Accessories - Universal Safety Heads

Pressures to 110,000 psi (7584 bar)

Safety Heads/Rupture Discs - Safety Heads and Rupture Discs offer an economical and dependable relief port to guard against system over-pressure.

Parker Autoclave Engineers offers universal safety heads in three series compatible in orifice size and maximum pressure rating with Parker Autoclave Low Pressure, Medium Pressure and High Pressure valves, fittings and tubing.

Parker Autoclave Engineers Low Pressure Series SS: Parker Autoclave SpeedBite Ermeto-type tube connection, maximum rupture pressures to 15,000 psi (1034 bar).

Parker Autoclave Engineers Medium Pressure Series CSX: Parker Autoclave Medium-Pressure coned-and-threaded tube connection, maximum rupture pressures to 20,000 psi (1379 bar).

Parker Autoclave Engineers High Pressure Series CS: Parker Autoclave High Pressure coned-and-threaded tube connection, maximum rupture pressure to 110,000 psi (7584 bar).

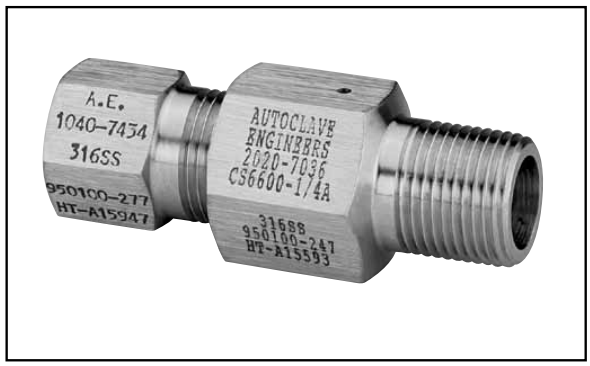
The 3/16F style features a 3/16" blow-out diameter and a flat seat which can be ordered in pressure range from 200 to 27,000 psi (13.8 to 1862 bar).

The 1/4A style features a 1/4" blow-out diameter and an angular seat which can be ordered in pressures from 900 to 60,000 psi (62 to 4137 bar).

The 1/4F style features a 1/4" blow-out diameter and a flat seat which is used for pressure above 60,000 psi (4137 bar).

The 1/2F style features a 1/2" blow-out diameter and a flat seat which can be ordered in pressures from 500 to 10,000 psi (35 to 690 bar).

ASME Safety Head - Parker Autoclave Engineers now has an ASME Section VIII Div. 3 safety head assembly rated to 115,000 psi (7929 bar).
Contact the factory or your local sales representative for details and ordering information.



Materials and Features

• Non-rotating double-cone plug design avoids galling and scoring of safety head or connection during installation. Reduces likelihood of leakage.

• Interchangeable hold-down rings permit use of several different sizes and types of rupture discs in a single safety head. Accommodates discs with rupture pressures as low as 90 psi (6.2 bar) and ranging to 60,000 psi (4137 bar) and above.

• Installs in any standard Parker Autoclave Engineers coupling, elbow, cross or tee.

• Cold-worked Type 316 SS body hold down gland and plug, all series.

• Hold down rings are corrossion resistant stainless steel.

Consult Local Sales Representative for safety head assemblies rated above 60,000 psi (4137 bar).

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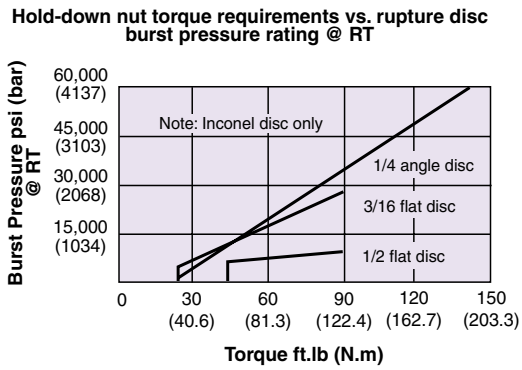
Ordering Information

