

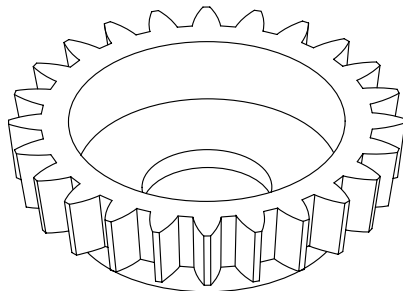
# S20 SERIES

## DP, 20° PA

Diam. Pitch	Pitch Dia.	Bore	No. Teeth	Whole Depth	Series
1-1/2	6.7	1-3/4	10	1.500	S20-150-7
1-3/4	6.8	1-3/4	12	1.2857	S20-175-7
2	4.5	1-1/4	9	1.125	S20-200-4
2	6	1-3/4	12	1.125	S20-200-6
2	7.5	1-3/4	15	1.125	S20-200-7
2-1/4	4	1-1/4	9	1.000	S20-225-4
2-1/4	5	1-3/4	11	1.000	S20-225-5
2-1/4	6.2	1-3/4	14	1.000	S20-225-6
2-1/2	4	1-1/4	10	.900	S20-250-4
2-1/2	5	1-3/4	13	.900	S20-250-5
2-1/2	6	1-3/4	15	.900	S20-250-6
2-3/4	2.9	3/4	8	.8182	S20-275-3
2-3/4	4	1-1/4	11	.8182	S20-275-4
2-3/4	5	1-3/4	14	.8182	S20-275-5
2-3/4	6.2	1-3/4	17	.8182	S20-275-6
3	2.7	1/2	8	.750	S20-300-H
3	2.7	3/4	8	.750	S20-300-S
3	3.3	1-1/4	10	.750	S20-300-3
3	4	1-1/4	12	.750	S20-300-4
3	4	1-3/4	12	.750	S20-300-4L

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## Finishing, Disc Type Non-Topping



$$2.25/DP=WD$$

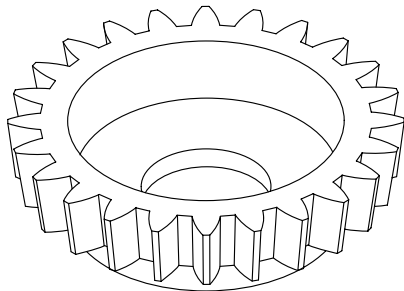
20DP & finer - depth is  $2.20/DP + .002$

*For precision shapers see page B6.*

Sizes and configurations shown are the most popular. Other sizes and configurations available from stock, please call.

# S20 SERIES DP, 20° PA

## Finishing, Disc Type Non-Topping (continued)



$$2.25/DP=WD$$

20DP & FINER - DEPTH IS  $2.20/DP + .002$

For precision shapers see page B6.

Diam. Pitch	Pitch Dia.	Bore	No. Teeth	Whole Depth	Series
3	5	1-3/4	15	.750	S20-300-5
3	5.3	1-3/4	16	.750	S20-300-5E
3	6	1-3/4	18	.750	S20-300-6
3	6.6	1-3/4	20	.750	S20-300-7
3-1/4	4	1-1/4	13	.6923	S20-325-4
3-1/2	3	1-1/4	11	.6429	S20-350-3
3-1/2	4	1-1/4	14	.6429	S20-350-4
3-1/2	4	1-3/4	14	.6429	S20-350-4L
3-1/2	5.1	1-3/4	18	.6429	S20-350-5
3-1/2	6	1-3/4	21	.6429	S20-350-6
4	2.3	3/4	9	.5625	S20-400-S
4	3	1-1/4	12	.5625	S20-400-3
4	4	1-1/4	16	.5625	S20-400-4
4	4	1-3/4	16	.5625	S20-400-4L
4	5	1-3/4	20	.5625	S20-400-5
4	6	1-3/4	24	.5625	S20-400-6
4-1/2	2.7	3/4	12	.500	S20-450-3
4-1/2	4	1-1/4	18	.500	S20-450-4
4-1/2	4	1-3/4	18	.500	S20-450-4L
4-1/2	5	1-3/4	23	.500	S20-450-5
5	2	3/4	10	.450	S20-500-S
5	2.4	3/4	12	.450	S20-500-SA
5	3	1-1/4	15	.450	S20-500-3
5	4	1-1/4	20	.450	S20-500-4
5	4	1-3/4	20	.450	S20-500-4L
5	5	1-3/4	25	.450	S20-500-5
5	6	1-3/4	30	.450	S20-500-6
5-1/2	3	1-1/4	17	.4091	S20-550-3
5-1/2	4	1-1/4	22	.4091	S20-550-4
5-1/2	4.9	1-3/4	27	.4091	S20-550-5
6	1.7	1/2	10	.375	S20-600-H
6	2	3/4	12	.375	S20-600-S
6	3	1-1/4	18	.375	S20-600-3
6	4	1-1/4	24	.375	S20-600-4
6	4	1-3/4	24	.375	S20-600-4L
6	5	1-3/4	30	.375	S20-600-5
6	6	1-3/4	36	.375	S20-600-6
6-1/2	3.1	1-1/4	20	.3462	S20-650-3
6-1/2	4	1-1/4	26	.3462	S20-650-4
6-1/2	5.1	1-3/4	33	.3462	S20-650-5

