

## HR (High Retention)

### Domed Head

Carbon Steel  
Mandrel: Carbon Steel



- Excellent pull-up capability
- Excellent mandrel head retention
- Increased blind side expansion

			DESCRIPTION							BULK PACK		SMALL PACK		
										ARTICLE	BOX QTY	ARTICLE	BOX QTY	
mm	mm	mm		mm	mm	mm	mm	N	N					
<b>3.2</b> 3.15 - 3.37	8.0	1.6 - 3.2	<b>SD42HR</b>	3.4 - 3.6	6.10 - 6.70	1.30	2.20	1,450	1,700	75250	1,000			1.70
	9.6	3.2 - 4.8	<b>SD43HR</b>							89686	1,000			1.75
	11.2	4.8 - 6.4	<b>SD44HR</b>							89687	1,000			1.80
<b>4.0</b> 3.95 - 4.17	9.0	1.6 - 3.2	<b>SD52HR</b>	4.2 - 4.4	7.70 - 8.30	1.70	2.80	2,000	2,600	89688	1,000			2.80
	10.6	3.2 - 4.8	<b>SD53HR</b>							78501	1,000			3.00
	12.2	4.8 - 6.4	<b>SD54HR</b>							89689	1,000			3.20
<b>4.8</b> 4.75 - 4.97	9.2	1.6 - 3.2	<b>SD62HR</b>	5.0 - 5.4	9.20 - 10.00	2.10	3.40	3,100	3,400	89690	1,000			4.30
	10.8	3.2 - 4.8	<b>SD63HR</b>							89691	1,000			4.60
	12.4	4.8 - 6.4	<b>SD64HR</b>							89692	1,000			4.90
	14.0	6.4 - 8.0	<b>SD65HR</b>							89693	500			5.32
<b>6.4</b> 6.35 - 6.57	11.3	1.2 - 4.8	<b>SD83HR</b>	6.6 - 7.0	12.50 - 13.50	2.70	4.60	3,900	5,350	89694	1,000			10.10
	14.5	4.8 - 8.0	<b>SD85HR</b>							89695	500			10.90

## HR (High Retention)

### Large Flange

Carbon Steel  
Mandrel: Carbon Steel



- Excellent pull-up capability
- Excellent mandrel head retention
- Increased blind side expansion
- **Large flange increases bearing surface for weaker, thinner materials**
- Suitable for oversized holes or slots under the head

			DESCRIPTION							BULK PACK		SMALL PACK		
										ARTICLE	BOX QTY	ARTICLE	BOX QTY	
mm	mm	mm		mm	mm	mm	mm	N	N					
<b>4.8</b> 4.75 - 4.97	9.2	1.6 - 3.2	<b>SD62HRLF</b>	5.0 - 5.4	15.40 - 16.40	2.20	3.40	3,100	3,400	89696	500			5.60
	10.8	3.2 - 4.8	<b>SD63HRLF</b>							89697	500			5.90
	12.4	4.8 - 6.4	<b>SD64HRLF</b>							89698	500			6.20
	14.0	6.4 - 8.0	<b>SD65HRLF</b>							89699	500			6.50
<b>6.4</b> 6.35 - 6.57	11.3	1.2 - 4.8	<b>SD83HRLF</b>	6.6 - 7.0	15.50 - 16.50	3.20	4.60	3,900	5,350	89700	1,000			11.10
	19.2	4.8 - 8.0	<b>SD85HRLF</b>							89701	1,000			11.90

$d$ =Nominal Diameter, Min - Max Diameter;  $l$ =Body Length (+/- 0.5mm);  $g$ =Grip Range (Min - Max);  $d_h$ =Hole Size (Min - Max);  $d_k$ =Flange Diameter (Min - Max);  $k$ =Flange Thickness (Max);  $d_m$ =Nominal Mandrel Diameter;  $S$ =Nominal Shear Strength;  $T$ =Nominal Tensile Strength