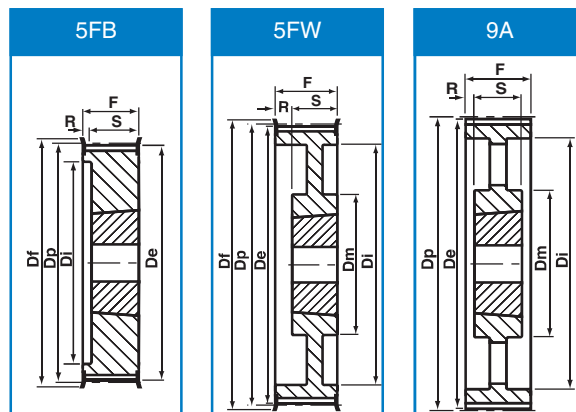


## Timing Taper Bore

### 1/2" PITCH (12.70mm) H150

Product Designation	Number of Teeth	Type	Bush Size	Material	De	Dp	Df	Dm	Di	F	S	R	Mass kg
18-H-150	18	5FB	1210	S	71.39	72.77	79	-	53	45	25	20.0	0.6
19-H-150	19	5FB	1210	S	75.44	76.81	83	-	56	45	25	20.0	0.7
20-H-150	20	5FB	1210	S	79.48	80.85	87	-	60	45	25	20.0	0.8
21-H-150	21	5FB	1210	S	83.52	84.89	91	-	64	45	25	20.0	1.0
22-H-150	22	5FB	1210	S	87.56	88.94	94	-	68	45	25	20.0	1.2
23-H-150	23	5FB	1610	S	91.61	92.98	102	-	71	45	25	20.0	1.3
24-H-150	24	5FB	1610	S	95.65	97.02	102	-	74	45	25	20.0	1.0
25-H-150	25	5FB	1610	CI	99.69	101.06	112	-	78	45	25	20.0	1.2
26-H-150	26	5FB	1610	CI	103.73	105.11	112	-	82	45	25	20.0	1.4
27-H-150	27	5FB	1610	CI	107.78	109.15	120	-	87	45	25	20.0	1.6
28-H-150	28	5FB	1610	CI	111.82	113.19	120	-	91	45	25	20.0	1.8
30-H-150	30	5FB	1610	CI	119.90	121.28	128	-	99	45	25	20.0	2.3
32-H-150	32	5FW	1610	CI	127.99	129.36	135	92	108	45	25	20.0	2.3
36-H-150	36	5FW	1610	CI	144.16	145.53	158	92	124	45	25	20.0	3.1
40-H-150	40	5FW	1610	CI	160.33	161.70	168	92	140	45	25	20.0	4.0
44-H-150	44	5FW	2012	CI	176.50	177.87	184	106	153	45	32	13.0	4.4
48-H-150	48	5FW	2012	CI	192.67	194.04	200	106	169	45	32	13.0	4.8
60-H-150	60	9A	2012	CI	241.18	242.55	-	106	223	46	32	7.5	5.4
72-H-150	72	9A	2012	CI	289.69	291.06	-	106	270	46	32	7.5	6.5
84-H-150	84	9A	2012	CI	338.20	339.57	-	106	320	46	32	7.5	8.4
96-H-150	96	9A	2517	CI	386.71	388.08	-	119	366	46	45	0.5	11.0



