



**Bakrie Pipe
Industries**



PT. Bakrie Pipe Industries is a pioneer of steel pipe manufacturing with established network in line with Indonesia's development.

Supported by approximately 600 employees, mostly spearheading the technical department across the processing plant and in the field.

Experienced in production process for more than half a decade with a systematic delivery process from the start of production process with high efficiency and accuracy.

STEEL HOLLOW SECTION

- Brata : Rectangular Hollow Section
- Sena : Square Hollow Section

Our Contact :

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RECTANGULAR HOLLOW SECTION (BRATA), SQUARE HOLLOW SECTION (SENA)

ISO 9001 : 2008
OHSAS 18001 : 2007
CERTIFIED

Specification of Rectangular Hollow Section (RHS-BRATA)

Side A x B (mm)	Wall Thickness (mm)	Weight (kg/m)	Transverse cross section (cm ²)	Properties					
				Momen Inersia (cm ⁴)		Modulus Seksion (cm ³)		Radius of Gyration (cm)	
				I _x	I _y	Z _x	Z _y	i _x	i _y
40 x 20	1,80	1,53	1,947	3,75	1,25	1,86	1,25	1,39	0,80
45 x 35	1,85	2,15	2,735	7,77	5,26	3,45	3,01	1,68	1,39
50 x 20	2,30	2,25	2,872	8,00	1,83	3,20	1,83	1,67	0,80
50 x 30	2,30	2,62	3,332	10,60	4,76	4,25	3,17	1,79	1,20
60 x 30	2,30	2,98	3,792	16,80	5,65	5,61	3,76	2,10	1,22
60 x 30	3,20	3,99	5,087	21,40	7,08	7,15	4,72	2,05	1,18
60 x 40	1,80	2,66	3,387	16,85	9,01	5,62	4,51	2,23	1,63
60 x 40	2,00	2,93	3,737	18,41	9,83	6,14	4,92	2,22	1,62
60 x 40	2,30	3,34	4,252	20,65	11,00	6,88	5,50	2,20	1,61
60 x 40	2,50	3,60	4,589	22,07	11,74	7,36	5,87	2,19	1,60
60 x 40	2,80	3,99	5,084	24,10	12,78	8,03	6,39	2,18	1,59
66 x 33	1,85	2,70	3,438	19,08	6,48	5,78	3,93	2,35	1,37
75 x 20	2,30	3,16	4,022	23,70	2,73	6,31	2,73	2,43	0,82
75 x 45	2,30	4,06	5,172	38,90	17,60	10,40	7,82	2,74	1,84
75 x 45	3,20	5,50	7,007	50,80	22,80	13,50	10,10	2,69	1,80
80 x 40	2,30	4,06	5,172	42,10	14,30	10,50	7,14	2,85	1,66
80 x 40	3,20	5,50	7,006	54,90	18,40	13,70	9,21	2,80	1,62
82 x 42	3,10	5,54	7,056	59,00	20,61	14,39	9,81	2,89	1,71
90 x 45	2,30	4,60	5,862	61,00	20,80	13,60	9,22	3,23	1,88
90 x 45	3,20	6,25	7,967	80,20	27,00	17,80	12,00	3,17	1,84
100 x 20	2,30	4,06	5,172	51,90	3,64	10,40	3,64	3,17	0,84
100 x 40	2,30	4,78	6,092	73,90	17,50	14,80	8,75	3,48	1,69
100 x 40	4,20	8,32	10,600	120,00	27,60	24,00	13,80	3,36	1,61
100 x 50	2,30	5,14	6,552	84,80	29,00	17,00	11,60	3,60	2,10
100 x 50	3,20	7,01	8,926	112,00	38,00	22,50	15,20	3,55	2,06
100 x 50	4,50	9,55	12,170	147,00	48,90	29,30	19,50	3,47	2,00
125 x 40	2,30	5,69	7,242	131,00	21,60	20,90	10,80	4,25	1,73
125 x 75	2,30	6,95	8,852	192,00	87,50	30,60	23,30	4,65	3,14
125 x 75	3,20	9,52	12,130	257,00	117,00	41,10	31,20	4,60	3,10
125 x 75	4,00	11,70	14,950	311,00	141,00	49,70	37,50	4,56	3,07
125 x 75	4,50	13,10	16,670	342,00	155,00	54,80	41,20	4,53	3,04
125 x 75	6,00	17,00	21,630	428,00	192,00	68,50	51,10	4,45	2,98

