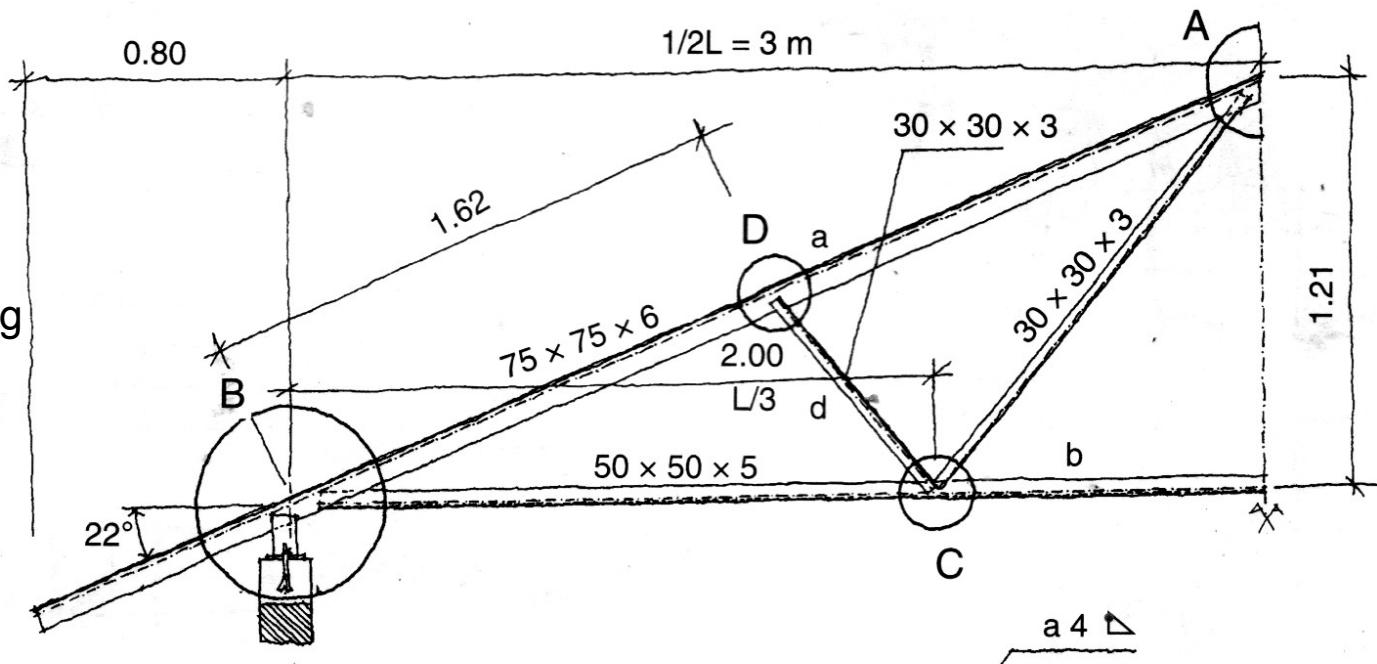
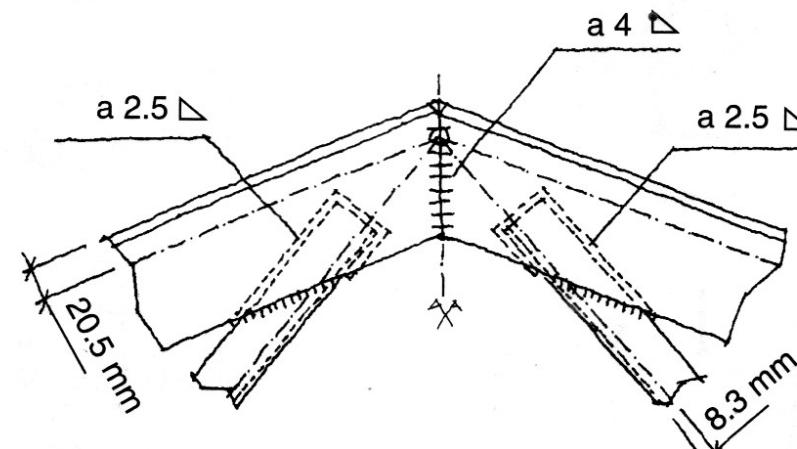


PERENCANAAN TEKNOLOGI & SISTEM BANGUNAN (PTSB) 03

Kemiringan atap
minimal 19° (genteng
beton) s/d
 30° (genteng press
tanah liat)

