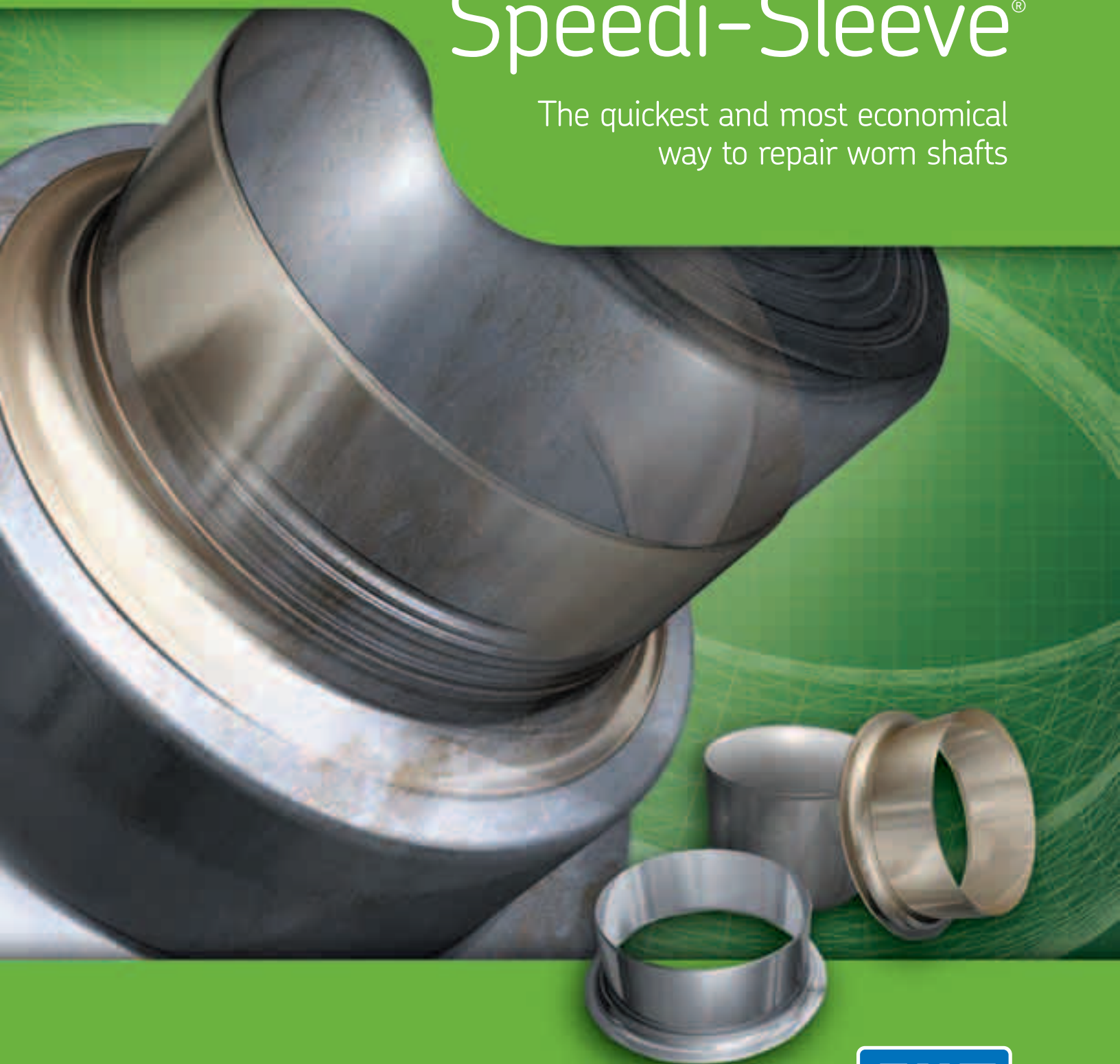


Catalog 457027  
October 2005

# Speedi-Sleeve®

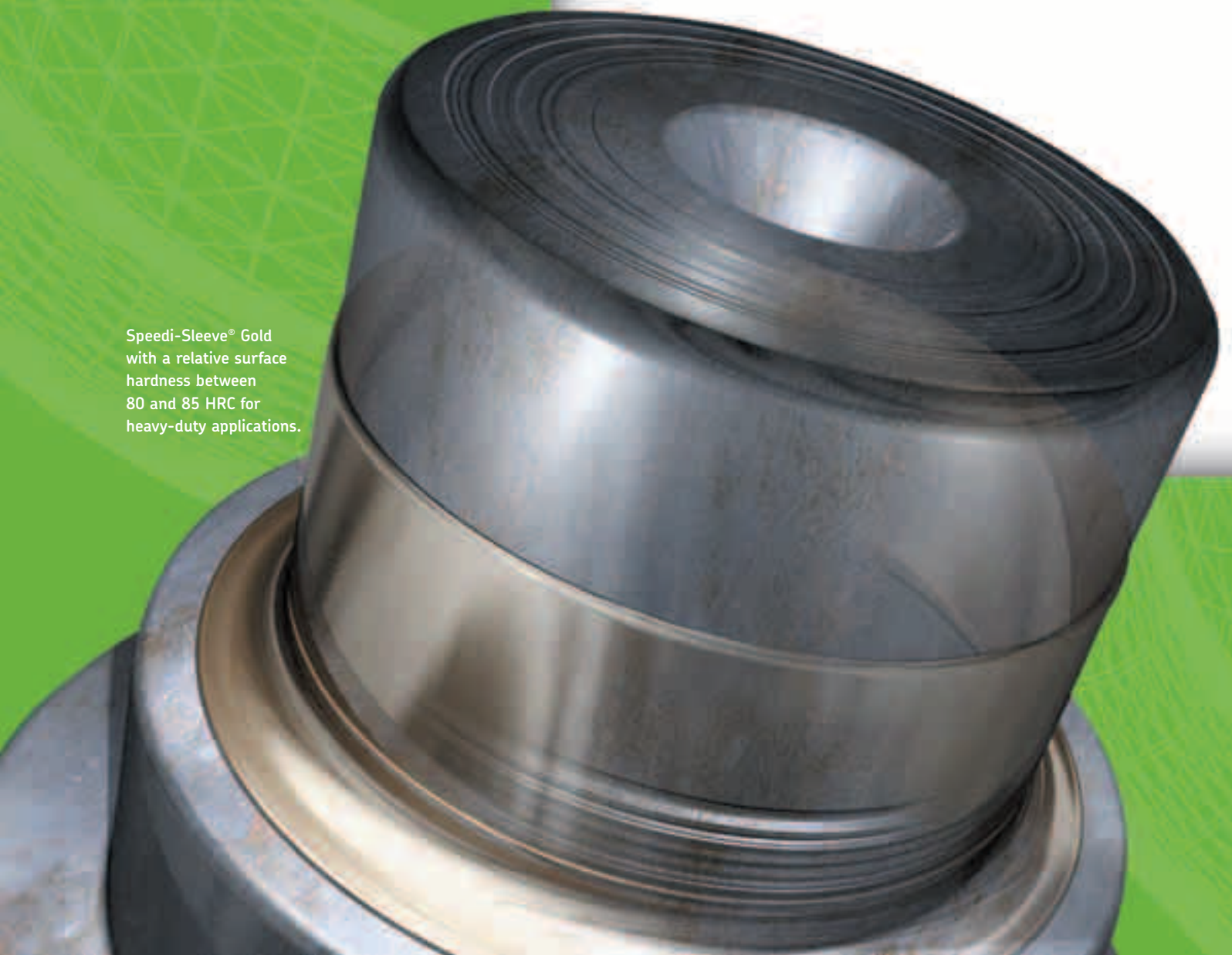
The quickest and most economical  
way to repair worn shafts



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Speedi-Sleeve® Gold with a relative surface hardness between 80 and 85 HRC for heavy-duty applications.



# The Speedi-Sleeve® concept

the quickest and sensible way to repair worn shafts

To seal efficiently, radial shaft seals must run against a smooth round surface - the seal counterface. If the counterface becomes worn, and it usually does, then the seal will no longer be able to fulfill its function, which is to retain lubricant and to exclude contaminants - solid particles as well as liquid.

Normally, the counterface will become grooved as a contaminant particle is caught under the seal lip and abrades a track as the shaft rotates. As this continues, the seal will allow more particles to pass or get stuck, and seal efficiency deteriorates, eventually leading to malfunction of the component the seal is meant to protect. To rectify the situation, it is necessary to repair the counterface on the shaft - a simple seal replacement will not be sufficient.

To repair the shaft, it is usually necessary to dismantle the machine in order to be able to handle the shaft and then to grind down the counterface until it is smooth again. If the grooves are deep, the original size of the seal will no longer fit properly - a seal with a smaller shaft diameter has to be found.

Now there is an easy way to repair the counterface with the shaft still in position and without having to look for a different size of seal. The answer is the Speedi-Sleeve® from SKF.



# The characteristics

a simple idea with an impressive effect

The Speedi-Sleeve® has been developed by SKF - a leading seal specialist - precisely to solve the problem of worn seal counterfaces at shaft ends. It is a thin-walled sleeve, with a high quality finish and hardness for its purpose, which is simply pushed in position over the worn shaft and after installing a new seal, the shaft is as good as new - if not better.

There is no shaft dismantling or machining involved - hence the "Speedi" - and costly downtime is saved. As the same size of seal as the original can be used, there is no need to search for other seals so that stock keeping is simplified, which results in time saved.

No special equipment is required - the installation tool is supplied with the sleeve. A mallet and a pair of pliers are all that is needed for the repair job.

## How it works

The sleeve is sufficiently thin-walled (.011" or .28 mm) to allow the same size of seal to be used. The Speedi-Sleeve® is made of high quality stainless steel SAE 304. The surface is wear-resistant and machined without directionality to a finish of Ra = 10 to 20 micro-inches or 0.25 to 0.5 µm. This is, in fact, a better counterface than can normally be achieved on a shaft. If an external all-rubber V-ring is added to the sealing arrangement, there is little risk of contaminants reaching the primary seal and causing wear.

## Size range

The standard range covers shaft diameters from .500" to 8.000" (12.70 to 203.20 mm). Depending on production quantities, non-standard sizes can be quoted and produced. Each inch or metric sleeve fits a range around their base nominal shaft diameter.



