



BRINGING TOGETHER A CENTURY OF EXPERIENCE  
DESIGNED & MANUFACTURED BY PRODUCERS FOR PRODUCERS



## HOT SHOTS

The **DARCOVA** engineers have molded a plastic seating cup and spacer into a single unit...the **DARCOVA Hot Shots®**. The **Hot Shots®** save pump shop time and labor. No more cleaning and refurbishing the metal seating cup spacers. We mold our **Hot Shots®** from heat stabilized Nylon® resins in standard API seating cup sizes...for pump shop convenience.



**DOUBLE SHOT:** for a 2-cup hold down assembly, combine 1 **Hot Shot®** and 1 seating cup.

**TRIPLE SHOT:** for a 3-cup hold down assembly, combine 2 **Hot Shots** and 1 seating cup.



### DARCOVA - PLASTIC SEATING CUPS

**DARCOVA's** plastic seating cups are injection molded from various durometer resins for use in applications from shallow wells to deep, hot wells. Pump shop operators tell us, "When the pump comes in, **DARCOVA's** cups are always there." Available in all sizes; API, non-API, oversize and Type "O."

**Hytrel®** – For shallow wells (less than 2000') this soft cup is recommended. Good to working temperatures up to 360°F.

**Nylon®** – For deeper wells (2000' – 8000') medium and hard heat-stabilized Nylon cups are available. Good to working temperatures up to 270°F.

**LFX** – For deep wells (7000' to 9000') Low Friction Extreme is recommended. Good to working temperatures up to 300°F.

**XT** – For high bottom hole temperatures and eXTreme well conditions use **DARCOVA XT** seating cups. Withstands temperatures as high as 400°F.

### DARCOVA AND THE DRAGON COMPOSITION SEATING CUPS

**DARCOVA** and The Dragon have been manufacturing composition seating cups longer than any company in business today. ALL of our composition cups have a tough, resilient, polyester outer layer laminated with our exclusively formulated latex elastomers. ALL of our cups are Premium cups. The result is a seating cup that has set the performance standard worldwide.

**DARCOVA** and The Dragon continue to manufacture all sizes of Type HR API, non-API and oversized seating cups. We also make a full line of composition Type "O" seating cups (seating rings). Every cup is gauged and inspected to ensure quality and dimensional compliance with our strict standards.

**DARCOVA** and The Dragon composition cups are available in **hard**, **medium** and **soft**.



# DIMENSIONS FOR API TYPE HR SEATING CUPS

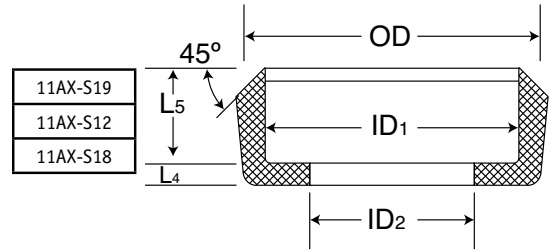
Composition Seating Cups: 275°F maximum working temperature

Plastic Seating Cups: 300°F maximum working temperature

XT® Plastic Seating Cups: 400°F maximum working temperature

Nominal Cup size	Seating Nipple Bore	API No.	1,000s	OD	ID <sub>1</sub>	ID <sub>2</sub>	L <sub>4</sub>	L <sub>5</sub>	
1 1/16	1.062		+30	1.082	0.860	0.687	0.095	0.375	
1 1/4	1.250		+30	1.270	0.984	0.750	0.125	0.375	
			+15	1.255		0.875			
			+30	1.270					
1 3/8	1.375		+30	1.405	1.015	0.750	0.125	0.531	
			+30	1.405		0.875			
			+45	1.420					
1 1/2	1.460		-40+30	1.486	1.160	0.875	0.154	0.593	
	1.500		Base	1.500					
			+15	1.515					
			+30	1.530					
			+45	1.545					
1 3/4	1.710	S18-20	-40+30	1.730	1.411	1.187	0.165	0.656	
	1.750		Base	1.740					
			+15	1.755					
			+30	1.770					
			+45	1.785					
25 <sup>1</sup> / <sub>32</sub>	1.780	S12-20	+60	1.800	1.411	1.187	0.165	0.656	
			+45	1.815					
			+70	1.830					
			+80	1.840					
			+90	1.840					
1 7/8			Base	1.865	1.411	1.187	0.165	0.656	
			+30	1.895					
2 1/4	2.210	S18-25	-40+30	2.230	1.850	1.562	0.185	0.688	
				Base					2.240
				+15					2.255
	2.250		+30	2.270					
			+45	2.285					
			+60	2.300					
2.280	S12-25	+70	2.310						
			+90	2.330					
2 3/4	2.710	S18-30	-40+30	2.730	2.350	2.000	0.185	0.688	
				Base					2.740
				+15					2.755
	2.750		+30	2.770					
			+45	2.785					
			+60	2.800					
2.780	S12-30	+70	2.810						
3 3/4	3.750		Base	3.375	3.271	2.812	0.186	0.978	
				+15					3.750
				+30					3.765
				+45					3.780
				+60					3.795

