

Features

- High Pressure Resistance
- Long-lasting performance
- Leak Prevention
- Easy Installation
- Reduced Downtime
- Non-Self-Centering

RS PRO Bonded Seals

RS Stock No.: 0727052



RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

Product Description

Bonded seals, also known as Dowty washers, are metal sealing washers with a rubber insert. They provide a secure, leak proof seal for threaded connections. Bonded seals are ideal for static sealing where durability and fluid resistance are critical.

Key Benefits:

- High Pressure Resistance: Effective sealing under extreme pressure conditions.
- Durability: Long-lasting performance due to metal and rubber construction.
- Leak Prevention: Creates a tight, secure seal to prevent fluid and gas leakage.
- Easy Installation: Fits standard bolt sizes, simplifying maintenance and replacement.
- Reduced Downtime: Reliable sealing reduces the risk of equipment failure and maintenance needs.

Applications:

- Hydraulic systems and equipment
- Pneumatic tools and machinery
- Automotive engines, transmissions, and braking systems
- Oil and gas pipelines, refineries, and rigs
- Industrial machinery such as pumps, compressors, and gearboxes
- Marine and offshore equipment exposed to harsh environments

Bonded seals offer reliable sealing across high and low pressure and temperature conditions, while reducing bolt torque without compromising clamping force, thanks to a metal washer that prevents over-compression and distortion.

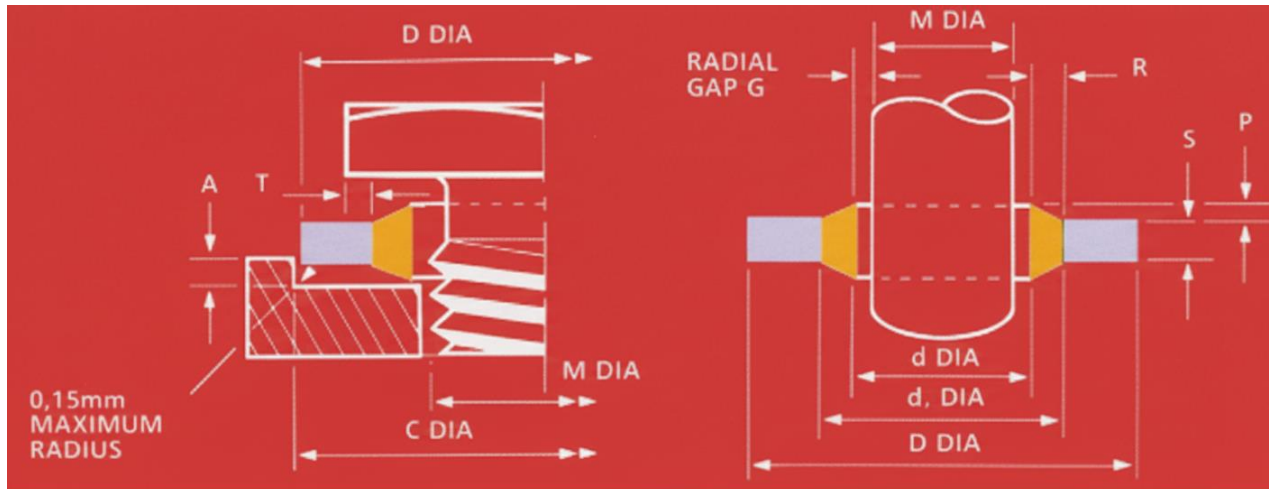
Non-Self-Centering Bonded Seals

- Installation: These seals require manual alignment with the bolt and mating surface during installation, increasing the chance of misalignment or offset if not fitted carefully.
- Benefits: Their primary advantage is a more compact profile, making them better suited for tighter installation spaces where a self-centering lip might not fit.
- Applications: They are used in high-pressure applications where conventional seals are unsuitable, particularly in cases where space is a limiting factor.