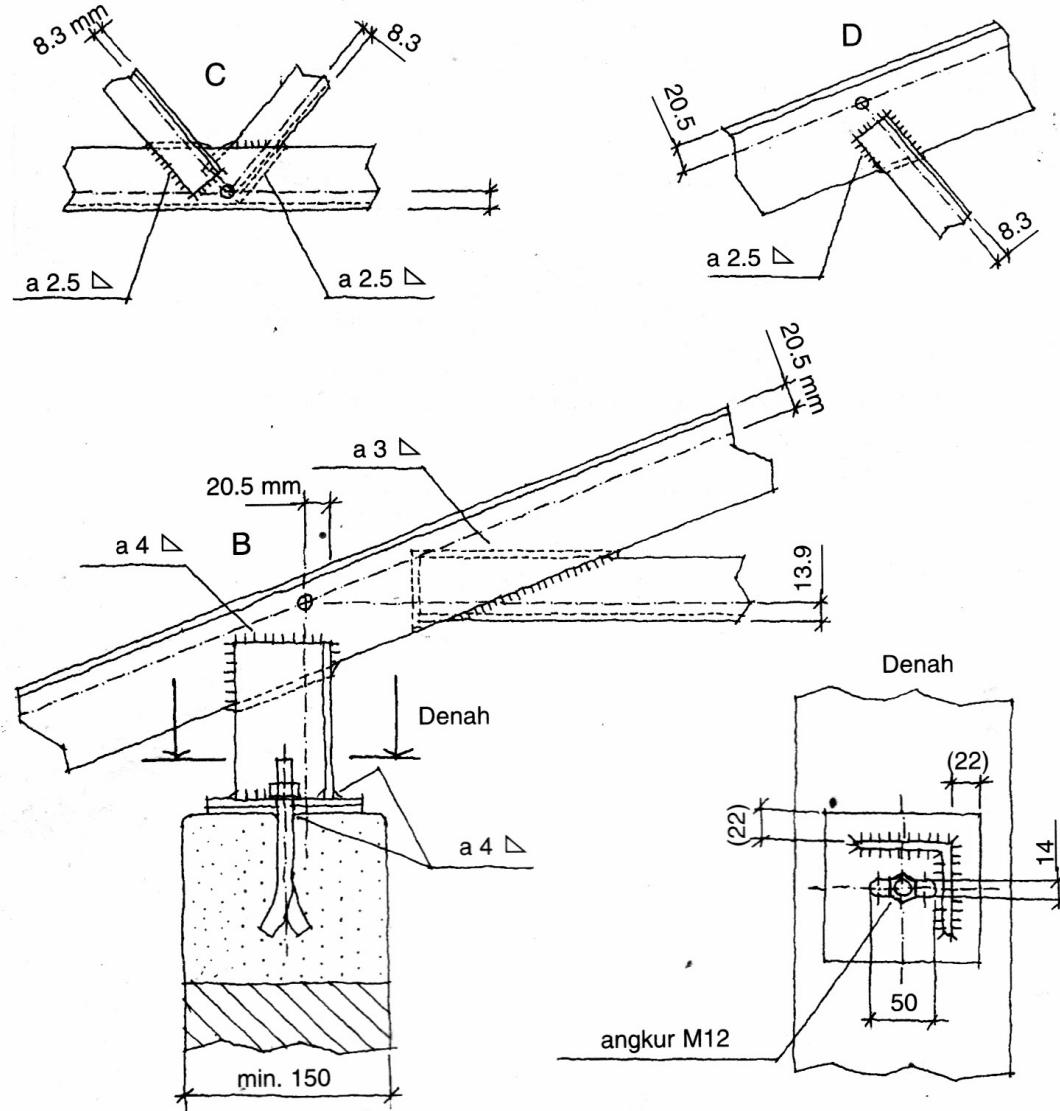


Alat sambung:
las



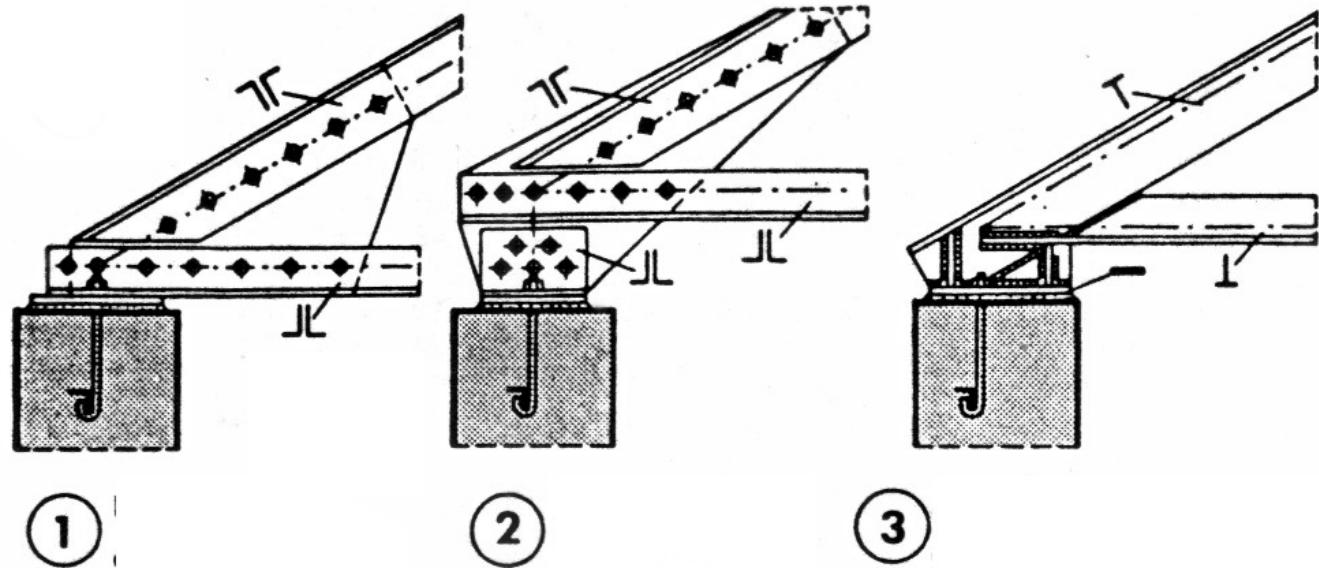
Kemiringan atap
minimal 19° (genteng
beton) s/d
 30° (genteng press
tanah liat)

Alat sambung:
las

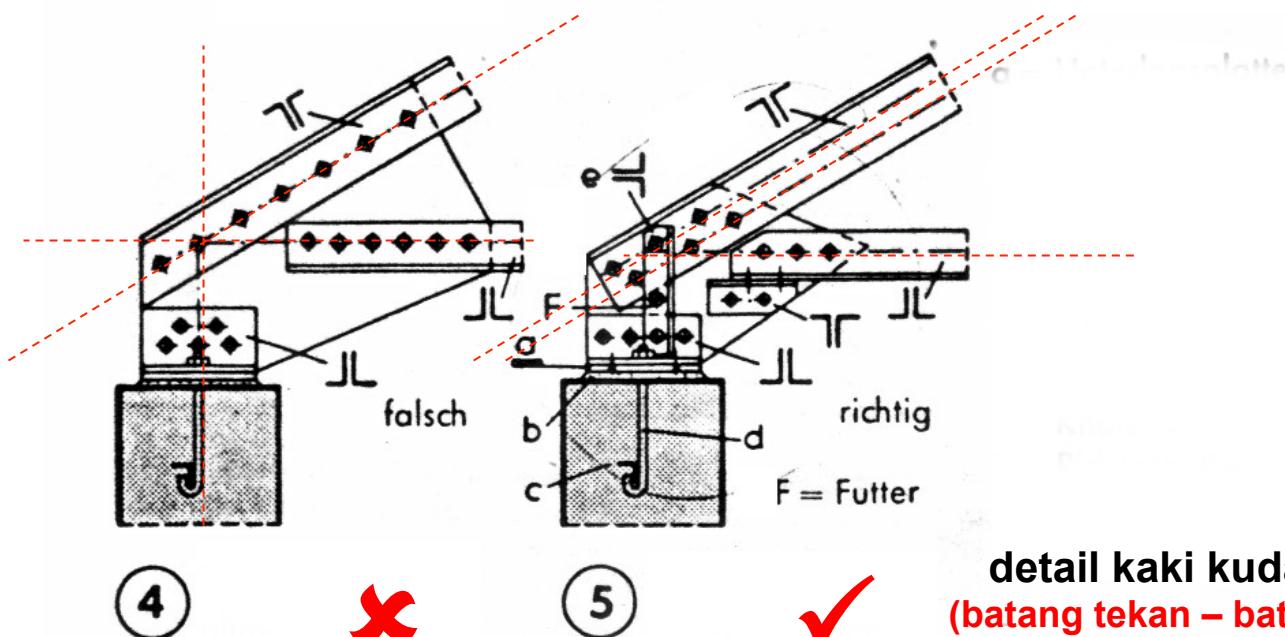


Sumber: Frick & Setiawan, 2001
Ilmu Konstruksi Struktur Bangunan

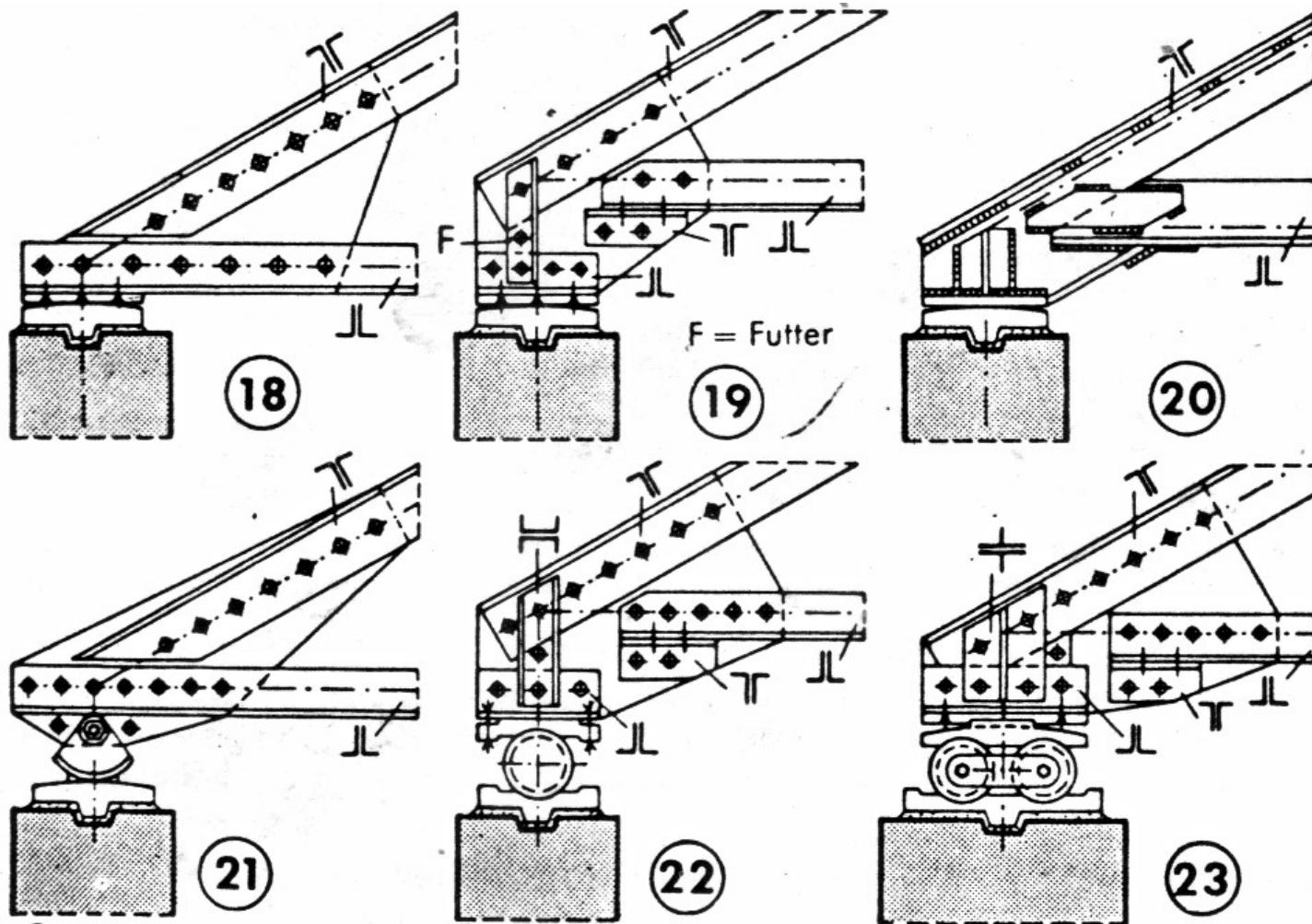
Kemiringan atap
minimal 19° (genteng
beton) s/d
30° (genteng press
tanah liat)



