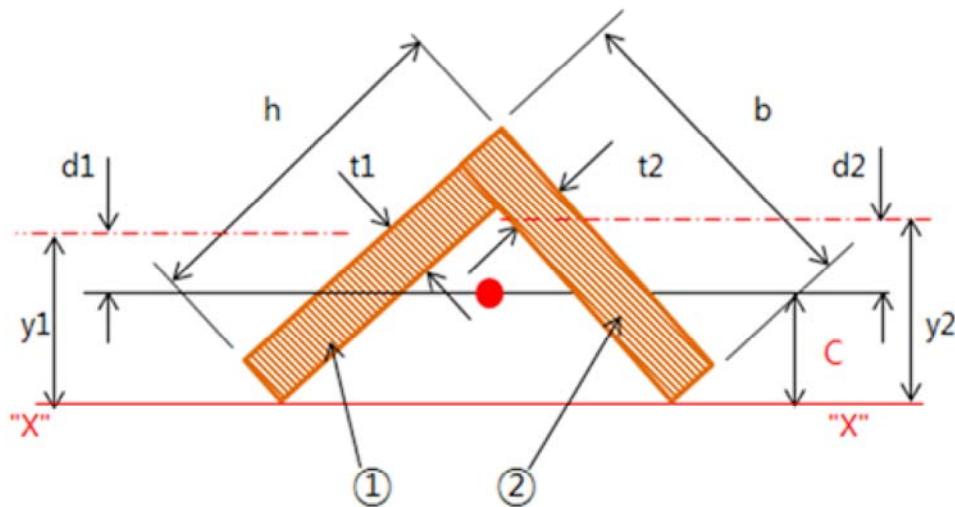


PROPERTIES OF STIFFENER

ANGLE-SECTIONAL PROPERTIES

INPUT DATA 계산실행 **V1.0** By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	0.6 cm	* Dim. h	7.5 cm
* Dim. t2	0.6 cm	* Dim. b	7.5 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	lg1=b*h ³ /12 (cm ⁴)	lg2=A*d ² (cm ⁴)
1	4.1	2.44	10.1	-0.11	11.6	0.1
2	4.5	2.65	11.9	0.10	14.9	0.0
TOTAL	8.6		22.0		26.5	0.1
c = $\Sigma A*y / \Sigma A$	2.55		Sectional Modulus, Zx=lg/c	10.4	Actual lg = (lg1+lg2)	26.6

[MENU PAGE-->](#)

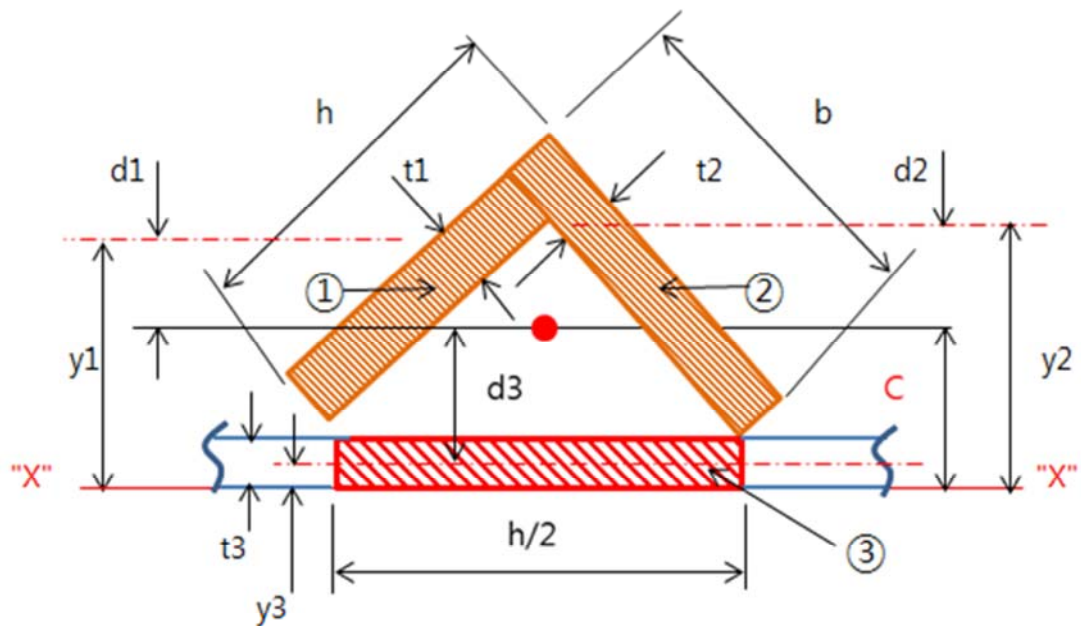
Copyright © 2001 피에스21 All rights reserved.
Please contact E-mail ***pes21@pes21.com***

PROPERTIES OF STIFFENER

ANGLE STIFFENER-SECTIONAL PROPERTIES

INPUT DATA 계산실행 V1.0 By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	0.6 cm	* Dim. h	7.5 cm
* Dim. t2	0.6 cm	* Dim. b	7.5 cm
* Dim. t3	0.6 cm		