Speedi-Sleeve®:  
good as a new shaft,  
if not better

# Speedi-Sleeve® Gold

The preferred choice for heavy duty applications

## Speedi-Sleeve® Gold

Speedi-Sleeve® Gold is an enhanced version of the popular Speedi-Sleeve® which offers improved resistance to abrasive wear. Designed to be used in applications where extended seal system life is needed, Speedi-Sleeve® Gold bridges the performance gap between the standard sleeve and expensive custom shaft treatments. A thin metallic film applied to the base stainless steel imparts a gold color and significantly increases durability and surface hardness (to approx. 2300 Vickers\*). The Gold version is particularly effective in high dust and grit environments when combined with a LongLife seal. Yet installation is as easy as the original Speedi-Sleeve® and the same seal size can still be used. Gold is available from stock for dozens of shaft sizes or run from production in small quantities.

## Test results

The Speedi-Sleeve® Gold has been thoroughly tested to establish its degree of abrasion resistance in severe dust environments using both coarse and fine sand. The tests were carried out at temperatures up to 225°F (107.2°C) and at shaft speeds of up to 1693 fpm (8.6 m/s).

Under these conditions, seals on shafts without Speedi-Sleeve® protection started to leak after 450 hours on average. Seals on Speedi-Sleeve® Gold ran for an average of 2,500 hours.

In other tests, for example, it was found that continuous salt spray at 95°F (35°C) produced no trace of corrosion even after 600 hours.

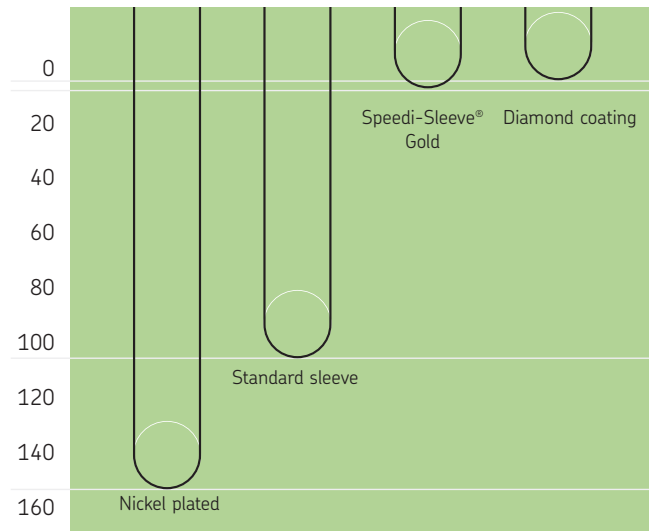
## Availability

Select inch and metric sizes of Speedi-Sleeve® Gold are in stock. These cover the many common shaft sizes. Other sizes (up to 8.000" or 203.20 mm) can be quoted and produced to special order upon request.

\* Due to the thin wall construction of Speedi-Sleeve®, this can only be accurately measured using highly specialized instruments and methods.

## Abrasion Resistance

Comparison of various Speedi-Sleeve® coatings



Testing in highly abrasive conditions demonstrates how the hardened surface of Speedi-Sleeve® Gold resists wear



50 sizes of Speedi-Sleeve® Gold are in production. Other sizes can be produced to special order.

# Installation

## From scored to restored in a few minutes

Although installation is simple, it should be done carefully to achieve the best results.

Before starting, the sealing zone on the shaft should be carefully cleaned and any burrs or rough spots should be filed down and polished. Deep wear grooves, scratches or very rough surfaces should be treated with a suitable powdered metal epoxy filler. The sleeve must be positioned on the shaft before the filler has hardened.

It should also be noted that although Speedi-Sleeves® can be easily installed within minutes on most shafts, **they should not be placed over splines or keyways etc. on the shaft.** As the thin-walled sleeve has an interference fit, any disturbances on the shaft surface may create a similar pattern on the sleeve surface and the seal will leak.

### Choosing the right size

To determine the appropriate sleeve size it is first necessary to clean the shaft carefully. The diameter of an undamaged section of the seal counterface should then be measured in at least three different planes. The arithmetical mean of these measurements is used to choose a Speedi-Sleeve®. If the value lies within the permissible range shown in the product table for the shaft diameter (A) then the Speedi-Sleeve® will have an adequately tight fit on the shaft. The sleeve cannot turn on the shaft and no adhesive is required.

If no suitable sleeve is listed in the product table, then it will be necessary to rework the shaft to an appropriate dimension. This will also mean that a new size of seal will be required. If production quantities are viable, SKF will also make tailored sleeves.

### SKF Speedi-Sleeve® Installation

*Note: If you can catch your fingernail in a seal wear track or shaft groove, a repair sleeve should be installed to prevent leakage.*

- 1 Clean the shaft where the seal contacts the shaft. File down and polish any burrs or rough spots.

- 2 Measure the diameter where the sleeve will be positioned on an unworn portion of the shaft. Measure in three positions and average the readings (to insure the shaft is within recommended specifications). If the average diameter is within the range for a given sleeve size, there is sufficient press-fit built into the sleeve to prevent it from sliding or spinning without the need for cement adhesive.
- 3 Determine how far back the sleeve must be positioned to cover the old seal wear track. Measure to the exact point, or mark directly on the surface. The sleeve must be placed over the worn area, not just bottomed or left flush with the end of the shaft.
- 4 Shallow wear grooves do not require filling. Optionally, a light layer of non-hardening sealant can be applied to the inner surface of the sleeve. Clear away sealant that migrates to the outer sleeve surface.
- 5 If the shaft is deeply scored, (see note above) fill the groove with powdered metal epoxy type filler.\* Install the sleeve before the filler hardens, allowing the sleeve to “wipe” off any excess filler. Clean away any residue and check that no filler is deposited on the sleeve O.D. surface.

(continued next page)





2 Measure shaft diameter in three places.



6 Place installation tool over Speedi-Sleeve®.



7 Tap tool to install Sleeve over shaft.



8 Pry flange off installed Speedi-Sleeve®.

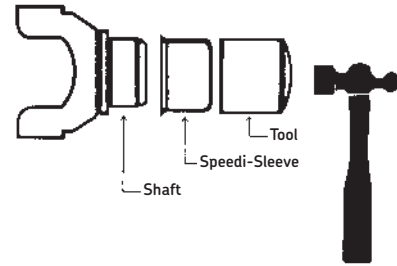
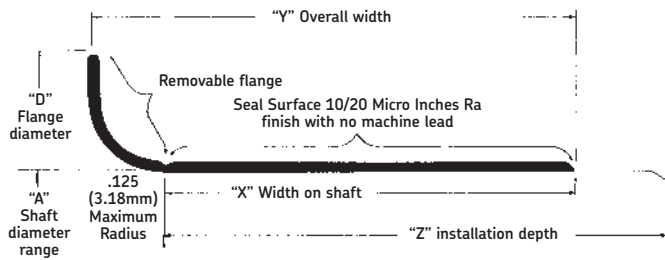
- 6 Place installation tool over the sleeve. The flange end of the sleeve goes on the shaft first.
- 7 Gently tap the center of the tool until the sleeve covers the seal worn surface. If the installation tool supplied with the sleeve is too short, a length of pipe or tubing with a squared-off, burr-free end can be substituted. Use care not to scratch the precision ground sleeve O.D.
- 8 Leave the flange intact unless clearance is required. If the flange is to be removed, one pre-cut of the flange perpendicular to the tear-off groove will aid in removal. Use heavy-duty side cutters or metal shears. Caution – cut only into the tear-off groove, not on to the finished sleeve surface. After positioning the sleeve, use standard pliers and flex the flange back and forth around its circumference and along the shaft axis. The flange will break loose along tear-off groove. Alternately, pry the flange away from the seal surface and twist it into a coil but take care not to lift the end of the sleeve off the shaft or it will leave a jagged edge. Flange removal must be done with care to avoid damage to sealing surface.
- 9 After the sleeve is installed, check again for burrs, which could damage the seal.
- 10 Lubricate the sleeve with the system media when installing the seal.
- 11 Proceed with the seal installation.

\*Loctite “Quickmetal” (#66010) or similar works well for filling a groove and can be used as an adhesive or sealant if desired. Use of an adhesive can make the removal of the seal difficult.

#### SKF Speedi-Sleeve® Removal

A Speedi-Sleeve® can be dismounted in one of the following ways: by applying heat to the sleeve; by using a pair of wire cutters starting at or near the flange and applying a twisting action; by “peening” with a small hammer across the full width of the sleeve to expand it or, if accessible, by using a drift on the flange. A Speedi-Sleeve® cannot be reused.