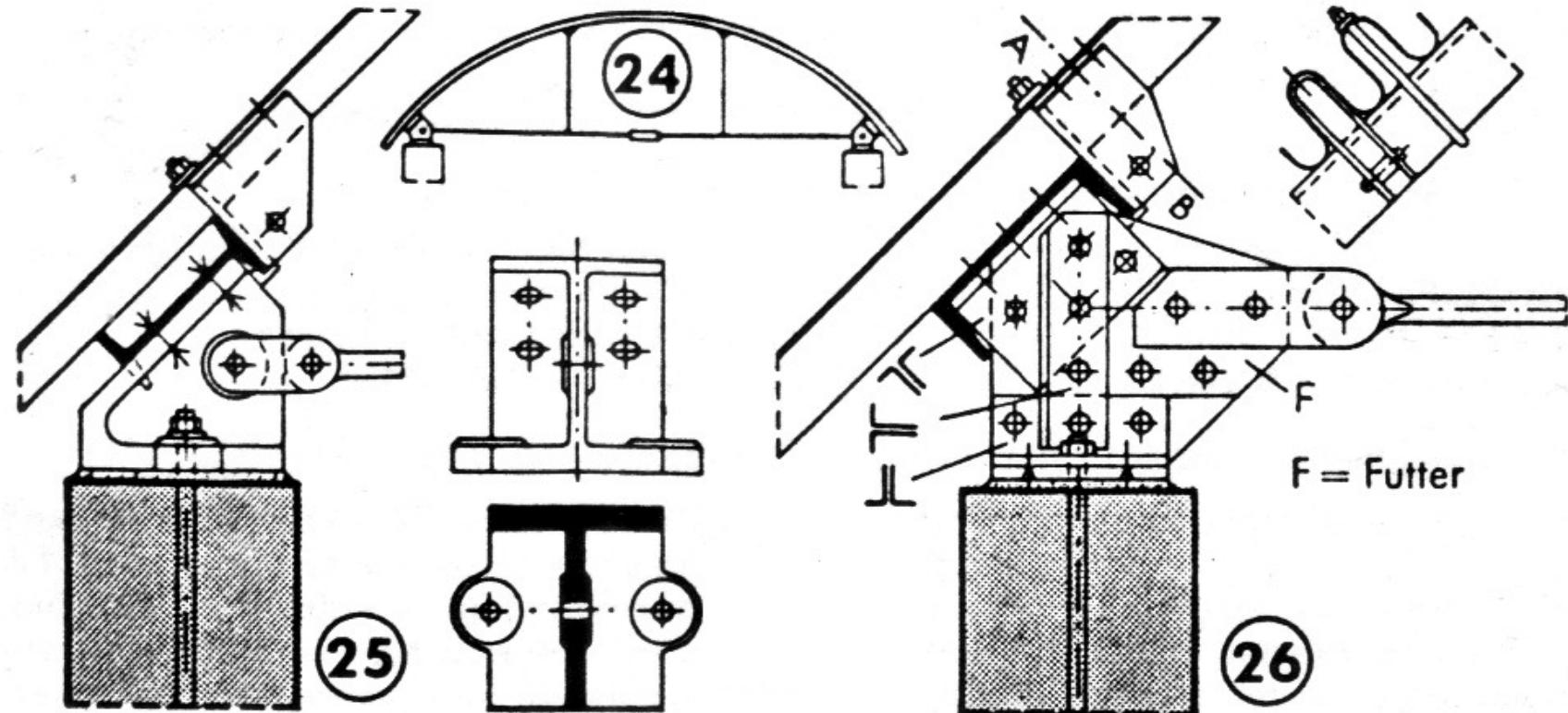
Alat sambung:
baut



detail kaki kuda-kuda
(batang tekan – batang tarik)



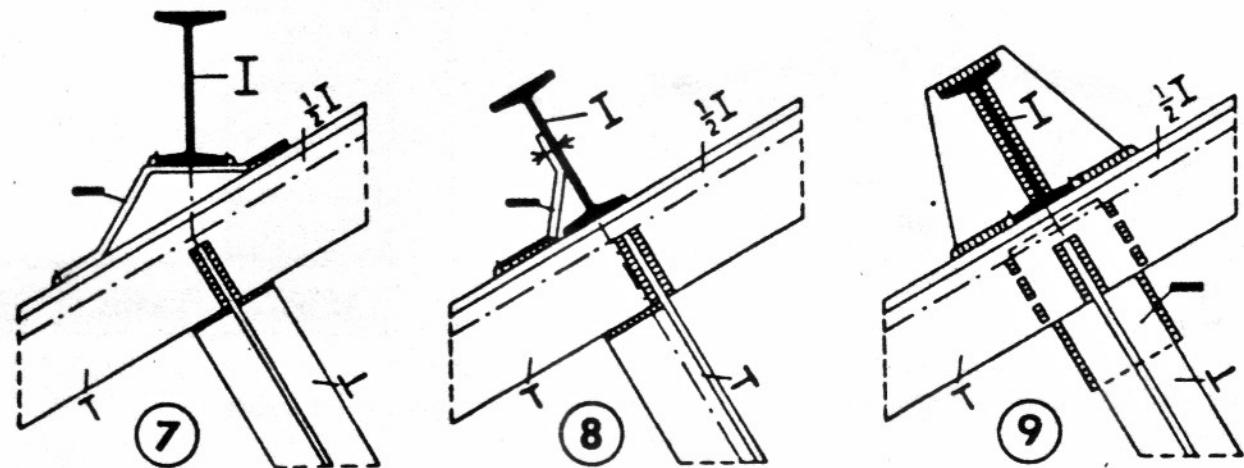
**detail kaki kuda-kuda
(batang tekan – batang tarik)**