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	lg1=b*h ³ /12 (cm ⁴)	lg2=A*d ² (cm ⁴)
1	4.1	2.44	10.1	0.66	11.6	1.8
2	4.5	2.65	11.9	0.87	14.9	3.4
3	4.5	0.30	1.4	-1.48	0.1	9.8
TOTAL	13.1		23.4		26.6	15.1
c = ΣA*y / ΣA	1.78					
			Sectional Modulus, Zx=lg/c	23.4	Actual lg = (lg1+lg2)	41.7

[MENU PAGE-->](#)

PROPERTIES OF STIFFENER

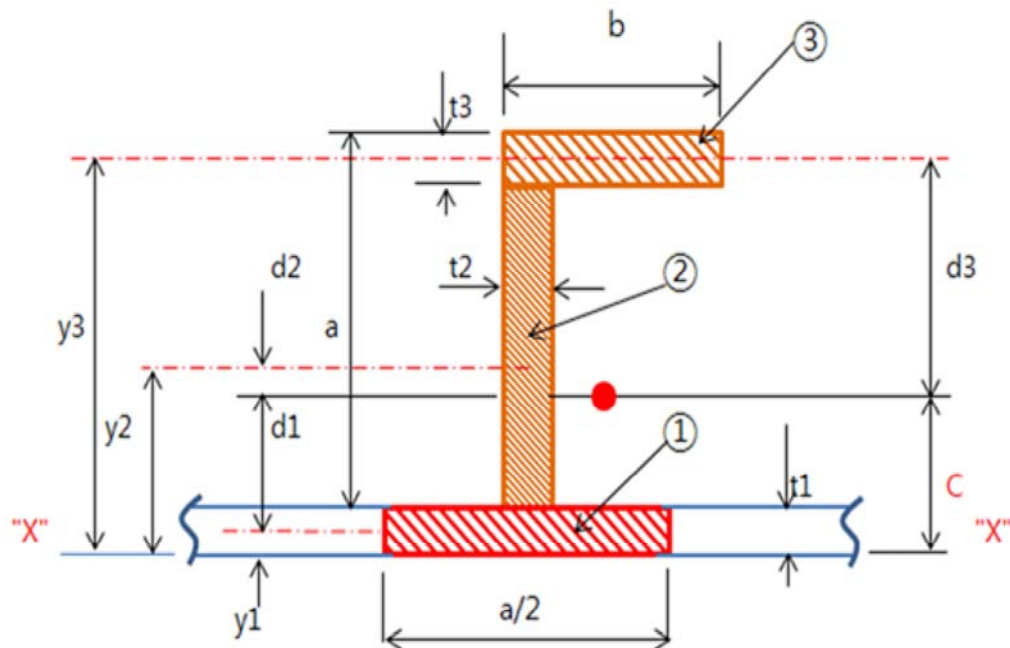
ANGLE STIFFENER-SECTIONAL PROPERTIES

INPUT DATA

계산실행

V2.0 By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	1 cm	* Dim. a	7.5 cm
* Dim. t2	0.6 cm		
* Dim. t3	0.6 cm	* Dim. b	7.5 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	lg1=b*h ³ /12 (cm ⁴)	lg2=A*d ² (cm ⁴)
1	3.8	0.50	1.9	-4.12	0.3	63.5
2	4.1	4.45	18.4	-0.17	16.4	0.1
3	4.5	8.20	36.9	3.58	0.1	57.8
TOTAL	12.4		57.2		16.9	121.4
c = $\Sigma A*y / \Sigma A$	4.62				Actual lg = (lg1+lg2)	138.3
			Sectional Modulus, Zx=lg/c	30.0		

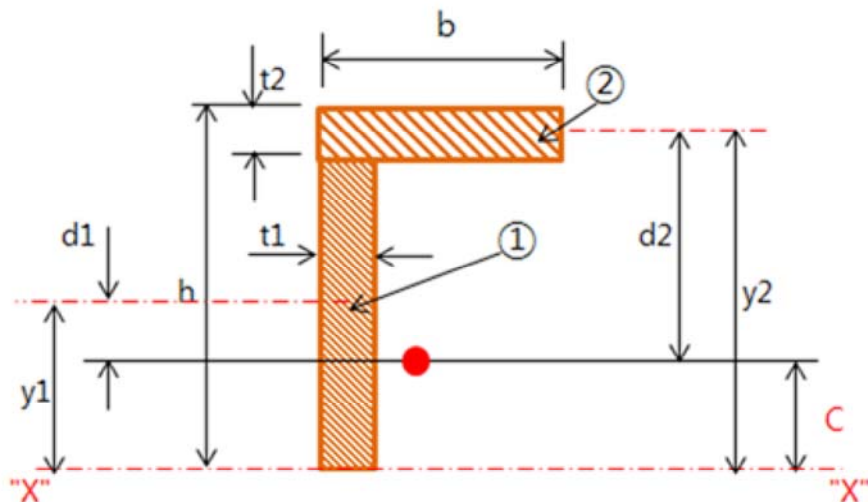
[MENU PAGE-->](#)

PROPERTIES OF STIFFENER

ANGLE-SECTIONAL PROPERTIES

INPUT DATA 계산실행 **V1.0** By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	0.6 cm	* Dim. h	7.5 cm
* Dim. t2	0.6 cm	* Dim. b	7.5 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	lg1=b*h ³ /12 (cm ⁴)	lg2=A*d ² (cm ⁴)
1	4.1	3.45	14.3	-1.95	16.4	15.8
2	4.5	7.20	32.4	1.80	0.1	14.5
TOTAL	8.6		46.7		16.6	30.3
c = $\Sigma A*y / \Sigma A$	5.40		Sectional Modulus, $Z_x = I_g / c$	8.7	Actual $I_g = (I_{g1} + I_{g2})$	46.9