Material; S = Steel, CI = Cast Iron

### 1/2" PITCH (12.70mm) H200

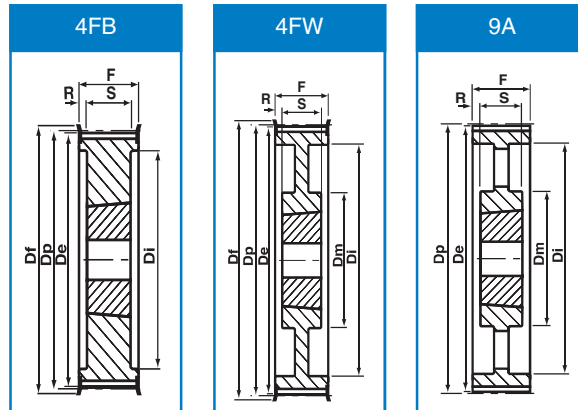
Product Designation	Number of Teeth	Type	Bush Size	Material	De	Dp	Df	Dm	Di	F	S	R	Mass kg
18-H-200	18	5FB	1210	S	71.39	72.77	79	-	52	58	25	33.0	0.8
19-H-200	19	5FB	1210	S	75.44	76.81	83	-	56	58	25	33.0	0.9
20-H-200	20	5FB	1610	S	79.48	80.85	87	-	60	58	25	33.0	1.0
21-H-200	21	5FB	1610	S	83.52	84.89	91	-	64	58	25	33.0	1.7
22-H-200	22	5FB	1610	S	87.56	88.94	94	-	68	58	25	33.0	1.5
23-H-200	23	5FB	1610	S	91.61	92.98	102	-	71	58	25	33.0	1.8
24-H-200	24	5FB	1610	S	95.65	97.02	102	-	74	58	25	33.0	1.5
25-H-200	25	5FB	1610	CI	99.69	101.06	112	-	78	58	25	33.0	1.5
26-H-200	26	5FB	1610	CI	103.73	105.11	112	-	82	58	25	33.0	1.8
27-H-200	27	5FB	1610	CI	107.78	109.15	120	-	87	58	25	33.0	1.9
28-H-200	28	5FB	1610	CI	111.82	113.19	120	-	91	58	25	33.0	2.3
30-H-200	30	5FB	1610	CI	119.90	121.28	128	-	99	58	25	33.0	3.0
32-H-200	32	5FB	2012	CI	127.99	129.36	135	-	107	58	32	26.0	3.0
36-H-200	36	5FW	2012	CI	144.16	145.53	158	102	124	58	32	26.0	3.6
40-H-200	40	5FW	2012	CI	160.33	161.70	168	106	140	58	32	26.0	4.0
44-H-200	44	5FW	2012	CI	176.50	177.87	184	106	153	58	32	26.0	4.6
48-H-200	48	5FW	2517	CI	192.67	194.04	200	119	169	58	45	13.0	7.0
60-H-200	60	9A	2517	CI	241.18	242.55	-	119	223	60	45	7.5	8.0
72-H-200	72	9A	2517	CI	289.69	291.06	-	119	270	60	45	7.5	9.0
84-H-200	84	9A	2517	CI	338.20	339.57	-	119	320	60	45	7.5	10.0
96-H-200	96	9A	2517	CI	386.71	388.08	-	119	366	60	45	7.5	13.4

Every effort has been taken to ensure that the data listed in this catalogue is correct. Challenge accepts no liability for any inaccuracies or damage caused. All dimensions in millimetres unless otherwise stated.

# Timing Taper Bore

## 1/2" PITCH (12.70mm) H300

Product Designation	Number of Teeth	Type	Bush Size	Material	De	Dp	Df	Dm	Di	F	S	R	Mass kg
20-H-300	20	4FB	1615	S	79.48	80.85	87	-	65	84	38	23.0	1.5
21-H-300	21	4FB	1615	S	83.52	84.89	91	-	66	84	38	23.0	12.0
22-H-300	22	4FB	1615	S	87.56	88.94	94	-	67	84	38	23.0	1.6
23-H-300	23	4FB	1615	S	91.61	92.98	102	-	71	84	38	23.0	1.8
24-H-300	24	4FB	1615	S	95.65	97.02	102	-	75	84	38	23.0	2.1
25-H-300	25	4FB	1615	CI	99.69	101.06	112	-	79	84	38	23.0	2.0
26-H-300	26	4FB	1615	CI	103.73	105.11	112	-	83	84	38	23.0	2.7
27-H-300	27	4FB	2012	CI	107.78	109.15	120	-	87	84	32	26.0	3.0
28-H-300	28	4FB	2012	CI	111.82	113.19	120	-	91	84	32	26.0	3.4
30-H-300	30	4FB	2012	CI	119.90	121.28	128	-	99	84	32	26.0	3.9
32-H-300	32	4FB	2517	CI	127.99	129.36	135	-	107	84	45	19.5	4.3
36-H-300	36	4FB	2517	CI	144.16	145.53	158	-	124	84	45	19.5	4.5
40-H-300	40	4FB	2517	CI	160.33	161.70	168	-	137	84	45	19.5	6.0
44-H-300	44	4FW	2517	CI	176.50	177.87	184	119	153	86	45	20.5	6.5
48-H-300	48	4FW	2517	CI	192.67	194.04	200	119	169	86	45	20.5	7.6
60-H-300	60	9A	2517	CI	241.18	242.55	-	119	223	86	45	20.5	8.4
72-H-300	72	9A	2517	CI	289.69	291.06	-	119	270	86	45	20.5	10.4
84-H-300	84	9A	2517	CI	338.20	339.57	-	119	320	86	45	20.5	12.5
96-H-300	96	9A	3030	CI	386.71	338.08	-	150	362	86	76	5.0	14.2
120-H-300	120	9A	3030	CI	483.73	485.10	-	150	460	86	76	5.0	18.8