## Speedi-Sleeve size listing - Inches



Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches ±.031)	"Y" Overall width (Inches ±.031)	"D" Flange diameter (Inches ±.063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
0.472	0.469	0.475	<b>99049</b>	0.236	0.331	0.610	1.875
0.500	0.498	0.502	<b>99050</b>	0.250	0.344	0.610	2.000
0.551	0.547	0.551	<b>99055</b>	0.250	0.391	0.750	1.831
0.563	0.560	0.566	<b>99056</b>	0.250	0.391	0.750	1.831
0.591	0.589	0.593	<b>99059</b>	0.197	0.354	0.750	1.862
0.625	0.623	0.627	<b>99810 *</b>	0.313	0.406	0.750	2.000
0.625	0.623	0.627	<b>99062</b>	0.313	0.406	0.750	2.000
0.630	0.626	0.630	<b>99058</b>	0.313	0.438	0.718	2.000
0.669	0.667	0.671	<b>99068</b>	0.315	0.433	0.875	2.000
0.684	0.682	0.686	<b>99060</b>	0.313	0.438	0.900	2.000
0.709	0.704	0.709	<b>99082</b>	0.315	0.433	0.962	1.811
0.750	0.748	0.752	<b>99811 *</b>	0.313	0.438	0.945	2.000
0.750	0.748	0.752	<b>99076</b>	0.313	0.438	0.945	2.000
0.760	0.759	0.761	<b>99081</b>	0.313	0.438	0.938	2.000
0.781	0.780	0.784	<b>99080</b>	0.313	0.438	0.935	2.000
0.787	0.785	0.789	<b>99078</b>	0.315	0.433	0.930	2.000
0.813	0.812	0.815	<b>99083</b>	0.375	0.563	0.000	3.000
0.859	0.857	0.861	<b>99086</b>	0.250	0.375	1.155	2.000
0.866	0.861	0.866	<b>99084</b>	0.259	0.359	1.188	1.856
0.866	0.861	0.866	<b>99085</b>	0.315	0.472	1.188	1.812
0.875	0.873	0.877	<b>99812 *</b>	0.313	0.438	1.094	2.000
0.875	0.873	0.877	<b>99087</b>	0.313	0.438	1.094	2.000
0.910	0.908	0.912	<b>99860 *</b>	0.313	0.438	1.218	1.847
0.910	0.908	0.912	<b>99091</b>	0.313	0.438	1.218	1.847
0.945	0.940	0.945	<b>99092</b>	0.313	0.438	1.130	2.000
0.969	0.966	0.970	<b>99094</b>	0.313	0.438	1.130	2.000
0.969	0.966	0.970	<b>99096</b>	0.625	0.719	1.130	2.000
0.984	0.982	0.986	<b>99813 *</b>	0.313	0.433	1.300	2.000
0.984	0.982	0.986	<b>99098</b>	0.313	0.433	1.300	2.000
1.000	0.998	1.002	<b>99814 *</b>	0.313	0.438	1.219	2.000
1.000	0.998	1.002	<b>99100</b>	0.313	0.438	1.219	2.000
1.024	1.019	1.024	<b>99103</b>	0.315	0.472	1.313	1.813
1.063	1.060	1.064	<b>99815 *</b>	0.313	0.438	1.320	1.843
1.063	1.060	1.064	<b>99106</b>	0.313	0.438	1.320	1.843
1.089	1.087	1.091	<b>99108</b>	0.313	0.438	1.406	0.625
1.102	1.100	1.104	<b>99866 *</b>	0.375	0.500	1.375	1.843
1.102	1.100	1.104	<b>99111</b>	0.375	0.500	1.375	1.843
1.125	1.123	1.127	<b>99816 *</b>	0.313	0.438	1.500	0.688
1.125	1.123	1.127	<b>99112</b>	0.313	0.438	1.500	0.688
1.125	1.123	1.127	<b>99116</b>	0.375	0.500	1.500	0.688
1.156	1.154	1.158	<b>99865 *</b>	0.375	0.500	1.350	0.688
1.156	1.154	1.158	<b>99120</b>	0.375	0.500	1.350	0.688
1.175	1.173	1.178	<b>99122</b>	0.313	0.438	1.400	0.688
1.181	1.179	1.184	<b>99114</b>	0.315	0.433	1.400	0.688
1.188	1.185	1.190	<b>99118</b>	0.313	0.438	1.400	0.688
1.219	1.216	1.222	<b>99123</b>	0.313	0.433	1.563	0.625
1.240	1.237	1.243	<b>99141</b>	0.315	0.438	1.540	0.688
1.250	1.247	1.253	<b>99817 *</b>	0.313	0.438	1.500	0.688

\* Indicates Speedi-Sleeve Gold product

## Speedi-Sleeve size listing - Inches (Cont.)

Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches ± .031)	"Y" Overall width (Inches ± .031)	"D" Flange diameter (Inches ± .063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
1.250	1.247	1.253	99871 *	0.625	0.750	1.500	2.000
1.250	1.247	1.253	99125	0.313	0.438	1.500	0.688
1.260	1.257	1.263	99128	0.315	0.438	1.500	0.688
1.299	1.297	1.301	99121	0.591	0.709	1.594	1.000
1.313	1.310	1.316	99818 *	0.500	0.625	1.594	0.813
1.313	1.308	1.314	99129	0.250	0.375	1.600	0.813
1.313	1.310	1.316	99131	0.500	0.625	1.594	0.813
1.339	1.333	1.339	99134	0.500	0.625	1.625	0.813
1.375	1.371	1.377	99819 *	0.500	0.625	1.638	0.813
1.375	1.375	1.381	99820 *	0.512	0.630	1.638	0.813
1.375	1.371	1.377	99133	0.313	0.438	1.638	0.813
1.375	1.371	1.377	99138	0.500	0.625	1.638	0.813
1.375	1.375	1.381	99139	0.512	0.630	1.638	0.813
1.417	1.411	1.417	99146	0.512	0.669	1.781	0.984
1.438	1.432	1.438	99821 *	0.563	0.688	1.781	1.016
1.438	1.432	1.438	99143	0.563	0.688	1.781	1.016
1.438	1.435	1.441	99144	0.375	0.500	1.781	1.016
1.496	1.490	1.496	99147	0.512	0.669	1.781	0.984
1.500	1.497	1.503	99822 *	0.563	0.688	1.781	1.016
1.500	1.497	1.503	99823 *	0.375	0.500	1.781	1.016
1.500	1.497	1.503	99149	0.563	0.688	1.781	1.016
1.500	1.497	1.503	99150	0.375	0.500	1.781	1.016
1.523	1.520	1.526	99152	0.438	0.563	1.859	1.016
1.552	1.549	1.555	99155	0.438	0.563	1.859	1.016
1.563	1.559	1.565	99824 *	0.563	0.688	1.859	1.016
1.563	1.559	1.565	99156	0.563	0.688	1.859	1.016
1.569	1.566	1.572	99159	0.625	0.750	1.859	1.016
1.575	1.569	1.575	99153	0.390	0.509	1.850	1.000
1.578	1.572	1.578	99825 *	0.512	0.630	1.850	1.023
1.578	1.572	1.578	99157	0.512	0.630	1.850	1.023
1.605	1.602	1.608	99160	0.500	0.641	1.938	1.000
1.614	1.608	1.614	99163	0.500	0.625	1.938	1.016
1.625	1.622	1.628	99826 *	0.563	0.688	1.875	0.813
1.625	1.622	1.628	99161	0.313	0.438	1.875	1.016
1.625	1.622	1.628	99162	0.563	0.688	1.875	0.813
1.650	1.647	1.654	99166	0.445	0.571	2.087	0.846
1.650	1.647	1.654	99169	0.563	0.689	2.087	0.827
1.654	1.647	1.654	99873 *	0.563	0.689	2.087	0.827
1.656	1.653	1.659	99165	0.550	0.689	2.087	0.827
1.688	1.685	1.691	99167	0.313	0.438	1.906	0.875
1.688	1.684	1.690	99168	0.563	0.688	1.906	0.875
1.693	1.687	1.693	99182	0.500	0.625	1.906	0.844
1.719	1.715	1.721	99171	0.563	0.688	2.031	0.813
1.739	1.736	1.742	99170	0.375	0.500	2.063	0.813
1.750	1.747	1.753	99827 *	0.563	0.688	2.063	0.813
1.750	1.747	1.753	99828 *	0.750	0.875	2.063	0.813
1.750	1.747	1.753	99172	0.375	0.500	2.055	0.813
1.750	1.747	1.753	99174	0.563	0.688	2.063	0.813
1.750	1.747	1.753	99175	0.750	0.875	2.063	0.813
1.750	1.747	1.753	99180	0.531	0.625	2.063	0.878
1.766	1.761	1.767	99829 *	0.563	0.688	2.063	0.813
1.766	1.761	1.767	99176	0.563	0.688	2.063	0.813
1.772	1.769	1.775	99830 *	0.551	0.669	2.087	0.812
1.772	1.769	1.775	99177	0.551	0.669	2.087	0.812
1.781	1.778	1.784	99179	0.667	0.800	2.125	1.062
1.813	1.809	1.815	99831 *	0.563	0.688	2.090	1.000
1.813	1.809	1.815	99181	0.563	0.688	2.090	1.000
1.859	1.857	1.863	99185	0.563	0.688	2.156	1.000
1.868	1.866	1.872	99186	0.889	1.025	2.188	1.000
1.875	1.872	1.878	99832 *	0.563	0.688	2.203	1.000

\* Indicates Speedi-Sleeve Gold product

## Speedi-Sleeve size listing - Inches (Cont.)

Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches ±.031)	"Y" Overall width (Inches ±.031)	"D" Flange diameter (Inches ±.063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
1.875	1.872	1.878	<b>99184</b>	0.375	0.516	2.203	1.050
1.875	1.872	1.878	<b>99187</b>	0.563	0.688	2.203	1.000
1.875	1.872	1.878	<b>99188</b>	0.295	0.415	2.203	0.744
1.875	1.872	1.878	<b>99190</b>	0.175	0.295	2.203	0.744
1.891	1.887	1.893	<b>99189</b>	0.551	0.668	2.205	0.984
1.912	1.909	1.915	<b>99192</b>	0.375	0.500	2.219	1.000
1.938	1.934	1.940	<b>99833 *</b>	0.563	0.688	2.219	1.000
1.938	1.934	1.940	<b>99193</b>	0.563	0.688	2.219	1.000
1.969	1.965	1.971	<b>99196</b>	0.551	0.668	2.244	0.984
1.980	1.977	1.983	<b>99198</b>	0.563	0.704	2.313	1.050
2.000	1.997	2.003	<b>99834 *</b>	0.563	0.688	2.406	1.006
2.000	1.997	2.003	<b>99835 *</b>	0.875	1.000	2.406	1.000
2.000	1.997	2.003	<b>99199</b>	0.563	0.688	2.406	1.000
2.000	1.997	2.003	<b>99200</b>	0.875	1.000	2.406	1.000
2.047	2.040	2.047	<b>99204</b>	0.500	0.625	2.469	1.359
2.063	2.057	2.063	<b>99205</b>	0.781	0.938	2.469	1.375
2.125	2.124	2.130	<b>99836 *</b>	0.781	0.938	2.422	1.375
2.125	2.123	2.128	<b>99210</b>	0.500	0.750	2.422	1.281
2.125	2.124	2.130	<b>99212</b>	0.781	0.938	2.422	1.375
2.165	2.162	2.169	<b>99863 *</b>	0.787	0.905	2.441	1.250
2.165	2.162	2.168	<b>99215</b>	0.787	0.905	2.441	1.250
2.188	2.186	2.192	<b>99218</b>	0.781	0.938	2.500	1.313
2.205	2.198	2.205	<b>99220</b>	0.500	0.625	2.531	1.313
2.230	2.227	2.233	<b>99861 *</b>	0.500	0.625	2.531	1.313
2.230	2.227	2.233	<b>99229</b>	0.500	0.625	2.531	1.313
2.230	2.227	2.233	<b>99230</b>	0.781	0.906	2.531	1.250
2.240	2.237	2.243	<b>99226</b>	0.764	0.900	2.563	1.250
2.250	2.249	2.255	<b>99837 *</b>	0.781	0.938	2.531	1.313
2.250	2.249	2.255	<b>99838 *</b>	0.313	0.438	2.531	1.313
2.250	2.249	2.255	<b>99225</b>	0.781	0.938	2.531	1.313
2.250	2.249	2.255	<b>99227</b>	0.313	0.438	2.531	1.313
2.283	2.280	2.286	<b>99219</b>	0.787	0.938	2.598	1.375
2.313	2.309	2.315	<b>99231</b>	0.781	0.938	2.688	1.375
2.328	2.327	2.333	<b>99233</b>	0.750	0.875	2.750	1.500
2.362	2.359	2.365	<b>99869 *</b>	0.787	0.905	2.785	1.375
2.362	2.359	2.365	<b>99235</b>	0.787	0.905	2.785	1.375
2.362	2.359	2.365	<b>99241</b>	0.370	0.450	2.785	1.471
2.375	2.374	2.380	<b>99839 *</b>	0.781	0.938	2.750	1.375
2.375	2.374	2.380	<b>99237</b>	0.781	0.938	2.750	1.375
2.375	2.372	2.378	<b>99238</b>	0.594	0.750	2.750	1.375
2.375	2.374	2.380	<b>99240</b>	0.526	0.683	2.750	1.375
2.438	2.435	2.441	<b>99242</b>	0.500	0.625	2.828	1.425
2.438	2.434	2.440	<b>99243</b>	0.781	0.938	2.828	1.393
2.441	2.434	2.441	<b>99244</b>	0.500	0.625	2.828	1.425
2.492	2.489	2.495	<b>99249</b>	0.781	0.938	2.875	1.393
2.500	2.500	2.506	<b>99840 *</b>	0.781	0.938	2.820	1.375
2.500	2.500	2.506	<b>99248</b>	0.500	0.656	2.828	1.393
2.500	2.500	2.506	<b>99250</b>	0.781	0.938	2.820	1.375
2.500	2.497	2.503	<b>99253</b>	0.555	0.650	2.820	0.890
2.516	2.510	2.516	<b>99251</b>	0.781	0.906	2.828	1.438
2.559	2.556	2.562	<b>99841 *</b>	0.787	0.905	2.850	1.375
2.559	2.556	2.562	<b>99254</b>	0.787	0.905	2.850	1.375
2.563	2.560	2.566	<b>99256</b>	0.781	0.938	2.891	1.375
2.598	2.595	2.601	<b>99259</b>	0.781	0.938	2.990	1.250
2.621	2.618	2.624	<b>99261</b>	0.781	0.938	3.047	1.375
2.625	2.625	2.631	<b>99842 *</b>	0.781	0.938	3.047	1.375
2.625	2.622	2.628	<b>99260</b>	0.500	0.625	3.047	1.375
2.625	2.625	2.631	<b>99262</b>	0.781	0.938	3.047	1.375
2.625	2.621	2.627	<b>99264</b>	0.781	0.906	3.047	1.375
2.677	2.670	2.677	<b>99266</b>	0.750	0.875	3.125	1.688