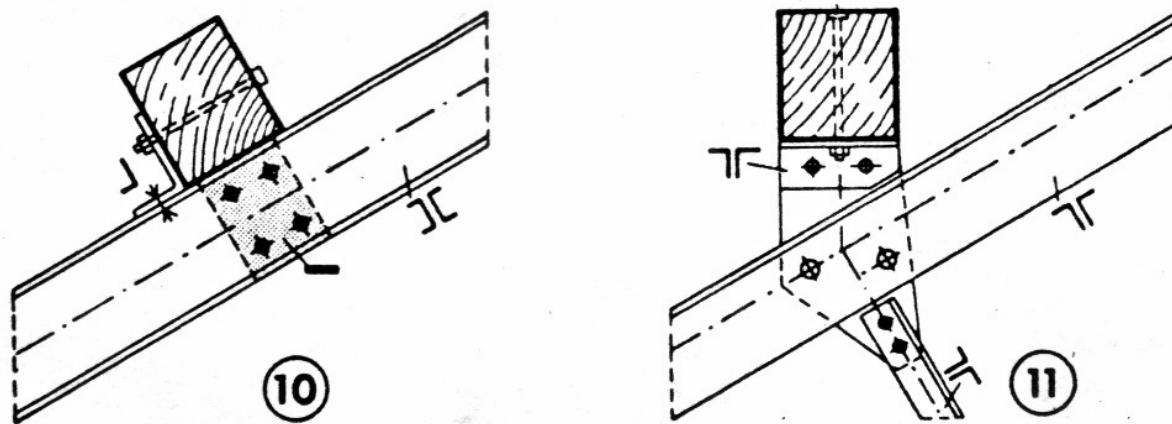
KONSTRUKSI ATAP
B a j a

detail kaki kuda-kuda
(batang tekan – track stang)

