | 1,10 | 1,23 | 1,35 | 1,45 |
| DN | 500 | Q (m³/s) | 0,085 | 0,120 | 0,148 | 0,170 | 0,190 | 0,209 | 0,241 | 0,269 | 0,295 | 0,319 |
|  |  | v (m/s) | 0,43 | 0,61 | 0,75 | 0,87 | 0,97 | 1,06 | 1,23 | 1,37 | 1,50 | 1,62 |
| DN | 600 | Q (m³/s) | 0,133 | 0,189 | 0,231 | 0,267 | 0,298 | 0,327 | 0,377 | 0,422 | 0,462 | 0,499 |
|  |  | v (m/s) | 0,47 | 0,67 | 0,82 | 0,94 | 1,05 | 1,15 | 1,33 | 1,49 | 1,63 | 1,76 |
| DN | 700 | Q (m³/s) | 0,194 | 0,274 | 0,336 | 0,387 | 0,433 | 0,474 | 0,548 | 0,613 | 0,671 | 0,725 |
|  |  | v (m/s | 0,50 | 0,71 | 0,87 | 1,01 | 1,13 | 1,23 | 1,42 | 1,59 | 1,74 | 1,88 |
| DN | 800 | Q (m³/s) | 0,267 | 0,377 | 0,462 | 0,533 | 0,596 | 0,653 | 0,754 | 0,843 | 0,924 | 0,998 |
|  |  | v (m/s) | 0,53 | 0,75 | 0,92 | 1,06 | 1,19 | 1,30 | 1,50 | 1,68 | 1,84 | 1,99 |
| DN | 900 | Q (m³/s) | 0,352 | 0,498 | 0,610 | 0,705 | 0,788 | 0,863 | 0,997 | 1,114 | 1,221 | 1,319 |
|  |  | v (m/s) | 0,55 | 0,78 | 0,96 | 1,11 | 1,24 | 1,36 | 1,57 | 1,75 | 1,92 | 2,07 |
| DN | 1000 | Q (m³/s) | 0,451 | 0,638 | 0,781 | 0,902 | 1,009 | 1,105 | 1,276 | 1,426 | 1,563 | 1,688 |
|  |  | v (m/s) | 0,57 | 0,81 | 0,99 | 1,15 | 1,28 | 1,41 | 1,62 | 1,82 | 1,99 | 2,15 |
| DN | 1100 | Q (m³/s) | 0,563 | 0,796 | 0,975 | 1,125 | 1,258 | 1,378 | 1,591 | 1,779 | 1,949 | 2,105 |
|  |  | v (m/s) | 0,59 | 0,84 | 1,03 | 1,18 | 1,32 | 1,45 | 1,67 | 1,87 | 2,05 | 2,22 |
| DN | 1200 | Q (m³/s) | 0,687 | 0,972 | 1,190 | 1,375 | 1,537 | 1,684 | 1,944 | 2,174 | 2,381 | 2,572 |
|  |  | v (m/s) | 0,61 | 0,86 | 1,05 | 1,22 | 1,36 | 1,49 | 1,72 | 1,92 | 2,11 | 2,27 |
| DN | 1400 | Q (m³/s) | 0,976 | 1,380 | 1,690 | 1,952 | 2,182 | 2,390 | 2,760 | 3,086 | 3,380 | 3,651 |
|  |  | v (m/s) | 0,63 | 0,90 | 1,10 | 1,27 | 1,42 | 1,55 | 1,79 | 2,00 | 2,20 | 2,37 |
| DN | 1600 | Q (m³/s) | 1,317 | 1,862 | 2,280 | 2,633 | 2,944 | 3,225 | 3,724 | 4,163 | 4,561 | 4,926 |
|  |  | v (m/s) | 0,65 | 0,93 | 1,13 | 1,31 | 1,46 | 1,60 | 1,85 | 2,07 | 2,27 | 2,45 |
| DN | 1800 | Q (m³/s) | 1,710 | 2,418 | 2,961 | 3,419 | 3,823 | 4,188 | 4,836 | 5,406 | 5,922 | 6,397 |
|  |  | v (m/s) | 0,67 | 0,95 | 1,16 | 1,34 | 1,50 | 1,65 | 1,90 | 2,12 | 2,33 | 2,51 |
