

# H-Seal and H-Gland Dimensions - October 2015

## H-Seal OD, Step ID and ID Basic Dimensions

## Zero Clearance H-Seals

## Gap H-Seals

## H-Gland

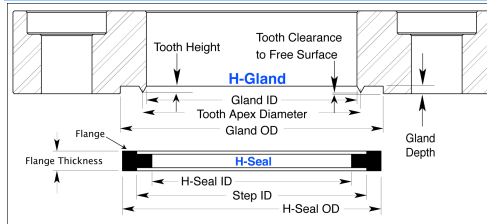
## Assembly & Compression

## Interchangeable Elastomeric O-Ring Dimensions

# English Engineering Units

Zero Clearance H-Seals allow the mating glands to bottom against each other. This means finished assembly stack-up dimensions are the same whether an H-Seal or an elastomeric o-ring is used in the gland. The H-Seal is self-centering. Check the Assembly & Compression columns to the right for tooth penetration values.

Gap H-Seals provide a positive compression stop for the mating glands. The glands bottom against the H-Seal and leave a gap between parts that can be used for leak checking. Note the Assembly & Compression columns to the right for gap dimensions.



Tooth depth of penetration per side

For both Zero Clearance and Gap H-Seals

**Zero-Clearance H-Seals**

Web material remaining after penetration

Clearance between parts after compression

**Gap H-Seals**

Web material remaining after penetration

Clearance between parts after compression

**Zero Clearance & Gap H-Seals**

Min clearance between tooth OD and H-Seal Step ID at min/max tolerance extremes

H-Seal OD, Step ID and ID Basic Dimensions		Zero Clearance H-Seals		Gap H-Seals		H-Gland										Assembly & Compression				Interchangeable Elastomeric O-Ring Dimensions																		
OD ±.001	Step ID ±.001	H-Seal ID ±.001	Flange Cross Section Width	Zero Clearance H-Seal Part Number	H-Seal Flange Thickness +00/- .001	Sealing surface: recess depth per side +.001/- .00	Web Thickness ±.001	Gap H-Seal Part Number	H-Seal Flange Thickness +00/- .001	Sealing surface: recess depth per side +.001/- .00	Web Thickness ±.001	H-Gland OD ±.002	H-Gland ID (Gland OD - H-Seal OD)	H-Gland ID (max recommended)	H-Gland Depth +00/- .001	Tooth Apex Diameter ±.001	Tooth Base ID (calculated) 60° included angle tooth	Tooth Base OD = O-Ring Gland ID	Tooth Base Width (calculated)	Tooth Height +1001/- .000	Tooth Clearance to Free Surface	Tooth Clearance to Free Surface (ref)	For both Zero Clearance and Gap H-Seals	Web material remaining after penetration	Clearance between parts after compression	Web material remaining after penetration	Clearance between parts after compression	Min clearance between tooth OD and H-Seal Step ID at min/max tolerance extremes	Parker Hannifin Part Number	ID	OD	Cross Section	ID (Mean ID of O-Ring, Ref)	ID max (ID min + 1% of Mean ID)	Gland (trough) Width for Vacuum & Gases	Gland (trough) Depth - from Parker Hannifin	OD min (calculated from tolerance range)	OD max (calculated from tolerance range)
0.3137	0.1850	0.0695	0.064	HZ-007	0.054	0.012	0.030	H-007	0.068	0.012	0.044	0.3187	0.005	0.0695	0.027	0.1203	0.0949	0.146	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-007	0.145	0.285	0.070	0.145	0.146	0.087	.050-.054	0.412	0.414	
0.3449	0.2160	0.1007	0.064	HZ-008	0.054	0.012	0.030	H-008	0.068	0.012	0.044	0.3499	0.005	0.1007	0.027	0.1515	0.1261	0.177	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-008	0.176	0.316	0.070	0.176	0.178	0.087	.050-.054	0.349	0.351	
0.3770	0.2480	0.1328	0.065	HZ-009	0.054	0.012	0.030	H-009	0.068	0.012	0.044	0.3820	0.005	0.1328	0.027	0.1836	0.1582	0.209	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-009	0.208	0.348	0.070	0.208	0.210	0.087	.050-.054	0.381	0.383	
0.4082	0.2790	0.1640	0.065	HZ-010	0.054	0.012	0.030	H-010	0.068	0.012	0.044	0.4132	0.005	0.1640	0.027	0.2148	0.1894	0.240	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-010	0.239	0.379	0.070	0.239	0.241	0.087	.050-.054	0.412	0.414	
0.4705	0.3410	0.2263	0.065	HZ-011	0.054	0.012	0.030	H-011	0.068	0.012	0.044	0.4755	0.005	0.2263	0.027	0.2771	0.2517	0.303	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-011	0.301	0.441	0.070	0.301	0.304	0.087	.050-.054	0.474	0.477	
0.5338	0.4040	0.2896	0.065	HZ-012	0.054	0.012	0.030	H-012	0.068	0.012	0.044	0.5388	0.005	0.2896	0.027	0.3404	0.3150	0.366	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-012	0.364	0.504	0.070	0.364	0.368	0.087	.050-.054	0.537	0.541	
0.5911	0.4660	0.3265	0.063	HZ-013	0.054	0.012	0.030	H-013	0.068	0.012	0.044	0.6011	0.010	0.3265	0.027	0.3773	0.3428	0.428	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-013	0.426	0.566	0.070	0.426	0.430	0.087	.050-.054	0.599	0.603	
0.6544	0.5290	0.3898	0.063	HZ-014	0.054	0.012	0.030	H-014	0.068	0.012	0.044	0.6644	0.010	0.3898	0.027	0.4660	0.4406	0.491	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-014	0.489	0.629	0.070	0.489	0.494	0.087	.050-.054	0.662	0.667	
0.7168	0.5910	0.4522	0.063	HZ-015	0.054	0.012	0.030	H-015	0.068	0.012	0.044	0.7268	0.010	0.4522	0.027	0.5284	0.5030	0.554	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-015	0.551	0.691	0.070	0.551	0.557	0.087	.050-.054	0.724	0.730	
0.7801	0.6540	0.5155	0.063	HZ-016	0.054	0.012	0.030	H-016	0.068	0.012	0.044	0.7901	0.010	0.5155	0.027	0.5917	0.5663	0.617	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-016	0.614	0.754	0.070	0.614	0.620	0.087	.050-.054	0.787	0.793	
0.8424	0.7160	0.5778	0.063	HZ-017	0.054	0.012	0.030	H-017	0.068	0.012	0.044	0.8524	0.010	0.5778	0.027	0.6540	0.6286	0.679	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-017	0.676	0.816	0.070	0.676	0.683	0.087	.050-.054	0.849	0.856	
0.9057	0.7790	0.6411	0.063	HZ-018	0.054	0.012	0.030	H-018	0.068	0.012	0.044	0.9157	0.010	0.6411	0.027	0.7173	0.6919	0.743	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-018	0.739	0.879	0.070	0.739	0.746	0.087	.050-.054	0.912	0.919	
0.9680	0.8410	0.7034	0.064	HZ-019	0.054	0.012	0.030	H-019	0.068	0.012	0.044	0.9780	0.010	0.7034	0.027	0.7796	0.7542	0.805	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-019	0.801	0.941	0.070	0.801	0.809	0.087	.050-.054	0.974	0.982	
1.0263	0.9040	0.7413	0.061	HZ-020	0.054	0.012	0.030	H-020	0.068	0.012	0.044	1.0413	0.015	0.7413	0.027	0.8429	0.8175	0.868	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-020	0.864	1.004	0.070	0.864	0.873	0.087	.050-.054	1.037	1.046	
1.0886	0.9660	0.8036	0.061	HZ-021	0.054	0.012	0.030	H-021	0.068	0.012	0.044	1.1036	0.015	0.8036	0.027	0.9052	0.8798	0.931	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-021	0.926	1.066	0.070	0.926	0.935	0.087	.050-.054	1.099	1.108	
1.1519	1.0290	0.8669	0.061	HZ-022	0.054	0.012	0.030	H-022	0.068	0.012	0.044	1.1669	0.015	0.8669	0.027	0.9685	0.9431	0.994	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-022	0.989	1.129	0.070	0.989	0.999	0.087	.050-.054	1.162	1.172	
1.2143	1.0910	0.9293	0.062	HZ-023	0.054	0.012	0.030	H-023	0.068	0.012	0.044	1.2293	0.015	0.9293	0.027	1.0309	1.0055	1.056	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-023	1.051	1.191	0.070	1.051	1.062	0.087	.050-.054	1.224	1.235	
1.2776	1.1540	0.9926	0.062	HZ-024	0.054	0.012	0.030	H-024	0.068	0.012	0.044	1.2926	0.015	0.9926	0.027	1.0942	1.0688	1.120	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-024	1.114	1.254	0.070	1.114	1.125	0.087	.050-.054	1.287	1.298	
1.3399	1.2160	1.0549	0.062	HZ-025	0.054	0.012	0.030	H-025	0.068	0.012	0.044	1.3549	0.015	1.0549	0.027	1.1565	1.1311	1.182	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-025	1.176	1.316	0.070	1.176	1.188	0.087	.050-.054	1.349	1.361	
1.4032	1.2790	1.1182	0.062	HZ-026	0.054	0.012	0.030	H-026	0.068	0.012	0.044	1.4182	0.015	1.1182	0.027	1.2198	1.1944	1.245	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-026	1.239	1.379	0.070	1.239	1.251	0.087	.050-.054	1.412	1.424	
1.4655	1.3410	1.1805	0.062	HZ-027	0.054	0.012	0.030	H-027	0.068	0.012	0.044	1.4805	0.015	1.1805	0.027	1.2821	1.2567	1.308	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-027	1.301	1.441	0.070	1.301	1.314	0.087	.050-.054	1.474	1.487	
1.5288	1.4040	1.2438	0.062	HZ-028	0.054	0.012	0.030	H-028	0.068	0.012	0.044	1.5438	0.015	1.2438	0.027	1.3454	1.3200	1.371	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-028	1.364	1.504	0.070	1.364	1.378	0.087	.050-.054	1.537	1.551	
1.6544	1.5290	1.3694	0.063	HZ-029	0.054	0.012	0.030	H-029	0.068	0.012	0.044	1.6694	0.015	1.3694	0.027	1.4710	1.4456	1.496	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-029	1.489	1.629	0.070	1.489	1.504	0.087	.050-.054	1.662	1.677	
1.7801	1.6540	1.4951	0.063	HZ-030	0.054	0.012	0.030	H-030	0.068	0.012	0.044	1.7951	0.015	1.4951	0.027	1.5967	1.5713	1.622	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-030	1.614	1.754	0.070	1.614	1.630	0.087	.050-.054	1.787	1.803	
1.9057	1.7790	1.6207	0.063	HZ-031	0.054	0.012	0.030	H-031	0.068	0.012	0.044	1.9207	0.015	1.6207	0.027	1.7223	1.6969	1.748	0.0254	0.022	0.005	0.010	0.010	0.000	0.024	0.014	0.0146	2-0										