Profil baja I

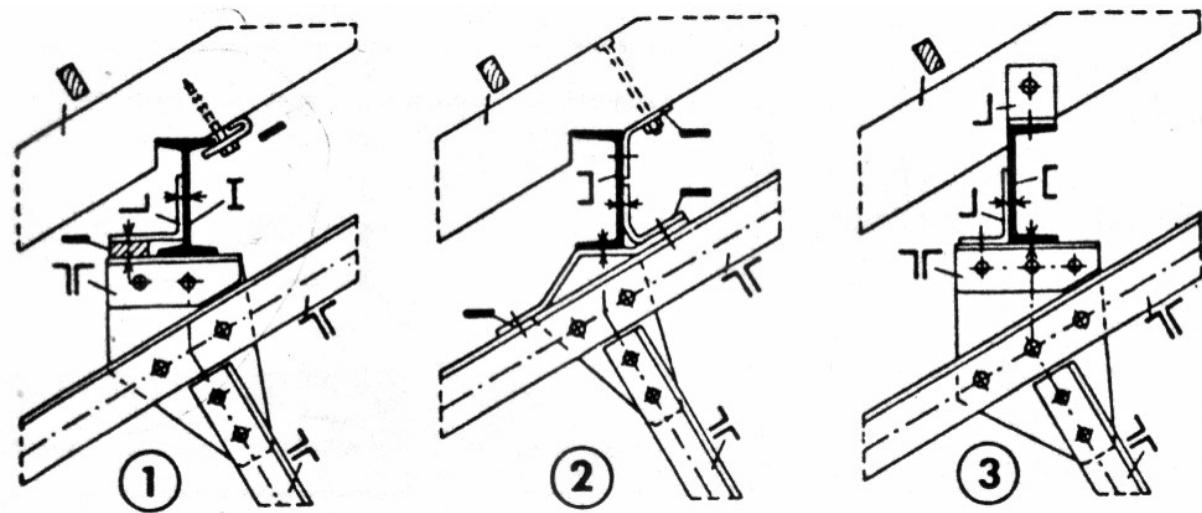


Balok kayu

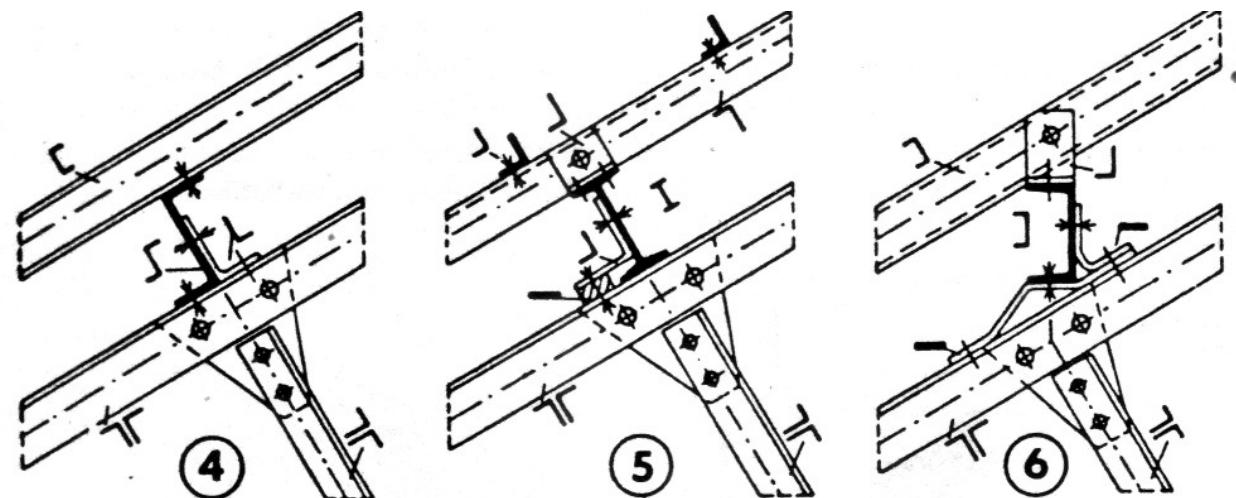


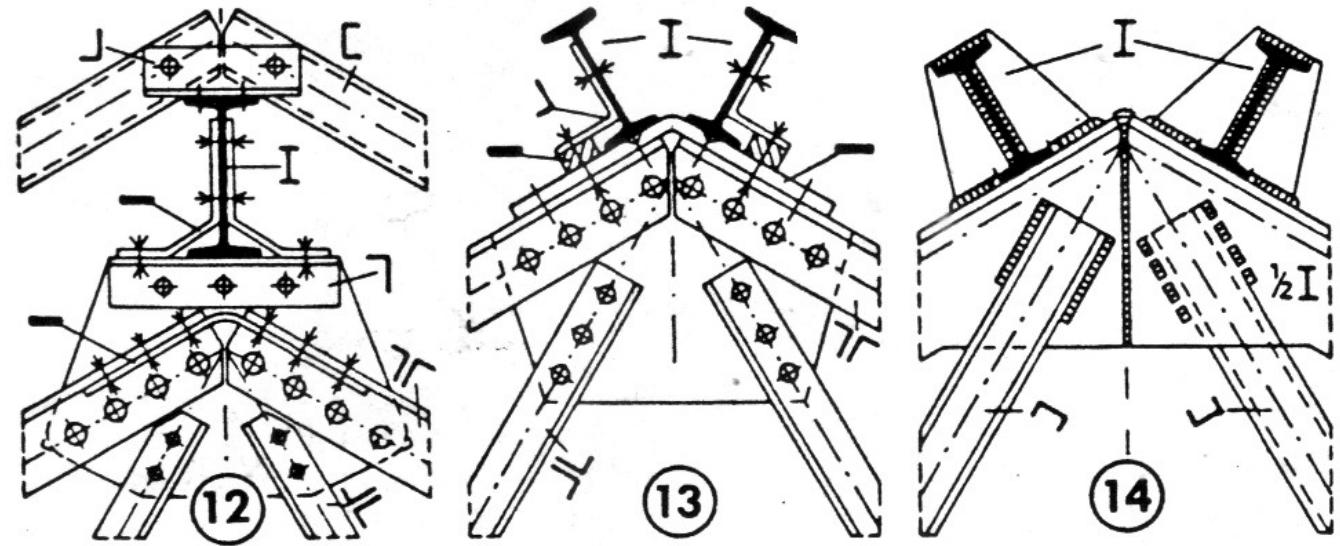
detail perletakan gording

Balok kayu

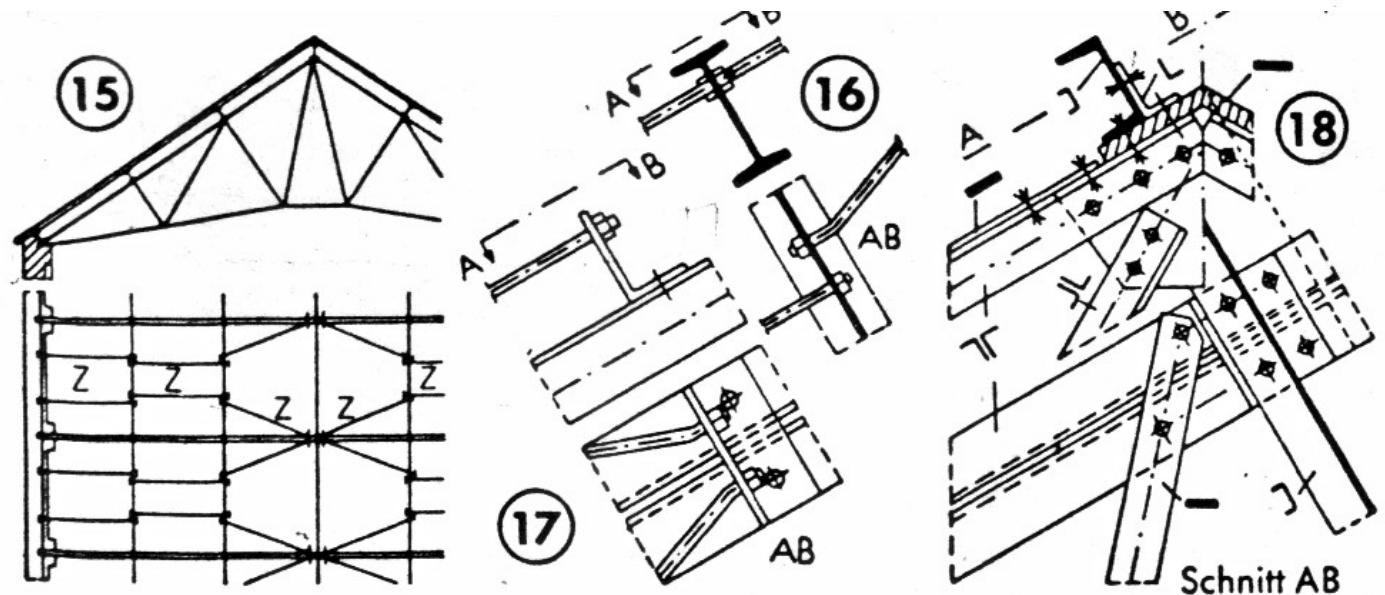


Kanal baja C





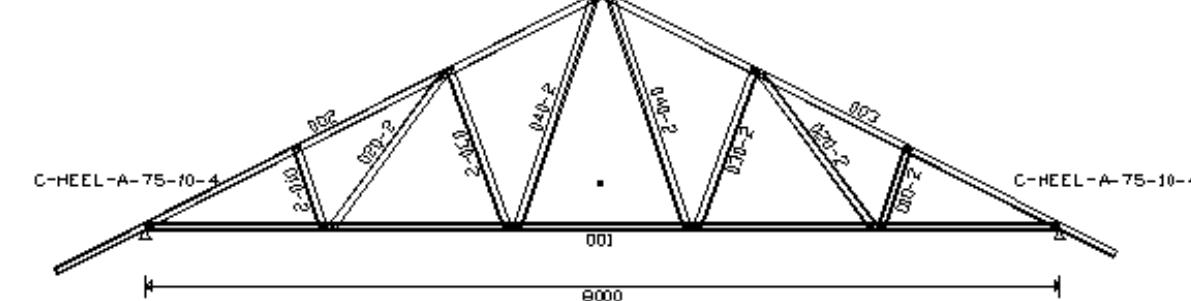
detail bubungan



KONSTRUKSI ATAP
B a j a

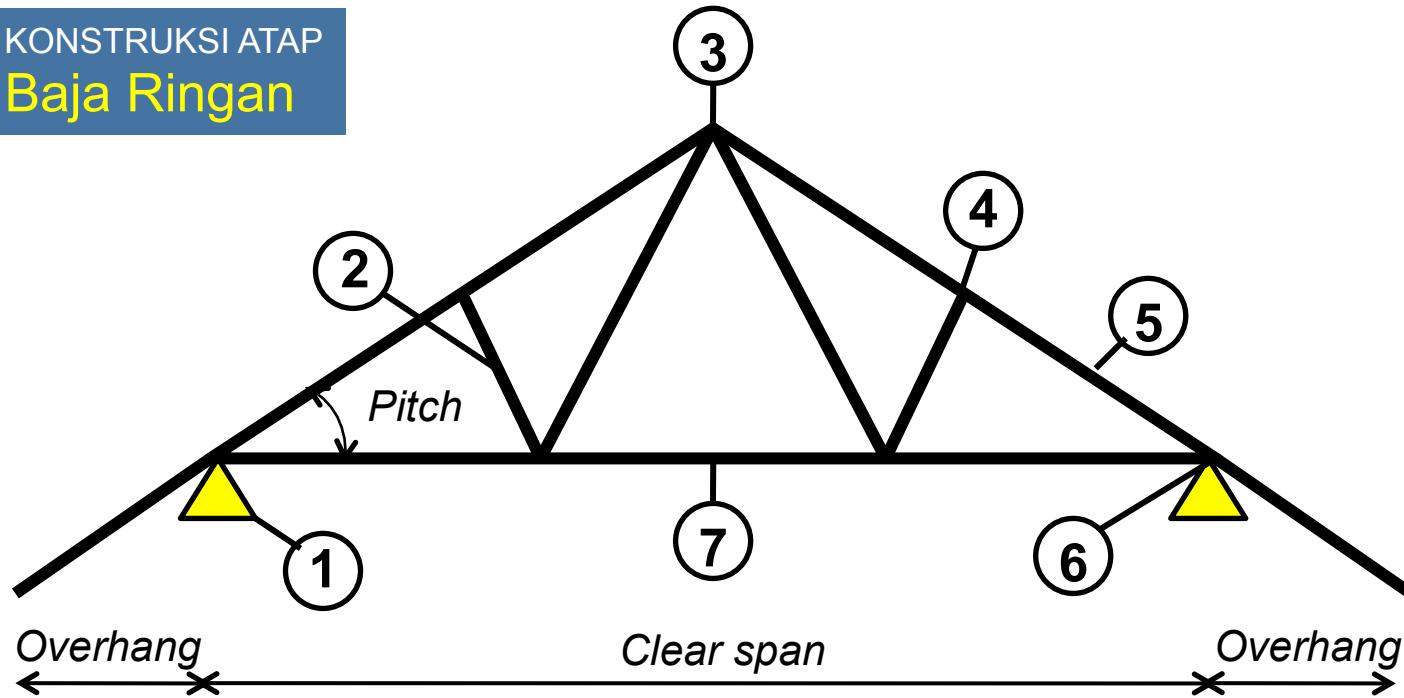
Ausführung	I	h mm	Flachstahl- taschen mm	$\frac{h}{2}$	a mm	b mm	c mm	\varnothing mm Schraube Bolzen	Tragkraft des Gelenkes in kg bei σ_{zul} für Pfette ¹⁾			G kg	
									1200	1400	1600		
A	8	80	55·250·5	27,5	—	—	40	19	19	595	695	790	1,7
	10	100	70·250·5	35	—	—	50	19	19	685	800	915	2,0
	12	120	90·250·5	45	—	—	60	22	22	910	1060	1210	2,6
	14	140	100·250·6	50	25	50	45	16	22	1450	1690	1930	3,0
B	16	160	120·250·6	60	30	60	50	19	25	1920	2240	2560	3,7
	18	180	140·250·6	70	30	80	50	19	25	2100	2450	2800	4,3
	20	200	150·250·7	75	35	80	60	19	25	2290	2670	3050	5,1
	22	220	170·250·7	85	35	100	60	22	25	2880	3360	3840	5,8
	24	240	190·250·7	95	35	120	60	22	25	3090	3610	4120	6,4