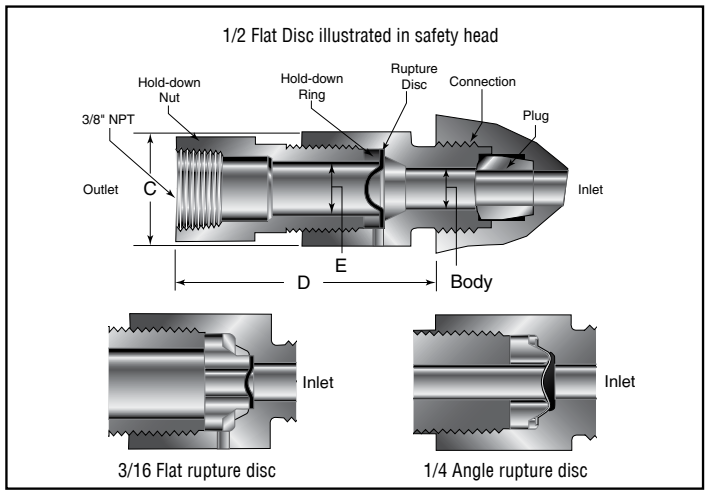
To order an Parker Autoclave Engineers Universal Safety Head, use the catalog order number from table. ADD THE SIZE OF THE RUPTURE DISC YOU WANT AS A SUFFIX TO THE CATALOG NUMBER; SUCH AS CS6600-1/4A. Then order desired rupture discs from rupture disc section. (This is important since the disc size determines which hold-down ring will be furnished with the safety head.) Note: Plug is included.

Hold-down nut torque values

Torque@ Minimum Pressure		Torque@ Maximum Pressure		Rupture Disc inches	Hold-down Ring Part Number
Ft. lb. (N.m)	psi (bar)	Ft. lb. (N.m)	psi (bar)		
20 (27.1)	5,000 (345)	90 (122.0)	26,500 (1827)	3/16 Flat†	112A-0439
40 (54.2)	4,000 (276)	90 (122.0)	10,000 (690)	1/2 Flat	1050-7434
20 (27.1)	4,000 (276)	140 (189.8)	60,000 (4137)	1/4 Angle	108A-0439

† 3/16 flat seat disc cannot be used with safety head assemblies SS6600, SS8600, 40CS9600 and CSX9600. Torque values for intermediate pressures may be linearily interpolated. Use minimum torque value for pressures lower than those shown.





Catalog Number Without Disc	Body Part Number	Plug Part Number	Hold-down Gland Part Number	Fits Connection Type	Fitting Pressure Rating psi (bar)	Body Torque Ft.lb. (N.m)	Plug Orifice inches (mm)	Body Orifice inches (mm)	Rupture Disc Size inches (mm)			Dimensions inches (mm)	
									3/16F Port E*	1/4A Port E*	1/2F Port E*	C	D
Low-Pressure													
SS2600	2010-7035	101A-0434	3/16 & 1/2 Flat 1040-7434	W125	15,000 (1034.2)	15 (20.3)	0.094 (2.39)	0.125 (3.15)	0.188 (4.78)	0.25 (6.35)	0.50 (12.7)	1.00 (25.4)	2.13 (53.96)
SS4600	2020-7035	102A-0434		SW250	15,000 (1034.2)	15 (20.3)	0.125 (3.18)	0.250 (6.35)	0.188 (4.78)	0.25 (6.35)	0.50 (12.7)	1.00 (25.4)	2.13 (53.96)
SS6600	2030-7035	103A-0434	1/4 Angle 1030-0241	SW375	15,000 (1034.2)	15 (20.3)	0.250 (6.35)	0.375 (9.53)	NA	0.25 (6.35)	0.50 (12.7)	1.00 (25.4)	2.13 (53.96)
SS8600	2040-7035	104A-0434		SW500	10,000 (690.0)	20 (22.1)	0.375 (9.53)	0.375 (9.53)	NA	0.25 (6.35)	0.50 (12.7)	1.00 (25.4)	2.13 (53.96)