| DN | 2000 | Q (m³/s) | 2,155 | 3,047 | 3,732 | 4,310 | 4,818 | 5,278 | 6,095 | 6,814 | 7,465 | 8,063 |
|  |  | v (m/s) | 0,69 | 0,97 | 1,19 | 1,37 | 1,53 | 1,68 | 1,94 | 2,17 | 2,38 | 2,57 |

**Tabelle A6.6.7: Leistungsfähigkeit von Rohrdurchlässen (Kreisprofil)  
 Durchlasslänge = 60,00 m**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| d in mm | | Q (m³/s) | Δh in m | | | | | | | | | |
| v (m/s) | 0,05 | 0,10 | 0,15 | 0,20 | 0,25 | 0,30 | 0,40 | 0,50 | 0,60 | 0,70 |
| DN | 400 | Q (m³/s) | 0,045 | 0,064 | 0,079 | 0,091 | 0,102 | 0,111 | 0,129 | 0,144 | 0,157 | 0,170 |
|  |  | v (m/s) | 0,36 | 0,51 | 0,63 | 0,72 | 0,81 | 0,89 | 1,02 | 1,14 | 1,25 | 1,35 |
| DN | 500 | Q (m³/s) | 0,080 | 0,113 | 0,138 | 0,159 | 0,178 | 0,195 | 0,225 | 0,252 | 0,276 | 0,298 |
|  |  | v (m/s) | 0,41 | 0,57 | 0,70 | 0,81 | 0,91 | 0,99 | 1,15 | 1,28 | 1,41 | 1,52 |
| DN | 600 | Q (m³/s) | 0,125 | 0,177 | 0,217 | 0,251 | 0,280 | 0,307 | 0,354 | 0,396 | 0,434 | 0,469 |
|  |  | v (m/s) | 0,44 | 0,63 | 0,77 | 0,89 | 0,99 | 1,09 | 1,25 | 1,40 | 1,54 | 1,66 |
| DN | 700 | Q (m³/s) | 0,183 | 0,259 | 0,317 | 0,366 | 0,409 | 0,448 | 0,517 | 0,578 | 0,633 | 0,684 |
|  |  | v (m/s | 0,48 | 0,67 | 0,82 | 0,95 | 1,06 | 1,16 | 1,34 | 1,50 | 1,65 | 1,78 |
| DN | 800 | Q (m³/s) | 0,253 | 0,357 | 0,438 | 0,505 | 0,565 | 0,619 | 0,715 | 0,799 | 0,875 | 0,945 |
|  |  | v (m/s) | 0,50 | 0,71 | 0,87 | 1,01 | 1,12 | 1,23 | 1,42 | 1,59 | 1,74 | 1,88 |
| DN | 900 | Q (m³/s) | 0,335 | 0,474 | 0,580 | 0,670 | 0,749 | 0,821 | 0,948 | 1,060 | 1,161 | 1,254 |
|  |  | v (m/s) | 0,53 | 0,74 | 0,91 | 1,05 | 1,18 | 1,29 | 1,49 | 1,67 | 1,82 | 1,97 |
| DN | 1000 | Q (m³/s) | 0,430 | 0,608 | 0,745 | 0,860 | 0,962 | 1,054 | 1,217 | 1,361 | 1,490 | 1,610 |
|  |  | v (m/s) | 0,55 | 0,77 | 0,95 | 1,10 | 1,22 | 1,34 | 1,55 | 1,73 | 1,90 | 2,05 |
| DN | 1100 | Q (m³/s) | 0,538 | 0,761 | 0,932 | 1,077 | 1,204 | 1,318 | 1,522 | 1,702 | 1,865 | 2,014 |
|  |  | v (m/s) | 0,57 | 0,80 | 0,98 | 1,13 | 1,27 | 1,39 | 1,60 | 1,79 | 1,96 | 2,12 |
| DN | 1200 | Q (m³/s) | 0,659 | 0,932 | 1,142 | 1,318 | 1,474 | 1,615 | 1,865 | 2,085 | 2,284 | 2,467 |