Ausführung	I	h	Winkelstahl-laschen	w ₁	a ₁	w	w'	a	c	∅ mm Niete	mm Bolzen	Tragkraft des Gelenkes in kg bei σ _{zul} für Pfette			G
												1200	1400	1600	
	mm	mm		mm	mm	mm	mm	mm	mm	mm	mm	kg	kg	kg	kg
C	8	80	40·50·5	—	—	28	—	22	40	14	13	430	500	570	1,0
	10	100	50·65·5	—	—	35	—	30	50	20	19	730	850	970	1,4
	12	120	40·80·6	—	—	45	—	35	60	23	22	1230	1430	1640	1,6
	14	140	50·100·6	53	47	30	46	24	47	17	22	1790	2090	2380	2,4
D	16	160	50·100·6	53	47	30	46	24	57	17	22	1790	2090	2380	2,4
	18	180	65·130·8	70	60	40	60	30	60	20	25	2490	2900	3320	3,2
	20	200	65·130·8	70	60	40	60	30	70	20	25	2490	2900	3320	3,2
	22	220	65·130·8	70	60	40	60	30	80	20	25	2490	2900	3320	3,2
	24	240	65·130·8	70	60	40	60	30	90	20	25	2490	2900	3320	3,2

In overhang=800 mm overhang=500 span=8000 spacing=300 loading=L.C.M+20%W = 0.7,-0.25,0,-0.7,-0.65,-0.9,0.2,-0.3,-1.1,-0.9,-0.93,0.8,0.21,2.5,0.4,4.4,4.2 In PINTEREST BY 2013-09-26 Top Left Top Right BS-5950-98 (British limit state) LEFT  RIGHT Approved By: PASS 1																																																																																																			
CHORD 002 59 WEB-040 541 WEB-020 546 WEB-030 5093 WEB-010 CHORD 001 568 WEB-010 614 WEB-020 3182 WEB-030 3243 WEB-040 4752 WEB-040 4919 WEB-030 5387 WEB-020 5434 WEB-010 CHORD 003 2700 WEB-010 3650 WEB-020 3656 WEB-030 5127 WEB-040																																																																																																			
																																																																																																			
QULITY CHECK FROM TOP OF TOP CHORD, TO BOTTOM OF BOTTOM CHORD = 2396 <small>Note: Offsets are from the right-hand end of chord</small>																																																																																																			
PARTS LIST <table border="1"> <thead> <tr> <th>DESCRIPTION</th> <th>NO.</th> <th>LEN.</th> <th>MAT.</th> <th>QTY</th> <th>DESCRIPTION</th> <th>NO.</th> <th>LEN.</th> <th>MAT.</th> <th>QTY</th> </tr> </thead> <tbody> <tr> <td>C7500pe</td> <td>001</td> <td>6000</td> <td>I</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>C7500pe</td> <td>002</td> <td>5548</td> <td>I</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>C7500pe</td> <td>003</td> <td>5196</td> <td>I</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>C7500pe</td> <td>010</td> <td>840</td> <td>I</td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>C7500pe</td> <td>020</td> <td>3800</td> <td>I</td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>C7500pe</td> <td>030</td> <td>7460</td> <td>I</td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>C7500pe</td> <td>040</td> <td>2380</td> <td>I</td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="10">27</td> </tr> </tbody> </table>										DESCRIPTION	NO.	LEN.	MAT.	QTY	DESCRIPTION	NO.	LEN.	MAT.	QTY	C7500pe	001	6000	I	1						C7500pe	002	5548	I	1						C7500pe	003	5196	I	1						C7500pe	010	840	I	2						C7500pe	020	3800	I	2						C7500pe	030	7460	I	2						C7500pe	040	2380	I	2						27									
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Material yang dipotong

KONSTRUKSI ATAP Baja Ringan



Bearing/ Support point

: Titik simpul pada suatu kuda-kuda yang difungsikan sebagai tumpuan/perletakan kuda-kuda. Tumpuan kuda-kuda minimal berjumlah dua buah, dan dipilih dari panel point yang berada di atas struktur penopang kuda-kuda (kolom atau ringbalk).

Pitch

Overhang

: Sudut kemiringan atap (dalam derajat).

: Perpanjangan dari batang utama atas, yang melewati posisi tumpuan rangka atap.

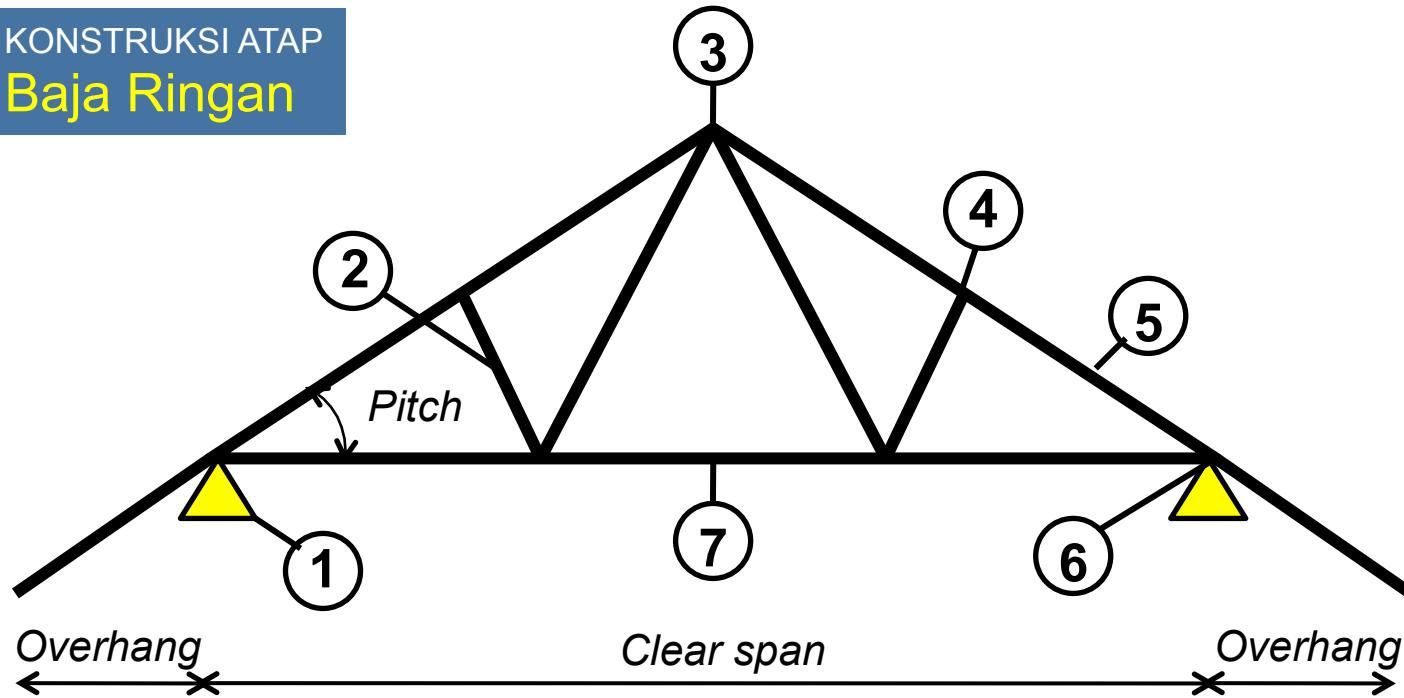
Clear span

Apex

: Jarak horisontal antara dua sisi dalam pada tumpuan kuda-kuda.

: Titik simpul yang berada di puncak kuda-kuda (*truss*).

KONSTRUKSI ATAP
Baja Ringan



Heel joint

Panel pointSpan

Top chords

Bottom chords

Webb

: Titik simpul yang merupakan pertemuan antara batang utama atas dan bawah.