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### H-Seal OD, Step ID and ID Basic Dimensions

### Zero Clearance H-Seals

### Gap H-Seals

### H-Gland

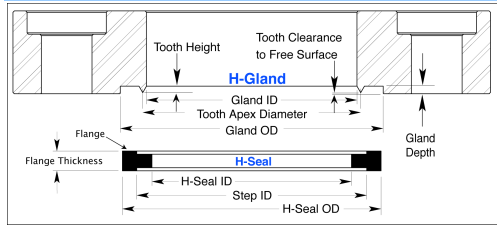
### Assembly & Compression

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**Tooth depth of penetration per side**

For both Zero Clearance and Gap H-Seals

**Zero-Clearance H-Seals**  
Web material remaining after penetration  
Clearance between parts after compression

**Gap H-Seals**  
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**Zero Clearance & Gap H-Seals**  
Min clearance between tooth OD and H-Seal Step ID at min/max tolerance extremes

H-Seal OD, Step ID and ID Basic Dimensions		Zero Clearance H-Seals		Gap H-Seals		H-Gland										Assembly & Compression				Interchangeable Elastomeric O-Ring Dimensions																			
OD ±.001	Step ID ±.001	H-Seal ID ±.001	Flange Cross Section Width	H-Seal Part Number	H-Seal Flange Thickness +00/- .001	Sealing surface: recess depth per side +.001/- .00	Web Thickness ±.001	Gap H-Seal Part Number	H-Seal Flange Thickness +00/- .001	Sealing surface: recess depth per side +.001/- .00	Web Thickness ±.001	H-Gland OD ±.002	H-Gland ID (calculated) ±.001	Tooth Apex Diameter ±.001	Tooth Base ID (calculated) ±.001	Tooth Base OD = O-Ring Gland ID	Tooth Base Width (calculated)	Tooth Height +001/- .000	Tooth Clearance to Free Surface	Tooth Clearance to Free Surface (ref)	For both Zero Clearance and Gap H-Seals	Web material remaining after penetration	Clearance between parts after compression	Web material remaining after penetration	Clearance between parts after compression	Min clearance between tooth OD and H-Seal Step ID at min/max tolerance extremes	O-Ring					O-Ring Face Seal Gland Dimensions							
																												Parker Hannifin Part Number	ID	OD	Cross Section	ID (Mean ID of O-Ring, Ref)	ID max (ID min + 1% of Mean ID)	OD min (calculated from tolerance range)	OD max (calculated from tolerance range)				
1.0390	0.8440	0.6471	0.097	HZ-117	0.076	0.017	0.042	H-117	0.092	0.010	0.058	1.0490	0.010	0.6471	0.039	0.9608	0.7718	0.7406	0.8003	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0130	2-117	0.799	1.005	0.103	0.799	0.807	1.013	0.123	.074-.080	1.233	1.243
1.0923	0.9070	0.7104	0.093	HZ-118	0.076	0.017	0.042	H-118	0.092	0.017	0.058	1.1123	0.020	0.7104	0.039	0.8351	0.8040	0.8663	0.929	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0078	2-118	0.862	1.068	0.103	0.862	0.871	1.023	0.123	.074-.080	1.108	1.117
1.1546	0.9690	0.7727	0.093	HZ-119	0.076	0.017	0.042	H-119	0.092	0.017	0.058	1.1746	0.020	0.7727	0.039	0.8974	0.8663	0.929	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0075	2-119	0.924	1.130	0.103	0.924	0.933	1.023	0.123	.074-.080	1.170	1.179	
1.2179	1.0320	0.8360	0.093	HZ-120	0.076	0.017	0.042	H-120	0.092	0.017	0.058	1.2379	0.020	0.8360	0.039	0.9608	0.9296	0.992	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0075	2-120	0.987	1.193	0.103	0.987	0.997	1.023	0.123	.074-.080	1.233	1.243	
1.2802	1.0940	0.8983	0.093	HZ-121	0.076	0.017	0.042	H-121	0.092	0.017	0.058	1.3002	0.020	0.8983	0.039	1.0231	0.9919	1.054	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0074	2-121	1.049	1.255	0.103	1.049	1.059	1.023	0.123	.074-.080	1.295	1.305	
1.3436	1.1570	0.9617	0.093	HZ-122	0.076	0.017	0.042	H-122	0.092	0.017	0.058	1.3636	0.020	0.9617	0.039	1.0864	1.0552	1.118	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0072	2-122	1.112	1.318	0.103	1.112	1.123	1.023	0.123	.074-.080	1.358	1.369	
1.4059	1.2190	1.0240	0.093	HZ-123	0.076	0.017	0.042	H-123	0.092	0.017	0.058	1.4259	0.020	1.0240	0.039	1.1487	1.1175	1.180	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0071	2-123	1.174	1.380	0.103	1.174	1.186	1.023	0.123	.074-.080	1.420	1.432	
1.4692	1.2820	1.0873	0.094	HZ-124	0.076	0.017	0.042	H-124	0.092	0.017	0.058	1.4892	0.020	1.0873	0.039	1.2120	1.1808	1.243	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0069	2-124	1.237	1.443	0.103	1.237	1.249	1.023	0.123	.074-.080	1.483	1.495	
1.5315	1.3440	1.1496	0.094	HZ-125	0.076	0.017	0.042	H-125	0.092	0.017	0.058	1.5515	0.020	1.1496	0.039	1.2743	1.2431	1.305	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0068	2-125	1.299	1.505	0.103	1.299	1.312	1.023	0.123	.074-.080	1.545	1.558	