\* Indicates Speedi-Sleeve Gold product

## Speedi-Sleeve size listing - Inches (Cont.)

Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches ±.031)	"Y" Overall width (Inches ±.031)	"D" Flange diameter (Inches ±.063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
2.730	2.727	2.733	99268	0.781	0.906	3.125	1.313
2.743	2.740	2.746	99273	0.781	0.938	3.065	1.250
2.750	2.745	2.751	99843 *	0.781	0.938	3.125	1.250
2.750	2.750	2.756	99844 *	0.781	0.938	3.125	1.250
2.750	2.747	2.753	99267	1.438	1.625	3.075	1.625
2.750	2.750	2.756	99269	1.125	1.250	3.125	1.312
2.750	2.750	2.756	99272	0.406	0.563	3.125	1.250
2.750	2.745	2.751	99274	0.781	0.938	3.125	1.250
2.750	2.750	2.756	99275	0.781	0.938	3.125	1.250
2.756	2.753	2.759	99276	0.787	0.945	3.125	1.250
2.813	2.809	2.815	99281	0.594	0.688	3.188	1.250
2.835	2.827	2.835	99870 *	0.750	0.875	3.225	1.343
2.835	2.828	2.835	99284	0.750	0.875	3.225	1.343
2.838	2.838	2.844	99845 *	0.500	0.656	3.225	1.250
2.838	2.838	2.844	99282	0.500	0.656	3.225	1.250
2.869	2.866	2.872	99286	0.781	0.938	3.188	1.250
2.875	2.873	2.879	99846 *	0.781	0.938	3.219	1.250
2.875	2.873	2.879	99287	0.781	0.938	3.219	1.250
2.938	2.937	2.943	99847 *	0.781	0.938	3.344	1.313
2.938	2.937	2.943	99290	0.500	0.641	3.344	1.331
2.940	2.937	2.943	99293	0.781	0.938	3.344	1.313
2.953	2.950	2.956	99875 *	0.866	1.024	3.305	1.313
2.953	2.950	2.956	99289	0.594	0.690	3.273	1.083
2.953	2.950	2.956	99294	0.866	1.024	3.305	1.313
2.974	2.972	2.976	99292	0.813	1.000	3.235	1.250
2.993	2.990	2.996	99291	0.484	0.625	3.359	1.331
2.993	2.990	2.996	99298	0.563	0.688	3.359	1.375
2.993	2.990	2.996	99299	0.813	1.000	3.350	1.281
3.000	3.000	3.006	99848 *	0.813	1.000	3.235	1.281
3.000	2.997	3.003	99296	0.813	0.938	3.240	1.375
3.000	3.000	3.006	99300	0.813	1.000	3.235	1.281
3.000	3.000	3.006	99303	0.625	0.813	3.345	1.280
3.011	3.008	3.014	99301	0.500	0.625	3.355	2.000
3.071	3.064	3.071	99306	0.750	0.875	3.468	2.056
3.125	3.120	3.126	99849 *	0.813	1.000	3.531	2.000
3.125	3.124	3.132	99307	0.551	0.709	3.525	2.031
3.125	3.120	3.126	99311	0.688	0.813	3.531	2.000
3.125	3.120	3.126	99312	0.813	1.000	3.531	2.000
3.150	3.142	3.150	99313	0.750	0.886	3.540	1.375
3.150	3.146	3.153	99315	0.827	0.945	3.543	1.375
3.150	3.146	3.153	99317	0.433	0.591	3.543	1.375
3.228	3.225	3.231	99328	0.660	0.848	3.585	1.750
3.250	3.250	3.256	99850 *	0.595	0.719	3.575	1.375
3.250	3.250	3.256	99851 *	0.813	1.000	3.585	1.375
3.250	3.247	3.253	99322	0.813	1.000	3.594	1.375
3.250	3.250	3.256	99324	0.595	0.719	3.575	1.375
3.250	3.250	3.256	99325	0.813	1.000	3.585	1.375
3.250	3.250	3.256	99326	0.688	0.875	3.585	1.250
3.310	3.307	3.313	99331	0.813	1.000	3.688	1.375
3.342	3.337	3.347	99332	0.669	0.827	3.700	1.378
3.342	3.337	3.347	99333	0.827	0.984	3.700	1.378
3.346	3.337	3.347	99872 *	0.827	0.984	3.700	1.378
3.346	3.338	3.346	99334	0.399	0.499	3.580	1.431
3.375	3.373	3.379	99337	0.813	1.000	3.695	1.375
3.375	3.373	3.379	99338	0.375	0.500	3.688	1.410
3.438	3.435	3.441	99339	0.781	0.906	3.844	1.406
3.480	3.477	3.483	99340	0.781	0.906	3.835	1.406
3.500	3.500	3.506	99852 *	0.813	1.000	3.844	1.347
3.500	3.497	3.503	99346	0.625	0.813	3.844	1.347
3.500	3.500	3.506	99347	0.313	0.500	3.825	1.347

\* Indicates Speedi-Sleeve Gold product

## Speedi-Sleeve size listing - Inches (Cont.)

Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches ±.031)	"Y" Overall width (Inches ±.031)	"D" Flange diameter (Inches ±.063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
3.500	3.500	3.506	99350	0.813	1.000	3.844	1.347
3.504	3.501	3.507	99349	0.625	0.813	3.844	1.348
3.543	3.540	3.546	99351	0.710	0.906	4.000	1.813
3.543	3.540	3.546	99352	0.438	0.538	4.000	1.813
3.543	3.540	3.546	99353	0.526	0.667	4.000	1.750
3.543	3.540	3.546	99354	0.906	1.102	4.000	1.750
3.563	3.560	3.566	99356	0.813	1.000	3.900	1.750
3.621	3.618	3.624	99360	0.813	1.000	4.031	1.750
3.625	3.623	3.629	99362	0.813	1.000	4.031	1.750
3.625	3.623	3.629	99363	0.500	0.625	4.025	1.750
3.688	3.685	3.691	99365	0.813	0.938	4.025	1.800
3.688	3.684	3.690	99368	0.313	0.438	4.031	0.875
3.730	3.727	3.733	99359	0.469	0.594	4.016	1.800
3.730	3.727	3.733	99366	0.781	0.906	4.025	1.800
3.740	3.737	3.743	99369	0.827	0.945	4.025	1.800
3.743	3.740	3.746	99364	0.469	0.594	4.035	1.800
3.743	3.740	3.746	99374	0.344	0.500	4.031	1.800
3.749	3.746	3.752	99376	0.563	0.688	4.025	1.800
3.750	3.750	3.756	99853 *	0.688	0.875	4.020	1.800
3.753	3.750	3.756	99367	0.344	0.500	4.025	1.800
3.753	3.750	3.756	99372	0.688	0.875	4.020	1.800
3.871	3.868	3.874	99386	0.813	1.000	4.185	1.875
3.875	3.873	3.879	99387	0.813	1.000	4.219	1.875
3.938	3.935	3.941	99854 *	0.813	1.000	4.313	2.050
3.938	3.935	3.941	99393	0.813	1.000	4.313	2.050
4.000	3.998	4.006	99855 *	0.813	1.000	4.375	2.050
4.000	3.998	4.006	99395	0.600	0.725	4.375	2.050
4.000	3.998	4.006	99399	0.813	1.000	4.375	2.050
4.000	3.998	4.006	99400	0.650	0.775	4.375	1.375
4.000	3.998	4.006	99401	0.500	0.625	4.375	2.066
4.094	4.090	4.098	99409	0.787	0.945	4.438	1.417
4.125	4.122	4.130	99412	0.813	1.000	4.470	1.375
4.134	4.130	4.138	99413	0.787	0.913	4.470	1.378
4.188	4.183	4.191	99418	0.813	1.000	4.500	1.375
4.234	4.226	4.234	99423	0.781	0.906	4.610	1.438
4.250	4.248	4.256	99424	0.813	1.000	4.610	1.438
4.328	4.327	4.335	99435	0.509	0.650	4.921	1.250
4.331	4.322	4.331	99434	0.448	0.589	4.921	1.297
4.375	4.370	4.378	99437	0.813	1.000	4.750	1.650
4.409	4.401	4.409	99438	0.750	0.886	4.750	1.300
4.438	4.434	4.442	99439	1.000	1.142	4.813	1.313
4.500	4.496	4.504	99856 *	0.813	1.000	4.900	1.250
4.500	4.496	4.504	99450	0.813	1.000	4.850	1.250
4.528	4.523	4.531	99452	0.813	0.938	5.000	1.250
4.625	4.621	4.629	99463	1.000	1.250	5.063	1.375
4.625	4.621	4.629	99465	0.438	0.625	5.000	1.375
4.688	4.685	4.693	99468	0.813	1.000	5.063	1.375
4.724	4.720	4.728	99471	0.315	0.433	5.110	1.323
4.724	4.720	4.728	99473	0.787	0.984	5.110	1.260
4.750	4.746	4.754	99475	0.500	0.750	5.000	1.500
4.803	4.799	4.807	99472	0.787	0.945	5.177	1.260
4.843	4.839	4.847	99484	0.787	0.984	5.229	1.244
4.875	4.871	4.879	99487	0.625	0.750	5.250	1.438
4.921	4.917	4.925	99490	0.394	0.551	5.400	1.438
4.921	4.917	4.925	99492	1.024	1.260	5.400	1.438
5.000	4.998	5.006	99857 *	0.688	0.875	5.400	1.438
5.000	4.998	5.006	99858 *	0.813	1.000	5.390	1.438
5.000	4.998	5.006	99498	0.688	0.875	5.400	1.438
5.000	4.998	5.006	99499	0.813	1.000	5.390	1.438
5.000	4.998	5.006	99501	0.540	0.681	5.400	1.438