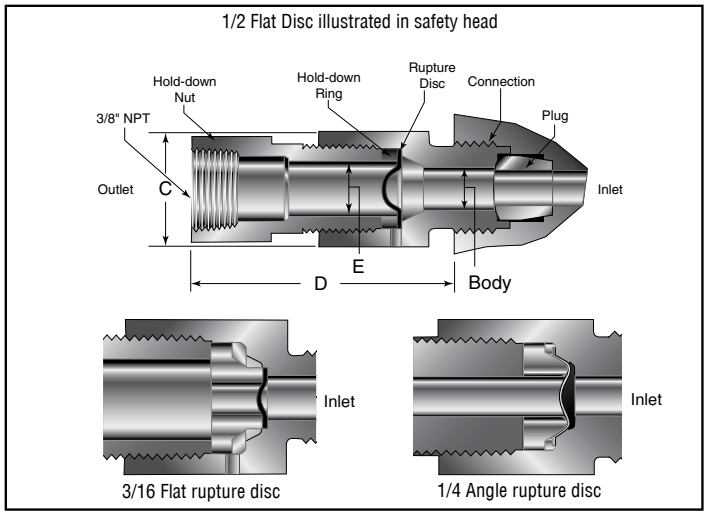
Port E* - Minimum disc blow-out diameter of hold down ring

Note: Interchangeable hold-down rings permit use of several different sizes and types of rupture disc in a single safety head.

Maximum pressure rating is based on the lowest rating of any component. Actual working pressure may be determined by tubing pressure rating, if lower.

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Catalog Number Without Disc	Body Part Number	Plug Part Number	Hold-down Gland Part Number	Fits Connection Type	Fitting Pressure Rating psi (bar)	Body Torque Ft.lb. (N.m)	Plug Orifice inches (mm)	Body Orifice inches (mm)	Rupture Disc Size inches (mm)			Dimensions inches (mm)	
									3/16F Port E*	1/4A Port E*	1/2F Port E*	C	D
Medium-Pressure													
CSX4600	101A-1731	2010-7823	3/16 & 1/2 Flat 1040-7434	SF250CX	20,000 (1378.9)	15 (20.3)	0.094 (2.39)	0.141 (3.58)	0.188 (4.78)	0.25 (6.35)	0.50 (12.7)	1.00 (25.4)	2.19 (55.63)
CSX6600	102A-1731	2010-7844		SF375CX	20,000 (1378.9)	20 (27.1)	0.171 (4.34)	0.250 (6.35)	0.188 (4.78)	0.25 (6.35)	0.50 (12.7)	1.00 (25.4)	2.19 (55.63)
CSX9600	101A-0438	102A-0438	1/4 Angle 1030-0241	SF562CX	20,000 (1378.9)	30 (40.6)	0.312 (7.92)	0.375 (9.53)	NA	0.25 (6.35)	0.50 (12.7)	1.00 (25.4)	2.19 (55.63)
High-Pressure													
CS4600	2010-7036	1030-4877	3/16 & 1/2 Flat 1040-7434	F250C	60,000 (4136.8)	20 (2.8)	0.082 (2.08)	0.125 (3.18)	0.188 (4.78)	0.25 (6.35)	0.50 (12.7)	1.00 (25.4)	2.25 (57.15)
CS6600	2020-7036	1030-6096		F375C	60,000 (4136.8)	40 (5.5)	0.125 (3.18)	0.219 (5.56)	0.188 (4.78)	0.25 (6.35)	0.50 (12.7)	1.00 (25.4)	2.25 (57.15)
CS9600	2030-7036	1030-6097		F562C	60,000 (4136.8)	80 (11.1)	0.188 (4.78)	0.281 (7.13)	0.188 (4.78)	0.25 (6.35)	0.50 (12.7)	1.19 (30.23)	2.25 (57.15)
40CS9600	2030-7036	101C-7192	1/4 Angle 1030-0241	F562C40	40,000 (2757.9)	80 (11.1	0.250 (6.35)	0.281 (7.13)	NA	0.25 (6.35)	0.50 (12.7)	1.19 (30.23)	2.25 (57.15)