1.5948	1.4070	1.2129	0.094	HZ-126	0.076	0.017	0.042	H-126	0.092	0.017	0.058	1.6148	0.020	1.2129	0.039	1.3376	1.3065	1.369	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0066	2-126	1.362	1.568	0.103	1.362	1.376	1.023	0.123	.074-.080	1.608	1.622	
1.6571	1.4690	1.2752	0.094	HZ-127	0.076	0.017	0.042	H-127	0.092	0.017	0.058	1.6771	0.020	1.2752	0.039	1.3999	1.3688	1.431	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0064	2-127	1.424	1.630	0.103	1.424	1.438	1.023	0.123	.074-.080	1.670	1.684	
1.7204	1.5320	1.3385	0.094	HZ-128	0.076	0.017	0.042	H-128	0.092	0.017	0.058	1.7404	0.020	1.3385	0.039	1.4633	1.4321	1.494	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0063	2-128	1.487	1.693	0.103	1.487	1.502	1.023	0.123	.074-.080	1.733	1.748	
1.7827	1.5940	1.4008	0.094	HZ-129	0.076	0.017	0.042	H-129	0.092	0.017	0.058	1.8027	0.020	1.4008	0.039	1.5256	1.4944	1.557	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0061	2-129	1.549	1.755	0.103	1.549	1.564	1.023	0.123	.074-.080	1.795	1.810	
1.8461	1.6570	1.4642	0.095	HZ-130	0.076	0.017	0.042	H-130	0.092	0.017	0.058	1.8661	0.020	1.4642	0.039	1.5889	1.5577	1.620	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0060	2-130	1.612	1.818	0.103	1.612	1.628	1.023	0.123	.074-.080	1.858	1.874	
1.9084	1.7190	1.5265	0.095	HZ-131	0.076	0.017	0.042	H-131	0.092	0.017	0.058	1.9284	0.020	1.5265	0.039	1.6512	1.6200	1.682	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0058	2-131	1.674	1.880	0.103	1.674	1.691	1.023	0.123	.074-.080	1.920	1.937	
1.9717	1.7820	1.5898	0.095	HZ-132	0.076	0.017	0.042	H-132	0.092	0.017	0.058	1.9917	0.020	1.5898	0.039	1.7145	1.6833	1.746	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0057	2-132	1.737	1.943	0.103	1.737	1.754	1.023	0.123	.074-.080	1.983	2.000	
2.0340	1.8440	1.6521	0.095	HZ-133	0.076	0.017	0.042	H-133	0.092	0.017	0.058	2.0540	0.020	1.6521	0.039	1.7768	1.7456	1.808	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0055	2-133	1.799	2.005	0.103	1.799	1.817	1.023	0.123	.074-.080	2.045	2.063	
2.0973	1.9070	1.7154	0.095	HZ-134	0.076	0.017	0.042	H-134	0.092	0.017	0.058	2.1173	0.020	1.7154	0.039	1.8401	1.8090	1.871	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0053	2-134	1.862	2.068	0.103	1.862	1.881	1.023	0.123	.074-.080	2.108	2.127	
2.1606	1.9700	1.7787	0.095	HZ-135	0.076	0.017	0.042	H-135	0.092	0.017	0.058	2.1806	0.020	1.7787	0.039	1.9034	1.8723	1.935	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0052	2-135	1.925	2.131	0.103	1.925	1.944	1.023	0.123	.074-.080	2.171	2.190	
2.2229	2.0320	1.8410	0.095	HZ-136	0.076	0.017	0.042	H-136	0.092	0.017	0.058	2.2429	0.020	1.8410	0.039	1.9658	1.9346	1.997	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0050	2-136	1.987	2.193	0.103	1.987	2.007	1.023	0.123	.074-.080	2.233	2.253	
2.2863	2.0950	1.9044	0.096	HZ-137	0.076	0.017	0.042	H-137	0.092	0.017	0.058	2.3063	0.020	1.9044	0.039	2.0291	1.9979	2.060	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0049	2-137	2.050	2.256	0.103	2.050	2.071	1.023	0.123	.074-.080	2.296	2.317	
2.3486	2.1570	1.9667	0.096	HZ-138	0.076	0.017	0.042	H-138	0.092	0.017	0.058	2.3686	0.020	1.9667	0.039	2.0914	2.0602	2.123	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0047	2-138	2.112	2.318	0.103	2.112	2.133	1.023	0.123	.074-.080	2.358	2.379	
2.4119	2.2200	2.0300	0.096	HZ-139	0.076	0.017	0.042	H-139	0.092	0.017	0.058	2.4319	0.020	2.0300	0.039	2.1547	2.1235	2.186	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0046	2-139	2.175	2.381	0.103	2.175	2.197	1.023	0.123	.074-.080	2.421	2.443	
2.4742	2.2820	2.0923	0.096	HZ-140	0.076	0.017	0.042	H-140	0.092	0.017	0.058	2.4942	0.020	2.0923	0.039	2.2170	2.1858	2.248	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0044	2-140	2.237	2.443	0.103	2.237	2.259	1.023	0.123	.074-.080	2.483	2.505	
2.5375	2.3450	2.1556	0.096	HZ-141	0.076	0.017	0.042	H-141	0.092	0.017	0.058	2.5575	0.020	2.1556	0.039	2.2803	2.2491	2.312	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0043	2-141	2.300	2.506	0.103	2.300	2.323	1.023	0.123	.074-.080	2.546	2.569	
2.5998	2.4070	2.2179	0.096	HZ-142	0.076	0.017	0.042	H-142	0.092	0.017	0.058	2.6198	0.020	2.2179	0.039	2.3426	2.3115	2.374	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0041	2-142	2.362	2.568	0.103	2.362	2.386	1.023	0.123	.074-.080	2.608	2.632	
2.6631	2.4700	2.2812	0.097	HZ-143	0.076	0.017	0.042	H-143	0.092	0.017	0.058	2.6831																											