\* Indicates Speedi-Sleeve Gold product

## Speedi-Sleeve size listing - Inches (Cont.)

Nominal shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft (Inches ±.031)	"Y" Overall width (Inches ±.031)	"D" Flange diameter (Inches ±.063)	"Z" Installation depth
	Minimum Inches	Maximum Inches					
5.114	5.110	5.118	<b>99494</b>	0.750	0.938	5.493	1.181
5.118	5.117	5.125	<b>99874 *</b>	0.866	0.996	5.493	1.280
5.125	5.117	5.125	<b>99491</b>	0.866	0.996	5.493	1.280
5.125	5.120	5.128	<b>99513</b>	0.813	1.000	5.500	1.250
5.250	5.246	5.254	<b>99525</b>	0.813	1.000	5.560	1.250
5.311	5.307	5.315	<b>99533</b>	0.807	1.000	5.735	1.250
5.375	5.371	5.379	<b>99537</b>	0.813	1.000	5.875	1.250
5.438	5.434	5.442	<b>99548</b>	1.500	1.688	5.750	1.875
5.476	5.472	5.480	<b>99547</b>	0.563	0.750	5.900	1.234
5.500	5.498	5.506	<b>99859 *</b>	0.813	1.000	5.938	1.250
5.500	5.498	5.506	<b>99549</b>	0.813	1.000	5.938	1.250
5.500	5.498	5.506	<b>99550</b>	0.518	0.705	5.938	1.250
5.512	5.508	5.516	<b>99552</b>	0.807	1.000	5.945	1.250
5.625	5.621	5.629	<b>99560</b>	0.875	1.000	6.188	1.812
5.709	5.699	5.709	<b>99571</b>	0.750	0.875	6.100	1.812
5.734	5.726	5.734	<b>99562</b>	0.563	0.750	6.100	1.938
5.750	5.746	5.754	<b>99575</b>	0.813	1.000	6.180	1.750
5.875	5.871	5.879	<b>99862 *</b>	1.000	1.250	6.188	1.313
5.875	5.871	5.879	<b>99587</b>	1.000	1.250	6.188	1.313
5.905	5.896	5.906	<b>99595</b>	1.024	1.181	6.260	1.280
5.938	5.934	5.942	<b>99596</b>	1.000	1.125	6.375	1.875
6.000	5.995	6.003	<b>99599</b>	1.000	1.250	6.375	1.750
6.000	5.995	6.003	<b>99601</b>	0.500	0.750	6.360	1.750
6.063	6.058	6.068	<b>99605</b>	1.024	1.181	6.375	1.299
6.097	6.092	6.102	<b>99606</b>	1.024	1.181	6.575	1.299
6.203	6.198	6.208	<b>99620</b>	0.813	1.063	6.625	1.750
6.250	6.245	6.255	<b>99625</b>	1.031	1.250	6.625	1.750
6.299	6.289	6.299	<b>99630</b>	1.000	1.250	6.750	1.375
6.500	6.495	6.505	<b>99650</b>	1.000	1.250	7.000	1.375
6.688	6.683	6.693	<b>99640</b>	1.250	1.496	7.188	1.750
6.750	6.745	6.755	<b>99675</b>	0.813	1.063	7.125	1.750
6.890	6.880	6.890	<b>99687</b>	1.102	1.260	7.362	1.378
7.000	6.995	7.005	<b>99864 *</b>	1.000	1.250	7.475	1.688
7.000	6.995	7.005	<b>99700</b>	1.000	1.250	7.475	1.688
7.087	7.077	7.087	<b>99721</b>	1.299	1.496	7.500	1.752
7.250	7.244	7.254	<b>99725</b>	1.250	1.500	7.760	2.175
7.278	7.273	7.283	<b>99726</b>	1.260	1.496	7.760	2.165
7.453	7.444	7.454	<b>99745</b>	0.813	1.000	7.860	1.250
7.500	7.495	7.505	<b>99750</b>	0.813	1.000	7.875	1.250
7.750	7.745	7.755	<b>99775</b>	1.000	1.313	8.270	1.875
7.875	7.869	7.879	<b>99787</b>	1.359	1.500	8.375	1.750
7.938	7.933	7.943	<b>99799</b>	1.000	1.250	8.375	1.750
8.000	7.995	8.005	<b>99800</b>	1.000	1.250	8.375	1.750

\* Indicates Speedi-Sleeve Gold product

## Speedi-Sleeve size listing - Metric

Nominal Shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft ±0.8 MM	"Y" Overall width ± 0.8 MM	"D" Flange diameter ± 16 MM	"Z" Installation depth MM
	Minimum MM	Maximum MM					
12.00	11.91	12.07	99049	6.00	8.40	15.50	47.60
12.70	12.65	12.75	99050	6.35	9.93	19.05	46.51
14.00	13.89	14.00	99055	6.35	9.93	19.05	46.51
14.30	14.22	14.38	99056	6.35	9.93	19.05	46.51
15.00	14.96	15.06	99059	5.00	8.99	19.05	47.29
15.88	15.82	15.93	99810 *	7.95	10.31	19.05	50.80
15.88	15.83	15.93	99062	7.95	10.31	19.05	50.80
16.00	15.89	16.00	99058	7.95	11.10	18.24	50.80
17.00	16.94	17.04	99068	7.95	11.00	22.23	50.80
17.37	17.32	17.42	99060	7.95	11.13	22.86	50.80
18.00	17.87	18.00	99082	8.00	11.00	24.43	46.00
19.00	19.00	19.10	99811 *	7.95	11.13	24.00	50.80
19.00	19.00	19.10	99076	7.95	11.13	24.00	50.80
19.30	19.27	19.33	99081	7.95	11.13	23.83	50.80
19.86	19.81	19.91	99080	7.95	11.13	23.75	50.80
20.00	19.94	20.04	99078	8.00	11.00	23.62	50.80
20.65	20.62	20.70	99083	9.52	14.30	0.00	76.20
21.82	21.77	21.87	99086	6.35	9.52	29.34	50.80
22.00	21.87	22.00	99084	6.58	9.09	30.20	47.09
22.00	21.87	22.00	99085	8.00	11.99	30.17	46.05
22.23	22.17	22.28	99812 *	7.95	11.13	27.79	50.80
22.23	22.18	22.28	99087	7.95	11.13	27.79	50.80
23.11	23.06	23.16	99091	7.95	11.13	30.94	46.91
23.11	23.06	23.17	99860 *	7.95	11.13	30.94	46.91
24.00	23.87	24.00	99092	7.95	11.10	28.70	50.80
24.59	24.54	24.64	99094	7.95	11.13	28.70	50.80
24.59	24.54	24.64	99096	15.88	18.26	28.70	50.80
25.00	24.94	25.04	99813 *	7.95	11.00	33.02	50.80
25.00	24.94	25.04	99098	7.95	11.00	33.02	50.80
25.40	25.35	25.45	99814 *	7.95	11.13	30.96	50.80
25.40	25.35	25.45	99100	7.95	11.13	30.96	50.80
26.00	25.88	26.01	99103	8.00	11.99	33.35	46.05
27.00	26.92	27.03	99815 *	7.95	11.13	33.53	46.81
27.00	26.92	27.02	99106	7.95	11.13	33.53	46.81
27.66	27.61	27.71	99108	7.95	11.13	35.71	15.88
28.00	27.94	28.04	99866 *	9.52	12.70	34.92	46.81
28.00	27.94	28.04	99111	9.52	12.70	34.92	46.81
28.58	28.52	28.63	99816 *	7.95	11.13	38.10	17.48
28.58	28.53	28.63	99112	7.95	11.13	38.10	17.48
28.58	28.53	28.63	99116	9.52	12.70	38.10	17.48
29.36	29.31	29.41	99120	9.52	12.70	34.29	17.48
29.36	29.31	29.41	99865 *	9.52	12.70	34.29	17.48
29.85	29.80	29.93	99122	7.95	11.13	35.56	17.48
30.00	29.95	30.08	99114	8.00	11.00	35.56	17.48
30.15	30.10	30.23	99118	7.95	11.13	35.56	17.48
31.00	30.88	31.04	99123	7.95	11.00	39.70	15.88
31.50	31.42	31.58	99141	8.00	11.10	39.12	17.48
31.75	31.67	31.83	99817 *	7.95	11.13	38.10	17.48
31.75	31.67	31.83	99871 *	15.88	19.05	38.10	50.80
31.75	31.67	31.83	99125	7.95	11.13	38.10	17.48
32.00	31.92	32.08	99128	8.00	11.13	38.10	17.48
33.00	32.94	33.04	99121	15.01	18.00	40.49	20.65
33.30	33.22	33.38	99129	6.35	9.50	40.64	20.65
33.35	33.27	33.43	99818 *	12.70	15.90	40.49	20.65
33.35	33.27	33.43	99131	12.70	15.88	40.49	20.65
34.00	33.86	34.01	99134	12.70	15.90	41.28	20.70
34.90	34.82	34.98	99133	7.95	11.13	41.60	20.65
34.90	34.82	34.98	99138	12.70	15.88	41.60	20.65
34.92	34.82	34.98	99819 *	12.70	15.88	41.60	20.65
35.00	34.92	35.08	99820 *	13.01	16.00	41.60	20.65