[MENU PAGE-->](#)

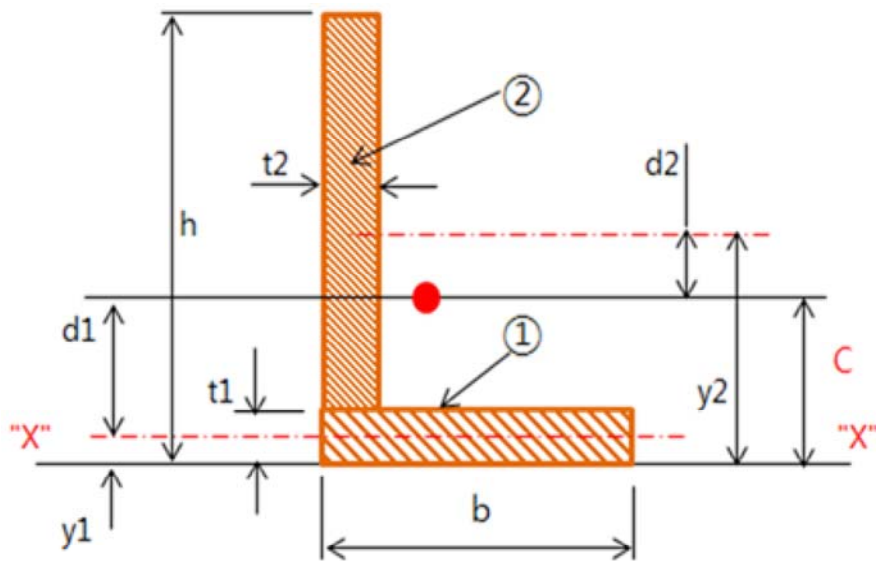
Copyright © 2001 피이에스21 All rights reserved.
Please contact E-mail ***pes21@pes21.com***

PROPERTIES OF STIFFENER

ANGLE-SECTIONAL PROPERTIES

INPUT DATA 계산실행 **V1.0** By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	0.6 cm	* Dim. h	7.5 cm
* Dim. t2	0.6 cm	* Dim. b	7.5 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	lg1=b*h ³ /12 (cm ⁴)	lg2=A*d ² (cm ⁴)
1	4.5	0.30	1.4	-1.80	0.1	14.5
2	4.1	4.05	16.8	1.95	16.4	15.8
TOTAL	8.6		18.1		16.6	30.3
c = $\Sigma A*y / \Sigma A$	2.10	Sectional Modulus, $Z_x = I_g / c$		22.4	Actual I _g = (lg1+lg2)	46.9

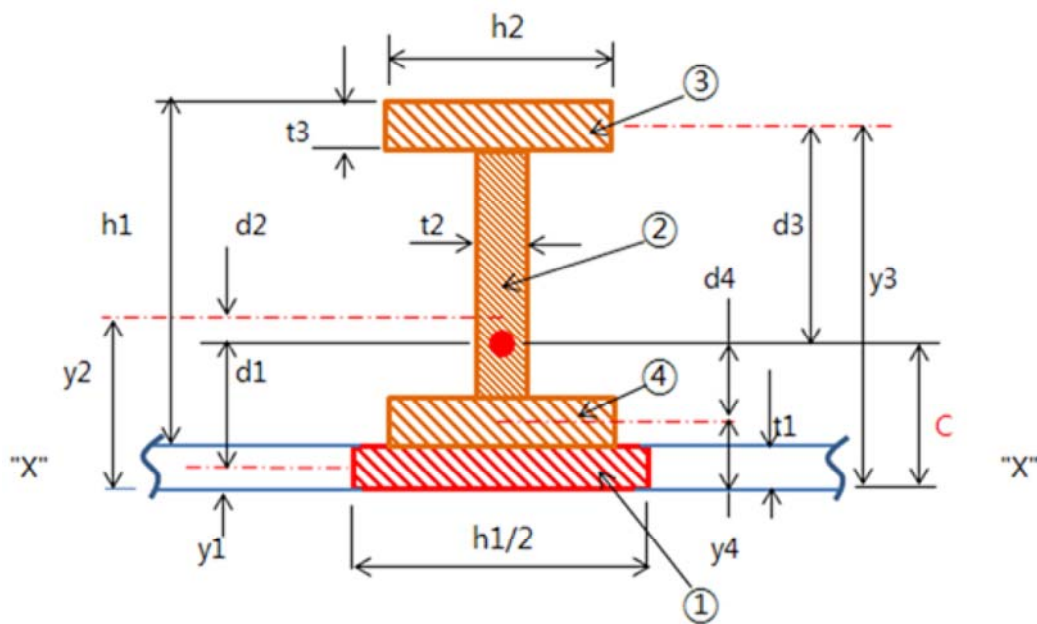
[MENU PAGE-->](#)

