# Woven wire mesh specification tables

Download paired wire-cloth specifications for plain square, Dutch, reverse Dutch, twill, Monel and pure nickel selections. Includes complete construction rows, units and a separate nickel composition and supply-range definition.

## Eight clearly separated data groups

The package contains 27 plain square-weave rows, 43 plain Dutch rows, eight reverse Dutch belt rows, two fine twill square-weave rows, 40 twill Dutch rows, 27 Monel geometry rows, four N-series chemistry rows and one independent nickel supply-range row.

XLSX: separate construction sheets with filters. CSV: one field per record, linked by series and row ID. PDF: readable complete tables and definitions.

## Field definitions and units

Read counts and wire diameters in warp × weft order. Square-mesh aperture is clear geometric space. Dutch pore size and effective filtration area describe dense-woven flow passages. Mass is kg/m² and thickness is mm. These quantities support different selection questions.

CSV uses UTF-8 with BOM, a comma delimiter and a decimal point. XLSX stores individual dimensions and measured values as numbers. Paired designations and ranges remain text. Empty cells mean no value is assigned for that construction.

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

## Construction and test conditions

Plain and twill identify interlacing. Monel 400 and K-500 are separate alloy choices; specify the alloy and weave alongside the chosen geometry. Nickel N2, N4, N6 and N8 are chemistry designations, with Ni+Co as a minimum and the other listed constituents as maxima in mass %. The independent 1–300 mesh/in and 0.03–1 mm ranges define supply coverage. Fine twill entries are nominal catalogue dimensions with displayed rounding.

# How to use the tables

1. Select the weave and material family. 2. Select one complete row using count, both wire diameters and the relevant aperture or pore-size field. 3. Define roll, sheet, slit strip or cut-part dimensions. 4. Add flow, fluid, temperature, support and sealing details for the assembled filter.

For square weave, pitch p = 25.4/N mm and aperture a = p − d. At 20 mesh and d = 0.25 mm, p = 1.27 mm and a = 1.02 mm. The formula explains square geometry; select Dutch woven cloth by its complete warp/weft construction and pore-size designation.

## Questions when specifying a filter

### Can the same mesh count have different openings?

Yes. Wire diameter changes the remaining clear opening. Select count, diameter and aperture together.

### How do I use the nickel ranges?

Specify the required count and wire diameter together with the exact nickel grade and weave. The ranges are independent coverage limits. Chemistry rows define the material, while the finished cloth drawing defines the geometry.

# W01 Plain square weave

| Row ID | Mesh count (mesh/in) | Wire diameter (in) | Wire diameter (mm) | Clear aperture (in) | Clear aperture (mm) | Open area (%) |
|---|---|---|---|---|---|---|
| W01-001 | 1×1 | .080 | 2.03 | .920 | 23.37 | 84.6 |
| W01-002 | 2×2 | .063 | 1.60 | .437 | 11.10 | 76.4 |
| W01-003 | 3×3 | .054 | 1.37 | .279 | 7.09 | 70.1 |
| W01-004 | 4×4 | .063 | 1.60 | .187 | 4.75 | 56.0 |
| W01-005 | 4×4 | .047 | 1.19 | .203 | 5.16 | 65.9 |
| W01-006 | 5×5 | .041 | 1.04 | .159 | 4.04 | 63.2 |
| W01-007 | 6×6 | .035 | .89 | .132 | 3.35 | 62.7 |
| W01-008 | 8×8 | .028 | .71 | .097 | 2.46 | 60.2 |
| W01-009 | 10×10 | .025 | .64 | .075 | 1.91 | 56.3 |
| W01-010 | 10×10 | .020 | .51 | .080 | 2.03 | 64.0 |
| W01-011 | 12×12 | .023 | .584 | .060 | 1.52 | 51.8 |
| W01-012 | 12×12 | .020 | .508 | .063 | 1.60 | 57.2 |
| W01-013 | 14×14 | .023 | .584 | .048 | 1.22 | 45.2 |
| W01-014 | 14×14 | .020 | .508 | .051 | 1.30 | 51.0 |
| W01-015 | 16×16 | .018 | .457 | .0445 | 1.13 | 50.7 |
| W01-016 | 18×18 | .017 | .432 | .0386 | .98 | 48.3 |
| W01-017 | 20×20 | .020 | .508 | .0300 | .76 | 36.0 |
| W01-018 | 20×20 | .016 | .406 | .0340 | .86 | 46.2 |
| W01-019 | 24×24 | .014 | .356 | .0277 | .70 | 44.2 |
| W01-020 | 30×30 | .013 | .330 | .0203 | .52 | 37.1 |