\* Indicates Speedi-Sleeve Gold product

## Speedi-Sleeve size listing - Metric (Cont.)

Nominal Shaft diameter	"A" Shaft diameter range		Stock number	"X"	"Y"	"D"	"Z"
	Minimum MM	Maximum MM		Width on shaft ±0.8 MM	Overall width ±0.8 MM	Flange diameter ±1.6 MM	Installation depth MM
35.00	34.92	35.08	99139	13.01	16.00	41.60	20.65
36.00	35.85	36.00	99146	13.01	16.99	45.24	24.99
36.45	36.37	36.53	99143	14.30	17.48	45.24	25.81
36.53	36.37	36.53	99821 *	14.30	17.48	45.24	25.81
36.53	36.45	36.61	99144	9.52	12.70	45.24	25.81
38.00	37.85	38.00	99147	13.01	16.99	45.24	24.99
38.10	38.02	38.18	99822 *	14.30	17.48	45.24	25.81
38.10	38.02	38.18	99823 *	9.52	12.70	45.24	25.81
38.10	38.02	38.18	99149	14.30	17.48	45.24	25.81
38.10	38.02	38.18	99150	9.52	12.70	45.24	25.81
38.68	38.60	38.76	99152	11.13	14.30	47.22	25.81
39.42	39.34	39.50	99155	11.13	14.30	47.22	25.81
39.67	39.59	39.75	99156	14.30	17.48	47.22	25.81
39.70	39.60	39.75	99824 *	14.30	17.48	47.22	25.81
39.85	39.77	39.93	99159	15.88	19.05	47.22	25.81
40.00	39.93	40.08	99825 *	13.01	16.00	46.99	25.98
40.00	39.84	40.00	99153	9.91	12.93	46.99	25.40
40.00	39.93	40.09	99157	13.01	16.00	46.99	25.98
40.77	40.69	40.85	99160	12.70	16.28	49.22	25.40
41.00	40.84	41.00	99163	12.70	15.88	49.20	25.81
41.28	41.20	41.35	99826 *	14.30	17.48	47.63	20.65
41.28	41.20	41.36	99161	7.95	11.13	47.63	25.81
41.28	41.20	41.36	99162	14.30	17.48	47.63	20.65
42.00	41.84	42.00	99873 *	14.00	18.00	53.01	21.01
42.00	41.84	42.00	99166	11.30	14.50	53.01	21.49
42.00	41.84	42.00	99169	14.30	17.50	53.01	21.01
42.06	41.98	42.14	99165	13.97	17.50	53.01	21.01
42.85	42.78	42.93	99168	14.30	17.48	48.41	22.23
42.88	42.80	42.96	99167	7.95	11.13	48.41	22.23
43.00	42.84	43.00	99182	12.70	15.88	48.41	21.41
43.64	43.56	43.72	99171	14.30	17.48	51.59	20.65
44.17	44.09	44.25	99170	9.52	12.70	52.40	20.65
44.45	44.37	44.53	99827 *	14.30	17.48	52.40	20.65
44.45	44.37	44.53	99828 *	19.05	22.23	52.40	20.65
44.45	44.37	44.53	99172	9.52	12.70	52.20	20.65
44.45	44.37	44.53	99174	14.30	17.48	52.40	20.65
44.45	44.37	44.53	99175	19.05	22.23	52.40	20.65
44.45	44.37	44.53	99180	13.49	15.88	52.40	22.23
44.81	44.73	44.89	99176	13.99	16.99	53.01	20.65
44.86	44.73	44.88	99829 *	14.30	17.48	52.40	20.65
45.00	44.93	45.08	99830 *	16.87	20.32	53.97	26.98
45.00	44.93	45.09	99177	13.99	16.99	53.01	20.63
45.24	45.16	45.32	99179	14.30	17.48	53.09	25.40
46.05	45.95	46.10	99831 *	14.30	17.48	54.76	25.40
46.05	45.94	46.10	99181	14.30	17.48	53.09	25.40
47.24	47.16	47.32	99185	22.58	17.48	55.58	25.40
47.45	47.39	47.55	99186	22.58	26.03	55.95	25.40
47.63	47.55	47.70	99832 *	14.30	17.48	55.96	25.40
47.63	47.55	47.71	99184	9.53	13.11	55.96	26.67
47.63	47.55	47.71	99187	14.30	17.48	55.96	25.40
47.63	47.55	47.71	99188	7.49	10.54	55.96	18.90
47.63	47.55	47.71	99190	4.45	7.49	55.96	18.90
48.00	47.93	48.09	99189	14.00	16.97	56.01	24.99
48.56	48.48	48.64	99192	9.53	12.70	56.36	25.40
49.20	49.12	49.28	99193	14.30	17.48	56.36	25.40
49.22	49.12	49.28	99833 *	14.30	17.48	56.36	25.40
50.00	49.91	50.07	99196	14.00	17.00	57.00	24.99
50.30	50.21	50.37	99198	14.30	17.88	58.75	26.67
50.80	50.72	50.88	99834 *	14.30	17.48	61.11	25.40
50.80	50.72	50.88	99835 *	22.23	25.40	61.11	25.40

\* Indicates Speedi-Sleeve Gold product

## Speedi-Sleeve size listing - Metric (Cont.)

Nominal Shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft ±0.8 MM	"Y" Overall width ±0.8 MM	"D" Flange diameter ± 1.6 MM	"Z" Installation depth MM
	Minimum MM	Maximum MM					
50.80	50.72	50.88	99199	14.30	17.48	61.11	25.40
50.80	50.72	50.88	99200	22.23	25.40	61.11	25.40
52.00	51.81	52.00	99204	12.70	15.88	62.71	34.52
52.32	52.24	52.40	99205	19.84	23.83	62.71	34.93
54.00	53.95	54.10	99836 *	19.84	23.83	61.52	34.92
54.00	53.92	54.06	99210	12.70	19.05	61.52	32.54
54.00	53.95	54.11	99212	19.84	23.83	61.52	34.93
54.99	54.92	55.09	99863 *	19.99	22.99	62.00	31.75
55.00	54.91	55.07	99215	19.99	22.99	62.00	31.75
55.60	55.52	55.68	99218	19.84	23.83	63.50	33.35
56.00	55.81	56.00	99220	12.70	15.88	64.29	33.35
56.64	56.56	56.72	99229	12.70	15.88	64.29	33.35
56.64	56.56	56.72	99230	19.84	23.01	64.29	31.75
56.64	56.57	56.72	99861 *	12.70	15.88	64.29	33.35
56.90	56.82	56.98	99226	19.41	22.86	65.10	31.75
57.15	57.13	57.28	99837 *	19.84	23.83	64.29	33.35
57.15	57.13	57.28	99838 *	7.95	11.13	64.29	33.35
57.20	57.12	57.28	99225	19.84	23.83	64.29	33.35
57.20	57.12	57.28	99227	7.95	11.13	64.29	33.35
58.00	57.91	58.06	99219	19.84	23.83	65.99	34.92
58.72	58.64	58.80	99231	19.84	23.83	68.28	34.93
59.18	59.10	59.26	99233	19.05	22.23	69.85	38.10
60.00	59.91	60.07	99869 *	20.00	23.00	70.74	34.93
60.00	59.91	60.07	99235	20.00	23.00	70.74	34.93
60.00	59.92	60.08	99241	9.40	11.43	70.74	37.36
60.33	60.30	60.45	99839 *	19.84	23.83	69.85	34.92
60.33	60.25	60.41	99238	15.09	19.05	69.85	34.93
60.38	60.30	60.46	99237	19.84	23.83	69.85	34.93
60.38	60.30	60.46	99240	13.36	17.35	69.85	34.93
61.90	61.82	61.98	99243	19.84	23.83	71.83	35.38
62.00	61.85	62.01	99242	12.70	15.88	71.83	36.20
62.00	61.81	62.00	99244	12.70	15.88	71.83	36.20
63.30	63.22	63.38	99249	19.84	23.83	73.03	35.38
63.50	63.50	63.65	99840 *	19.84	23.83	71.63	34.92
63.50	63.50	63.66	99248	12.70	16.66	71.83	35.38
63.50	63.50	63.66	99250	19.84	23.83	71.63	34.93
63.50	63.42	63.58	99253	14.10	16.51	71.63	22.61
63.83	63.75	63.91	99251	19.84	23.01	71.83	36.53
65.00	64.92	65.07	99841 *	20.00	23.00	72.39	34.92
65.00	64.92	65.08	99254	19.99	22.99	72.39	34.93
65.10	65.02	65.18	99256	19.84	23.83	73.43	34.93
66.00	65.91	66.07	99259	19.84	23.83	75.95	31.75
66.57	66.49	66.65	99261	19.84	23.83	77.39	34.93
66.65	66.57	66.73	99264	19.84	23.01	77.39	34.93
66.68	66.68	66.83	99842 *	19.84	23.83	77.39	34.92
66.68	66.60	66.76	99260	12.70	15.88	77.39	34.93
66.75	66.67	66.83	99262	19.84	23.83	77.39	34.93
68.00	67.81	68.00	99266	19.05	22.23	79.38	42.88
69.34	69.26	69.42	99268	19.84	23.01	79.38	33.35
69.67	69.59	69.75	99273	19.84	23.83	77.85	31.75
69.80	69.72	69.88	99274	19.84	23.83	79.38	31.75
69.85	69.72	69.88	99843 *	19.84	23.83	79.38	31.75
69.85	69.77	69.93	99267	36.53	41.28	78.11	41.28
70.00	69.85	70.00	99844 *	19.84	23.83	79.38	31.75
70.00	69.85	70.01	99269	28.58	31.75	79.38	33.32
70.00	69.85	70.01	99272	10.31	14.30	79.38	31.75
70.00	69.85	70.01	99275	19.84	23.83	79.38	31.75
70.00	69.92	70.08	99276	19.99	24.00	79.38	31.75
71.42	71.34	71.50	99281	15.09	17.48	80.98	31.75
72.00	71.81	72.01	99870 *	19.05	22.23	81.92	34.11