Material; S = Steel, CI = Cast Iron

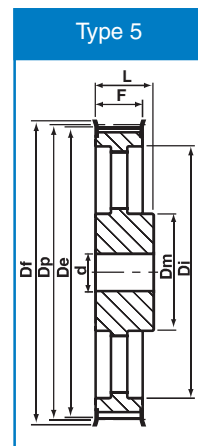
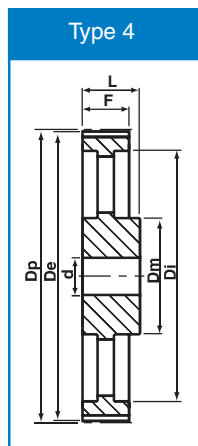
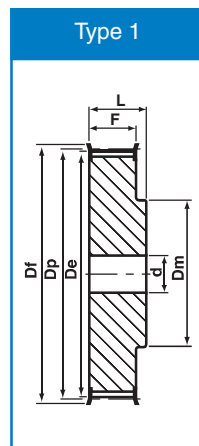
## Timing Pilot Bore

### H075 Pitch 1/2" (12.70 mm)

Product	Type	Mat.	De	Dp	Df	Dm	F	L	d
14-H-075	1	S	55.22	56.59	64	40	26.4	40	12
15-H-075	1	S	59.27	60.64	70	45	26.4	40	12
16-H-075	1	S	63.31	64.67	70	45	26.4	40	12
17-H-075	1	S	67.35	68.72	75	45	26.4	40	12
18-H-075	1	S	71.39	72.77	79	55	26.4	40	12
19-H-075	1	S	75.44	76.81	83	60	26.4	40	12
20-H-075	1	S	79.48	80.85	86	62	26.4	40	12
21-H-075	1	S	83.52	84.89	91	65	26.4	40	12
22-H-075	1	S	87.56	88.93	94	68	26.4	40	12
23-H-075	1	S	91.61	92.98	97	72	26.4	40	12
24-H-075	1	S	95.65	97.03	102	72	26.4	40	12
25-H-075	1	S	99.69	101.06	106	72	26.4	40	12
26-H-075	1	S	103.73	105.11	112	80	26.4	40	12
27-H-075	1	S	107.78	109.15	115	80	26.4	40	12
28-H-075	1	S	111.82	113.18	120	80	26.4	40	12
30-H-075	1	S	119.90	121.29	128	80	26.4	40	12
32-H-075	1	S	127.99	129.30	135	80	26.4	40	12
33-H-075	1	S	132.03	133.40	142	80	26.4	40	12
34-H-075	1	S	136.07	137.45	150	80	26.4	40	12
35-H-075	1	S	140.12	141.49	150	80	26.4	40	12
36-H-075	1	S	144.16	145.54	150	80	26.4	40	12
38-H-075	1	S	152.24	153.62	158	80	26.4	40	12
40-H-075	1	S	160.33	161.70	168	80	26.4	40	12
42-H-075	1	CI	168.41	169.79	184	80	26.4	40	12
44-H-075	4	CI	176.50	177.88	-	80	26.4	40	14
48-H-075	4	CI	192.67	194.03	-	90	26.4	45	14
50-H-075	4	CI	200.75	202.13	-	90	26.4	45	14