|  |  | v (m/s) | 0,58 | 0,82 | 1,01 | 1,17 | 1,30 | 1,43 | 1,65 | 1,84 | 2,02 | 2,18 |
| DN | 1400 | Q (m³/s) | 0,940 | 1,330 | 1,629 | 1,880 | 2,102 | 2,303 | 2,659 | 2,973 | 3,257 | 3,518 |
|  |  | v (m/s) | 0,61 | 0,86 | 1,06 | 1,22 | 1,37 | 1,50 | 1,73 | 1,93 | 2,12 | 2,29 |
| DN | 1600 | Q (m³/s) | 1,273 | 1,801 | 2,206 | 2,547 | 2,848 | 3,119 | 3,602 | 4,027 | 4,411 | 4,765 |
|  |  | v (m/s) | 0,63 | 0,90 | 1,10 | 1,27 | 1,42 | 1,55 | 1,79 | 2,00 | 2,19 | 2,37 |
| DN | 1800 | Q (m³/s) | 1,659 | 2,346 | 2,874 | 3,318 | 3,710 | 4,064 | 4,692 | 5,246 | 5,747 | 6,207 |
|  |  | v (m/s) | 0,65 | 0,92 | 1,13 | 1,30 | 1,46 | 1,60 | 1,84 | 2,06 | 2,26 | 2,44 |
| DN | 2000 | Q (m³/s) | 2,097 | 2,965 | 3,632 | 4,194 | 4,689 | 5,136 | 5,931 | 6,631 | 7,264 | 7,846 |
|  |  | v (m/s) | 0,67 | 0,94 | 1,16 | 1,33 | 1,49 | 1,63 | 1,89 | 2,11 | 2,31 | 2,50 |

**Tabelle A6.6.8: Leistungsfähigkeit von Rohrdurchlässen (Kreisprofil)**

**Durchlasslänge = 80,00 m**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| d in mm | | Q (m³/s) | Δh in m | | | | | | | | | |
| v (m/s) | 0,05 | 0,10 | 0,15 | 0,20 | 0,25 | 0,30 | 0,40 | 0,50 | 0,60 | 0,70 |
| DN | 400 | Q (m³/s) | 0,040 | 0,057 | 0,070 | 0,081 | 0,090 | 0,099 | 0,114 | 0,128 | 0,140 | 0,151 |
|  |  | v (m/s) | 0,32 | 0,45 | 0,56 | 0,64 | 0,72 | 0,79 | 0,91 | 1,02 | 1,11 | 1,20 |
| DN | 500 | Q (m³/s) | 0,071 | 0,101 | 0,123 | 0,143 | 0,159 | 0,175 | 0,202 | 0,225 | 0,247 | 0,267 |
|  |  | v (m/s) | 0,36 | 0,51 | 0,63 | 0,73 | 0,81 | 0,89 | 1,03 | 1,15 | 1,26 | 1,36 |
| DN | 600 | Q (m³/s) | 0,113 | 0,160 | 0,195 | 0,226 | 0,252 | 0,276 | 0,319 | 0,357 | 0,391 | 0,422 |
|  |  | v (m/s) | 0,40 | 0,56 | 0,69 | 0,80 | 0,89 | 0,98 | 1,13 | 1,26 | 1,38 | 1,49 |
| DN | 700 | Q (m³/s) | 0,166 | 0,234 | 0,287 | 0,331 | 0,370 | 0,406 | 0,469 | 0,524 | 0,574 | 0,620 |
|  |  | v (m/s | 0,43 | 0,61 | 0,75 | 0,86 | 0,96 | 1,05 | 1,22 | 1,36 | 1,49 | 1,61 |
| DN | 800 | Q (m³/s) | 0,230 | 0,326 | 0,399 | 0,460 | 0,515 | 0,564 | 0,651 | 0,728 | 0,798 | 0,861 |
|  |  | v (m/s) | 0,46 | 0,65 | 0,79 | 0,92 | 1,02 | 1,12 | 1,30 | 1,45 | 1,59 | 1,71 |