General Specifications

Type	Bonded Seal
Rubber Type	Nitrile Rubber (NBR)
Metal Type:	Mild Steel
Material:	NBR & Mild Steel
Type	Non-Self-Centering
Hardness	80 ShA
Colour	Black
Operating Temperature Range	-25°C to +120°C
Minimum Operating Temperature	-25°C
Maximum Operating Temperature	+120°C
Inside Diameter	See below table for details
Outside Diameter	See below table for details
Thickness	See below table for details

BRITISH IMPERIAL STANDARD Bonded Seals Range



- Thread Type: Whitworth thread form (parallel or tapered).
- Common Standard: BS 21 or ISO 228.
- Application: Used with BSP fittings (male/female) for sealing high-pressure hydraulic systems.
- Seal ID/OD: Matches BSP thread sizes like 1/8", 1/4", 3/8", etc.
- Typical Use: Hydraulic, pneumatic, and gas fittings in the UK and Commonwealth countries.

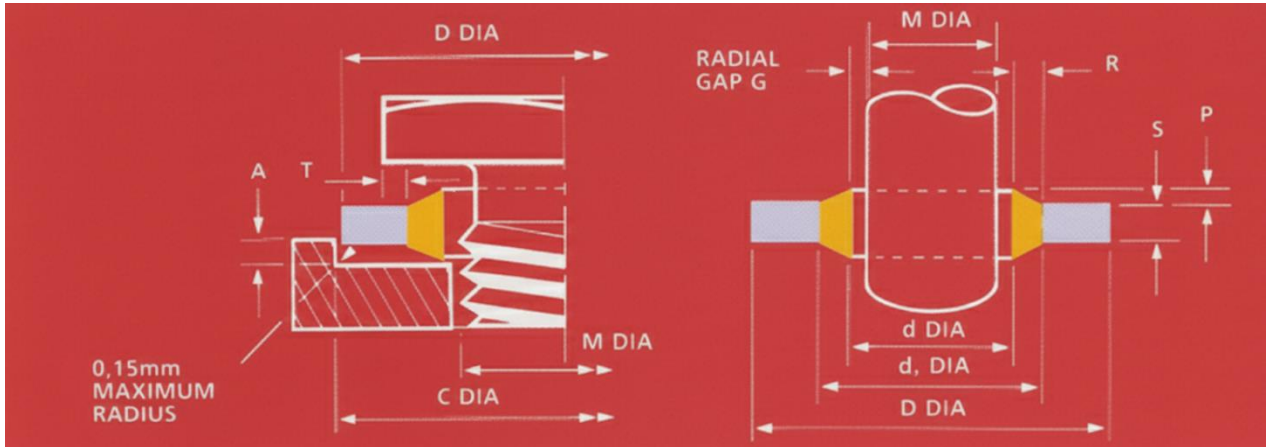
Product Number	Size Reference		Thread Diameter (M)		Inside Diameter (mm) ± 0.13 (d DIA)	Outside Diameter (mm) $+0.13 -0.00$ (D DIA)	Thickness (mm) (S)	Thickness Tolerance	Radial Gap $+0.07$ (G)		Minimum Burst Pressure in Bar
	***	+	BSP	Inch					Inch	BSP	
0727119	001	1		6BA	3.05	6.35	1.22	+0.15 - 0.00	0.13		2150
0727120	002	2		4BA	4.12	7.26	1.22		0.26		1570
0727122	003	3		2BA	5.21	8.38	1.22		0.26		1360
0727123	004	4		1/4	6.86	13.21	1.22		0.26		2430
0727124	005	5		1/4	6.99	13.34	1.22		0.32		1680
0727125	006	6		5/16	8.31	13.34	1.22		0.19		1680
0727126	007	7		5/16	8.64	14.22	1.22		0.35		1750
0727127	020	A	1/8	3/8	10.37	15.88	2		0.42	0.32	1480
0727128	008	8		0.4	11.26	18.36	2		0.55		1950