## TYPE HR SEATING CUP



### Seating Cup Type HR Specifications

#### S12 ROD PUMPS

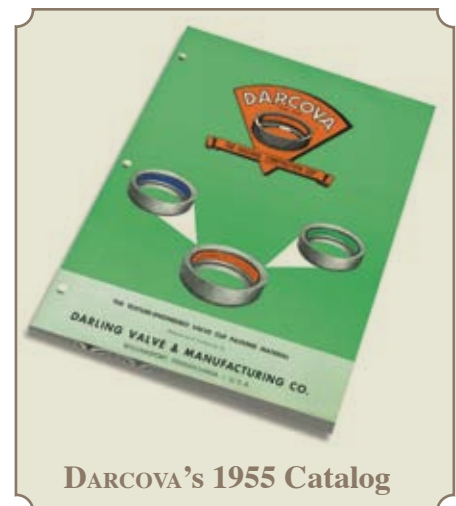
Dimensional Symbol	S12-20	S12-25	S12-30
ID <sub>1</sub>	+0.015/-0.000	1.411	1.850
ID <sub>2</sub>	+0.005/-0.000	1.187	1.562
OD	+/-0.005	1.800	2.310
L <sub>4</sub>	+0.015/-0.015	0.165	0.185
L <sub>5</sub>	+0.000/-0.016	0.656	0.688

### Seating Cup Type HR Specifications

#### S18 TUBING PUMPS

Dimensional Symbol	S18-20	S18-25	S18-30
ID <sub>1</sub>	+0.015/-0.000	1.411	1.850
ID <sub>2</sub>	+0.005/-0.000	1.187	1.562
OD	+/-0.005	1.730	2.230
L <sub>4</sub>	+0.030/-0.015	0.165	0.185
L <sub>5</sub>	+0.000/-0.016	0.656	0.688

Unless otherwise specified, the outside diameter of cups furnished to this specification shall be shown for -0.030" cups.



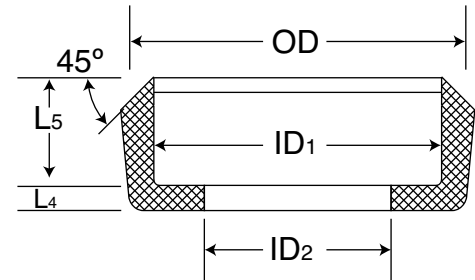
# OVERSIZE TYPE HR SEATING CUPS

## WORKING TEMPERATURES

Composition Seating Cups: 275°F maximum

Plastic Seating Cups: 300°F maximum

Nominal Cup Size	Seating Nipple Bore	1,000s	O.D.	ID <sub>1</sub>	ID <sub>2</sub>	L <sub>4</sub>	L <sub>5</sub>
1 1/2	1.460	-40+30	1.486	1.160	0.750	0.154	0593
	1.500	Base	1.500				
		+15	1.515				
		+30	1.530				
		+45	1.545				
1 25/32	1.780	Base	1.770	1.411	1.250	0.165	0.656
		+15	1.785				
		+30	1.800				
2 1/4	2.210	-10	2.230	1.937	1.750	0.185	0.688
		Base	2.240				
	2.250	+15	2.255				
		+30	2.270				
		+45	2.285				
		+70	2.310				
2 3/4	2.710	Base	2.740	2.448	2.250	0.175	0.688
	2.750	+30	2.770				



Seating Cup (Type HR) Oversized Specifications

Dimensional Symbol

ID<sub>1</sub> +0.016/-0.000

ID<sub>2</sub> +0.005/-0.000

OD<sub>a</sub> +/-0.005

L<sub>4</sub> +0.030/-0.015

L<sub>5</sub> +0.000/-0.016b

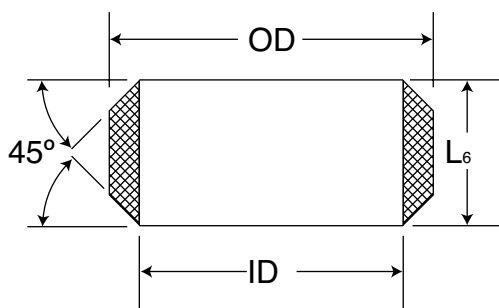
11AX-S19
11AX-S12
11AX-S18

# TYPE "O" SEATING RINGS

## WORKING TEMPERATURES

Composition Seating Cups: 275°F maximum

Plastic Seating Cups: 300°F maximum



Seating Cup (Type O) 11AX-S32 Information

Dimensional Symbol

Tolerances

Part Number

Dimensional Symbol	Tolerances	S32-15
OD	+/-0.005"	1.188
ID	+0.010/-0.000"	1.490
L <sub>6</sub>	+0.010/-0.000"	0.625

Nominal Cup Size	1,000s	OD	ID	L <sub>6</sub>
1 1/2	-10	1.490	1.188	0.625
	+30	1.530		
	+70	1.570		
1 3/4	+70	1.810	1.440	0.687
1 25/32	+30	1.800	1.425	0.687
		1.800	1.431	0.687
		1.800	1.471	0.687
		1.800	1.505	0.687
		1.800	1.560	0.687
		1.800	1.560	0.687
2 1/4	+70	2.310	1.805	0.844
	+30	2.270	1.856	0.750
	+70	2.310	1.856	0.750
	+30	2.270	1.871	0.750
	+70	2.310		0.750
	+30	2.270	1.981	0.750
	+70	2.310		0.750
	+70	2.310	1.805	0.813
2 3/4	+70	2.810	2.356	0.843