\* Indicates Speedi-Sleeve Gold product

## Speedi-Sleeve size listing - Metric (Cont.)

Nominal Shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft ±0.8 MM	"Y" Overall width ±0.8 MM	"D" Flange diameter ± 16 MM	"Z" Installation depth MM
	Minimum MM	Maximum MM					
72.00	71.81	72.00	99284	19.05	22.23	81.92	34.11
72.08	72.08	72.24	99845 *	12.70	16.66	81.92	31.75
72.16	72.08	72.24	99282	12.70	16.66	81.92	31.75
72.87	72.79	72.95	99286	19.84	23.83	80.98	31.75
73.00	72.97	73.13	99846 *	19.84	23.83	81.76	31.75
73.00	72.97	73.13	99287	19.84	23.83	81.76	31.75
74.63	74.60	74.75	99847 *	19.84	23.83	84.94	33.35
74.68	74.60	74.76	99290	12.70	16.28	84.94	33.81
74.68	74.60	74.75	99293	19.84	23.83	84.94	33.35
75.00	74.93	75.09	99875 *	22.00	26.01	83.95	33.35
75.00	74.93	75.09	99289	15.09	17.53	83.13	27.51
75.00	74.93	75.09	99294	22.00	26.01	83.95	33.35
75.54	75.49	75.59	99292	20.62	25.40	82.17	31.75
76.00	75.94	76.10	99298	14.30	17.48	85.32	34.93
76.00	75.94	76.10	99299	20.65	25.40	85.09	32.54
76.02	75.94	76.10	99291	12.29	15.88	85.32	33.81
76.20	76.20	76.35	99848 *	20.65	25.40	82.17	32.54
76.20	76.12	76.28	99296	20.65	23.83	82.30	34.93
76.28	76.20	76.36	99300	20.65	25.40	82.17	32.54
76.28	76.20	76.36	99303	15.88	20.65	84.96	32.51
76.48	76.40	76.56	99301	12.70	15.88	85.22	50.80
78.00	77.81	78.00	99306	19.05	22.23	88.04	52.22
79.32	79.24	79.40	99311	17.48	20.65	89.69	50.80
79.38	79.25	79.40	99849 *	20.65	25.40	89.69	50.80
79.38	79.24	79.40	99312	20.65	25.40	89.69	50.80
79.38	79.35	79.55	99307	14.00	18.01	89.54	51.59
80.00	79.81	80.01	99313	19.05	22.50	89.92	34.93
80.00	79.91	80.08	99315	21.01	24.00	89.99	34.93
80.00	79.90	80.08	99317	11.00	15.01	89.99	34.93
82.00	81.91	82.07	99328	16.76	21.54	91.06	44.45
82.50	82.50	82.70	99850 *	15.11	18.26	90.81	34.92
82.55	82.55	82.70	99851 *	20.65	25.40	91.06	34.92
82.55	82.47	82.63	99322	20.65	25.40	91.29	34.93
82.63	82.55	82.71	99324	15.11	18.26	90.81	34.93
82.63	82.55	82.71	99325	20.65	25.40	91.06	34.93
82.63	82.55	82.71	99326	17.48	22.23	91.06	31.75
84.00	84.00	84.15	99331	20.65	25.40	93.68	34.93
85.00	84.76	85.02	99872 *	21.00	25.00	93.98	35.00
85.00	84.76	85.02	99332	16.99	21.00	93.98	35.00
85.00	84.76	85.02	99333	21.01	24.99	93.98	35.00
85.00	84.78	85.00	99334	10.13	12.67	90.93	36.35
85.75	85.67	85.83	99337	20.65	25.40	93.85	34.93
85.75	85.67	85.83	99338	9.53	12.70	93.67	35.81
87.33	87.25	87.41	99339	19.84	23.01	97.64	35.71
88.39	88.31	88.47	99340	19.84	23.01	97.41	35.71
88.98	88.82	88.98	99346	15.88	20.65	97.64	34.21
89.00	88.90	89.05	99852 *	20.65	25.40	97.64	34.21
89.00	88.90	89.06	99347	7.95	12.70	97.16	34.21
89.00	88.92	89.08	99349	15.88	20.65	97.64	34.24
89.00	88.90	89.06	99350	20.65	25.40	97.64	34.21
90.00	89.91	90.07	99351	18.03	23.01	101.60	46.05
90.00	89.91	90.07	99352	11.13	13.67	101.60	46.05
90.00	89.91	90.07	99353	13.36	16.94	101.60	44.45
90.00	89.91	90.07	99354	23.01	27.99	101.60	44.45
90.50	90.42	90.58	99356	20.65	25.40	99.06	44.45
92.00	91.89	92.05	99360	20.65	25.40	102.39	44.45
92.10	92.02	92.18	99362	20.65	25.40	102.39	44.45
92.10	92.02	92.18	99363	12.70	15.87	102.24	44.45
93.65	93.57	93.73	99368	7.95	11.13	102.39	22.23
93.68	93.60	93.76	99365	20.65	23.83	102.24	45.72

\* Indicates Speedi-Sleeve Gold product

## Speedi-Sleeve size listing - Metric (Cont.)

Nominal Shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft ±0.8 MM	"Y" Overall width ±0.8 MM	"D" Flange diameter ±1.6 MM	"Z" Installation depth MM
	Minimum MM	Maximum MM					
94.74	94.66	94.82	<b>99359</b>	11.91	15.09	102.01	45.72
94.74	94.66	94.82	<b>99366</b>	19.84	23.01	102.24	45.72
95.00	94.99	95.15	<b>99364</b>	11.91	15.09	102.49	45.72
95.00	94.92	95.08	<b>99369</b>	21.01	24.00	102.24	45.72
95.00	94.99	95.15	<b>99374</b>	8.74	12.70	102.39	45.72
95.22	95.14	95.30	<b>99376</b>	14.30	17.48	102.24	45.72
95.25	95.25	95.40	<b>99853 *</b>	17.48	22.23	102.11	45.72
95.33	95.25	95.41	<b>99367</b>	8.74	12.70	102.24	45.72
95.33	95.25	95.41	<b>99372</b>	17.48	22.23	102.11	45.72
98.32	98.24	98.40	<b>99386</b>	20.65	25.40	106.30	47.63
98.45	98.37	98.53	<b>99387</b>	20.65	25.40	107.16	47.63
100.00	99.95	100.10	<b>99854 *</b>	20.65	25.40	109.55	52.07
100.00	99.95	100.11	<b>99393</b>	20.65	25.40	109.55	52.07
101.60	101.55	101.75	<b>99855 *</b>	20.65	25.40	111.13	52.07
101.65	101.55	101.75	<b>99395</b>	15.24	18.42	111.13	52.07
101.65	101.55	101.75	<b>99399</b>	20.65	25.40	111.13	52.07
101.65	101.55	101.75	<b>99400</b>	16.51	19.69	111.13	34.93
101.65	101.55	101.75	<b>99401</b>	12.70	15.88	111.13	52.48
104.00	103.89	104.09	<b>99409</b>	19.99	24.00	112.72	35.99
104.80	104.70	104.90	<b>99412</b>	20.65	25.40	113.54	34.93
105.00	104.90	105.10	<b>99413</b>	19.99	23.19	113.54	35.00
106.35	106.25	106.45	<b>99418</b>	20.65	25.40	114.30	34.93
107.44	107.34	107.54	<b>99423</b>	19.84	23.01	117.09	36.53
108.00	107.90	108.10	<b>99424</b>	20.65	25.40	117.09	36.53
110.00	109.78	110.00	<b>99434</b>	11.38	14.96	124.99	32.94
110.00	109.91	110.11	<b>99435</b>	12.93	16.51	124.99	31.75
111.10	111.00	111.20	<b>99437</b>	20.65	25.40	120.65	41.91
112.00	111.78	112.00	<b>99438</b>	19.05	22.50	120.70	33.02
112.72	112.63	112.83	<b>99439</b>	25.40	29.01	122.25	33.35
114.30	114.20	114.40	<b>99856 *</b>	20.65	25.40	124.46	31.75
114.30	114.20	114.40	<b>99450</b>	20.65	25.40	123.19	31.75
115.00	114.89	115.09	<b>99452</b>	20.65	23.83	127.00	31.75
117.48	117.38	117.58	<b>99463</b>	25.40	31.75	128.60	34.93
117.48	117.38	117.58	<b>99465</b>	11.13	15.88	127.00	34.93
119.00	119.00	119.20	<b>99468</b>	20.65	25.40	128.60	34.93
120.00	119.89	120.09	<b>99471</b>	8.00	11.00	129.79	33.60
120.00	119.89	120.09	<b>99473</b>	19.99	24.99	129.79	32.00
120.65	120.55	120.75	<b>99475</b>	12.70	19.05	127.00	38.10
122.00	121.90	122.10	<b>99472</b>	19.99	24.00	131.49	32.00
123.00	122.91	123.11	<b>99484</b>	19.99	24.99	132.82	31.60
123.83	123.73	123.93	<b>99487</b>	15.88	19.05	133.35	36.53
125.00	124.90	125.10	<b>99490</b>	10.00	14.00	137.16	36.53
125.00	124.89	125.09	<b>99492</b>	26.01	32.00	137.16	36.53
127.00	126.95	127.15	<b>99857 *</b>	17.48	22.23	137.16	36.53
127.00	126.95	127.15	<b>99858 *</b>	20.65	25.40	139.91	36.53
127.00	126.95	127.15	<b>99498</b>	17.48	22.23	137.16	36.50
127.00	126.95	127.15	<b>99499</b>	20.65	25.40	136.91	36.53
127.00	126.95	127.15	<b>99501</b>	13.72	17.30	137.16	36.53
130.00	129.97	130.17	<b>99874 *</b>	22.00	25.30	139.52	32.51
130.00	129.97	130.17	<b>99491</b>	22.00	25.30	139.52	32.51
130.00	129.80	130.00	<b>99494</b>	19.05	23.83	139.52	30.00
130.15	130.05	130.25	<b>99513</b>	20.65	25.40	139.70	31.75
133.35	133.25	133.45	<b>99525</b>	20.65	25.40	141.22	31.75
135.00	134.80	135.00	<b>99533</b>	20.50	25.40	145.67	31.75
136.53	136.43	136.63	<b>99537</b>	20.65	25.40	149.23	31.75
138.13	138.03	138.23	<b>99548</b>	38.10	42.88	146.05	47.63
139.00	138.99	139.19	<b>99547</b>	14.30	19.05	149.86	31.34
139.70	139.65	139.85	<b>99859 *</b>	20.65	25.40	150.82	31.75
139.75	139.65	139.85	<b>99549</b>	20.65	25.40	150.83	31.75
139.75	139.65	139.85	<b>99550</b>	13.16	17.91	150.83	31.75