### H100 Pitch 1/2" (12.70 mm)

Product	Type	Mat.	De	Dp	Df	Dm	F	L	d
14-H-100	1	S	55.22	56.59	64	40	31.8	45	12
15-H-100	1	S	59.27	60.64	70	45	31.8	45	12
16-H-100	1	S	63.31	64.67	70	45	31.8	45	12
17-H-100	1	S	67.35	68.72	75	45	31.8	45	12
18-H-100	1	S	71.39	72.77	79	55	31.8	45	12
19-H-100	1	S	75.44	76.81	83	60	31.8	45	14
20-H-100	1	S	79.48	80.85	86	62	31.8	45	14
21-H-100	1	S	83.52	84.89	91	65	31.8	45	14
22-H-100	1	S	87.56	88.93	94	68	31.8	45	14
23-H-100	1	S	91.61	92.98	97	72	31.8	45	14
24-H-100	1	S	95.65	97.03	102	72	31.8	45	14
25-H-100	1	S	99.69	101.06	106	72	31.8	45	14
26-H-100	1	S	103.73	105.11	112	80	31.8	45	14
27-H-100	1	S	107.78	109.15	115	80	31.8	45	14
28-H-100	1	S	111.82	113.18	120	80	31.8	45	14
29-H-100	1	S	115.86	117.23	120	80	31.8	45	14
30-H-100	1	S	119.90	121.29	128	80	31.8	45	14
32-H-100	1	S	127.99	129.30	135	80	31.8	45	14
33-H-100	1	S	132.03	133.40	142	80	31.8	45	14
34-H-100	1	S	136.07	137.45	150	80	31.8	45	14
35-H-100	1	S	140.12	141.49	150	80	31.8	45	14
36-H-100	1	S	144.16	145.54	150	80	31.8	45	14
38-H-100	1	S	152.24	153.62	158	80	31.8	45	14
40-H-100	1	S	160.33	161.70	168	80	31.8	45	14
42-H-100	1	CI	168.41	169.79	184	80	31.8	45	14
44-H-100	5	CI	176.50	177.88	184	80	31.8	50	14
45-H-100	5	CI	180.54	181.91	192	80	31.8	50	14
48-H-100	5	CI	192.67	194.03	200	90	31.8	50	14
50-H-100	4	CI	200.75	202.13	-	90	31.8	50	20
52-H-100	4	CI	208.84	210.21	-	90	31.8	50	20
57-H-100	4	CI	229.05	230.42	-	90	31.8	50	20
58-H-100	4	CI	233.09	234.47	-	90	31.8	50	20
60-H-100	4	CI	241.18	242.55	-	120	31.8	50	20
68-H-100	4	CI	273.53	274.90	-	120	31.8	55	20
70-H-100	4	CI	281.61	282.98	-	120	31.8	55	20
72-H-100	4	CI	289.69	291.06	-	120	31.8	55	20
84-H-100	4	CI	338.20	339.57	-	120	31.8	55	20
96-H-100	4	CI	386.71	388.09	-	120	31.8	60	20
120-H-100	4	CI	483.73	485.12	-	120	31.8	60	20
156-H-100	4	CI	629.26	630.64	-	120	31.8	60	20



Material; S = Steel, CI = Cast Iron

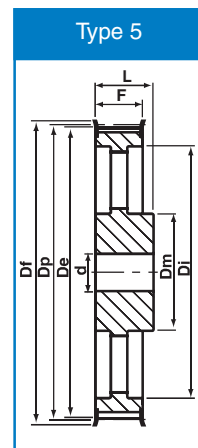
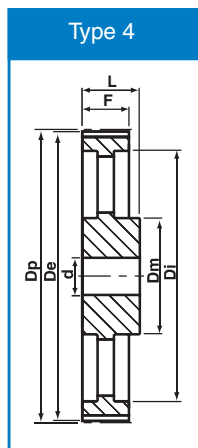
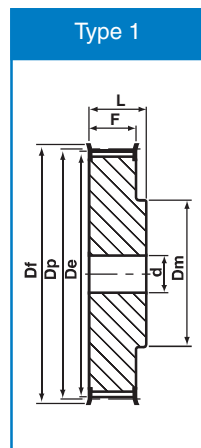
# Timing Pilot Bore