## H-Seal and H-Gland Dimensions - October 2015

### H-Seal OD, Step ID and ID Basic Dimensions

### Zero Clearance H-Seals

### Gap H-Seals

### H-Gland

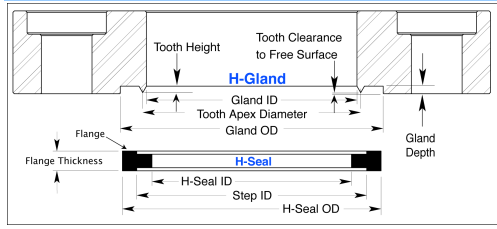
### Assembly & Compression

### Interchangeable Elastomeric O-Ring Dimensions

# English Engineering Units

Zero Clearance H-Seals allow the mating glands to bottom against each other. This means finished assembly stack-up dimensions are the same whether an H-Seal or an elastomeric o-ring is used in the gland. The H-Seal is self-centering. Check the Assembly & Compression columns to the right for tooth penetration values.

Gap H-Seals provide a positive compression stop for the mating glands. The glands bottom against the H-Seal and leave a gap between parts that can be used for leak checking. Note the Assembly & Compression columns to the right for gap dimensions.



Tooth depth of penetration per side

For both Zero Clearance and Gap H-Seals

Web material remaining after penetration

Clearance between parts after compression

Web material remaining after penetration

Clearance between parts after compression

Min clearance between tooth OD and H-Seal Step ID at min/max tolerance extremes

Zero Clearance H-Seals

Gap H-Seals

Zero Clearance & Gap H-Seals

H-Seal OD, Step ID and ID Basic Dimensions		Zero Clearance H-Seals		Gap H-Seals		H-Gland										Assembly & Compression				Interchangeable Elastomeric O-Ring Dimensions																	
OD ±.001	Step ID ±.001	H-Seal ID ±.001	Flange Cross Section Width	H-Seal Part Number	H-Seal Flange Thickness +00/- .001	Sealing surface recess depth per side +.001/- .00	Web Thickness ±.001	H-Seal Part Number	H-Seal Flange Thickness +00/- .001	Sealing surface recess depth per side +.001/- .00	Web Thickness ±.001	H-Gland OD ±.002	H-Seal OD Clearance: (Gland OD - H-Seal OD)	H-Gland ID (max recommended)	H-Gland Depth +00/- .001	Tooth Apex Diameter ±.001	Tooth Base ID (calculated)	Tooth Base OD = O-Ring Gland ID	Tooth Base Width (calculated)	Tooth Height +001/- .000	Tooth Clearance to Free Surface (ref)	For both Zero Clearance and Gap H-Seals	Web material remaining after penetration	Clearance between parts after compression	Web material remaining after penetration	Clearance between parts after compression	Min clearance between tooth OD and H-Seal Step ID at min/max tolerance extremes	Parker Hannifin Part Number	O-Ring		O-Ring Face Seal Gland Dimensions						
																													ID	OD	Cross Section	ID (Mean ID of O-Ring, Ref)	ID max (ID min + 1% of Mean ID)	Gland (trough) Width for Vacuum & Gases	Gland (trough) Depth - from Parker Hannifin	OD min (calculated from tolerance range)	OD max (calculated from tolerance range)
6.7454	6.5620	6.3635	0.092	HZ-165	0.076	0.017	0.042	H-165	0.092	0.017	0.058	6.7654	0.020	6.3635	0.039	6.4883	6.4571	6.519	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0088	2-165	6.487	6.693	0.103	6.487	6.552	0.123	.074-.080	6.733	6.798
6.9967	6.8120	6.6148	0.092	HZ-166	0.076	0.017	0.042	H-166	0.092	0.017	0.058	7.0167	0.020	6.6148	0.039	6.7395	6.7083	6.771	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0082	2-166	6.737	6.943	0.103	6.737	6.804	0.123	.074-.080	6.983	7.050
7.2479	7.0620	6.8660	0.093	HZ-167	0.076	0.017	0.042	H-167	0.092	0.017	0.058	7.2679	0.020	6.8660	0.039	6.9908	6.9596	7.022	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0069	2-167	6.987	7.193	0.103	6.987	7.057	0.123	.074-.080	7.233	7.303
7.4992	7.3120	7.1173	0.094	HZ-168	0.076	0.017	0.042	H-168	0.092	0.017	0.058	7.5192	0.020	7.1173	0.039	7.2420	7.2108	7.273	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0069	2-168	7.237	7.443	0.103	7.237	7.309	0.123	.074-.080	7.483	7.555
7.7504	7.5620	7.3685	0.094	HZ-169	0.076	0.017	0.042	H-169	0.092	0.017	0.058	7.7704	0.020	7.3685	0.039	7.4933	7.4621	7.524	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0063	2-169	7.487	7.693	0.103	7.487	7.562	0.123	.074-.080	7.733	7.808
8.0017	7.8120	7.6198	0.095	HZ-170	0.076	0.017	0.042	H-170	0.092	0.017	0.058	8.0217	0.020	7.6198	0.039	7.7445	7.7133	7.776	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0057	2-170	7.737	7.943	0.103	7.737	7.814	0.123	.074-.080	7.983	8.060
8.2529	8.0620	7.8710	0.095	HZ-171	0.076	0.017	0.042	H-171	0.092	0.017	0.058	8.2729	0.020	7.8710	0.039	7.9958	7.9646	8.027	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0050	2-171	7.987	8.193	0.103	7.987	8.067	0.123	.074-.080	8.233	8.313