| DN | 900 | Q (m³/s) | 0,307 | 0,434 | 0,532 | 0,614 | 0,686 | 0,752 | 0,868 | 0,971 | 1,063 | 1,148 |
|  |  | v (m/s) | 0,48 | 0,68 | 0,84 | 0,96 | 1,08 | 1,18 | 1,36 | 1,53 | 1,67 | 1,81 |
| DN | 1000 | Q (m³/s) | 0,396 | 0,560 | 0,686 | 0,792 | 0,885 | 0,970 | 1,120 | 1,252 | 1,372 | 1,482 |
|  |  | v (m/s) | 0,50 | 0,71 | 0,87 | 1,01 | 1,13 | 1,24 | 1,43 | 1,59 | 1,75 | 1,89 |
| DN | 1100 | Q (m³/s) | 0,498 | 0,704 | 0,862 | 0,995 | 1,113 | 1,219 | 1,408 | 1,574 | 1,724 | 1,862 |
|  |  | v (m/s) | 0,52 | 0,74 | 0,91 | 1,05 | 1,17 | 1,28 | 1,48 | 1,66 | 1,81 | 1,96 |
| DN | 1200 | Q (m³/s) | 0,612 | 0,866 | 1,060 | 1,224 | 1,369 | 1,499 | 1,731 | 1,935 | 2,120 | 2,290 |
|  |  | v (m/s) | 0,54 | 0,77 | 0,94 | 1,08 | 1,21 | 1,33 | 1,53 | 1,71 | 1,87 | 2,02 |
| DN | 1400 | Q (m³/s) | 0,879 | 1,244 | 1,523 | 1,759 | 1,966 | 2,154 | 2,487 | 2,781 | 3,046 | 3,290 |
|  |  | v (m/s) | 0,57 | 0,81 | 0,99 | 1,14 | 1,28 | 1,40 | 1,62 | 1,81 | 1,98 | 2,14 |
| DN | 1600 | Q (m³/s) | 1,199 | 1,695 | 2,076 | 2,397 | 2,680 | 2,936 | 3,390 | 3,790 | 4,152 | 4,485 |
|  |  | v (m/s) | 0,60 | 0,84 | 1,03 | 1,19 | 1,33 | 1,46 | 1,69 | 1,89 | 2,07 | 2,23 |
| DN | 1800 | Q (m³/s) | 1,570 | 2,220 | 2,719 | 3,140 | 3,511 | 3,846 | 4,440 | 4,965 | 5,438 | 5,874 |
|  |  | v (m/s) | 0,62 | 0,87 | 1,07 | 1,23 | 1,38 | 1,51 | 1,74 | 1,95 | 2,14 | 2,31 |
| DN | 2000 | Q (m³/s) | 1,994 | 2,819 | 3,453 | 3,987 | 4,458 | 4,883 | 5,639 | 6,304 | 6,906 | 7,459 |
|  |  | v (m/s) | 0,63 | 0,90 | 1,10 | 1,27 | 1,42 | 1,55 | 1,79 | 2,01 | 2,20 | 2,37 |

**Tabelle A6.6.9: Leistungsfähigkeit von Rohrdurchlässen (Kreisprofil)**

**Durchlasslänge = 100,00 m**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| d in mm | | Q (m³/s) | Δh in m | | | | | | | | | |
| v (m/s) | 0,05 | 0,10 | 0,15 | 0,20 | 0,25 | 0,30 | 0,40 | 0,50 | 0,60 | 0,70 |
| DN | 400 | Q (m³/s) | 0,037 | 0,052 | 0,064 | 0,073 | 0,082 | 0,090 | 0,104 | 0,116 | 0,127 | 0,137 |
|  |  | v (m/s) | 0,29 | 0,41 | 0,51 | 0,58 | 0,65 | 0,72 | 0,83 | 0,92 | 1,01 | 1,09 |
| DN | 500 | Q (m³/s) | 0,065 | 0,092 | 0,113 | 0,130 | 0,146 | 0,159 | 0,184 | 0,206 | 0,225 | 0,244 |
|  |  | v (m/s) | 0,33 | 0,47 | 0,57 | 0,66 | 0,74 | 0,81 | 0,94 | 1,05 | 1,15 | 1,24 |