## H150 Pitch 1/2" (12.70 mm)

Product	Type	Mat.	De	Dp	Df	Dm	F	L	d
14-H-150	1	S	55.22	56.59	64	42	46	58	20
15-H-150	1	S	59.27	60.64	70	45	46	58	20
16-H-150	1	S	63.31	64.67	70	45	46	58	20
17-H-150	1	S	67.35	68.72	75	45	46	58	20
18-H-150	1	S	71.39	72.77	79	55	46	58	20
19-H-150	1	S	75.44	76.81	82	60	46	58	20
20-H-150	1	S	79.48	80.85	86	62	46	58	20
21-H-150	1	S	83.52	84.89	91	65	46	58	20
22-H-150	1	S	87.56	88.93	94	68	46	58	20
23-H-150	1	S	91.61	92.98	97	72	46	58	20
24-H-150	1	S	95.65	97.03	102	72	46	58	20
25-H-150	1	S	99.69	101.06	106	72	46	58	20
26-H-150	1	S	103.73	105.11	112	80	46	58	20
27-H-150	1	S	107.78	109.15	115	80	46	58	20
28-H-150	1	S	111.82	113.18	120	80	46	58	20
29-H-150	1	S	115.86	117.23	120	80	46	58	20
30-H-150	1	S	119.90	121.29	128	80	46	58	20
32-H-150	1	S	127.99	129.30	135	80	46	58	20
33-H-150	1	S	132.03	133.40	142	80	46	58	20
34-H-150	1	S	136.07	137.45	150	80	46	58	20
35-H-150	1	S	140.12	141.49	150	80	46	58	20
36-H-150	1	S	144.16	145.54	150	80	46	58	20
38-H-150	1	S	152.24	153.62	158	80	46	58	20
40-H-150	1	S	160.33	161.70	168	80	46	58	20
42-H-150	1	CI	168.41	169.79	184	80	46	58	20
45-H-150	5	CI	180.54	181.91	192	80	46	58	20
48-H-150	5	CI	192.67	194.03	200	90	46	58	20
50-H-150	4	CI	200.75	202.13	-	90	46	65	20
52-H-150	4	CI	208.84	210.21	-	90	46	65	20
57-H-150	4	CI	229.05	230.43	-	90	46	65	20
58-H-150	4	CI	233.09	234.47	-	90	46	65	20
60-H-150	4	CI	241.18	242.55	-	120	46	65	20
68-H-150	4	CI	273.53	274.91	-	120	46	65	25
70-H-150	4	CI	281.61	282.98	-	120	46	65	25
72-H-150	4	CI	289.69	291.06	-	120	46	65	25
84-H-150	4	CI	338.20	339.57	-	120	46	65	25
96-H-150	4	CI	386.71	388.09	-	120	46	65	25
120-H-150	4	CI	483.73	485.12	-	120	46	65	25
156-H-100	4	CI	629.26	630.64	-	120	46	65	25

## H200 Pitch 1/2" (12.70 mm)

Product	Type	Mat.	De	Dp	Df	Dm	F	L	d
14-H-200	1	S	55.22	56.59	64	42	58.7	70	20
15-H-200	1	S	59.27	60.64	70	45	58.7	70	20
16-H-200	1	S	63.31	64.67	70	45	58.7	70	20
17-H-200	1	S	67.35	68.72	75	45	58.7	70	20
18-H-200	1	S	71.39	72.77	79	55	58.7	70	20
19-H-200	1	S	75.44	76.81	82	60	58.7	70	20
20-H-200	1	S	79.48	80.85	86	62	58.7	70	20
21-H-200	1	S	83.52	84.89	91	65	58.7	70	20
22-H-200	1	S	87.56	88.93	94	68	58.7	70	20
23-H-200	1	S	91.61	92.98	97	72	58.7	70	20
24-H-200	1	S	95.65	97.03	102	72	58.7	70	20
25-H-200	1	S	99.69	101.06	106	72	58.7	70	20
26-H-200	1	S	103.73	105.11	112	80	58.7	70	20
27-H-200	1	S	107.78	109.15	115	80	58.7	70	20
28-H-200	1	S	111.82	113.18	120	80	58.7	70	20
29-H-200	1	S	115.86	117.23	120	80	58.7	70	20
30-H-200	1	S	119.90	121.29	128	80	58.7	70	20
32-H-200	1	S	127.99	129.30	135	80	58.7	70	20
33-H-200	1	S	132.03	133.40	142	80	58.7	70	20
34-H-200	1	S	136.07	137.45	150	80	58.7	70	20
35-H-200	1	S	140.12	141.49	150	80	58.7	70	20
36-H-200	1	S	144.16	145.54	150	80	58.7	70	20
38-H-200	1	S	152.24	153.62	158	80	58.7	70	20
40-H-200	1	S	160.33	161.70	168	80	58.7	70	20
42-H-200	1	CI	168.41	169.79	184	80	58.7	70	20
44-H-200	5	CI	176.50	177.88	184	80	58.7	70	20
45-H-200	5	CI	180.54	181.91	192	80	58.7	70	20
48-H-200	5	CI	192.67	194.03	200	90	58.7	75	25
50-H-200	4	CI	200.75	202.13	-	90	58.7	75	25
52-H-200	4	CI	208.84	210.21	-	90	58.7	75	25
57-H-200	4	CI	229.05	230.42	-	90	58.7	75	25
58-H-200	4	CI	233.09	234.47	-	90	58.7	75	25
60-H-200	4	CI	241.18	242.55	-	120	58.7	75	25
68-H-200	4	CI	273.53	274.90	-	120	58.7	75	28
70-H-200	4	CI	281.61	282.98	-	120	58.7	75	28
72-H-200	4	CI	289.69	291.06	-	120	58.7	75	28
84-H-200	4	CI	338.20	339.57	-	120	58.7	75	28
96-H-200	4	CI	386.71	388.09	-	120	58.7	75	28
120-H-200	4	CI	483.73	485.12	-	120	58.7	75	28
156-H-100	4	CI	629.26	630.64	-	120	58.7	75	28

