



SUDARSHAN<sup>TM</sup>  
ELASTOMER<sup>TM</sup>  
PVT. LTD.

## SUDARSHAN PISTONS





# Sudarshan Extreme Piston



The **Sudarshan Extreme Pistons** are manufactured from urethanes compound with dual hardness that provides resistance to water, oil and synthetic based drilling fluids. The compound also provides superior resistance to tear, abrasion and extrusion and as the name suggests it is capable of operating in extreme conditions of fluid temperatures up to 300°F (150°C) and high pressure UPTO 7500 PSI.

- “Bull Nose”, design promises ease of assembly when loading into the liner due to the smooth engagement of the piston into the liner bore.
- Extra strong sealing area increases run times even at pressures up to 7500 psi.
- Reduced maintenance Reduced operational costs.
- Specially engineered Urethane compound provides: high resistance to water, oil and synthetic based drilling fluids.
- Dual-durometer bonded urethane allows for longer piston life
- Superior resistance to tear, abrasion and extrusion.
- Well-designed piston body for strong bonding with urethane and reduced weight.
- Bonded design prevents fluid migration and abrasion between liner body and Pistons.

PISTON SIZE	PART NO
Extreme Piston 4”	SE-EPB-K-40
Extreme Piston 4.5”	SE-EPB-K-45
Extreme Piston 5”	SE-EPB-B-50
Extreme Piston 5.5”	SE-EPB-B-55
Extreme Piston 6”	SE-EPB-B-60
Extreme Piston 6.25”	SE-EPB-L-625
Extreme Piston 6.5”	SE-EPB-L-65
Extreme Piston 6.75”	SE-EPB-L-675
Extreme Piston 7”	SE-EPB-L-70



# Pinnacle Assembled Piston



The **SUDARSHAN PINNACLE ASSEMBLED PISTON** is designed for use in the most demanding applications. The replaceable seal element is manufactured from a specially formulated elastomeric compound designed to be resistant to most chemical fluid found in the drilling industry today. These pistons can also be used in conditions where elevated temperatures can be problematic to other types of pistons in the market.

The fabric anti-extrusion device on the piston is constructed from proprietary materials utilizing well researched process to reduce the extrusion of the rubber even at the pump's maximum pressure rating.

- “Bull Nose”, design promises ease of assembly when loading into the liner due to the smooth engagement of the piston into the liner bore.
- Extra strong sealing area increases run times even at pressures up to 7500 psi.
- Rubber Assembly can be re installed till circular marks on the metal core are prominent and deep.
- Fabric allows for longer piston life
- Superior resistance to tear, abrasion and extrusion.

PISTON SIZE	PART NO
Pinnacle Assembled Piston 4" K	SE-LPA-K-40
Pinnacle Assembled Piston 4.5" K	SE-LPA-K-45
Pinnacle Assembled Piston 5" B	SE-LPA-B-50
Pinnacle Assembled Piston 5.1/2" B	SE-LPA-B-55
Pinnacle Assembled Piston 6" B	SE-LPA-B-60
Pinnacle Assembled Piston 6.25" L	SE-LPA-L-625
Pinnacle Assembled Piston 6.5" L	SE-LPA-L-65
Pinnacle Assembled Piston 6.75" L	SE-LPA-L-675
Pinnacle Assembled Piston 7" L	SE-LPA-L-70
Pinnacle Assembled Piston 7.25" L	SE-LPA-L-725
Pinnacle Assembled Piston 7.5" L	SE-LPA-L-75

Mm size also available from 100 mm upto 180 mm



# Performance Assembled Piston



The **SUDARSHAN PERFORMANCE ASSEMBLED PISTON** is a urethane piston with Fabric anti-extrusion backup ring built to deliver an economical solution for harsh drilling environments.

The **SUDARSHAN PERFORMANCE ASSEMBLED PISTON** offers increased resistance to synthetic and oil based drilling fluids and is capable of operating in fluid temperatures of up to 220°F while maintaining superior resistance to tear and extrusion.

- “Bull Nose”, design promises ease of assembly when loading into the liner due to the smooth engagement of the piston into the liner bore.
- Extra strong sealing area increases run times even at pressures up to 7500 psi.
- Rubber Assembly can be re installed till circular marks on the metal core are prominent and deep.
- Fabric allows for longer piston life
- Superior resistance to tear, abrasion and extrusion.
- Urethane Cup Assembly can be re installed till circular marks on the metal core are prominent and deep
- Very good abrasion resistance which ensures better life.

PISTON SIZE	PART NO
Performance Assembled Piston 4" K	SE-PPA-K-40
Performance Assembled Piston 4.5" K	SE-PPA-K-45
Performance Assembled Piston 5" B	SE-PPA-B-50
Performance Assembled Piston 5.1/2" B	SE-PPA-B-55
Performance Assembled Piston 6" B	SE-PPA-B-60
Performance Assembled Piston 6.25" L	SE-PPA-L-625
Performance Assembled Piston 6.5" L	SE-PPA-L-65
Performance Assembled Piston 6.75" L	SE-PPA-L-675
Performance Assembled Piston 7" L	SE-PPA-L-70
Performance Assembled Piston 7.25" L	SE-PPA-L-725
Performance Assembled Piston 7.5" L	SE-PPA-L-75

Mm size also available from 100 mm upto 180 mm



# Performance Bonded Piston



The **SUDARSHAN PERFORMANCE BONDED PISTON** manufactured from urethanes compound with dual hardness that provides resistance to oil and synthetic based drilling fluids ,these piston that is highly resistant to abrasion and tear. The bonded construction resists extrusion under pressure and restricts movement to reduce the build-up of heat.