0727129	009	9		7/16	11.69	19.05	2	±0.1	0.29		1890
0727130	021	B	1/4	1/2	13.74	20.57	2		0.52	0.29	1540
0727131	010	10		9/16	14.86	22.23	2		0.29		1560
0727132	022	BB		0.6	15.83	22.23	2		0.30		1290
0727133	011	11		5/8	16.51	25.4	2		0.32		1560
Product Number	Size Reference		Thread Diameter (M)		Inside Diameter (mm) ±0.13 (d DIA)	Outside Diameter (mm) +0.13 -0.00 (D DIA)	Thickness (mm) (S)	Thickness Tolerance	Radial Gap +0.07 (G)		Minimum Burst Pressure in Bar
	***	+	BSP	Inch					Inch	BSP	
0727134	023	C	3/8		17.28	23.8	2	±0.1		0.31	1230
0727135	012	12		11/16	18.16	25.4	2.34		0.35		1310
0727136	024	CC		3/4	19.69	26.92	2.34		0.32		1230
0727138	025	D	1/2	13/16	21.54	28.58	2.47		0.45	0.29	1120
0727139	026	E	5/8	7/8	23.49	31.75	2.47		0.63	0.29	1240
0727140	013	13		15/16	24.26	33.27	2.34	+0.26 -0.00	0.23		1275
0727141	027	F	3/4	1	27.05	34.93	2.47		0.82	0.30	1050
0727142	028	FF		1 1/16	27.82	38.61	2.34		0.41		1210
0727144	014	14		1 1/8	29.33	36.58	2.34		0.38		880
0727145	029	G	7/8	1 3/16	30.81	38.1	2.47		0.33	0.30	860
0727146	015	15		1 1/4	32.64	41.4	3.25		0.45		775
0727147	030	H	1	1 5/16	33.89	42.8	2.34		0.28	0.40	780
0727148	016	HH		1 3/8	35.94	44.45	3.25		0.28	0.40	780
0727149	017	16		1 1/2	38.96	47.75	3.25		0.51		680
0727150	032	17	1 1/4	1 5/8	42.93	52.38	2.5		0.43		660

072715 1	018	J		1 3/4	45.34	57.15	3.38		0.82	0.51	690
072715 2	033	18	1 1/2	1 7/8	48.44	58.6	2.5		0.45		870
072705 2	019	K		2	51.69	63.5	3.25		0.40	0.32	690
072705 3	034	19	1 3/4	2 1/8	54.89	69.85	3.25		0.45		780
072705 4	035	L		2 1/4	58.04	70.36	3.25		0.45	0.57	950
072705 5	036	LL	2		60.58	73.03	3.25		0.45		740
072705 6	037	M		2 1/2	64.39	77.72	3.25			0.48	720
072705 7	038	MM	2 1/4		66.68	79.5	3.25		0.45		750
072705 9	039	N	2 1/2		76.08	90.17	3.25			0.59	670
072706 0	079	P	3		89.08	101.47	3.25			0.45	680

Note: *** size reference fourth, fifth, sixth digits. Previous mark numbers for PP45 (industrial) and AGS1186 are shown by symbol +
Burst pressures were calculated using 540MN/m² (35 ton f/in) UTS steel.