Port E* - Minimum disc blow-out diameter of hold down ring

Note: Interchangeable hold-down rings permit use of several different sizes and types of rupture disc in a single safety head.

Maximum pressure rating is based on the lowest rating of any component.
Actual working pressure may be determined by tubing pressure rating, if lower.

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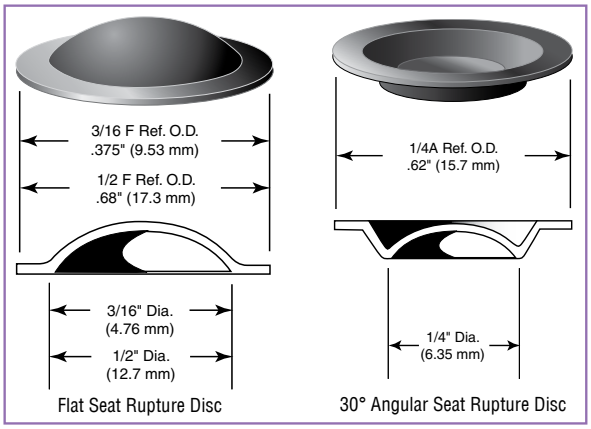
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Accessories - Prebulged Rupture Discs

Ordering Information

- Specify quantity, disc size, type, material and temperature.
- Indicate desired rupture rating which should be at least 110% of operating pressure. The burst rating tolerance is +/- 5% of the furnished tag rating. Discs are rated at 72°F (22°C).
- 0% optional manufacturing range is available upon request. 0% option provides the burst pressure requested with a +/-5% burst tolerance.
- Minimum order of 6 discs required for materials other than Inconel.
- See next page for standard part numbers.

Note: Inconel disc normally available from stock.



Flat Seat Rupture Disc — 30° Angular Seat Rupture Disc

Disc Material	Disc Size Seat Type	Rupture Pressures Standard Available Range ± 5%	Maximum Temperature Rating
	Inches	psi (bar)	°F (°C)
Aluminum	3/16 flat	220 to 1,750 (15.2 to 120.7)	250 (121)
	1/4 angle	160 to 2,000 (11.0 to 137.9)	250 (121)
	1/2 flat	90 to 1,000 (6.2 to 68.9)	250 (121)
Silver	3/16 flat	500 to 4,500 (34.5 to 310.3)	250 (121)
	1/4 angle	360 to 6,000 (24.8 to 413.7)	250 (121)
	1/2 flat	190 to 1,700 (13.1 to 117.2)	250 (121)
Hastelloy C	3/16 flat	4,400 to 65,000 (303.4 to 4481.5)	1,000 (538)
	1/4 angle	3,300 to 70,000 (227.5 to 4826.3)	1,000 (538)
	1/2 flat	1,000 to 11,500 (68.9 to 792.9)	1,000 (538)
Nickel	3/16 flat	770 to 20,000 (53.1 to 1378.9)	750 (399)
	1/4 angle	550 to 35,000 (37.9 to 2413.1)	750 (399)
	1/2 flat	300 to 7,500 (20.7 to 517.1)	750 (399)
Monel	3/16 flat	2,650 to 20,000 (182.7 to 1378.9)	800 (427)
	1/4 angle	2,000 to 40,000 (137.9 to 2757.9)	800 (427)
	1/2 flat	1,000 to 7,500 (68.5 to 517.1)	800 (427)
Inconel 600 (Standard)	3/16 flat	1,250 to 20,000 (86.2 to 1378.9)	900 (482)
	1/4 angle	900 to 75,000 (62.1 to 5171.0)	900 (482)
	1/2 flat	500 to 10,000 (34.5 to 690.0)	900 (482)
Type 316 Stainless Steel	3/16 flat	1,750 to 20,000 (120.7 to 1378.9)	900 (482)
	1/4 angle	1,250 to 60,000 (86.2 to 4136.8)	900 (482)
	1/2 flat	700 to 10,000 (48.3 to 690.0)	900 (482)

