

BEND SHEET

Press brake examples - hard parts 2026-10-21

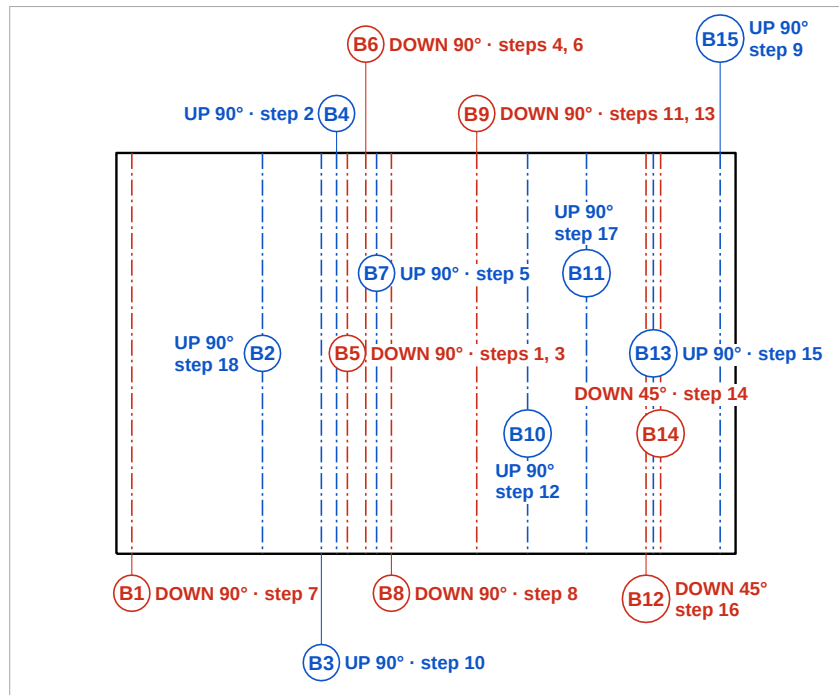
1 part 15 bends

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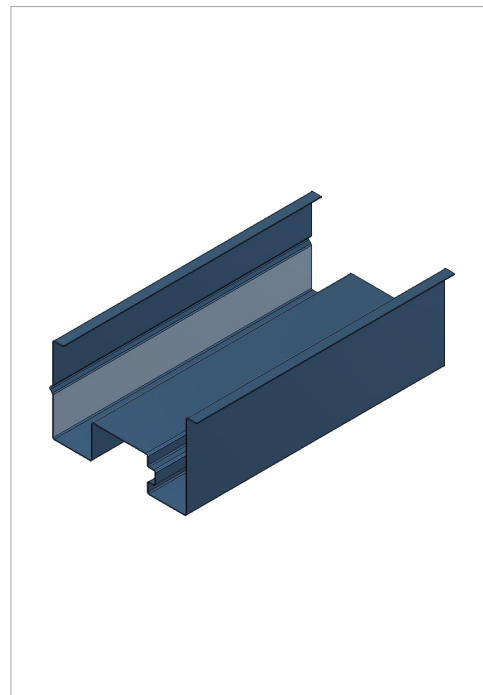
Hat with V bead and offset

MATERIAL S235JR structural steel	THICKNESS 1.5 mm	DIE Per step (see Tools by step)	PUNCH Per step (see Tools by step)
MACHINE TRUMPF TruBend 7036	UNITS mm	FLAT SIZE 772.5 x 500.0 mm	BENDS 15

FLAT PATTERN



3D VIEW



Seen from the top face: **UP** bends fold toward you, **DOWN** bends away.

Overall 772.5 x 500.0 mm

BEND TABLE (STEP: ORDER ON THE BRAKE; BEND: LINE ON THE FLAT; FLANGES: GAUGE SIDE / FRONT)