\* Indicates Speedi-Sleeve Gold product

## Speedi-Sleeve size listing - Metric (Cont.)

Shaft diameter	"A" Shaft diameter range		Stock number	"X" Width on shaft ±0.8 MM	"Y" Overall width ±0.8 MM	"D" Flange diameter ± 1.6 MM	"Z" Installation depth MM
	Minimum MM	Maximum MM					
140.00	139.90	140.11	<b>99552</b>	20.50	25.40	151.00	31.75
142.88	142.77	142.98	<b>99560</b>	22.23	25.40	157.18	46.02
145.00	144.75	145.00	<b>99571</b>	19.05	22.23	154.94	46.02
145.54	145.44	145.64	<b>99562</b>	14.30	19.05	154.94	49.23
146.05	145.95	146.15	<b>99575</b>	20.65	25.40	156.97	44.45
149.23	149.12	149.33	<b>99862 *</b>	25.40	31.75	157.18	33.35
149.23	149.13	149.33	<b>99587</b>	25.40	31.75	157.18	33.35
150.00	149.75	150.00	<b>99595</b>	26.01	30.00	159.00	32.51
150.83	150.73	150.93	<b>99596</b>	25.40	28.58	161.93	47.63
152.37	152.27	152.47	<b>99599</b>	25.40	31.75	161.93	44.45
152.37	152.27	152.47	<b>99601</b>	12.70	19.05	161.54	44.45
154.00	153.87	154.13	<b>99605</b>	26.01	30.00	161.93	32.99
155.00	154.75	155.00	<b>99606</b>	26.01	30.00	167.01	32.99
157.56	157.43	157.69	<b>99620</b>	20.65	27.00	168.28	44.45
158.75	158.62	158.88	<b>99625</b>	26.19	31.75	168.28	44.45
160.00	159.74	160.00	<b>99630</b>	25.40	31.75	171.45	34.93
165.10	164.97	165.23	<b>99650</b>	25.40	31.75	177.80	34.93
170.00	169.75	170.01	<b>99640</b>	31.75	38.00	182.57	44.45
171.45	171.32	171.58	<b>99675</b>	20.65	27.00	180.98	44.45
175.00	174.75	175.01	<b>99687</b>	27.99	32.00	187.00	35.00
177.80	177.67	177.93	<b>99864 *</b>	25.40	31.75	189.87	42.88
177.80	177.67	177.93	<b>99700</b>	25.40	31.75	189.87	42.88
180.00	179.75	180.01	<b>99721</b>	32.99	38.00	190.50	44.50
184.00	183.99	184.25	<b>99725</b>	31.75	38.10	197.10	55.25
185.00	184.75	185.00	<b>99726</b>	32.00	38.00	197.10	54.99
189.20	189.07	189.33	<b>99745</b>	20.65	25.40	199.64	31.75
190.50	190.37	190.63	<b>99750</b>	20.65	25.40	200.03	31.75
196.85	196.72	196.98	<b>99775</b>	25.40	33.35	210.06	47.63
200.00	199.87	200.13	<b>99787</b>	34.52	38.10	212.73	44.45
201.63	201.50	201.76	<b>99799</b>	25.40	31.75	212.73	44.45
203.20	203.07	203.33	<b>99800</b>	25.40	31.75	212.73	44.45

\* Indicates Speedi-Sleeve Gold product

# Large diameter wear sleeves

for shafts 8.313" to 45" (211.15 – 1143mm)\*

## SKF large diameter wear sleeves

Polishing friction and shaft scoring from foreign materials during continued contact between a rotating shaft and a seal make severe shaft damage a common occurrence. Without checking the problem immediately, damage can accelerate sharply.

LD wear sleeves are used primarily for applications where no Speedi-Sleeve® is available, i.e. for shafts in the diameter range 8.313" to 45" (203 mm to 1143 mm). Two designs of SKF wear sleeves are available: the Style 3 sleeve with a flange (Figure A) and the Style 4 without a flange (Figure B).

LDSL3 is designed with a flange to provide assistance in final positioning of the sleeve. It has a sealing surface width .250" (6.35mm) narrower than the overall sleeve width. The flange adds a nominal 1.000" over the shaft diameter.

SKF Style	Shaft Range	* Wd Min	* Wd Max
Style 3 w/Flg	8.313" -29"	.688"	2.500"
	30" -45"	1.000"	2.500"

\*Overall (1.5" To 2" Max. at 45" Shaft Diameter)

LDSL4 is the same except without the flange. This version can be made slightly narrower.

SKF Style	Shaft Range	* Wd Min	* Wd Max
Style 4 w/o Flg	8.313" -29"	.500"	2.500"
	30" -45"	.750"	2.500"

\*Overall (1.5" To 2" Max. at 45" Shaft Diameter)

Their use is recommended in all cases where the operating conditions for the seals are difficult, particularly where solid contaminants can reach the seal lip, e.g. in rolling mills and chemical plants. These heavy-duty sleeves are used extensively on large diameter shafts in primary metal mills, chemical and mineral processing plants and in power generator applications. In cases where seal wear and damage of the counterface on the shaft can be expected it is recommended that SKF wear sleeves are designed into the application from the outset. During repairs, it will then not be necessary to rework the shaft and the original seal size can always be used as the replacement.



FIGURE A



FIGURE B

Each standard sleeve is custom made from high quality SAE 1008 steel. Sleeve hardness is approximately Rockwell B96. Standard wear sleeve thickness is .094" (2.4 mm). The sleeve surface is specially finished to provide a suitable sealing surface for lip seals. A hard chrome plating is applied to provide wear and corrosion resistance.

\*Primary shaft range. Sleeves for other dimensions and special materials can be evaluated according to specification or the application conditions and quoted upon request.

## Use

There are two alternative ways of using SKF wear sleeves for shaft repairs. Either the sleeve can be positioned on the shaft until it covers the damaged part and a seal which has a .188" (4.8 mm) larger shaft diameter than the original is used, or the shaft can be machined down .188" (4.8 mm) and the original seal size used. The reworked shaft seating for the sleeve should have a surface roughness Ra of between 10-125 micro-inches.

## Installation

SKF wear sleeves are mounted with an interference fit on the shaft. It is therefore recommended that they are heated prior to mounting. Temperatures of up to 350°F (177°C) are permitted; under no circumstances should the sleeve be heated to above 400°F (204°C). The types of heating arrangements normally used for bearings are suitable, e.g. heating cabinets, oil baths or induction heaters.

The sleeves should be mounted immediately after heating as they cool rapidly and they are difficult to mount cold. This is particularly true of the Style 4 sleeves. Mechanical repositioning of the sleeves by impacts from hammers, etc. should be avoided or minimized.

## Removal

To remove the sleeve it is recommended first to either heat them or to expand them by light hammer blows. The flange of the Style 3 sleeves should first be cut through at one point.

Refer to SKF's Handbook of Seals (457010) for detailed technical information on large diameter wear sleeves.

# Speedi-Sleeve® and wear sleeve request form

Application: (Crankshaft, Pinion, Gearbox Shaft, etc.) \_\_\_\_\_

Manufacturer, part no. & size of seal being used: \_\_\_\_\_

My estimated annual quantity would be \_\_\_\_\_ sleeve/kits (circle one)

Dimensions required:

A \_\_\_\_\_

X \_\_\_\_\_

\*Y \_\_\_\_\_

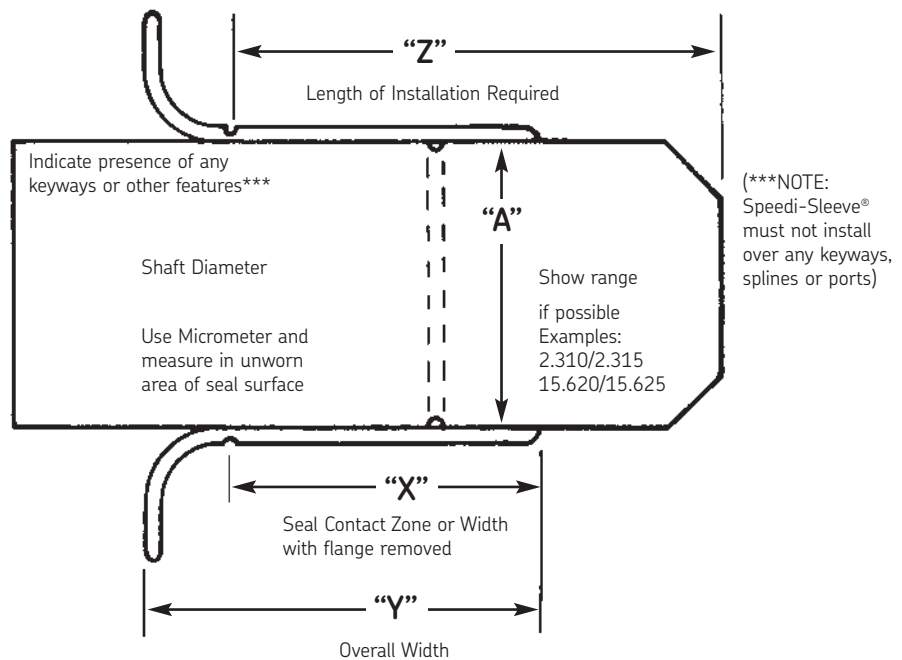
Z \_\_\_\_\_

Please fill in maximum widths which will fit application.

Notes:  
SPEEDI-SLEEVE® (Ultra-thin .011" wall for shafts 8.000" or smaller.

LARGE DIAMETER SLEEVE (.094" thick wall for shafts 8.313" or larger. Other wall thickness by special quote. Depth for driver tool only for Speedi-Sleeve® size range.)

\* Flange is standard on Speedi-Sleeve®, optional on LD sleeves over 8.313". Specify "Y" dimension on large sleeves only if flange is requested.



Business Name \_\_\_\_\_

Your Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Email \_\_\_\_\_ Telephone \_\_\_\_\_

Please mail completed form to:  
SKF Sealing Solutions  
890 N. State Street, Suite 200  
Elgin, IL 60123

Or fax to:  
Industrial Technical Support  
847-742-1085

# NOTES

# NOTES

Phone: 1-800-882-0008 (U.S.)  
Phone: 1-866-832-6753 (Canada)  
Phone: 1-847-742-7840 (International)  
Fax: 1-800-526-7268 (U.S. & Canada)  
Fax: 1-847-742-0261 (International)

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