GERMAN STANDARD Bonded Seals Range



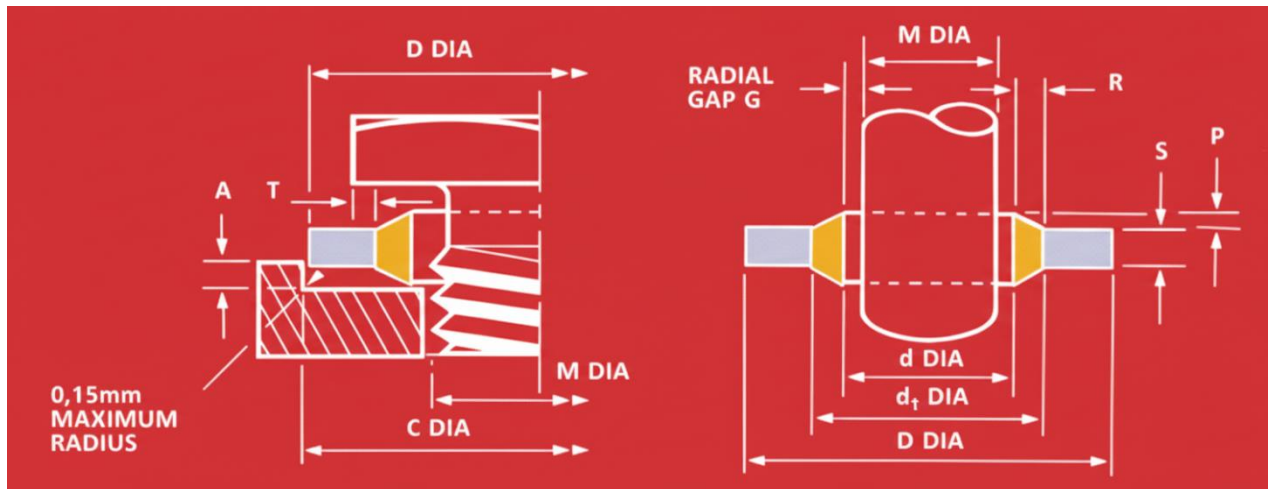
- Thread Type: Usually UNC, UNF, or BSW.
- Application: Designed for imperial bolts and screws, often in older or legacy systems.
- Seal ID/OD: Matches inch-size fasteners.
- Typical Use: Machinery and equipment built to British imperial standards.

Product Number	Size Reference	Thread Size	Inside Diameter (mm) ± 0.10 (d DIA)	Outside Diameter (mm) $+0.13 -0.00$ (D DIA)	Thickness (mm) (S)	Thickness Tolerance	Radial Gap ± 0.05 (G)	Minimum Burst Pressure in Bar
0727061	201	3.5	4.1	7.2	1	± 0.1	0.30	1600
0727062	202	4	4.5	7	1		0.25	1270
0727063	203	5	5.7	9	1		0.35	1400
0727065	204	5	5.7	10	1		0.35	1510
0727066	205	5.5	6.2	9.2	1		0.35	1220
0727067	206	6	6.7	10	1		0.35	1120
0727068	207	6	6.7	11	2.5		0.35	1480
0727069	208	6	6.7	11	1		0.35	1480
0727071	209	6.5	7.1	12	1		0.30	1560
0727072	210	6.7	7.3	10.2	1		0.30	850
0727073	211	8	8.5	13.4	1		0.25	1780
0727074	212	8	8.7	13	1		0.35	1330
0727075	213	8	8.7	14	1		0.35	1510
0727076	214	8	8.7	16	1		0.35	2150
0727077	215	8.5	9.3	13.3	1		0.40	1200
0727078	216	10	10.35	16	2		Thickness Tolerance	0.17
0727079	217	10	10.7	16	1.5	0.35		1300
Product Number	Size Reference	Thread Size	Inside Diameter (mm) ± 0.10 (d DIA)	Outside Diameter (mm) $+0.13 -0.00$ (D DIA)	Thickness (mm) (S)	Radial Gap ± 0.05 (G)		Minimum Burst Pressure Bar
0727080	218	10	10.7	18	1.5	0.35	1880	
0727081	219	11	11.4	16.3	1.5	0.20	1280	