8.5042	8.3120	8.1223	0.096	HZ-172	0.076	0.017	0.042	H-172	0.092	0.017	0.058	8.5242	0.020	8.1223	0.039	8.2470	8.2158	8.278	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0044	2-172	8.237	8.443	0.103	8.237	8.317	0.123	.074-.080	8.483	8.565
8.7554	8.5620	8.3735	0.097	HZ-173	0.076	0.017	0.042	H-173	0.092	0.017	0.058	8.7754	0.020	8.3735	0.039	8.4983	8.4671	8.529	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0038	2-173	8.487	8.693	0.103	8.487	8.572	0.123	.074-.080	8.733	8.818
9.0067	8.8120	8.6248	0.097	HZ-174	0.076	0.017	0.042	H-174	0.092	0.017	0.058	9.0267	0.020	8.6248	0.039	8.7495	8.7183	8.781	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0032	2-174	8.737	8.943	0.103	8.737	8.824	0.123	.074-.080	8.983	9.070
9.2579	9.0620	8.8760	0.098	HZ-175	0.076	0.017	0.042	H-175	0.092	0.017	0.058	9.2779	0.020	8.8760	0.039	9.0008	8.9696	9.032	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0025	2-175	8.987	9.193	0.103	8.987	9.077	0.123	.074-.080	9.233	9.323
9.5092	9.3120	9.1273	0.099	HZ-176	0.076	0.017	0.042	H-176	0.092	0.017	0.058	9.5292	0.020	9.1273	0.039	9.2520	9.2208	9.283	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0019	2-176	9.237	9.443	0.103	9.237	9.329	0.123	.074-.080	9.483	9.575
9.7604	9.5620	9.3785	0.099	HZ-177	0.076	0.017	0.042	H-177	0.092	0.017	0.058	9.7804	0.020	9.3785	0.039	9.5033	9.4721	9.534	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0013	2-177	9.487	9.693	0.103	9.487	9.582	0.123	.074-.080	9.733	9.828
10.0117	9.8120	9.6298	0.100	HZ-178	0.076	0.017	0.042	H-178	0.092	0.017	0.058	10.0317	0.020	9.6298	0.039	9.7545	9.7233	9.786	0.0312	0.027	0.012	0.010	0.022	0.000	0.038	0.014	0.0007	2-178	9.737	9.943	0.103	9.737	9.834	0.123	.074-.080	9.983	10.080
1.3452	1.1210	0.8547	0.112	HZ-215	0.101	0.024	0.053	H-215	0.122	0.024	0.074	1.3732	0.028	0.8547	0.052	1.0119	0.9726	1.051	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0184	2-215	1.046	1.324	0.139	1.046	1.056	0.161	.101-.107	1.368	1.378
1.4085	1.1840	0.9180	0.112	HZ-216	0.101	0.024	0.053	H-216	0.122	0.024	0.074	1.4365	0.028	0.9180	0.052	1.0752	1.0359	1.115	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0182	2-216	1.109	1.387	0.139	1.109	1.120	0.161	.101-.107	1.431	1.442
1.4709	1.2460	0.9804	0.112	HZ-217	0.101	0.024	0.053	H-217	0.122	0.024	0.074	1.4989	0.028	0.9804	0.052	1.1376	1.0983	1.177	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0181	2-217	1.171	1.449	0.139	1.171	1.183	0.161	.101-.107	1.493	1.505
1.5342	1.3090	1.0437	0.113	HZ-218	0.101	0.024	0.053	H-218	0.122	0.024	0.074	1.5622	0.028	1.0437	0.052	1.2009	1.1616	1.240	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0179	2-218	1.234	1.512	0.139	1.234	1.246	0.161	.101-.107	1.556	1.568
1.5965	1.3710	1.1060	0.113	HZ-219	0.101	0.024	0.053	H-219	0.122	0.024	0.074	1.6245	0.028	1.1060	0.052	1.2632	1.2239	1.302	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0178	2-219	1.296	1.574	0.139	1.296	1.309	0.161	.101-.107	1.618	1.631
1.6598	1.4340	1.1693	0.113	HZ-220	0.101	0.024	0.053	H-220	0.122	0.024	0.074	1.6878	0.028	1.1693	0.052	1.3265	1.2872	1.366	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0176	2-220	1.359	1.637	0.139	1.359	1.373	0.161	.101-.107	1.681	1.695
1.7221	1.4960	1.2316	0.113	HZ-221	0.101	0.024	0.053	H-221	0.122	0.024	0.074	1.7501	0.028	1.2316	0.052	1.3888	1.3495	1.428	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0174	2-221	1.421	1.699	0.139	1.421	1.435	0.161	.101-.107	1.743	1.757
1.7854	1.5590	1.2949	0.113	HZ-222	0.101	0.024	0.053	H-222	0.122	0.024	0.074	1.8134	0.028	1.2949	0.052	1.4521	1.4128	1.491	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0173	2-222	1.484	1.762	0.139	1.484	1.499	0.161	.101-.107	1.806	1.821
1.9110	1.6840	1.4205	0.114	HZ-223	0.101	0.024	0.053	H-223	0.122	0.024	0.074	1.9390	0.028	1.4205	0.052	1.5777	1.5384	1.617	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0170	2-223	1.609	1.887	0.139	1.609	1.625	0.161	.101-.107	1.931	1.947
2.0367	1.8090	1.5462	0.114	HZ-224	0.101	0.024	0.053	H-224	0.122	0.024	0.074	2.0647	0.028	1.5462	0.052	1.7034	1.6641	1.743	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0167	2-224	1.734	2.012	0.139	1.734	1.751	0.161	.101-.107	2.056	2.073
2.1623	1.9340	1.6718	0.114	HZ-225	0.101	0.024	0.053	H-225	0.122	0.024	0.074	2.1903	0.028	1.6718	0.052	1.8290	1.7897	1.868	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0164	2-225	1.859	2.137	0.139	1.859	1.878	0.161	.101-.107	2.181	2.200
2.2879	2.0590	1.7974	0.114	HZ-226	0.101	0.024	0.053	H-226	0.122	0.024	0.074	2.3159	0.028	1.7974	0.052	1.9546	1.9153	1.994	0.0393	0.034	0.018	0.010	0.033	0.000	0.054	0.018	0.0160	2-226	1.984								