Diam. Pitch	Pitch Dia.	Bore	No. Teeth	Whole Depth	Series
7	2	3/4	14	.3214	S20-700-S
7	3	1-1/4	21	.3214	S20-700-3
7	4	1-1/4	28	.3214	S20-700-4
7	4	1-3/4	28	.3214	S20-700-4L
7	5	1-3/4	35	.3214	S20-700-5
7	6	1-3/4	42	.3214	S20-700-6
7-1/2	4	1-1/4	30	.300	S20-750-4
8	1.8	1/2	14	.2813	S20-800-H
8	1.9	3/4	15	.2813	S20-800-S
8	3	1-1/4	24	.2813	S20-800-3
8	4	1-1/4	32	.2813	S20-800-4
8	4	1-3/4	32	.2813	S20-800-4L
8	5	1-3/4	40	.2813	S20-800-5
8	6	1-3/4	48	.2813	S20-800-6
9	2	1/2	18	.250	S20-900-H
9	3	1-1/4	27	.250	S20-900-3
9	4	1-1/4	36	.250	S20-900-4
9	4	1-3/4	36	.250	S20-900-4L
9	5	1-3/4	45	.250	S20-900-5
9	6	1-3/4	54	.250	S20-900-6
10	1.6	1/2	16	.225	S20-010-H
10	1.8	3/4	18	.225	S20-010-S
10	3	1-1/4	30	.225	S20-010-3
10	4	1-1/4	40	.225	S20-010-4
10	4	1-3/4	40	.225	S20-010-4L
10	5	1-3/4	50	.225	S20-010-5
10	6	1-3/4	60	.225	S20-010-6
11	3	1-1/4	33	.2045	S20-011-3
11	4	1-1/4	44	.2045	S20-011-4
11	5	1-3/4	55	.2045	S20-011-5
12	1.5	1/2	18	.1875	S20-012-H
12	1.6	3/4	21	.1875	S20-012-S
12	3	1-1/4	36	.1875	S20-012-3
12	4	1-1/4	48	.1875	S20-012-4
12	4	1-3/4	48	.1875	S20-012-4L
12	5	1-3/4	60	.1875	S20-012-5
12	6	1-3/4	72	.1875	S20-012-6
13	3	1-1/4	39	.1731	S20-013-3
13	4	1-1/4	52	.1731	S20-013-4
13	5	1-3/4	65	.1731	S20-013-5
14	1.7	1/2	24	.1607	S20-014-H
14	3	1-1/4	42	.1607	S20-014-3
14	4	1-1/4	56	.1607	S20-014-4
14	4	1-3/4	56	.1607	S20-014-4L
14	5	1-3/4	70	.1607	S20-014-5
14	6	1-3/4	84	.1607	S20-014-6
15	3	1-1/4	45	.1500	S20-015-3
15	4	1-1/4	60	.1500	S20-015-4
16	1.5	1/2	24	.1406	S20-016-H
16	2	3/4	32	.1406	S20-016-S
16	3	1-1/4	48	.1406	S20-016-3
16	4	1-1/4	64	.1406	S20-016-4
16	4	1-3/4	64	.1406	S20-016-4L
16	5	1-3/4	80	.1406	S20-016-5
16	6	1-3/4	96	.1406	S20-016-6
17	3	1-1/4	51	.1324	S20-017-3