PTFE coating available on one or both sides to increase minimum rupture rating.

CAUTION: High pressure-to-rupture ratios, severe pressure or temperature cycling, corrosion and metal fatigue affect disc life and rupture pressure. Frequent disc replacement may be desirable to avoid premature rupture. Rupture disc manufacturers recommended a 140 to 170 percent margin on disc ratings for extended disc life.

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Rupture Disc Stock Part List - 3/16 Flat Disc

Part Number	Description	Material	Pressure Range (psi)	Pressure Range (bar)
P-7003	3/16F DISC	Inconel	1940-2120	134-146
P-7674	3/16F DISC	Inconel	2231-2438	154-168
P-7005	3/16F DISC	Inconel	2910-3180	201-219
P-7007	3/16F DISC	Inconel	3201-3498	221-241
P-7009	3/16F DISC	Inconel	3880-4240	268-292
P-7011	3/16F DISC	Inconel	4365-4700	301-324
P-7013	3/16F DISC	Inconel	4850-5300	334-365
P-7015	3/16F DISC	Inconel	5141-5618	355-387
P-7017	3/16F DISC	Inconel	5335-5830	368-402
P-7018	3/16F DISC	Inconel	5626-6148	388-424
P-7019	3/16F DISC	Inconel	5723-6254	395-431
P-7020	3/16F DISC	Inconel	5820-6360	401-439
P-7021	3/16F DISC	Inconel	6014-6572	415-453
P-7022	3/16F DISC	Inconel	6111-6678	421-460
P-7024	3/16F DISC	Inconel	6305-6890	435-475
P-7026	3/16F DISC	Inconel	6790-7420	468-512
P-7028	3/16F DISC	Inconel	7275-7950	502-548
P-7030	3/16F DISC	Inconel	7760-8480	535-585
P-7032	3/16F DISC	Inconel	8245-9010	568-621
P-7034	3/16F DISC	Inconel	8730-9540	602-658
P-7040	3/16F DISC	Inconel	10185-11130	702-767
P-7044	3/16F DISC	Inconel	11155-12190	769-840
P-7046	3/16F DISC	Inconel	11640-12720	803-877
P-7048	3/16F DISC	Inconel	12125-13250	836-914
P-7050	3/16F DISC	Inconel	12610-13780	869-950
P-7052	3/16F DISC	Inconel	13095-14310	903-987
P-7054	3/16F DISC	Inconel	13580-14840	936-1023
P-7056	3/16F DISC	Inconel	14065-15370	970-1060
P-7058	3/16F DISC	Inconel	14550-15900	1003-1096
P-7060	3/16F DISC	Inconel	15035-16430	1037-1133
P-7062	3/16F DISC	Inconel	15520-16960	1070-1169
P-7064	3/16F DISC	Inconel	16005-17490	1103-1206
P-7068	3/16F DISC	Inconel	16975-18550	1170-1279
P-7072	3/16F DISC	Inconel	17945-19610	1237-1352
P-7074	3/16F DISC	Inconel	18430-20140	1271-1389
P-7080	3/16F DISC	Inconel	19885-21730	1371-1498
P-7082	3/16F DISC	Inconel	20370-22260	1404-1535
P-7084	3/16F DISC	Inconel	20885-22790	1440-1571
P-7086	3/16F DISC	Inconel	21340-23320	1471-1608
P-7088	3/16F DISC	Inconel	21825-23850	1505-1644
P-7094	3/16F DISC	Inconel	23280-25440	1605-1754
P-7096	3/16F DISC	Inconel	24250-26500	1672-1827
P-7098	3/16F DISC	Inconel	24735-27030	1705-1864