| DN | 600 | Q (m³/s) | 0,103 | 0,146 | 0,179 | 0,207 | 0,231 | 0,253 | 0,293 | 0,327 | 0,358 | 0,387 |
|  |  | v (m/s) | 0,37 | 0,52 | 0,63 | 0,73 | 0,82 | 0,90 | 1,03 | 1,16 | 1,27 | 1,37 |
| DN | 700 | Q (m³/s) | 0,153 | 0,216 | 0,264 | 0,305 | 0,341 | 0,374 | 0,431 | 0,482 | 0,528 | 0,571 |
|  |  | v (m/s | 0,40 | 0,56 | 0,69 | 0,79 | 0,89 | 0,97 | 1,12 | 1,25 | 1,37 | 1,48 |
| DN | 800 | Q (m³/s) | 0,213 | 0,301 | 0,369 | 0,426 | 0,476 | 0,521 | 0,602 | 0,673 | 0,737 | 0,796 |
|  |  | v (m/s) | 0,42 | 0,60 | 0,73 | 0,85 | 0,95 | 1,04 | 1,20 | 1,34 | 1,47 | 1,58 |
| DN | 900 | Q (m³/s) | 0,285 | 0,403 | 0,493 | 0,570 | 0,637 | 0,698 | 0,806 | 0,901 | 0,987 | 1,066 |
|  |  | v (m/s) | 0,45 | 0,63 | 0,78 | 0,90 | 1,00 | 1,10 | 1,27 | 1,42 | 1,55 | 1,68 |
| DN | 1000 | Q (m³/s) | 0,369 | 0,522 | 0,639 | 0,738 | 0,825 | 0,903 | 1,043 | 1,166 | 1,278 | 1,380 |
|  |  | v (m/s) | 0,47 | 0,66 | 0,81 | 0,94 | 1,05 | 1,15 | 1,33 | 1,48 | 1,63 | 1,76 |
| DN | 1100 | Q (m³/s) | 0,465 | 0,658 | 0,805 | 0,930 | 1,040 | 1,139 | 1,315 | 1,471 | 1,611 | 1,740 |
|  |  | v (m/s) | 0,49 | 0,69 | 0,85 | 0,98 | 1,09 | 1,20 | 1,38 | 1,55 | 1,70 | 1,83 |
| DN | 1200 | Q (m³/s) | 0,574 | 0,811 | 0,994 | 1,147 | 1,283 | 1,405 | 1,623 | 1,814 | 1,987 | 2,147 |
|  |  | v (m/s) | 0,51 | 0,72 | 0,88 | 1,01 | 1,13 | 1,24 | 1,43 | 1,60 | 1,76 | 1,90 |
| DN | 1400 | Q (m³/s) | 0,829 | 1,172 | 1,436 | 1,658 | 1,854 | 2,031 | 2,345 | 2,621 | 2,872 | 3,102 |
|  |  | v (m/s) | 0,54 | 0,76 | 0,93 | 1,08 | 1,20 | 1,32 | 1,52 | 1,70 | 1,87 | 2,01 |
| DN | 1600 | Q (m³/s) | 1,136 | 1,606 | 1,967 | 2,271 | 2,539 | 2,781 | 3,212 | 3,591 | 3,934 | 4,249 |
|  |  | v (m/s) | 0,56 | 0,80 | 0,98 | 1,13 | 1,26 | 1,38 | 1,60 | 1,79 | 1,96 | 2,11 |
| DN | 1800 | Q (m³/s) | 1,494 | 2,113 | 2,587 | 2,988 | 3,340 | 3,659 | 4,225 | 4,724 | 5,175 | 5,589 |
|  |  | v (m/s) | 0,59 | 0,83 | 1,02 | 1,17 | 1,31 | 1,44 | 1,66 | 1,86 | 2,03 | 2,20 |
| DN | 2000 | Q (m³/s) | 1,904 | 2,693 | 3,298 | 3,808 | 4,258 | 4,664 | 5,386 | 6,022 | 6,596 | 7,125 |
|  |  | v (m/s) | 0,61 | 0,86 | 1,05 | 1,21 | 1,36 | 1,48 | 1,71 | 1,92 | 2,10 | 2,27 |