The **SUDARSHAN PERFORMANCE BONDED PISTON** is recommended for systems with oil or synthetic based mud

- Temperature resistance up to 220°F (104°C)
- Can be operated in pressures up to 5000 psi
- Can also perform in clear water and water based mud.
- Very good abrasion resistance which ensures better life.
- Specially designed metal core for strong bonding with rubber

PISTON SIZE	PART NO
Performance Bonded Piston 4" K	SE-PPAB-K-40
Performance Bonded Piston 4.5" K	SE-PPAB-K-45
Performance Bonded Piston 5" B	SE-PPAB-B-50
Performance Bonded Piston 5.1/2" B	SE-PPAB-B-55
Performance Bonded Piston 6" B	SE-PPAB-B-60
Performance Bonded Piston 6.25" L	SE-PPAB-L-625
Performance Bonded Piston 6.5" L	SE-PPAB-L-65
Performance Bonded Piston 6.75" L	SE-PPAB-L-675
Performance Bonded Piston 7" L	SE-PPAB-L-70



# Power Performance Bonded Piston



The **SUDARSHAN POWER PERFORMANCE BONDED PISTON** manufactured from special grade urethanes compound with dual hardness that provides resistance to water, oil and synthetic based drilling fluids ,these piston that is highly resistant to abrasion and tear. The bonded construction resists extrusion under pressure and restricts movement to reduce the build-up of heat.

The **SUDARSHAN POWER PERFORMANCE BONDED PISTON** is recommended for systems with oil or synthetic based mud

- Temperature resistance up to 300°F (150°C)
- Can be operated in pressures up to 5000 psi
- Can also perform in clear water and water based mud.
- Very good abrasion resistance which ensures better life.
- Specially designed metal core for strong bonding with rubber

PISTON SIZE	PART NO
Power Performance Bonded Piston 4" K	SE-PPPAB-K-40
Power Performance Bonded Piston 4.5" K	SE-PPPAB-K-45
Power Performance Bonded Piston 5" B	SE-PPPAB-B-50
Power Performance Bonded Piston 5.1/2" B	SE-PPPAB-B-55
Power Performance Bonded Piston 6" B	SE-PPPAB-B-60
Power Performance Bonded Piston 6.25" L	SE-PPPAB-L-625
Power Performance Bonded Piston 6.5" L	SE-PPPAB-L-65
Power Performance Bonded Piston 6.75" L	SE-PPPAB-L-675
Power Performance Bonded Piston 7" L	SE-PPPAB-L-70



## Advance Bonded Piston



The **SUDARSHAN ADVANCE BONDED PISTON** is constructed of Nitrile rubber bonded to a well designed metal hub. The oil resistant rubber is designed to provide optimum performance in oil based or water based mud and high drilling pressures. The bonded construction resists extrusion under pressure and restricts movement to reduce the build-up of heat.





- Temperature resistance up to 225°F (107°C)
- Can be operated in pressures up to 5000 psi
- Very good abrasion resistance which ensures better life.
- Specially designed metal core for strong bonding with rubber
- Most economical option of piston for low operating pressure and temperature.

PISTON SIZE	PART NO
Advance Bonded Piston 4" K	SE-LPAB-K-40
Advance Bonded Piston 4.5" K	SE-LPAB-K-45
Advance Bonded Piston 5" B	SE-LPAB-B-50
Advance Bonded Piston 5.1/2" B	SE-LPAB-B-55
Advance Bonded Piston 6" B	SE-LPAB-B-60
Advance Bonded Piston 6.25" L	SE-LPAB-L-625
Advance Bonded Piston 6.5" L	SE-LPAB-L-65
Advance Bonded Piston 6.75" L	SE-LPAB-L-675
Advance Bonded Piston 7" L	SE-LPAB-L-70



# Sudarshan Piston Resistance Chart

As you can see from the below chart the Sudarshan Piston line is designed to have success in most drilling muds operated in today's market. When using the proper mud weight there is not much the Sudarshan Piston line cannot handle. We offer a Sudarshan Piston for any drilling condition providing extended Piston and Liner life lowering your operating costs and reducing safety related injuries.

No	Feature	Extreme Piston	Pinnacle Assembled Piston	Performance Bonded Piston	Power Performance Bonded Piston
					
1	Abrasion Resistance	Green	Green	Green	Green
2	Tear Resistance	Green	Green	Green	Green
3	Resistance to Oil	Green	Green	Green	Green
4	Chemical Resistance	Green	Green	Yellow	Green
5	Resistance to Synthetic Oil	Green	Green	Green	Green
6	Temperature Resistance	Green	Green	Yellow	Green
7	Use in Oil Based Muds	Green	Green	Green	Green
8	Use in Synthetic Based Muds	Green	Green	Green	Green
9	Use in Water Based Mud	Yellow	Green	Yellow	Yellow
11	Use in Clear Water	Green	Green	Green	Green
12	Use in Salt Water	Green	Green	Red	Green
13	Use in Low Solids	Green	Green	Green	Green
14	Use in Moderate Solids	Green	Yellow	Yellow	Green
15	Use in High Solids	Green	Red	Yellow	Green
16	Liner Wear Characteristics	Green	Green	Green	Green
17	Use in Zirconia/Ceramic Liners	Green	Green	Green	Green
18	Maximum Temperature (FL) (°F)	300	225	220	300
19	Max Pressure (PSI)	7500	7500	5000	5000

Excellent	Green	Good	Yellow	Poor	Red
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