: Titik simpul yang merupakan pertemuan beberapa elemen batang pada suatu struktur kuda-kuda.

: Jarak horisontal antara as/sumbu ke as/sumbu tumpuan kuda-kuda.

: Batang-batang utama yang terletak di bagian atas dari kuda-kuda

: Batang-batang utama yang terletak di bagian bawah dari kuda-kuda

: Batang-batang yang terletak di bagian dalam dari kuda-kuda



① *Leveling & Marking*





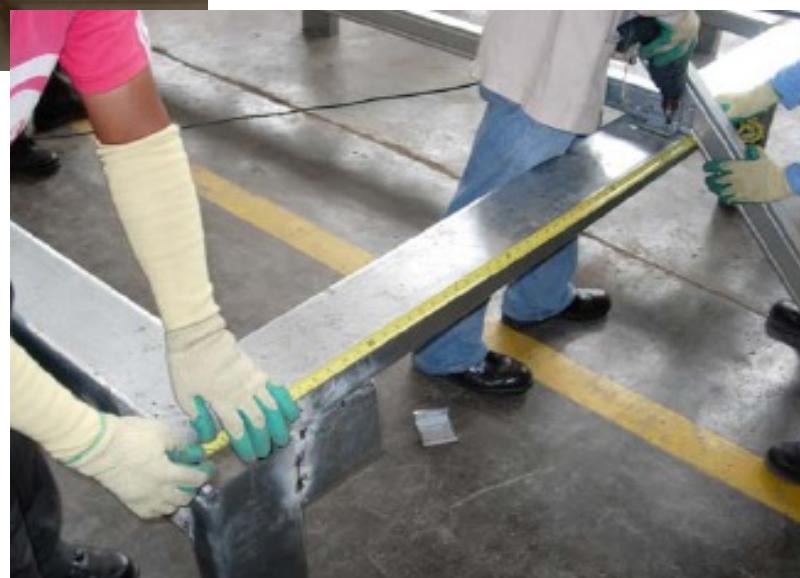
② Assembly

KONSTRUKSI ATAP
Baja Ringan

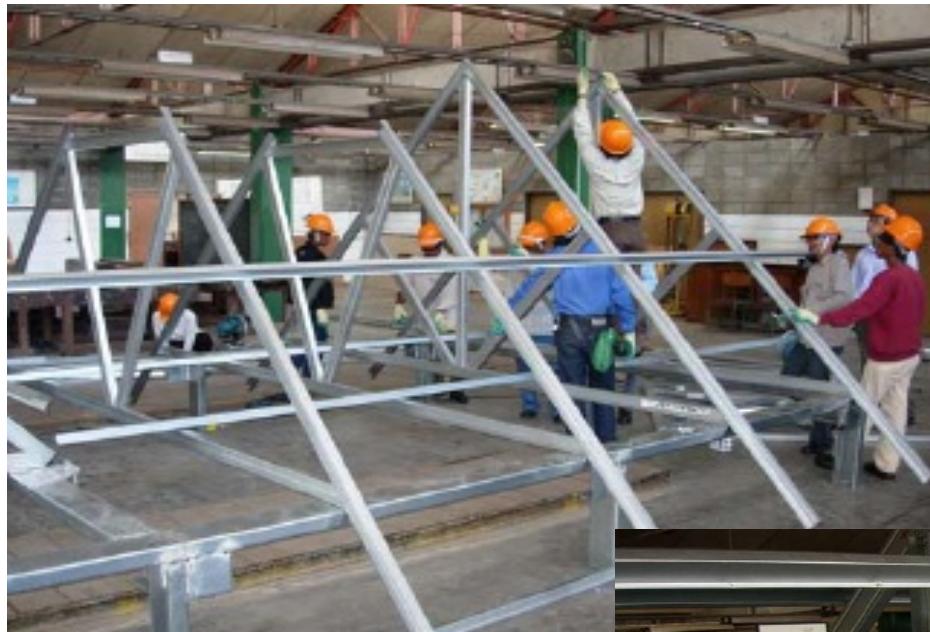


12-14x20 HEX

(*L bracket*)



③ *Controlling primary structure position*



Roof Battens







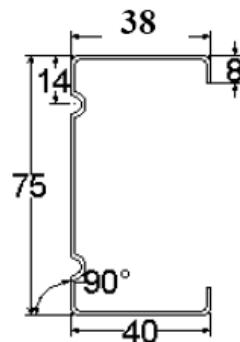
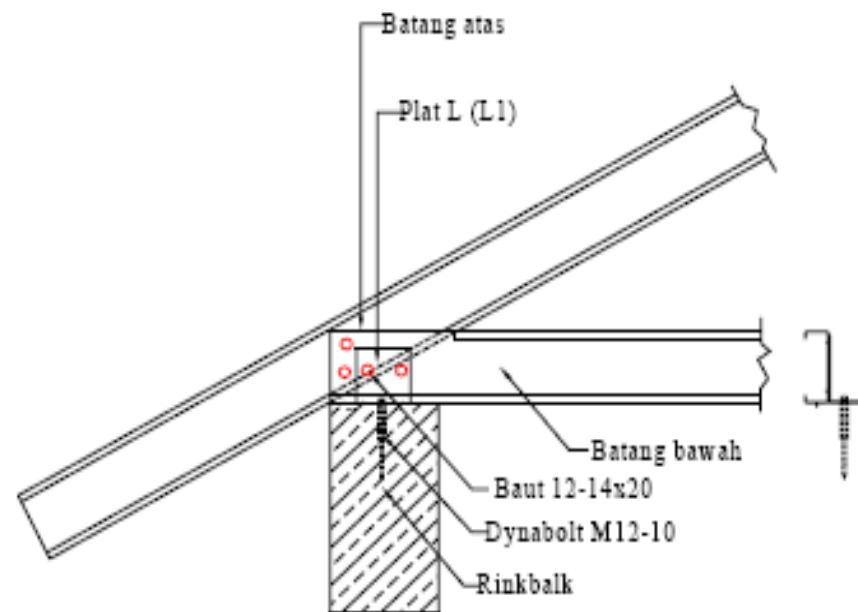
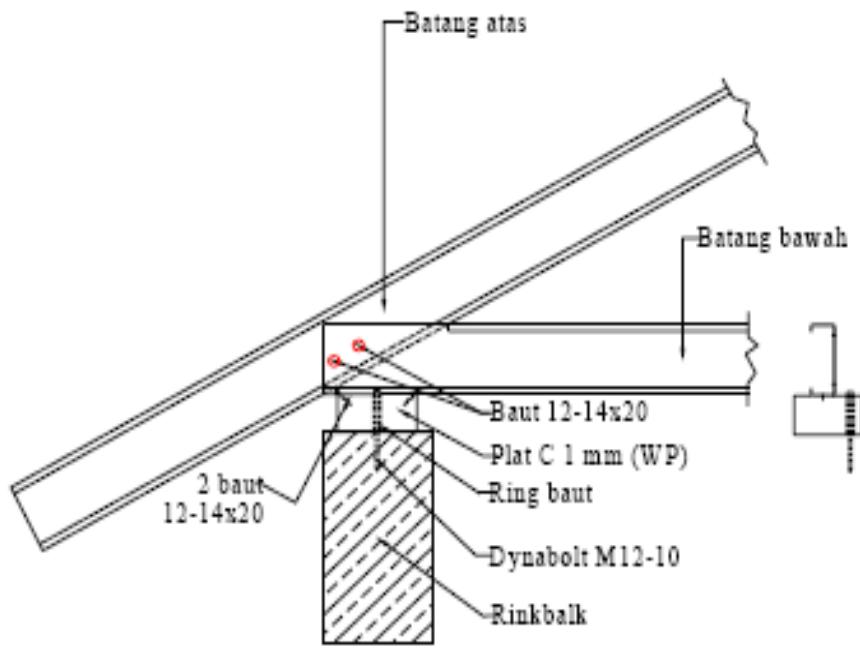
*Outrigger Overhang
per 120 cm*





