



# DTP41 Target Design Guidelines

## Target Type: No Gaps

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### Pros

- Higher density of color patches per sheet.

### Cons

- Not suited for adjacent patches of very similar color.

## Target Type: With Gaps

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### Pros

- Well suited for adjacent patches of very similar density
- Maximum flexibility of patch layout options

### Cons

- Minor reduction in density of color patches per sheet
- More considerations in strip layout to account for

## Definition Rules

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1. The DTP41 is designed to have a single linear column of patches defined and measured as a single pass of the linear column under the optical engine. A full set of passes may be required to present large quantities of patches to the instrument. Each single pass is defined as a “strip”. The strip may be from 1 to 100 patches in length. After the device measures a single ‘pass’ of this column of patches and has valid data, the instrument can provide the measured patch data to the host computer in several different color space formats, until another pass of data is read.
2. The sheet length (in scanning direction) ranges from approximately 3 inches (75 mm) up to 60 inches (1516 mm). Below are examples for targets with no gaps and targets with gaps.

### No Gaps

#### One patch example:

1.50	inch leader
0.28	1 x 0.28 inch (7.0mm) patch (the minimum)
1.19	30mm (greater of 30mm or 2 patch + 2 gap)
~3	inches total

Strip Definition command: 001070000008DS<cr>

#### One hundred patch example:

1.50	inch leader
50.0	100 x 0.5 inch (12.7mm) patch
1.19	30mm (greater of 30mm or 2 patch + 2 gap)
~53	inches total

Strip Definition command: 100127000008DS<cr>

## With Gaps

### One patch example:

1.50	inch leader
0.28	1 x 0.28 inch (7.0mm) patch (the minimum)
1.19	30mm (greater of 30mm or 2 patch + 2 gap)
~3	inches total

Strip Definition command: 0010700000008DS<cr>

### One hundred patch example:

1.50	inch leader
50.0	100 x 0.5 inch (12.7mm) patch
7.82	.079 inches (2 mm) x 99 gaps
1.19	30mm (greater of 30mm or 2 patch + 2 gap)
~60	inches total

Strip Definition command: 1001270020008DS<cr>

- All patches must be the same height in a single strip, and should be the same width.
- The specified minimum height of a patch is 0.28 inches (7.0 mm).
- The minimum recommended width of a patch strip is 0.5 inches (13 mm) to easily allow end user alignment with optical center feature on instrument cover.
- The maximum center line of a patch strip from the right edge is 4.00 (100mm) inches
- The leader length from top edge to leading edge of first patch must be at least 1.5 inches (38mm), and no more than 5 inches (127mm).
- A Clear Area (no printing) of at least 1 inch (25.4mm) is required before the first patch leading edge. The Clear Area must begin no more than 0.875 inches (22mm) from the top edge.
- A Clear Area minimum of 2 patch + 2 gap heights or 30mm, whichever is larger, is required after the last patch trailing edge.
- For targets with gaps:* All between patch gaps in scanning direction must be the same height. Patch height must be more than twice the gap height. A gap height of 0.5 to 2 mm is adequate for all known situations. X-Rite recommends a gap height of 2mm for cases which require optimum precision.
- Patch pattern recognition requires adjacent patches to be minimum of .5 D different. This is also required for the first and last patch in a column relative to the paper. *For targets with gaps:* When gaps are used, the gap must be uniformly filled with a minimum of 0.5 D difference than adjacent patches. If the first or last patch is close to the media in Apparent Density, a black or high contrast bar may be used before the first patch or after the last patch, and it should be the same height as the rest of the gaps.



# Target Type: With Gaps