# H-Seal and H-Gland Dimensions - October 2015

## H-Seal OD, Step ID and ID Basic Dimensions

## Zero Clearance H-Seals

## Gap H-Seals

## H-Gland

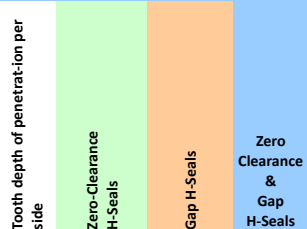
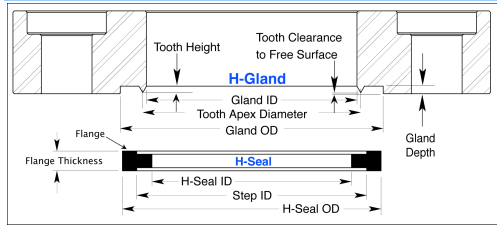
## Assembly & Compression

## Interchangeable Elastomeric O-Ring Dimensions

# English Engineering Units

Zero Clearance H-Seals allow the mating glands to bottom against each other. This means finished assembly stack-up dimensions are the same whether an H-Seal or an elastomeric o-ring is used in the gland. The H-Seal is self-centering. Check the Assembly & Compression columns to the right for tooth penetration values.

Gap H-Seals provide a positive compression stop for the mating glands. The glands bottom against the H-Seal and leave a gap between parts that can be used for leak checking. Note the Assembly & Compression columns to the right for gap dimensions.