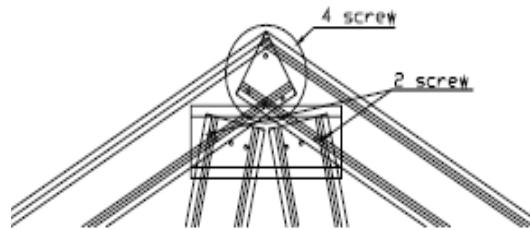
KONSTRUKSI ATAP
Baja Ringan

Moediartianto, ST, M.Sc © 2010



Contoh Profil

C-APEX-C-100-75-④⑥



SCREW 12 -14 X 20 HEX

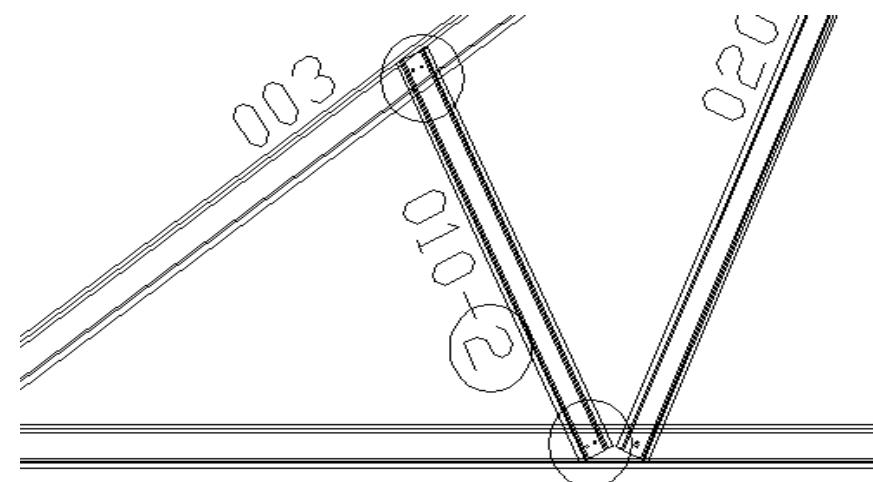
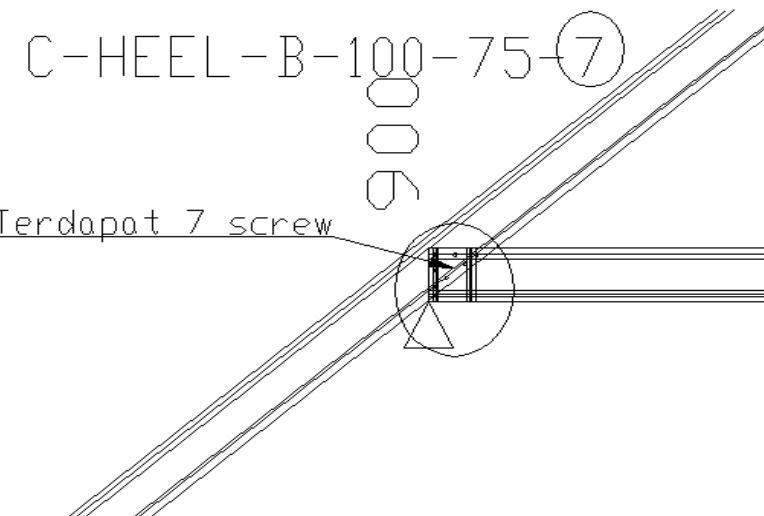
Diameter 12 Gauge
(5.5 mm)

(a) (b) (c)
14 Threads per-inch
(14 putaran per inchi)

Panjang baut 20 mm

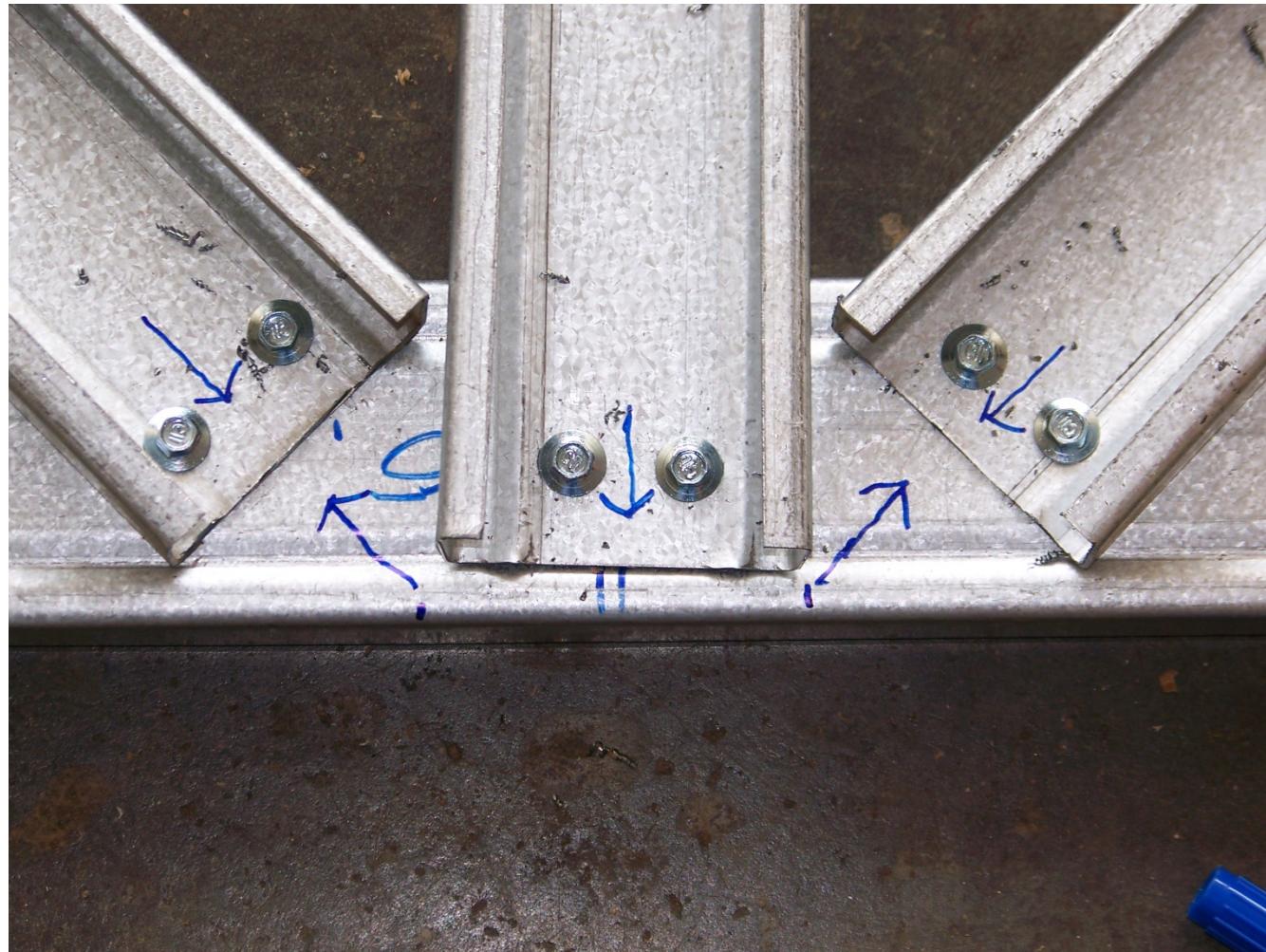
Kode Screw

KONSTRUKSI ATAP
Baja Ringan





Contoh Sistem Tumpuan **Wall-Plate**,
Kuda-kuda ditumpukan pada *Boxed C75.100* , diikat dengan Grip segitiga



Harap mengisi
Angket Evaluasi Perkuliahan (AEP)
<http://sintak.unika.ac.id/>

*evaluasi yang anda berikan akan sangat
Membantu peningkatan kualitas
pembelajaran di MK ini*