STEP	BEND	DIR	ANGLE	Ri (mm)	LENGTH (mm)	FLANGES (mm)	X (mm)	GAUGE	HANDLING	FORCE (kN)
1	B5	DOWN	45° pre-bend	2.0	500.0	24.9 / 15.4	484.33	edge	Bottom face up	57.9
2	B4	UP	90°	2.0	500.0	22.0 / 15.4	274.67	edge	Flip over	57.9
3	B5	DOWN	90° from 45°	2.0	500.0	26.0 / 16.5	-	in the die	Flip over	57.9
4	B6	DOWN	45° pre-bend	2.0	500.0	15.4 / 24.9	461.35	edge	Same placement	57.9
5	B7	UP	90°	2.0	500.0	21.5 / 15.4	447.88	edge	Flip over, turn end for end	57.9
6	B6	DOWN	90° from 45°	2.0	500.0	26.0 / 16.5	-	in the die	Flip over	57.9
7	B1	DOWN	90°	2.0	500.0	166.0 / 20.7	732.33	edge	Turn end for end	57.9
8	B8	DOWN	90°	2.0	500.0	109.5 / 21.5	429.40	edge	Same placement	57.9
9	B15	UP	90°	2.0	500.0	20.7 / 76.2	19.24	edge	Flip over, turn end for end	57.9
10	B3	UP	90°	2.0	500.0	22.0 / 76.5	88.74	edge	Same placement	57.9
11	B9	DOWN	45° pre-bend	2.0	500.0	65.4 / 108.4	305.20	flange B15	Flip over, turn end for end	57.9
12	B10	UP	90°	2.0	500.0	76.5 / 65.4	241.72	flange B15	Flip over, turn end for end	57.9
13	B9	DOWN	90° from 45°	2.0	500.0	66.5 / 109.5	-	in the die	Flip over, turn end for end	57.9
14	B14	DOWN	45°	2.0	500.0	76.2 / 11.1	75.79	flange B15	Same placement	57.9

BEND SHEET

Press brake examples - hard parts 2026-10-21

1 part 15 bends

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Hat with V bead and offset (continued)

BEND TABLE (continued)

STEP	BEND	DIR	ANGLE	Ri (mm)	LENGTH (mm)	FLANGES (mm)	X (mm)	GAUGE	HANDLING	FORCE (kN)
15	B13	UP	90°	2.0	500.0	11.1 / 11.1	78.13	edge	Flip over, turn end for end	65.6
16	B12	DOWN	45°	2.0	500.0	11.1 / 76.2	64.52	flange B15	Flip over, turn end for end	65.6
17	B11	UP	90°	2.0	500.0	76.5 / 76.2	423.96	flange B1	Flip over	57.9
18	B2	UP	90°	2.0	500.0	76.5 / 166.0	268.81	flange B13	Turn end for end	57.9

TOOLS BY STEP

STEP	PUNCH	DIE	SECTION CHECK
1	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
2	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
3	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
4	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
5	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
6	WILA BIU-015 90° R0.6 H120 narrow; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
7	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
8	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
9	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
10	UKB 15.750 acute 28° R1 H240; 500 mm: 500	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
11	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
12	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
13	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
14	WILA BIU-016 90° R1.2 H120; 515 mm: 515	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
15	WILA BIU-016 90° R1.2 H120; 515 mm: 515	UKB 25.303 V10.6 84° H100; 500 mm: 500	Clear (sampled)
16	WILA BIU-016 90° R1.2 H120; 515 mm: 515	UKB 25.303 V10.6 84° H100; 500 mm: 500	Clear (sampled)
17	UKB 15.710 86° R1 H220; 500 mm: 500	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)
18	UKB 15.800 gooseneck 86° R1 H300; 500 mm: 200 + 100 + 200	WILA OZU-011 V12 86° H55; 515 mm: 515	Clear (sampled)

CHECKS

- CHECK:** The flat uses K-factor 0.357, the brake setup gives 0.344. Run Apply Bend Rule so the flat matches the brake.
- CHECK:** B13: flat bend radius 2.0 mm differs from the selected setup radius 1.8 mm.
- CHECK:** B12: flat bend radius 2.0 mm differs from the selected setup radius 1.8 mm.
- Assumed:** beam: clamp of an equivalent maker (the machine maker publishes none).
- Assumed:** gauge: typical two-step finger (Delem DA-66T example).

SIDE VIEWS

The part on the die before each bend, back gauge on the right; red: the moment of a collision. Each view to its own scale.