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

## W01 Plain square weave

| Row ID | Mesh count (mesh/in) | Wire diameter (in) | Wire diameter (mm) | Clear aperture (in) | Clear aperture (mm) | Open area (%) |
|---|---|---|---|---|---|---|
| W01-021 | 30×30 | .012 | .305 | .0213 | .54 | 40.8 |
| W01-022 | 30×30 | .009 | .229 | .0243 | .62 | 53.1 |
| W01-023 | 35×35 | .011 | .279 | .0176 | .45 | 37.9 |
| W01-024 | 40×40 | .010 | .254 | .0150 | .38 | 36.0 |
| W01-025 | 50×50 | .009 | .229 | .0110 | .28 | 30.3 |
| W01-026 | 50×50 | .008 | .203 | .0120 | .31 | 36.0 |
| W01-027 | 60×60 | .0075 | .191 | .0092 | .23 | 30.5 |

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

# W02 Plain Dutch weave

| Row ID | Warp × weft count (mesh/in) | Warp × weft wires (mm) | Pore-size designation (µm) | Effective filtration area (%) | Mass per area (kg/m²) | Thickness (mm) |
|---|---|---|---|---|---|---|
| W02-001 | 7×40 | 0.9×0.71 | 347 | 14.3 | 6.65 | 2.32 |
| W02-002 | 7×44 | 0.71×0.63 | 319 | 14.2 | 5.55 | 1.97 |
| W02-003 | 8×45 | 0.8×0.6 | 310 | 15.5 | 5.7 | 2.00 |
| W02-004 | 8.5×60 | 0.63×0.45 | 296 | 20.3 | 4.16 | 1.53 |
| W02-005 | 8×85 | 0.45×0.315 | 275 | 27.3 | 2.73 | 1.08 |
| W02-006 | 10×90 | 0.45×0.28 | 249 | 29.2 | 2.57 | 1.01 |
| W02-007 | 10×76 | 0.5×0.355 | 248 | 21.8 | 3.24 | 1.21 |
| W02-008 | 12×86 | 0.45×0.315 | 211 | 20.9 | 2.93 | 1.08 |
| W02-009 | 12×64 | 0.56×0.4 | 211 | 16.0 | 3.89 | 1.36 |
| W02-010 | 12.5×76 | 0.45×0.355 | 192 | 15.9 | 3.26 | 1.16 |
| W02-011 | 14×100 | 0.40×0.28 | 182 | 20.3 | 2.62 | 0.96 |
| W02-012 | 14×110 | 0.355×0.25 | 177 | 22.2 | 2.28 | 0.855 |
| W02-013 | 14×76 | 0.45×0.355 | 173 | 14.3 | 3.33 | 1.16 |
| W02-014 | 16×100 | 0.40×0.28 | 160 | 17.7 | 2.7 | 0.96 |
| W02-015 | 17×120 | 0.355×0.224 | 155 | 22.4 | 2.19 | 0.803 |
| W02-016 | 16×120 | 0.28×0.224 | 145 | 19.2 | 1.97 | 0.728 |
| W02-017 | 20×140 | 0.315×0.20 | 133 | 21.5 | - | 0.715 |
| W02-018 | 20×170 | 0.25×0.16 | 130 | 28.9 | 1.56 | 0.57 |
| W02-019 | 20×110 | 0.355×0.25 | 126 | 15.3 | 2.47 | 0.855 |
| W02-020 | 22×120 | 0.315×0.224 | 115 | 15.5 | 2.20 | 0.763 |