H-Seal OD, Step ID and ID Basic Dimensions		Zero Clearance H-Seals		Gap H-Seals		H-Gland										Assembly & Compression				Interchangeable Elastomeric O-Ring Dimensions																	
OD ±.001	Step ID ±.001	H-Seal Part Number	H-Seal Flange Thickness +.001 / -.001	Sealing surface: recess depth per side +.001 / -.001	Web Thickness ±.001	H-Seal Part Number	H-Seal Flange Thickness +.001 / -.001	Sealing surface: recess depth per side +.001 / -.001	Web Thickness ±.001	H-Gland OD ±.002	H-Gland ID (Gland OD - H-Seal OD)	H-Gland ID (max recommended)	H-Gland Depth +.001 / -.001	Tooth Apex Diameter ±.001	Tooth Base ID (calculated)	Tooth Base OD = O-Ring Gland ID	Tooth Base Width (calculated)	Tooth Height +.001 / -.000	Tooth Clearance to Free Surface	Tooth Clearance (ref)	For both Zero Clearance and Gap H-Seals	Web material remaining after penetration	Clearance between parts after compression	Web material remaining after penetration	Clearance between parts after compression	Min clearance between tooth OD and H-Seal Step ID at min/max tolerance extremes	Parker Hannifin Part Number	ID	OD	Cross Section	ID (Mean ID of O-Ring, Ref)	ID max (ID min + 1% of Mean ID)	Gland (trough) Width for Vacuum & Gases	Gland (trough) Depth - from Parker Hannifin	OD min (calculated from tolerance range)	OD max (calculated from tolerance range)	
5.0517	4.8090	4.5612	0.121			<b>HZ-248</b>	0.101	0.024	0.053	5.0797	4.5612	4.5612	0.052	4.7184	4.6791	4.758	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0092	<b>2-248</b>	4.734	5.012	0.139	4.734	4.781	5.160	0.161	.101-.107	5.431	5.482
5.1773	4.9340	4.6868	0.122			<b>HZ-249</b>	0.101	0.024	0.053	5.2053	4.6868	4.6868	0.052	4.8440	4.8047	4.883	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0089	<b>2-249</b>	4.859	5.137	0.139	4.859	4.908	5.286	0.161	.101-.107	5.581	5.230
5.3029	5.0590	4.8124	0.122			<b>HZ-250</b>	0.101	0.024	0.053	5.3309	0.028	4.8124	0.052	4.9696	4.9303	5.009	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0085	<b>2-250</b>	4.984	5.262	0.139	4.984	5.034	5.413	0.161	.101-.107	5.556	5.356
5.4285	5.1840	4.9380	0.122			<b>HZ-251</b>	0.101	0.024	0.053	5.4565	0.028	4.9380	0.052	5.0952	5.0559	5.135	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0082	<b>2-251</b>	5.109	5.387	0.139	5.109	5.160	5.540	0.161	.101-.107	5.611	5.482
5.5542	5.3090	5.0637	0.123			<b>HZ-252</b>	0.101	0.024	0.053	5.5822	0.028	5.0637	0.052	5.2209	5.1816	5.260	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0079	<b>2-252</b>	5.234	5.512	0.139	5.234	5.286	5.665	0.161	.101-.107	5.735	5.608
5.6798	5.4340	5.1893	0.123			<b>HZ-253</b>	0.101	0.024	0.053	5.7078	0.028	5.1893	0.052	5.3465	5.3072	5.386	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0076	<b>2-253</b>	5.359	5.637	0.139	5.359	5.413	5.792	0.161	.101-.107	5.906	5.735
5.8054	5.5590	5.3149	0.123			<b>HZ-254</b>	0.101	0.024	0.053	5.8334	0.028	5.3149	0.052	5.4721	5.4328	5.511	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0073	<b>2-254</b>	5.484	5.762	0.139	5.484	5.539	5.918	0.161	.101-.107	5.806	5.861
5.9310	5.6840	5.4405	0.123			<b>HZ-255</b>	0.101	0.024	0.053	5.9590	0.028	5.4405	0.052	5.5977	5.5584	5.637	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0070	<b>2-255</b>	5.609	5.887	0.139	5.609	5.665	6.044	0.161	.101-.107	5.931	5.987
6.0567	5.8090	5.5662	0.124			<b>HZ-256</b>	0.101	0.024	0.053	6.0847	0.028	5.5662	0.052	5.7234	5.6841	5.763	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0067	<b>2-256</b>	5.734	6.012	0.139	5.734	5.791	6.170	0.161	.101-.107	6.056	6.113
6.1823	5.9340	5.6918	0.124			<b>HZ-257</b>	0.101	0.024	0.053	6.2103	0.028	5.6918	0.052	5.8490	5.8097	5.888	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0064	<b>2-257</b>	5.859	6.137	0.139	5.859	5.918	6.297	0.161	.101-.107	6.181	6.240
6.3079	6.0590	5.8174	0.124			<b>HZ-258</b>	0.101	0.024	0.053	6.3359	0.028	5.8174	0.052	5.9746	5.9353	6.014	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0060	<b>2-258</b>	5.984	6.262	0.139	5.984	6.044	6.423	0.161	.101-.107	6.306	6.366
6.5592	6.3290	6.0687	0.115			<b>HZ-259</b>	0.101	0.024	0.053	6.5872	0.028	6.0687	0.052	6.2259	6.1866	6.265	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0154	<b>2-259</b>	6.234	6.512	0.139	6.234	6.296	6.675	0.161	.101-.107	6.556	6.618
6.8104	6.5790	6.3199	0.116			<b>HZ-260</b>	0.101	0.024	0.053	6.8384	0.028	6.3199	0.052	6.4771	6.4378	6.516	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0148	<b>2-260</b>	6.484	6.762	0.139	6.484	6.546	6.925	0.161	.101-.107	6.806	6.871
7.0617	6.8290	6.5712	0.116			<b>HZ-261</b>	0.101	0.024	0.053	7.0897	0.028	6.5712	0.052	6.7284	6.6891	6.768	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0142	<b>2-261</b>	6.734	7.012	0.139	6.734	6.801	7.180	0.161	.101-.107	7.056	7.123
7.3129	7.0790	6.8224	0.117			<b>HZ-262</b>	0.101	0.024	0.053	7.3409	0.028	6.8224	0.052	6.9796	6.9403	7.019	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0135	<b>2-262</b>	6.984	7.262	0.139	6.984	7.054	7.433	0.161	.101-.107	7.306	7.376
7.5642	7.3290	7.0737	0.118			<b>HZ-263</b>	0.101	0.024	0.053	7.5922	0.028	7.0737	0.052	7.2309	7.1916	7.270	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0129	<b>2-263</b>	7.234	7.512	0.139	7.234	7.306	7.685	0.161	.101-.107	7.556	7.628
7.8154	7.5790	7.3249	0.118			<b>HZ-264</b>	0.101	0.024	0.053	7.8434	0.028	7.3249	0.052	7.4821	7.4428	7.521	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0123	<b>2-264</b>	7.484	7.762	0.139	7.484	7.559	7.938	0.161	.101-.107	7.806	7.881
8.0667	7.8290	7.5762	0.119			<b>HZ-265</b>	0.101	0.024	0.053	8.0947	0.028	7.5762	0.052	7.7334	7.6941	7.773	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0117	<b>2-265</b>	7.734	8.012	0.139	7.734	7.811	8.190	0.161	.101-.107	8.056	8.133
8.3179	8.0790	7.8274	0.119			<b>HZ-266</b>	0.101	0.024	0.053	8.3459	0.028	7.8274	0.052	7.9846	7.9453	8.024	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0110	<b>2-266</b>	7.984	8.262	0.139	7.984	8.064	8.443	0.161	.101-.107	8.306	8.386
8.5692	8.3290	8.0787	0.120			<b>HZ-267</b>	0.101	0.024	0.053	8.5972	0.028	8.0787	0.052	8.2359	8.1966	8.275	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0104	<b>2-267</b>	8.234	8.512	0.139	8.234	8.316	8.695	0.161	.101-.107	8.506	8.638
8.8204	8.5790	8.3299	0.121			<b>HZ-268</b>	0.101	0.024	0.053	8.8484	0.028	8.3299	0.052	8.4871	8.4478	8.526	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0098	<b>2-268</b>	8.484	8.762	0.139	8.484	8.569	8.948	0.161	.101-.107	8.806	8.891
9.0717	8.8290	8.5812	0.121			<b>HZ-269</b>	0.101	0.024	0.053	9.0997	0.028	8.5812	0.052	8.7384	8.6991	8.778	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0092	<b>2-269</b>	8.734	9.012	0.139	8.734	8.821	9.200	0.161	.101-.107	9.056	9.143
9.3229	9.0790	8.8324	0.122			<b>HZ-270</b>	0.101	0.024	0.053	9.3509	0.028	8.8324	0.052	8.9896	8.9503	9.029	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0085	<b>2-270</b>	8.984	9.262	0.139	8.984	9.074	9.453	0.161	.101-.107	9.306	9.396
9.5742	9.3290	9.0837	0.123			<b>HZ-271</b>	0.101	0.024	0.053	9.6022	0.028	9.0837	0.052	9.2409	9.2016	9.280	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0079	<b>2-271</b>	9.234	9.512	0.139	9.234	9.326	9.705	0.161	.101-.107	9.556	9.648
9.8254	9.5790	9.3349	0.123			<b>HZ-272</b>	0.101	0.024	0.053	9.8534	0.028	9.3349	0.052	9.4921	9.4528	9.531	0.0393	0.034	0.018	0.010	0.010	0.033	0.000	0.054	0.018	0.0073	<b>2-272</b>	9.484	9.762	0.139	9.484	9.579	9.958	0.161	.101-.107	9.806	9.901
6.3263	5.9500	5.5329	0.188			<b>HZ-360</b>	0.154	0.050	0.054	6.3613	0.035	5.5329	0.08																								