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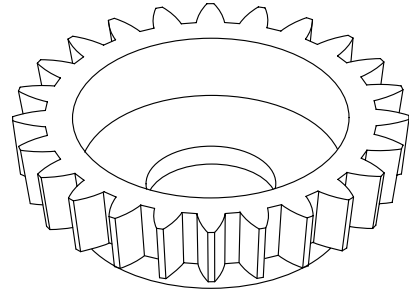
# S20 SERIES

## DP, 20° PA (continued)

Diam. Pitch	Pitch Dia.	Bore	No. Teeth	Whole Depth	Series
17	4	1-1/4	68	.1324	S20-017-4
18	1.5	1/2	26	.1250	S20-018-H
18	3	1-1/4	54	.1250	S20-018-3
18	4	1-1/4	72	.1250	S20-018-4
18	5	1-3/4	90	.1250	S20-018-5
19	3	1-1/4	57	.1184	S20-019-3
19	4	1-1/4	76	.1184	S20-019-4
20	1.5	1/2	30	.112	S20-020-H
20	3	1-1/4	60	.112	S20-020-3
20	4	1-1/4	80	.112	S20-020-4
20	4	1-3/4	80	.112	S20-020-4L
20	5	1-3/4	100	.112	S20-020-5
20	6	1-3/4	120	.112	S20-020-6
21	3	1-1/4	63	.1068	S20-021-3
21	4	1-1/4	84	.1068	S20-021-4
21	5	1-3/4	105	.1068	S20-021-5
22	1.5	1/2	33	.102	S20-022-H
22	3	1-1/4	66	.102	S20-022-3
22	4	1-1/4	88	.102	S20-022-4
24	1.3	1/2	32	.0937	S20-024-H
24	1.5	1/2	36	.0937	S20-024-HA
24	3	1-1/4	72	.0937	S20-024-3
24	4	1-1/4	96	.0937	S20-024-4
24	4	1-3/4	96	.0937	S20-024-4L
24	5	1-3/4	120	.0937	S20-024-5
24	6	1-3/4	144	.0937	S20-024-6
25	3	1-1/4	75	.090	S20-025-3
25	4	1-1/4	100	.090	S20-025-4
26	1.5	1/2	39	.0866	S20-026-H
26	3	1-1/4	78	.0866	S20-026-3
26	4	1-1/4	104	.0866	S20-026-4
27	3	1-1/4	80	.0835	S20-027-3
27	4	1-1/4	108	.0835	S20-027-4
28	1.5	1/2	42	.0806	S20-028-H
28	3	1-1/4	84	.0806	S20-028-3
28	4	1-1/4	112	.0806	S20-028-4
29	3	1-1/4	87	.0779	S20-029-3
29	4	1-1/4	116	.0779	S20-029-4
30	1.5	1/2	45	.0753	S20-030-H
30	3	1-1/4	90	.0753	S20-030-3
30	4	1-1/4	120	.0753	S20-030-4
32	1.25	1/2	40	.0708	S20-032-H
32	1.5	1/2	48	.0708	S20-032-HA
32	3	1-1/4	96	.0708	S20-032-3
32	4	1-1/4	128	.0708	S20-032-4
32	4	1-3/4	128	.0708	S20-032-4L
32	5	1-3/4	160	.0708	S20-032-5
34	3	1-1/4	102	.0667	S20-034-3
36	1.5	1/2	54	.0631	S20-036-H
36	3	1-1/4	108	.0631	S20-036-3
36	4	1-1/4	144	.0631	S20-036-4
38	3	1-1/4	112	.060	S20-038-3
40	1.5	1/2	60	.057	S20-040-H
40	3	1-1/4	120	.057	S20-040-3
40	4	1-1/4	160	.057	S20-040-4
42	3	1-1/4	126	.0544	S20-042-3

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## Finishing, Disc Type Non-Topping



2.25/DP=WD  
20DP & finer - depth is 2.20/DP + .002

For precision shapers see page B6.

Sizes and configurations shown are the most popular. Other sizes and configurations available from stock, please call.