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

# W02 Plain Dutch weave

| Row ID | Warp × weft count (mesh/in) | Warp × weft wires (mm) | Pore-size designation (µm) | Effective filtration area (%) | Mass per area (kg/m²) | Thickness (mm) |
|---|---|---|---|---|---|---|
| W02-021 | 25×140 | 0.28×0.2 | 100 | 15.2 | 1.96 | 0.68 |
| W02-022 | 24×110 | 0.355×0.25 | 97 | 11.3 | 2.60 | 0.855 |
| W02-023 | 28×150 | 0.28×0.18 | 92 | 15.9 | 1.87 | 0.64 |
| W02-024 | 30×150 | 0.25×0.18 | 82 | 13.5 | 1.79 | 0.61 |
| W02-025 | 30×140 | 0.315×0.20 | 77 | 11.4 | 2.21 | 0.715 |
| W02-026 | 35×190 | 0.224×0.14 | 74 | 16.8 | 1.47 | 0.504 |
| W02-027 | 35×170 | 0.224×0.16 | 69 | 12.8 | 1.62 | 0.544 |
| W02-028 | 40×200 | 0.18×0.135 | 63 | 15.4 | 1.24 | 0.43 |
| W02-029 | 45×250 | 0.16×0.11 | 56 | 15.2 | 1.11 | 0.384 |
| W02-030 | 50×300 | 0.16×0.09 | 55 | 20.0 | 0.98 | 0.34 |
| W02-031 | 60×500 | 0.14×0.055 | 51 | 34.1 | 0.70 | 0.252 |
| W02-032 | 50×270 | 0.14×0.10 | 50 | 15.2 | 0.98 | 0.34 |
| W02-033 | 70×930 | 0.10×0.03 | 30 | 36.2 | 0.39 | 0.16 |
| W02-034 | 65×390 | 0.125×0.071 | 42 | 19.1 | 0.78 | 0.267 |
| W02-035 | 60×300 | 0.14×0.09 | 41 | 14.1 | 0.96 | 0.32 |
| W02-036 | 80×700 | 0.125×0.04 | 40 | 38.1 | 0.60 | 0.205 |
| W02-037 | 60×270 | 0.14×0.1 | 39 | 11.2 | 1.03 | 0.34 |
| W02-038 | 77×560 | 0.14×0.05 | 38 | 27.5 | 0.74 | 0.24 |
| W02-039 | 80×600 | 0.1×0.045 | 37 | 29.8 | 0.53 | 0.19 |
| W02-040 | 70×390 | 0.112×0.071 | 36 | 16.3 | 0.74 | 0.254 |

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

# W02 Plain Dutch weave

| Row ID | Warp × weft count (mesh/in) | Warp × weft wires (mm) | Pore-size designation (µm) | Effective filtration area (%) | Mass per area (kg/m²) | Thickness (mm) |
|---|---|---|---|---|---|---|
| W02-041 | 65×750 | 0.10×0.036 | 36 | 37.1 | 0.43 | 0.172 |
| W02-042 | 70×340 | 0.125×0.08 | 35 | 13.2 | 0.86 | 0.285 |
| W02-043 | 80×430 | 0.125×0.063 | 32 | 16.6 | 0.77 | 0.251 |

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

# W03 Reverse Dutch belt

| Row ID | Warp × weft count (mesh/in) | Warp × weft wires (mm) | Thickness (mm) | Belt width range (mm) |
|---|---|---|---|---|
| W03-001 | 54×15 | 0.45×0.60 | 1.75 | 50–800 |
| W03-002 | 72×15 | 0.45×0.55 | 1.7 | 50–800 |
| W03-003 | 132×17 | 0.23×0.45 | 1.2 | 50–1000 |
| W03-004 | 160×18 | 0.28×0.45 | 1.27 | 50–1000 |
| W03-005 | 200×40 | 0.17×0.27 | 0.7 | 50–1500 |
| W03-006 | 260×40 | 0.15×0.27 | 0.65 | 50–1500 |
| W03-007 | 300×40 | 0.15×0.27 | 0.65 | 50–1500 |
| W03-008 | 350×40 | 0.13×0.27 | 0.6 | 50–1500 |

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

# W04 Fine twill square weave

| Row ID | Mesh count (mesh/in) | Wire diameter (mm) | Clear aperture (mm) | Open area (%) |
|---|---|---|---|---|
| W04-001 | 500×500 | 0.0254 | 0.0254 | 25.0 |
| W04-002 | 635×635 | 0.0203 | 0.0203 | 25.0 |

Plain and twill identify interlacing. Monel 400 and K-500 are separate alloy choices; specify the alloy and weave alongside the chosen geometry. Nickel N2, N4, N6 and N8 are chemistry designations, with Ni+Co as a minimum and the other listed constituents as maxima in mass %. The independent 1–300 mesh/in and 0.03–1 mm ranges define supply coverage. Fine twill entries are nominal catalogue dimensions with displayed rounding.