0727082	220	11	11.8	18.5	1.5	±0.1	0.40	1540
0727083	221	11	11.8	19.1	1.5		0.40	1760
0727084	222	12	12.7	18	1.5		0.35	1150
0727153	223	12	12.7	20	1.5		0.35	1680
0727154	224	13	13.7	20	1.5		0.35	1340
0727155	225	13	13.7	22	1.5		0.35	1810
0727156	226	13.5	14.0	18.7	1.5		0.25	900
0727157	227	14	14.7	22	1.5		0.35	1510
0727158	228	15	16	22.7	1.5		0.50	1260
0727160	229	16	16.7	24	1.5		0.35	1370
0727161	230	17	17.4	24	1.5		0.20	1150
0727162	231	17.5	18	24.7	1.5		0.25	1070
0727163	232	18	18.7	26	1.5		0.35	1260
0727164	233	20	20.7	28	1.5		0.35	1140
0727166	234	21	21.5	28.7	2.5	±0.15	0.25	1080
0727167	235	22	22.5	28	1.5	±0.1	0.25	760
0727168	236	22	22.7	30	2		0.35	1080
0727169	237	22	22.7	30	3		0.35	1080
0727170	238	24	24.7	32	3		0.35	1000
0727172	240	27	27.2	36	3		0.10	1130
0727173	242	30	31	39	2		0.50	870
0727174	243	33	33.7	42	2		0.35	840
0727175	244	33	34.3	43	2		0.65	870
0727176	245	36	36.7	46	2		0.35	890
0727177	246	39	40	51	2.5		0.50	1030
0727178	247	42	42.7	53	2.5	±0.15	0.35	930
0727179	248	48	48.7	59	2.5		0.35	790
0727180	249	51	52	60	3		0.50	540
0727181	251	60	60.7	73	3		0.35	780
0727182	252	68	68.6	79.5	3.5		0.30	510
0727183	253	75	76.08	90.3	3.38		0.54	700
0727085	254	88	89.09	101.48	3.25		0.54	510

Burst pressures were calculated using 540MN/m² (35 ton f/in) UTS steel

FRENCH STANDARD Bonded Seals Range



- Thread Type: Usually UNC, UNF, or BSW.
- Application: Designed for imperial bolts and screws, often in older or legacy systems.
- Seal ID/OD: Matches inch-size fasteners.
- Typical Use: Machinery and equipment built to British imperial standards.

Product Number	Size Reference	Thread Size	Inside Diameter (mm) ± 0.10 (d DIA)	Outside Diameter (mm) $+0.13 -0.00$ (D DIA)	Thickness (mm) (S)	Thickness Tolerance	Radial Gap ± 0.05 (G)	Minimum Burst Pressure in Bar
0727087	301	3	3.6	7.5	1	± 0.1	0.3	1980
0727088	302	4	4.6	9	1		0.3	2000
0727089	303	5	5.6	10	1		0.3	1780
0727090	304	6	6.6	11	1		0.3	1680
0727091	305	6	6.85	13.27	1.3		0.42	1970
0727093	306	6	7	11.4	1		0.5	1540
0727094	307	8	8.6	13	1		0.3	1330
0727095	310	10	10.7	17	1.5		0.35	1730
0727096	312	11	11.8	18.1	1.5		0.4	1610
0727097	313	12	12.7	19	1.5		0.4	1530
0727098	315	13	13.8	20.1	1.5		0.4	1430
0727099	316	14	14.7	21	1.5		0.35	1370
0727100	317	16	16.7	23	1.5		0.35	1240
Product Number	Size Reference	Thread Size	Inside Diameter (mm) ± 0.10 (d DIA)	Outside Diameter (mm) $+0.13 -0.00$ (D DIA)	Thickness (mm) (S)		Radial Gap ± 0.05 (G)	Minimum Burst Pressure in Bar
0727101	319	16.5	17.2	23.9	2.1		0.35	1020
0727102	320	18	18.7	27	2		0.35	1450

0727103	321	20	20.7	29	2		0.35	1340	
0727104	323	21	21.7	30	2		0.35	1290	
0727105	324	22	22.7	31	2		0.35	1240	
0727106	325	23	23.7	32	2	±0.1	0.35	965	
0727107	326	24	24.7	33	2		0.35	1160	
0727108	327	26	27	35.3	2		0.5	860	
0727110	328	27	27.7	36	2		0.35	1060	
0727111	329	28	28.6	36	2		0.3	720	
0727112	330	28.5	29.2	37.5	2		0.35	810	
0727113	331	30	30.7	39	2		0.35	970	
0727174	332	33	33.7	42	2		0.35	900	
0727114	333	36	37	48	2.5		±0.15	0.5	1010
0727177	334	39	40	51	2.5			0.5	950
0727116	335	42	43	54	2.5	.5		890	
0727117	336	45	46	57	2.5	0.5		860	
0727118	337	48	49	60	2.5	0.5		790	

Burst pressures were calculated using 540MN/m² (35 ton f/in²) UTS steel