## H-Seal and H-Gland Dimensions - October 2015

H-Seal OD, Step ID and ID Basic Dimensions				Zero Clearance H-Seals			Gap H-Seals			H-Gland						Assembly & Compression				Interchangeable Elastomeric O-Ring Dimensions																	
<p><b>English Engineering Units</b></p>	<p>Zero Clearance H-Seals allow the mating glands to bottom against each other. This means finished assembly stack-up dimensions are the same whether an H-Seal or an elastomeric o-ring is used in the gland. The H-Seal is self-centering. Check the Assembly &amp; Compression columns to the right for tooth penetration values.</p>			<p>Gap H-Seals provide a positive compression stop for the mating glands. The glands bottom against the H-Seal and leave a gap between parts that can be used for leak checking. Note the Assembly &amp; Compression columns to the right for gap dimensions.</p>									<p><b>Tooth depth of penetration per side</b></p> <p>For both Zero Clearance and Gap H-Seals</p> <p><b>Zero-Clearance H-Seals</b></p> <p>Web material remaining after penetration</p> <p>Clearance between parts after compression</p> <p><b>Gap H-Seals</b></p> <p>Web material remaining after penetration</p> <p>Clearance between parts after compression</p> <p><b>Zero Clearance &amp; Gap H-Seals</b></p> <p>Min clearance between tooth OD and H-Seal Step ID at min/max tolerance extremes</p>				<p><b>O-Ring</b></p> <p><b>O-Ring Face Seal Gland Dimensions</b></p>																				
	OD ±.001	Step ID ±.001	H-Seal ID ±.001	Flange Cross Section Width	Zero Clearance H-Seal Part Number	H-Seal Flange Thickness +.00 / -.001	Sealing surface: recess depth per side +.001 / -.00	Web Thickness ±.001	Gap H-Seal Part Number	H-Seal Flange Thickness +.00 / -.001	Sealing surface: recess depth per side +.001 / -.00	Web Thickness ±.001	H-Gland OD ±.002	H-Seal OD Clearance: (Gland OD - H-Seal OD) (max recommended = H-Seal ID)	H-Gland ID	H-Gland Depth +.00 / -.001	Tooth Apex Diameter ±.001	Tooth Base ID (calculated) 60° included angle tooth	Tooth Base OD = O-Ring Gland ID	Tooth Base Width (calculated)	Tooth Height +.001 / -.000	Tooth Clearance to Free Surface (ref)	For both Zero Clearance and Gap H-Seals	Web material remaining after penetration	Clearance between parts after compression	Web material remaining after penetration	Clearance between parts after compression	Min clearance between tooth OD and H-Seal Step ID at min/max tolerance extremes	Parker Hannifin Part Number	ID	OD	Cross Section	ID (Mean ID of O-Ring, Ref)	ID max (ID min + 1% of Mean ID)	Gland (trough) Width for Vacuum & Gases	Gland (trough) Depth - from Parker Hannifin	OD min (calculated from tolerance range)
13.4869	13.1750	12.6935	0.156	<b>HZ-382</b>	0.154	0.050	0.054	<b>H-382</b>	0.185	0.050	0.085	13.5219	0.035	12.6935	0.080	12.9706	12.9013	13.040	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0476	<b>2-382</b>	12.975	13.395	0.210	12.975	13.105	0.241	.152-.162	13.457	13.587
14.4919	14.1750	13.6985	0.158	<b>HZ-383</b>	0.154	0.050	0.054	<b>H-383</b>	0.185	0.050	0.085	14.5269	0.035	13.6985	0.080	13.9756	13.9063	14.045	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0426	<b>2-383</b>	13.975	14.395	0.210	13.975	14.115	0.241	.152-.162	14.457	14.597
15.4969	15.1750	14.7035	0.161	<b>HZ-384</b>	0.154	0.050	0.054	<b>H-384</b>	0.185	0.050	0.085	15.5319	0.035	14.7035	0.080	14.9806	14.9113	15.050	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0426	<b>2-384</b>	14.975	15.395	0.210	14.975	15.125	0.241	.152-.162	15.457	15.607
16.4818	16.1550	15.6884	0.163	<b>HZ-385</b>	0.154	0.050	0.054	<b>H-385</b>	0.185	0.050	0.085	16.5168	0.035	15.6884	0.080	15.9655	15.8962	16.035	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0401	<b>2-385</b>	15.955	16.375	0.210	15.955	16.115	0.241	.152-.162	16.437	16.597
17.4868	17.1550	16.6934	0.166	<b>HZ-386</b>	0.154	0.050	0.054	<b>H-386</b>	0.185	0.050	0.085	17.5218	0.035	16.6934	0.080	16.9705	16.9012	17.040	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0376	<b>2-386</b>	16.955	17.375	0.210	16.955	17.125	0.241	.152-.162	17.437	17.607
18.4918	18.1550	17.6984	0.168	<b>HZ-387</b>	0.154	0.050	0.054	<b>H-387</b>	0.185	0.050	0.085	18.5268	0.035	17.6984	0.080	17.9755	17.9062	18.045	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0351	<b>2-387</b>	17.955	18.375	0.210	17.955	18.135	0.241	.152-.162	18.437	18.617
19.4968	19.1550	18.7034	0.171	<b>HZ-388</b>	0.154	0.050	0.054	<b>H-388</b>	0.185	0.050	0.085	19.5318	0.035	18.7034	0.080	18.9805	18.9112	19.050	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0326	<b>2-388</b>	18.955	19.375	0.210	18.955	19.145	0.241	.152-.162	19.437	19.627
20.5018	20.1550	19.7084	0.173	<b>HZ-389</b>	0.154	0.050	0.054	<b>H-389</b>	0.185	0.050	0.085	20.5368	0.035	19.7084	0.080	19.9855	19.9162	20.055	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0301	<b>2-389</b>	19.955	20.375	0.210	19.955	20.155	0.241	.152-.162	20.437	20.637
21.5068	21.1550	20.7134	0.176	<b>HZ-390</b>	0.154	0.050	0.054	<b>H-390</b>	0.185	0.050	0.085	21.5418	0.035	20.7134	0.080	20.9905	20.9212	21.060	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0276	<b>2-390</b>	20.955	21.375	0.210	20.955	21.165	0.241	.152-.162	21.437	21.647
22.5118	22.1550	21.7184	0.178	<b>HZ-391</b>	0.154	0.050	0.054	<b>H-391</b>	0.185	0.050	0.085	22.5468	0.035	21.7184	0.080	21.9955	21.9262	22.065	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0251	<b>2-391</b>	21.955	22.375	0.210	21.955	22.175	0.241	.152-.162	22.437	22.657
23.5017	23.1400	22.7083	0.181	<b>HZ-392</b>	0.154	0.050	0.054	<b>H-392</b>	0.185	0.050	0.085	23.5367	0.035	22.7083	0.080	22.9854	22.9161	23.055	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0226	<b>2-392</b>	22.940	23.360	0.210	22.940	23.169	0.241	.152-.162	23.422	23.651
24.5067	24.1400	23.7133	0.183	<b>HZ-393</b>	0.154	0.050	0.054	<b>H-393</b>	0.185	0.050	0.085	24.5417	0.035	23.7133	0.080	23.9904	23.9211	24.060	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0201	<b>2-393</b>	23.940	24.360	0.210	23.940	24.179	0.241	.152-.162	24.422	24.661
25.5117	25.1400	24.7183	0.186	<b>HZ-394</b>	0.154	0.050	0.054	<b>H-394</b>	0.185	0.050	0.085	25.5467	0.035	24.7183	0.080	24.9954	24.9261	25.065	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0176	<b>2-394</b>	24.940	25.360	0.210	24.940	25.189	0.241	.152-.162	25.422	25.671
26.5167	26.1400	25.7233	0.188	<b>HZ-395</b>	0.154	0.050	0.054	<b>H-395</b>	0.185	0.050	0.085	26.5517	0.035	25.7233	0.080	26.0004	25.9311	26.070	0.0693	0.060	0.020	0.010	0.034	0.000	0.065	0.025	0.0151	<b>2-395</b>	25.940	26.360	0.210	25.940	26.199	0.241	.152-.162	26.422	26.681