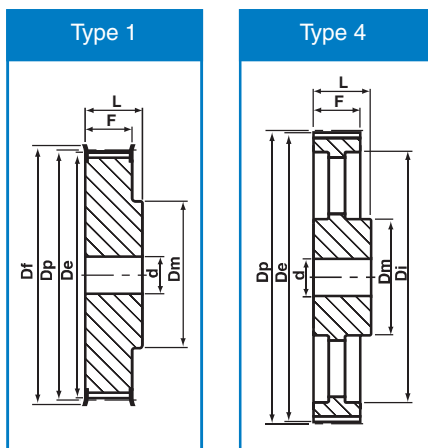


Material; S = Steel, CI = Cast Iron

## Timing Pilot Bore

### H300 Pitch 1/2" (12.70 mm)

Product	Type	Mat.	De	Dp	Df	Dm	F	L	d
14-H-300	1	S	55.22	56.59	64	42	85.7	100	20
15-H-300	1	S	59.27	60.64	70	45	85.7	100	20
16-H-300	1	S	63.31	64.67	70	45	85.7	100	20
17-H-300	1	S	67.35	68.72	75	45	85.7	100	20
18-H-300	1	S	71.39	72.77	79	55	85.7	100	20
19-H-300	1	S	75.44	76.81	83	60	85.7	100	20
20-H-300	1	S	79.48	80.85	86	62	85.7	100	20
21-H-300	1	S	83.52	84.89	91	65	85.7	100	20
22-H-300	1	S	87.56	88.93	94	68	85.7	100	20
23-H-300	1	S	91.61	92.98	97	72	85.7	100	20
24-H-300	1	S	95.65	97.03	102	72	85.7	100	20
25-H-300	1	S	99.69	101.06	106	72	85.7	100	20
26-H-300	1	S	103.73	105.11	112	80	85.7	100	20
27-H-300	1	S	107.78	109.15	115	80	85.7	100	20
28-H-300	1	S	111.82	113.18	120	80	85.7	100	20
30-H-300	1	S	119.90	121.29	128	80	85.7	100	20
32-H-300	1	S	127.99	129.30	135	80	85.7	100	20
33-H-300	1	S	132.03	133.40	142	80	85.7	100	20
34-H-300	1	S	136.07	137.45	150	80	85.7	100	20
35-H-300	1	S	140.12	141.49	150	80	85.7	100	25
36-H-300	1	S	144.16	145.54	150	80	85.7	100	25
38-H-300	1	S	152.24	153.62	158	80	85.7	100	25
40-H-300	1	S	160.33	161.70	168	80	85.7	100	25
42-H-300	1	CI	168.41	169.79	184	80	85.7	100	25
44-H-300	4	CI	176.50	177.88	-	90	85.7	100	25
45-H-300	4	CI	180.54	181.91	-	90	85.7	100	25
48-H-300	4	CI	192.67	194.03	-	90	85.7	100	25
50-H-300	4	CI	200.75	202.13	-	90	85.7	100	25
52-H-300	4	CI	208.84	210.21	-	90	85.7	100	25
57-H-300	4	CI	229.05	230.47	-	90	85.7	100	25
58-H-300	4	CI	233.09	234.47	-	90	85.7	100	25
60-H-300	4	CI	241.18	242.55	-	120	85.7	100	25
70-H-300	4	CI	281.61	282.98	-	120	85.7	100	30
72-H-300	4	CI	289.69	291.06	-	120	85.7	100	30
84-H-300	4	CI	338.20	339.57	-	120	85.7	100	30
96-H-300	4	CI	386.71	388.09	-	120	85.7	100	30
120-H-300	4	CI	483.73	485.12	-	120	85.7	100	30
150-H-300	4	CI	605.01	606.38	-	120	85.7	100	30
156-H-300	4	CI	629.26	630.64	-	120	85.7	100	30



Material; S = Steel, CI = Cast Iron