PROPERTIES OF STIFFENER

I-BEAM STIFFENER-SECTIONAL PROPERTIES

INPUT DATA 계산실행 V3.0 By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	2.5 cm	* Dim. h1	20 cm
* Dim. t2	2.5 cm	* h limits to less than t*8	
* Dim. t3	2.5 cm	* Dim. h2	8 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	Ig1=b*h ³ /12 (cm ⁴)	Ig2=A*d ² (cm ⁴)
1	25.0	1.25	31.3	8.51	13.0	1,808.8
2	37.5	12.50	468.8	2.74	703.1	282.3
3	20.0	21.25	425.0	11.49	10.4	2,642.2
4	20.0	3.75	75.0	6.01	10.4	721.5
TOTAL	102.5		1,000.0		737.0	5,454.8
c = $\Sigma A*y / \Sigma A$	9.76		Sectional Modulus, Zx=Ig/c	634.7	Actual Ig = (Ig1+Ig2)	6,191.8

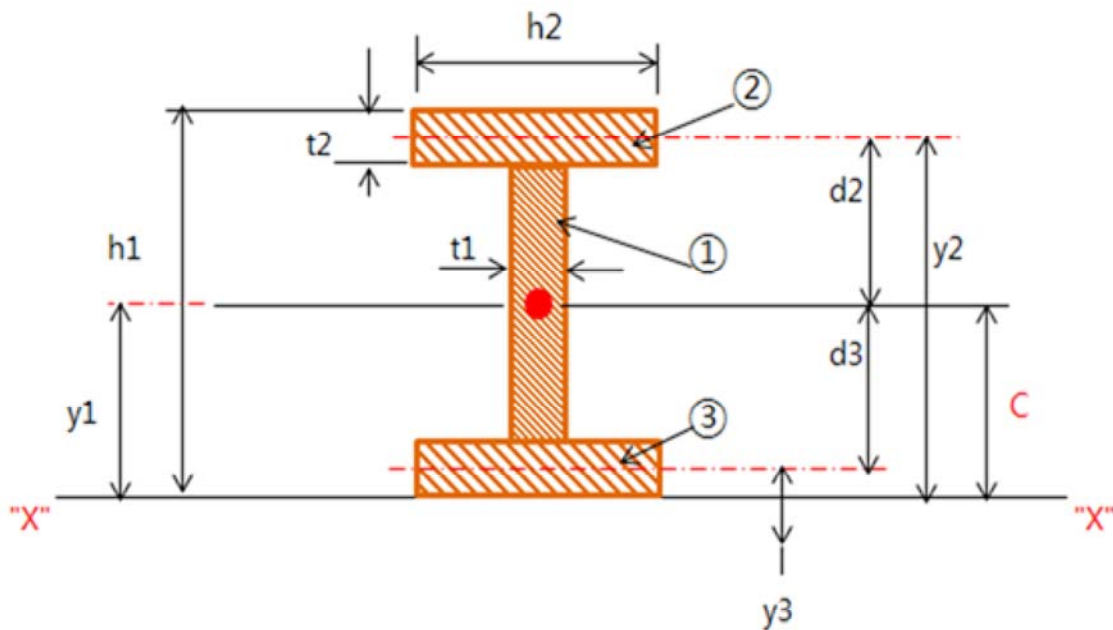
[MENU PAGE-->](#)

PROPERTIES OF STIFFENER

I-BEAM -SECTIONAL PROPERTIES

INPUT DATA 계산실행 **V1.0** By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t2	2.5 cm	* Dim. h1	20 cm
* Dim. t3	2.5 cm	* Dim. h2	8 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A (cm ²)	y(cm)	A*y(cm ³)	d(cm)	Ig1=b*h ³ /12 (cm ⁴)	Ig2=A*d ² (cm ⁴)
1	37.5	10.00	375.0	0.00	703.1	0.0
2	20.0	18.75	375.0	8.75	10.4	1,531.3
3	20.0	1.25	25.0	8.75	10.4	1,531.3
TOTAL	77.5		775.0		724.0	3,062.5
c =ΣA*y / ΣA	10.00		Sectional Modulus, Zx=Ig/c	378.6	Actual Ig = (Ig1+Ig2)	3,786.5

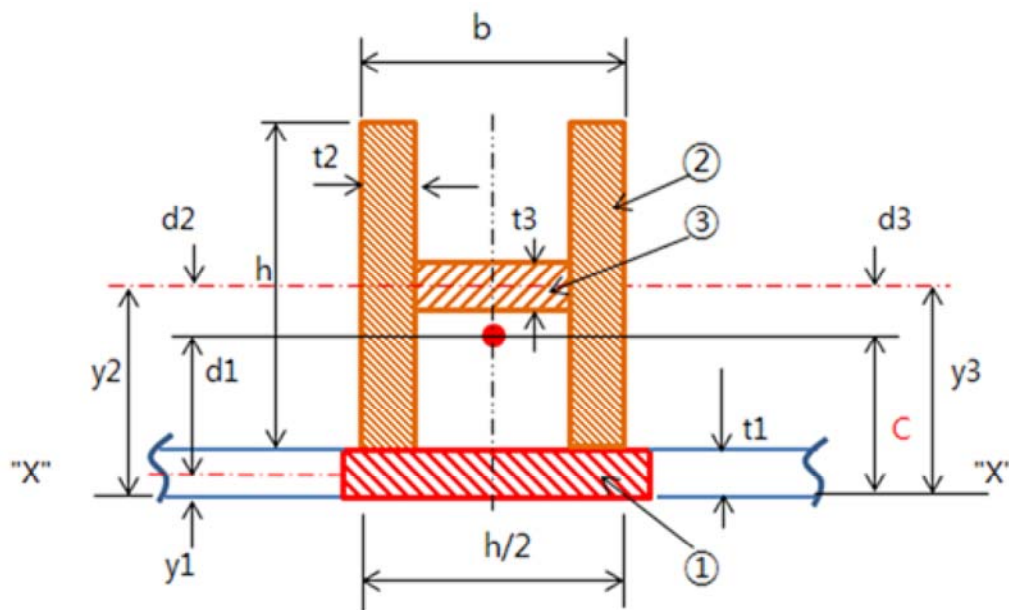
[MENU PAGE-->](#)