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Rupture Disc Stock Part List - 1/4 Angle Disc

Part Number	Description	Material	Pressure Range (psi)	Pressure Range (bar)
P-7301	1/4A DISC	Inconel	970-1060	67-73
P-7303	1/4A DISC	Inconel	1164-1272	80-88
P-7305	1/4A DISC	Inconel	1445-1590	100-110
P-7307	1/4A DISC	Inconel	1697-1855	117-128
P-7309	1/4A DISC	Inconel	1940-2120	134-146
P-7311	1/4A DISC	Inconel	2425-2650	167-183
P-7313	1/4A DISC	Inconel	2910-3180	201-219
P-7315	1/4A DISC	Inconel	3395-3710	234-256
P-7317	1/4A DISC	Inconel	3880-4240	268-292
P-7319	1/4A DISC	Inconel	4365-4770	301-329
P-7321	1/4A DISC	Inconel	4850-5300	334-365
P-7323	1/4A DISC	Inconel	5335-5830	368-402
P-7325	1/4A DISC	Inconel	5820-6360	401-438
P-7327	1/4A DISC	Inconel	6305-6890	435-475
P-7329	1/4A DISC	Inconel	6790-7420	468-512
P-7331	1/4A DISC	Inconel	7275-7950	502-548
P-7333	1/4A DISC	Inconel	7760-8480	535-585
P-7335	1/4A DISC	Inconel	8245-9010	568-621
P-7337	1/4A DISC	Inconel	8730-9540	602-658
P-7339	1/4A DISC	Inconel	9215-10070	635-694
P-7341	1/4A DISC	Inconel	9700-10600	669-731
P-7343	1/4A DISC	Inconel	10185-11130	702-767
P-7345	1/4A DISC	Inconel	10670-11660	736-804
P-7347	1/4A DISC	Inconel	11155-12190	769-841
P-7349	1/4A DISC	Inconel	11640-12720	803-877
P-7351	1/4A DISC	Inconel	12125-13250	836-914
P-7353	1/4A DISC	Inconel	12610-13780	869-950
P-7355	1/4A DISC	Inconel	13095-14310	903-987
P-7357	1/4A DISC	Inconel	13580-14840	936-1023
P-7361	1/4A DISC	Inconel	14550-15900	1003-1096
P-7363	1/4A DISC	Inconel	15035-16430	1037-1133
P-7365	1/4A DISC	Inconel	15520-16960	1070-1169
P-7367	1/4A DISC	Inconel	16005-17490	1103-1206
P-7369	1/4A DISC	Inconel	16490-18020	1137-1242
P-7371	1/4A DISC	Inconel	16975-18550	1170-1279
P-7373	1/4A DISC	Inconel	17460-19080	1204-1315
P-7375	1/4A DISC	Inconel	17945-19610	1237-1352
P-7377	1/4A DISC	Inconel	18915-20670	1304-1425
P-7379	1/4A DISC	Inconel	19400-21200	1338-1462
P-7381	1/4A DISC	Inconel	19885-21730	1371-1498
P-7382	1/4A DISC	Inconel	21000-22000	1448-1517
P-7383	1/4A DISC	Inconel	21825-23850	1505-1644
P-7385	1/4A DISC	Inconel	24250-26500	1672-1827

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Rupture Disc Stock Part List - 1/4 Angle Disc - con't