# W05 Twill Dutch weave

| Row ID | Warp × weft count (mesh/in) | Warp × weft wires (mm) | Pore-size designation (μm) | Effective filtration area (%) | Mass per area (kg/m²) | Thickness (mm) |
|---|---|---|---|---|---|---|
| W05-001 | 20×270 | 0.25×0.2 | 119 | 17.6 | 3.14 | 0.65 |
| W05-002 | 20×200 | 0.355×0.28 | 118 | 12.1 | 4.58 | 0.915 |
| W05-003 | 24×300 | 0.28×0.18 | 110 | 19.6 | 3.01 | 0.64 |
| W05-004 | 20×150 | 0.45×0.355 | 101 | 7.5 | 6.02 | 1.16 |
| W05-005 | 30×340 | 0.28×0.16 | 89 | 17.9 | 2.84 | 0.60 |
| W05-006 | 30×270 | 0.28×0.20 | 77 | 11.2 | 3.41 | 0.68 |
| W05-007 | 40×540 | 0.18×0.10 | 70 | 23.5 | 1.73 | 0.38 |
| W05-008 | 40×430 | 0.18×0.125 | 63 | 15.4 | 2.09 | 0.43 |
| W05-009 | 50×600 | 0.125×0.09 | 51 | 17.2 | 1.47 | 0.305 |
| W05-010 | 50×500 | 0.14×0.11 | 47 | 12 | 1.83 | 0.364 |
| W05-011 | 65×600 | 0.14×0.09 | 36 | - | 1.59 | 0.32 |
| W05-012 | 70×600 | 0.14×0.09 | 31 | 10.1 | 1.61 | 0.32 |
| W05-013 | 78×760 | 0.112×0.071 | 31 | 13.5 | 1.25 | 0.254 |
| W05-014 | 78×680 | 0.112×0.08 | 29 | 10.3 | 1.37 | 0.272 |
| W05-015 | 80×680 | 0.112×0.08 | 28 | 9.8 | 1.38 | 0.272 |
| W05-016 | 90×850 | 0.10×0.063 | 26 | 12.7 | 1.12 | 0.226 |
| W05-017 | 90×760 | 0.10×0.071 | 24 | 9.6 | 1.23 | 0.242 |
| W05-018 | 100×850 | 0.10×0.063 | 22 | 10 | 1.14 | 0.226 |
| W05-019 | 130×1500 | 0.063×0.036 | 21 | 18.6 | 0.64 | 0.135 |
| W05-020 | 100×760 | 0.10×0.071 | 20 | 7.4 | 1.25 | 0.242 |

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## W05 Twill Dutch weave

| Row ID | Warp × weft count (mesh/in) | Warp × weft wires (mm) | Pore-size designation (μm) | Effective filtration area (%) | Mass per area (kg/m²) | Thickness (mm) |
|---|---|---|---|---|---|---|
| W05-021 | 130×1200 | 0.071×0.045 | 18 | 12 | 0.80 | 0.161 |
| W05-022 | 130×1100 | 0.071×0.05 | 17 | 9.4 | 0.87 | 0.171 |
| W05-023 | 150×1400 | 0.063×0.04 | 15 | 11.4 | 0.71 | 0.143 |
| W05-024 | 160×1500 | 0.063×0.036 | 15 | 12.4 | 0.67 | 0.135 |
| W05-025 | 165×1500 | 0.063×0.036 | 14 | 11.4 | 0.67 | 0.135 |
| W05-026 | 174×1700 | 0.063×0.032 | 13 | 12.9 | 0.62 | 0.127 |
| W05-027 | 165×1400 | 0.063×0.04 | 13 | 8.8 | 0.73 | 0.143 |
| W05-028 | 174×1400 | 0.063×0.04 | 11 | 7.4 | 0.74 | 0.143 |
| W05-029 | 203×1600 | 0.05×0.032 | 10 | 9.3 | 0.58 | 0.114 |
| W05-030 | 216×1800 | 0.045×0.03 | 10 | 9.4 | 0.53 | 0.105 |
| W05-031 | 203×1500 | 0.056×0.036 | 9 | 6.2 | 0.67 | 0.128 |
| W05-032 | 250×1900 | 0.04×0.028 | 8 | 7.8 | 0.51 | 0.096 |
| W05-033 | 250×1600 | 0.05×0.032 | 8 | 3.8 | 0.63 | 0.114 |
| W05-034 | 285×2100 | 0.036×0.025 | 7 | 7.2 | 0.44 | 0.086 |
| W05-035 | 300×2100 | 0.036×0.025 | 6 | 6.0 | 0.44 | 0.086 |
| W05-036 | 317×2100 | 0.036×0.025 | 5 | 4.7 | 0.44 | 0.086 |
| W05-037 | 325×2300 | 0.036×0.024 | 4 | 4.2 | 0.44 | 0.086 |
| W05-038 | 363×2300 | 0.032×0.022 | 4 | 4.5 | 0.40 | 0.076 |
| W05-039 | 400×2700 | 0.028×0.02 | 4 | 4.7 | 0.36 | 0.068 |
| W05-040 | 500×3500 | 0.025×0.015 | 3 | 4.9 | 0.30 | 0.055 |