PROPERTIES OF STIFFENER

H-BEAM STIFFENER-SECTIONAL PROPERTIES

INPUT DATA 계산실행 **V2.0** By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	2 cm	* Dim. h	20 cm
* Dim. t2	1.2 cm	* h limits to less than t*8	
* Dim. t3	0.8 cm	* Dim. b	20 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	lg1=b*h ³ /12 (cm ⁴)	lg2=A*d ² (cm ⁴)
1	20.0	1.00	20.0	8.32	6.7	1,384.3
2	48.0	12.00	576.0	2.68	1,600.0	344.8
3	14.1	12.00	169.0	2.68	0.8	101.2
TOTAL	82.1		765.0		1,607.4	1,830.3
c = ΣA*y / ΣA	9.32	Sectional Modulus, Zx=lg/c		368.9	Actual lg = (lg1+lg2)	3,437.7

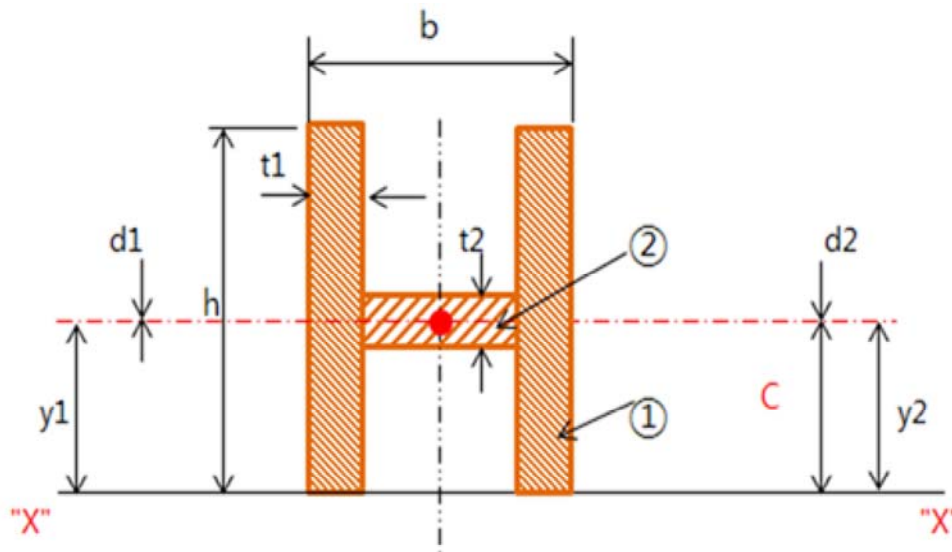
[MENU PAGE-->](#)

PROPERTIES OF STIFFENER

H-BEAM-SECTIONAL PROPERTIES

INPUT DATA 계산실행 **V1.0** By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	1.2 cm	* Dim. h	20 cm
* Dim. t2	0.8 cm	* Dim. b	20 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	lg1=b*h ³ /12 (cm ⁴)	lg2=A*d ² (cm ⁴)
1	48.0	10.00	480.0	0.00	1,600.0	0.0
2	14.1	10.00	140.8	0.00	0.8	0.0
TOTAL	62.1		620.8		1,600.8	0.0
c = $\Sigma A*y / \Sigma A$	10.00		Sectional Modulus, $Z_x = I_g / c$	160.1	Actual I _g = (lg1+lg2)	1,600.8

[MENU PAGE-->](#)

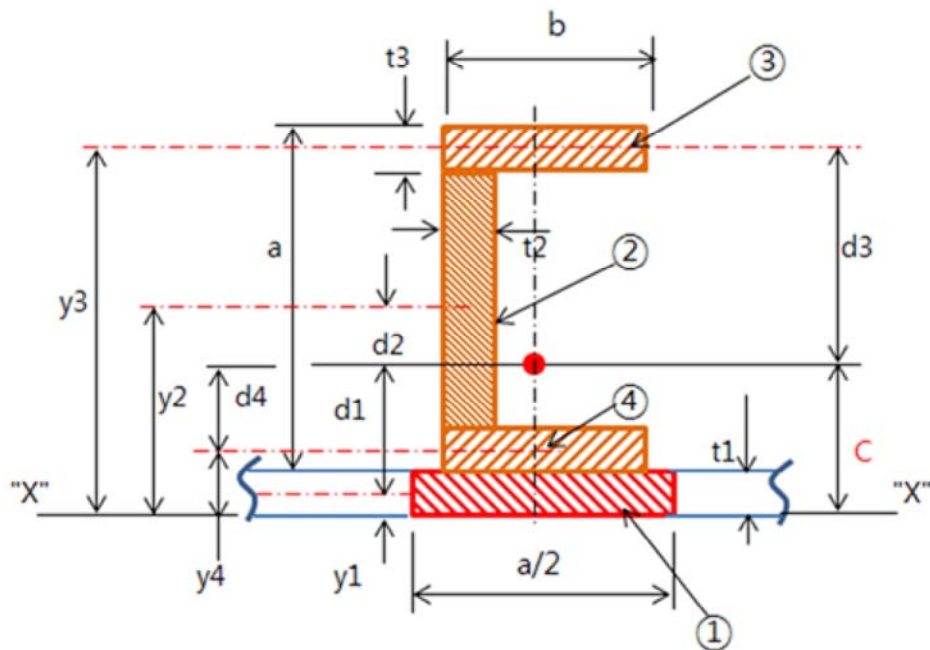
Copyright © 2001 피이에스21 All rights reserved.
Please contact E-mail ***pes21@pes21.com***