Part Number	Description	Material	Pressure Range (psi)	Pressure Range (bar)
P-7387	1/4A DISC	Inconel	25220-27560	1739-1900
P-7389	1/4A DISC	Inconel	26190-28620	1806-1973
P-7391	1/4A DISC	Inconel	27160-29680	1873-2046
P-7393	1/4A DISC	Inconel	29100-31800	2006-2192
P-7395	1/4A DISC	Inconel	30070-32860	2073-2266
P-7397	1/4A DISC	Inconel	31525-34450	2174-2375
P-7399	1/4A DISC	Inconel	33950-37100	2341-2558
P-7401	1/4A DISC	Inconel	36375-39750	2508-2741
P-7403	1/4A DISC	Inconel	38880-42400	2681-2923
P-7405	1/4A DISC	Inconel	41255-45050	2844-3106
P-7407	1/4A DISC	Inconel	43650-47700	3010-3289
P-7409	1/4A DISC	Inconel	48500-53000	3344-3654
P-7411	1/4A DISC	Inconel	53350-58300	3678-4020
P-7413	1/4A DISC	Inconel	58200-63600	4013-4385
P-7415	1/4A DISC	Inconel	62155-66000	4285-4550
P-7417	1/4A DISC	Inconel	65960-72080	4548-4970
P-7419	1/4A DISC	Inconel	68870-75260	4748-5189

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Rupture Disc Stock Part List - 1/2 Flat Disc

Part Number	Description	Material	Pressure Range (psi)	Pressure Range (bar)
P-7601	1/2F DISC	Inconel	485-530	33-37
P-7603	1/2F DISC	Inconel	679-742	47-51
P-7605	1/2F DISC	Inconel	727-795	50-55
P-7607	1/2F DISC	Inconel	873-954	60-73
P-7609	1/2F DISC	Inconel	970-1060	67-75
P-7610	1/2F DISC	Inconel	1006-1100	69-76
P-7611	1/2F DISC	Inconel	1164-1272	80-88
P-7613	1/2F DISC	Inconel	1213-1323	84-91
P-7615	1/2F DISC	Inconel	1358-1484	94-102
P-7617	1/2F DISC	Inconel	1455-1590	100-110
P-7619	1/2F DISC	Inconel	1552-1696	107-117
P-7621	1/2F DISC	Inconel	1697-1855	117-128
P-7623	1/2F DISC	Inconel	1746-1908	120-132
P-7625	1/2F DISC	Inconel	1940-2120	134-146
P-7627	1/2F DISC	Inconel	2183-2385	151-164
P-7629	1/2F DISC	Inconel	2271-2438	157-168
P-7631	1/2F DISC	Inconel	2425-2650	167-183
P-7633	1/2F DISC	Inconel	2619-2862	181-197
P-7635	1/2F DISC	Inconel	2716-2968	187-204
P-7637	1/2F DISC	Inconel	2910-3180	201-219
P-7639	1/2F DISC	Inconel	3104-3392	214-234
P-7641	1/2F DISC	Inconel	3395-3710	234-256
P-7643	1/2F DISC	Inconel	3589-3922	247-270
P-7645	1/2F DISC	Inconel	3637-3975	251-274
P-7647	1/2F DISC	Inconel	3880-4240	268-292
P-7649	1/2F DISC	Inconel	4365-4770	301-329
P-7651	1/2F DISC	Inconel	4462-4876	308-336
P-7653	1/2F DISC	Inconel	4850-5300	334-365
P-7655	1/2F DISC	Inconel	5335-5830	368-402
P-7657	1/2F DISC	Inconel	5626-6148	388-424
P-7659	1/2F DISC	Inconel	5820-6360	401-438
P-7661	1/2F DISC	Inconel	6305-6890	435-475
P-7663	1/2F DISC	Inconel	6790-7420	468-512
P-7665	1/2F DISC	Inconel	7275-7950	502-548
P-7667	1/2F DISC	Inconel	7760-8480	535-585
P-7669	1/2F DISC	Inconel	8245-9010	568-621
P-7671	1/2F DISC	Inconel	8730-9540	602-658
P-7673	1/2F DISC	Inconel	9700-10600	669-731

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