Specification of Square Hollow Section (SHS-BRATA)

Sisi A x B (mm)	Wall Thickness (mm)	Weight W (kg/m)	Transverse cross section (cm ²)	Properties		
				Momen Inersia (cm ⁴)	Modulus Seksion (cm ³)	Radius of Gyration (cm)
				I _x , I _y	Z _x , Z _y	i _x , i _y
20 x 20	1,8	0,96	1,227	0,66	0,66	0,73
25 x 25	1,8	1,25	1,587	1,39	1,11	0,94
30 x 30	1,8	1,53	1,947	2,53	1,69	1,14
36 x 36	1,8	1,87	2,379	4,56	2,53	1,38
37 x 37	1,8	1,92	2,451	5,03	2,71	1,42
38 x 38	1,8	1,98	2,523	5,42	2,86	1,47
40 x 40	1,8	2,09	2,667	6,39	3,19	1,55
40 x 40	2,3	2,62	3,332	7,73	3,86	1,52
50 x 50	2,3	3,34	4,252	15,90	6,34	1,93
50 x 50	3,2	4,50	5,727	20,40	8,16	1,89
60 x 60	2,3	4,06	5,172	28,30	9,44	2,34
60 x 60	3,2	5,50	7,007	36,90	12,30	2,30
75 x 75	2,3	5,14	6,552	57,10	15,20	2,95
75 x 75	3,2	7,01	8,927	75,50	20,10	2,91
75 x 75	4,5	9,55	12,170	98,60	26,30	2,85
80 x 80	2,3	5,50	7,012	69,90	17,50	3,16
80 x 80	3,2	7,51	9,567	72,70	23,20	3,11
80 x 80	4,5	10,30	13,070	122	30,40	3,05
90 x 90	2,3	6,23	7,932	101	22,40	3,56
90 x 90	3,2	8,51	10,850	135	29,90	3,52
100 x 100	2,3	6,95	8,852	140	27,90	3,97
100 x 100	3,2	9,52	12,130	187	37,50	3,93
100 x 100	4,0	11,70	14,950	226	45,30	3,89
100 x 100	4,5	13,10	16,670	249	49,90	3,97
100 x 100	6,0	17,00	21,630	311	62,30	3,79

Pipe Dimension Tolerance BRATA and SENA

Size	Tolerance		
	BRATA SENIA I	Grade A	Grade B
Weight	± 10%	± 10%	± 10%
Side Length	-	± 1 mm	± 1 mm
Wall Thickness	± 10%	± 10%	± 10%
Length	± 10%	± 10%	± 10%
Outer Radius, S	t < 3 mm = 2t t ≥ 3 mm = 2,5t	t < 2,5 mm = 1,5t t ≥ 2,5 - 4 mm = 2t t > 4 mm = 2,5t	t < 2,5 mm = 1,5t t ≥ 2,5 - 4 mm = 2t t > 4 mm = 2,5t
Flatness, max		0,05	0,05
The angle between two			

Chemical Composition Requirements (% max)

Class	Notation	Chemical Composition				
		C	Si	Mn	P	S
BRATA SENIA I	PKP (STKR) - 290	-	-	-	-	-
BRATA SENIA II	Grade A	-	-	-	0,05	0,05
	Grade B	-	-	-	0,05	0,05

Mechanical Properties

Class	Notation	Mechanical Composition (min.)		
		Yield Strength (MPa)	Tensile Strength (MPa)	Elongation (%)