PROPERTIES OF STIFFENER

CHANNEL STIFFENER-SECTIONAL PROPERTIES

INPUT DATA 계산실행 V2.0 By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	1.5 cm	* Dim. a	20 cm
* Dim. t2	0.7 cm		
* Dim. t3	1.0 cm	* Dim. b	7 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	lg1=b*h ³ /12 (cm ⁴)	lg2=A*d ² (cm ⁴)
1	15.0	0.75	11.3	6.57	2.8	647.7
2	12.6	10.50	132.3	3.18	340.2	127.3
3	7.0	21.00	147.0	13.68	0.6	1,309.8
4	7.0	2.00	14.0	-5.32	0.6	198.2
TOTAL	41.6		304.6		344.2	2,283.0
c = $\Sigma A*y / \Sigma A$	7.32				Sectional Modulus, Z _x =lg/c	358.9
					Actual lg = (lg1+lg2)	2,627.2

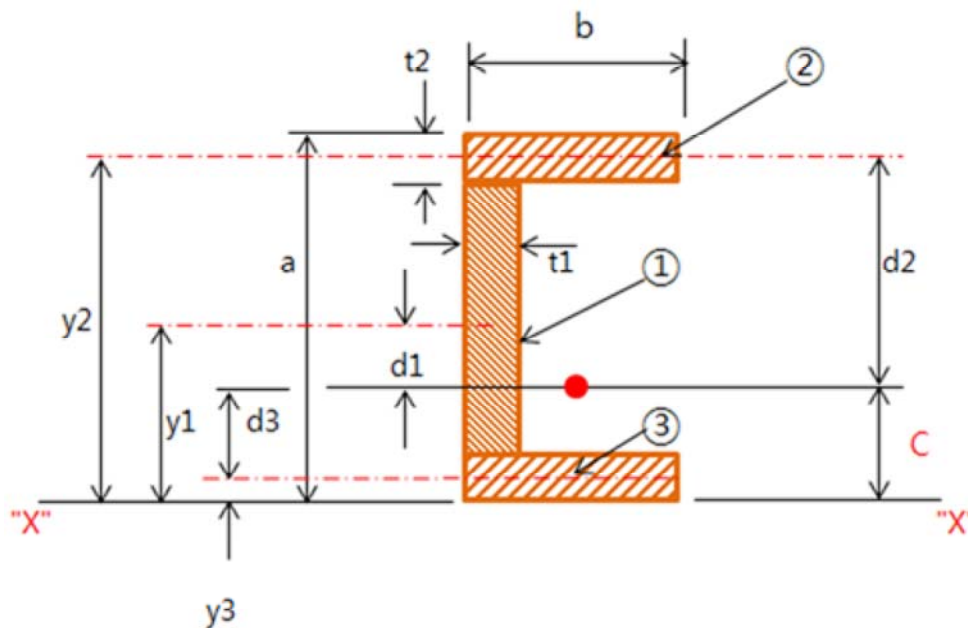
[MENU PAGE-->](#)

PROPERTIES OF STIFFENER

CHANNEL-SECTIONAL PROPERTIES

INPUT DATA 계산실행 **V1.0** By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	0.7 cm	* Dim. a	20 cm
* Dim. t2	1.0 cm	* Dim. b	7 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	lg1=b*h ³ /12 (cm ⁴)	lg2=A*d ² (cm ⁴)
1	12.6	9.00	113.4	-0.53	340.2	3.5
2	7.0	19.50	136.5	9.97	0.6	696.3
3	7.0	0.50	3.5	-9.03	0.6	570.3
TOTAL	26.6		253.4		341.4	1,270.1
c = $\Sigma A*y / \Sigma A$	9.53		Sectional Modulus, $Z_x = I_g / c$	169.2	Actual $I_g = (I_{g1} + I_{g2})$	1,611.5