Step 1: B5 DOWN 45° pre-bend X = 484.33 mm

sampled clear

Step 2: B4 UP 90° X = 274.67 mm

sampled clear

Step 3: B5 DOWN 90° from 45° in the die

sampled clear

BEND SHEET

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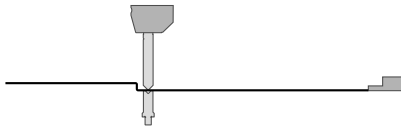
1 part 15 bends

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Hat with V bead and offset (continued)

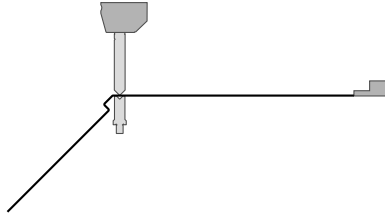
SIDE VIEWS (continued)

Step 4: B6 DOWN 45° pre-bend X = 461.35 mm



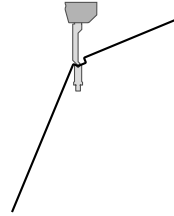
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Step 5: B7 UP 90° X = 447.88 mm



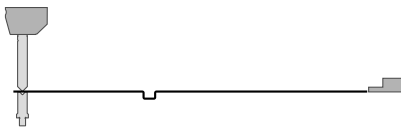
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Step 6: B6 DOWN 90° from 45° in the die



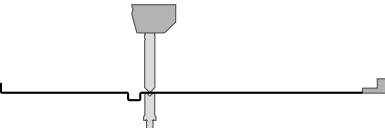
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Step 7: B1 DOWN 90° X = 732.33 mm



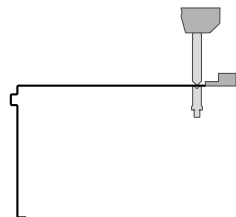
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Step 8: B8 DOWN 90° X = 429.40 mm



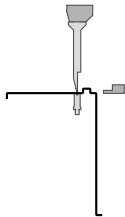
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Step 9: B15 UP 90° X = 19.24 mm



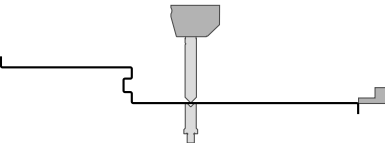
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Step 10: B3 UP 90° X = 88.74 mm



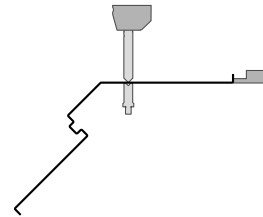
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Step 11: B9 DOWN 45° pre-bend X = 305.20 mm



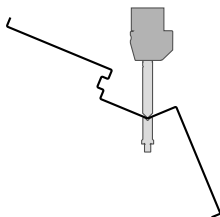
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Step 12: B10 UP 90° X = 241.72 mm



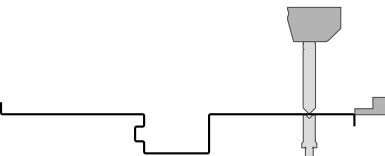
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Step 13: B9 DOWN 90° from 45° in the die



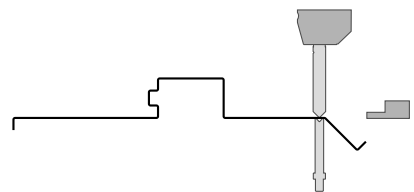
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Step 14: B14 DOWN 45° X = 75.79 mm



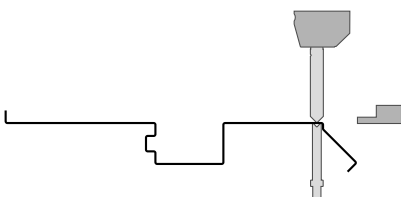
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Step 15: B13 UP 90° X = 78.13 mm



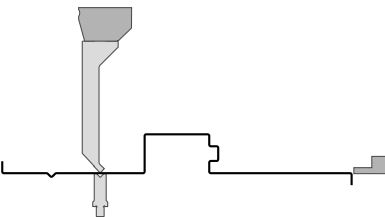
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Step 16: B12 DOWN 45° X = 64.52 mm



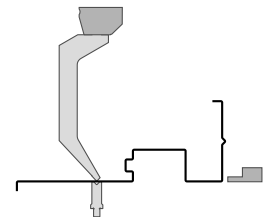
sampled clear

Step 17: B11 UP 90° X = 423.96 mm



sampled clear

Step 18: B2 UP 90° X = 268.81 mm



sampled clear