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

# W06 Monel square mesh

| Row ID | Mesh count (mesh/in) | Wire diameter (mm) | Clear aperture (mm) |
|---|---|---|---|
| W06-001 | 2 | 1.80 | 10.90 |
| W06-002 | 3 | 1.60 | 6.866 |
| W06-003 | 4 | 1.20 | 5.15 |
| W06-004 | 5 | 0.91 | 4.17 |
| W06-005 | 6 | 0.80 | 3.433 |
| W06-006 | 8 | 0.60 | 2.575 |
| W06-007 | 10 | 0.55 | 1.990 |
| W06-008 | 12 | 0.50 | 1.616 |
| W06-009 | 14 | 0.45 | 1.362 |
| W06-010 | 16 | 0.40 | 1.188 |
| W06-011 | 18 | 0.35 | 1.060 |
| W06-012 | 20 | 0.30 | 0.970 |
| W06-013 | 26 | 0.28 | 0.696 |
| W06-014 | 30 | 0.25 | 0.596 |
| W06-015 | 40 | 0.21 | 0.425 |
| W06-016 | 50 | 0.19 | 0.318 |
| W06-017 | 60 | 0.15 | 0.273 |
| W06-018 | 70 | 0.14 | 0.223 |
| W06-019 | 80 | 0.12 | 0.198 |
| W06-020 | 90 | 0.11 | 0.172 |

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

# W06 Monel square mesh

| Row ID | Mesh count (mesh/in) | Wire diameter (mm) | Clear aperture (mm) |
|---|---|---|---|
| W06-021 | 100 | 0.10 | 0.154 |
| W06-022 | 120 | 0.08 | 0.132 |
| W06-023 | 140 | 0.07 | 0.111 |
| W06-024 | 150 | 0.065 | 0.104 |
| W06-025 | 160 | 0.065 | 0.094 |
| W06-026 | 180 | 0.053 | 0.088 |
| W06-027 | 200 | 0.053 | 0.074 |

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

## W07 N-series nickel composition limits

| Row ID | Grade | Ni+Co minimum (%) | Cu maximum (%) | Si maximum (%) | Mn maximum (%) | C maximum (%) |
|---|---|---|---|---|---|---|
| W07-001 | N2 | 99.98 | 0.001 | 0.003 | 0.002 | 0.005 |
| W07-002 | N4 | 99.90 | 0.015 | 0.030 | 0.002 | 0.010 |
| W07-003 | N6 | 99.50 | 0.030 | 0.100 | 0.050 | 0.100 |
| W07-004 | N8 | 99.00 | 0.150 | 0.150 | 0.200 | 0.200 |

Plain and twill identify interlacing. Monel 400 and K-500 are separate alloy choices; specify the alloy and weave alongside the chosen geometry. Nickel N2, N4, N6 and N8 are chemistry designations, with Ni+Co as a minimum and the other listed constituents as maxima in mass %. The independent 1–300 mesh/in and 0.03–1 mm ranges define supply coverage. Fine twill entries are nominal catalogue dimensions with displayed rounding.

## W07 N-series nickel composition limits

| Row ID | Mg maximum (%) | S maximum (%) | Fe maximum (%) | Total impurities maximum (%) |
|---|---|---|---|---|
| W07-001 | 0.003 | 0.001 | 0.007 | 0.02 |
| W07-002 | 0.010 | 0.001 | 0.040 | 0.10 |
| W07-003 | 0.100 | 0.005 | 0.100 | 0.50 |
| W07-004 | 0.100 | 0.015 | 0.300 | 1.00 |

Plain and twill identify interlacing. Monel 400 and K-500 are separate alloy choices; specify the alloy and weave alongside the chosen geometry. Nickel N2, N4, N6 and N8 are chemistry designations, with Ni+Co as a minimum and the other listed constituents as maxima in mass %. The independent 1–300 mesh/in and 0.03–1 mm ranges define supply coverage. Fine twill entries are nominal catalogue dimensions with displayed rounding.

# W08 Nickel independent supply ranges

| Row ID | Mesh count minimum (mesh/in) | Mesh count maximum (mesh/in) | Wire diameter minimum (mm) | Wire diameter maximum (mm) |
|---|---|---|---|---|
| W08-001 | 1 | 300 | 0.03 | 1 |

Plain and twill identify interlacing. Monel 400 and K-500 are separate alloy choices; specify the alloy and weave alongside the chosen geometry. Nickel N2, N4, N6 and N8 are chemistry designations, with Ni+Co as a minimum and the other listed constituents as maxima in mass %. The independent 1–300 mesh/in and 0.03–1 mm ranges define supply coverage. Fine twill entries are nominal catalogue dimensions with displayed rounding.