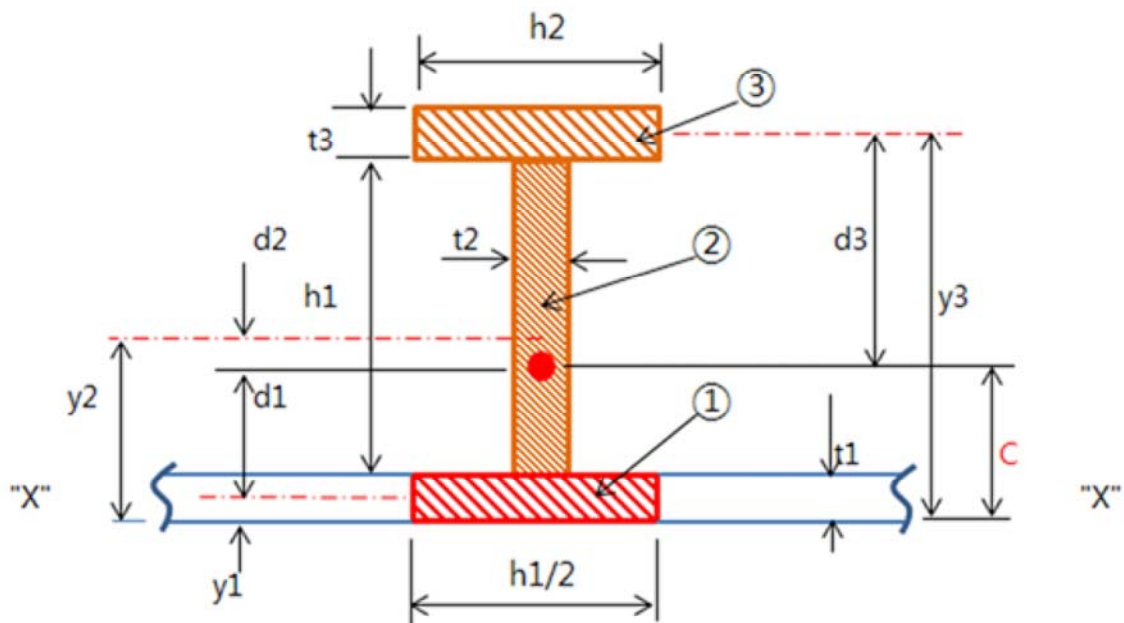
[MENU PAGE-->](#)

PROPERTIES OF STIFFENER

T-BAR STIFFENER-SECTIONAL PROPERTIES

INPUT DATA 계산실행 **V2.0** By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	2.5 cm	* Dim. h1	20 cm
* Dim. t2	2.5 cm	* h limits to less than t*8	
* Dim. t3	2.5 cm	* Dim. h2	8 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	Ig1=b*h ³ /12 (cm ⁴)	Ig2=A*d ² (cm ⁴)
1	25.0	1.25	31.3	10.66	13.0	2,839.8
2	50.0	12.50	625.0	0.59	1,666.7	17.5
3	20.0	23.75	475.0	11.84	10.4	2,804.7
TOTAL	95.0		1,131.3		1,690.1	5,662.0
c = ΣA*y / ΣA	11.91		Sectional Modulus, Zx=Ig/c	617.4	Actual Ig = (Ig1+Ig2)	7,352.1

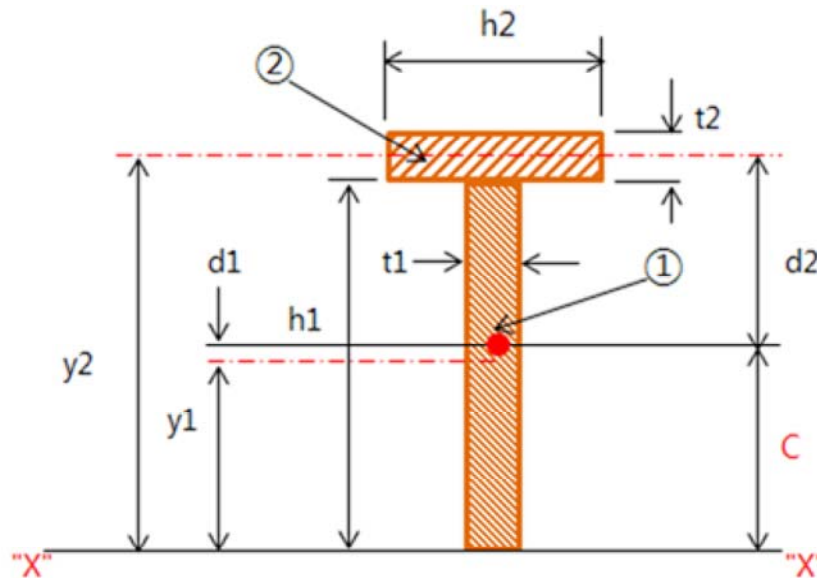
[MENU PAGE-->](#)

PROPERTIES OF STIFFENER

T-BAR-SECTIONAL PROPERTIES

INPUT DATA 계산실행 **V1.0** By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	2.5 cm	* Dim. h1	20 cm
* Dim. t2	2.5 cm	* Dim. h2	8 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	Ig1=b*h ³ /12 (cm ⁴)	Ig2=A*d ² (cm ⁴)
1	50.0	10.00	500.0	-3.21	1,666.7	516.6
2	20.0	21.25	425.0	8.04	10.4	1,291.5
TOTAL	70.0		925.0		1,677.1	1,808.0
c = $\Sigma A*y / \Sigma A$	13.21		Sectional Modulus, $Z_x = I_g / c$	263.7	Actual Ig = (Ig1+Ig2)	3,485.1

[MENU PAGE-->](#)