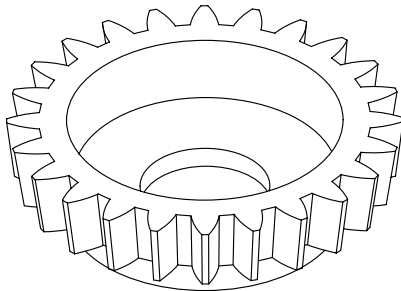
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Diam. Pitch	Pitch Dia.	Bore	No. Teeth	Whole Depth	Series
42	4	1-1/4	168	.0544	S20-042-4
48	1.5	1/2	72	.0478	S20-048-H
48	3	1-1/4	144	.0478	S20-048-3
48	4	1-1/4	192	.0478	S20-048-4
48	5	1-3/4	240	.0478	S20-048-5
56	1.5	1/2	84	.0413	S20-056-H
56	3	1-1/4	168	.0413	S20-056-3
64	1.5	1/2	96	.0364	S20-064-H
64	3	1-1/4	192	.0364	S20-064-3
64	4	1-1/4	256	.0364	S20-064-4
72	1.5	1/2	108	.0326	S20-072-H
72	2.5	1-1/4	180	.0326	S20-072-2
72	3	1-1/4	216	.0326	S20-072-3
72	4	1-1/4	288	.0326	S20-072-4
80	1.5	1/2	120	.0295	S20-080-H
80	2.5	1-1/4	208	.0295	S20-080-2
80	3	1-1/4	240	.0295	S20-080-3
96	1	1/2	96	.0249	S20-096-HA
96	1.5	1/2	144	.0249	S20-096-H
96	2.5	1-1/4	240	.0249	S20-096-2
96	3	1-1/4	288	.0249	S20-096-3
96	4	1-1/4	384	.0249	S20-096-4
100	1.5	1/2	150	.0240	S20-0100-H
120	1.5	1/2	180	.0203	S20-0120-H
120	2.5	1-1/4	300	.0203	S20-0120-2

# S20P SERIES

## DP, 20° PA

### Precision Finishing Disc Type, Non-Topping



$$2.25/DP=WD$$

20DP & finer - depth is  $2.20/DP + .002$

*Pitches not shown can be special ordered. Please call for quotation.*

*The terms used to describe "close tolerance" shapers will vary with different manufactures. These series S20P cutters are Precision class 4, and should accommodate most requirements that are loosely described in the industry as "Precision" or class "A".*

*Class 5 is rarely required but would generally be called "ultra precision" and available by special order only .*

Diam. Pitch	Pitch Dia.	Bore	No. Teeth	Whole Depth	Series
8	3	1-1/4	24	.2813	S20P-800-3
10	1.8	3/4	18	.225	S20P-010-S
10	3	1-1/4	30	.225	S20P-010-3
10	4	1-1/4	40	.225	S20P-010-4
12	1.6	3/4	21	.1875	S20P-012-S
12	3	1-1/4	36	.1875	S20P-012-3
12	4	1-1/4	48	.1875	S20P-012-4
14	1.7	1/2	24	.1607	S20P-014-H
14	3	1-1/4	42	.1607	S20P-014-3
14	4	1-1/4	56	.1607	S20P-014-4
16	1.5	1/2	24	.1406	S20P-016-H
16	3	1-1/4	48	.1406	S20P-016-3
16	4	1-1/4	64	.1406	S20P-016-4
18	3	1-1/4	54	.1250	S20P-018-3
20	1.5	1/2	30	.112	S20P-020-H
20	3	1-1/4	60	.112	S20P-020-3
24	1.5	1/2	36	.0937	S20P-024-HA
24	3	1-1/4	72	.0937	S20P-024-3
32	1.5	1/2	48	.0708	S20P-032-HA
32	3	1-1/4	96	.0708	S20P-032-3
36	1.5	1/2	54	.0631	S20P-036-H
40	1.5	1/2	60	.057	S20P-040-H
48	1.5	1/2	72	.0478	S20P-048-H
48	3	1-1/4	144	.0478	S20P-048-3
64	1.5	1/2	96	.0364	S20P-064-H
64	3	1-1/4	192	.0364	S20P-064-3
72	1.5	1/2	108	.0326	S20P-072-H
72	3	1-1/4	216	.0326	S20P-072-3
80	1.5	1/2	120	.0295	S20P-080-H
96	1.5	1/2	144	.0249	S20P-096-H
100	1.5	1/2	150	.0240	S20P-0100-H
120	1.5	1/2	180	.0203	S20P-0120-H