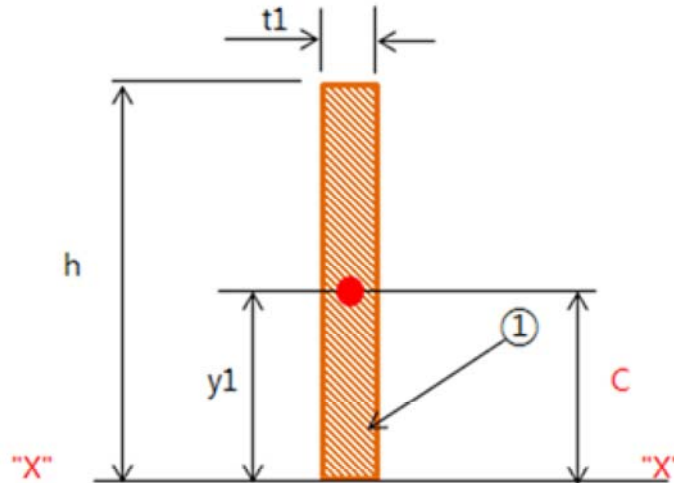
Copyright © 2001 피이에스21 All rights reserved.
Please contact E-mail ***pes21@pes21.com***

PROPERTIES OF STIFFENER

FLAT BAR –SECTIONAL PROPERTIES

INPUT DATA 계산실행 **V1.0** By Ryu-ChangMyong/P.E

* Item Name E1004 * Description PES
 * Dim. t1 2.5 cm * Dim.h 20 cm



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	lg1=b*h ³ /12 (cm ⁴)	lg2=A*d ² (cm ⁴)
1	50.0	10.00	500.0	0.00	1,666.7	0.0
TOTAL	50.0		500.0		1,666.7	0.0
c = $\Sigma A*y / \Sigma A$	10.00		Sectional Modulus, $Z_x=lg/c$	166.7	Actual lg = (lg1+lg2)	1,666.7

[MENU PAGE-->](#)

Copyright © 2001 피이에스21 All rights reserved.
 Please contact E-mail ***pes21@pes21.com***

PROPERTIES OF STIFFENER

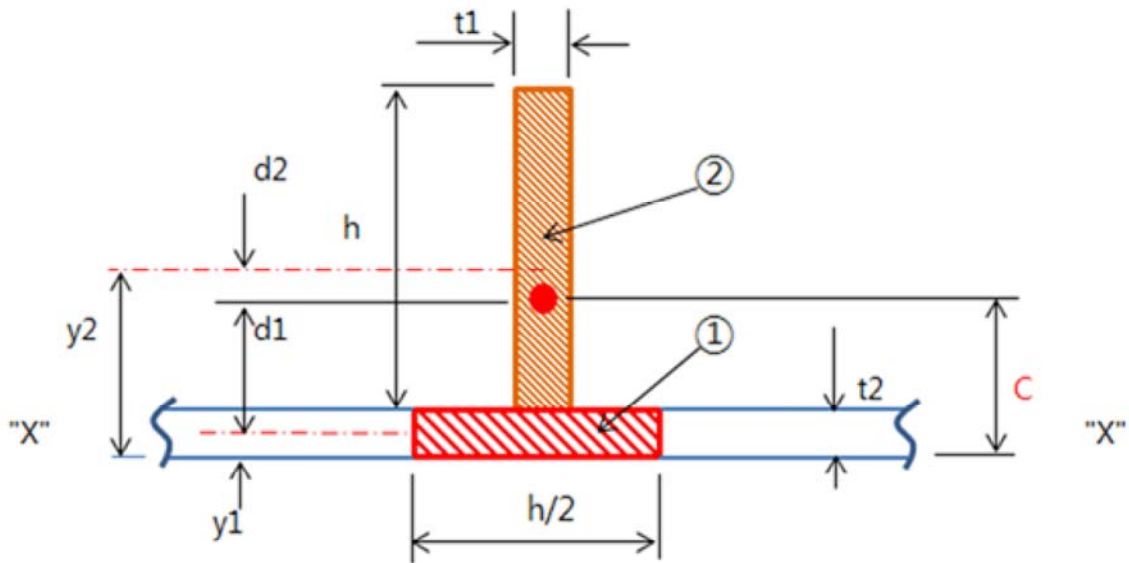
FLAT BAR STIFFENER-SECTIONAL PROPERTIES

INPUT DATA

계산실행

V2.0 By Ryu-ChangMyong/P.E

* Item Name	E1004	* Description	PES
* Dim. t1	2.5	cm	* Dim.h
			20
			cm
* Dim. t2	2.5	cm	* h limits to less than t*8



RESULT OF CALCULATION

* Actual moment of inertia

Mark	A(cm ²)	y(cm)	A*y(cm ³)	d(cm)	lg1=b*h ³ /12 (cm ⁴)	lg2=A*d ² (cm ⁴)
1	25.0	1.25	31.3	7.50	13.0	1,406.3
2	50.0	12.50	625.0	3.75	1,666.7	703.1
TOTAL	75.0		656.3		1,679.7	2,109.4
c = $\Sigma A*y / \Sigma A$	8.75				Actual lg = (lg1+lg2)	3,789.1
			Sectional Modulus, $Z_x=lg/c$	433.0		

[MENU PAGE-->](#)

Copyright © 2001 피에스21 All rights reserved.
Please contact E-mail ***pes21@pes21.com***