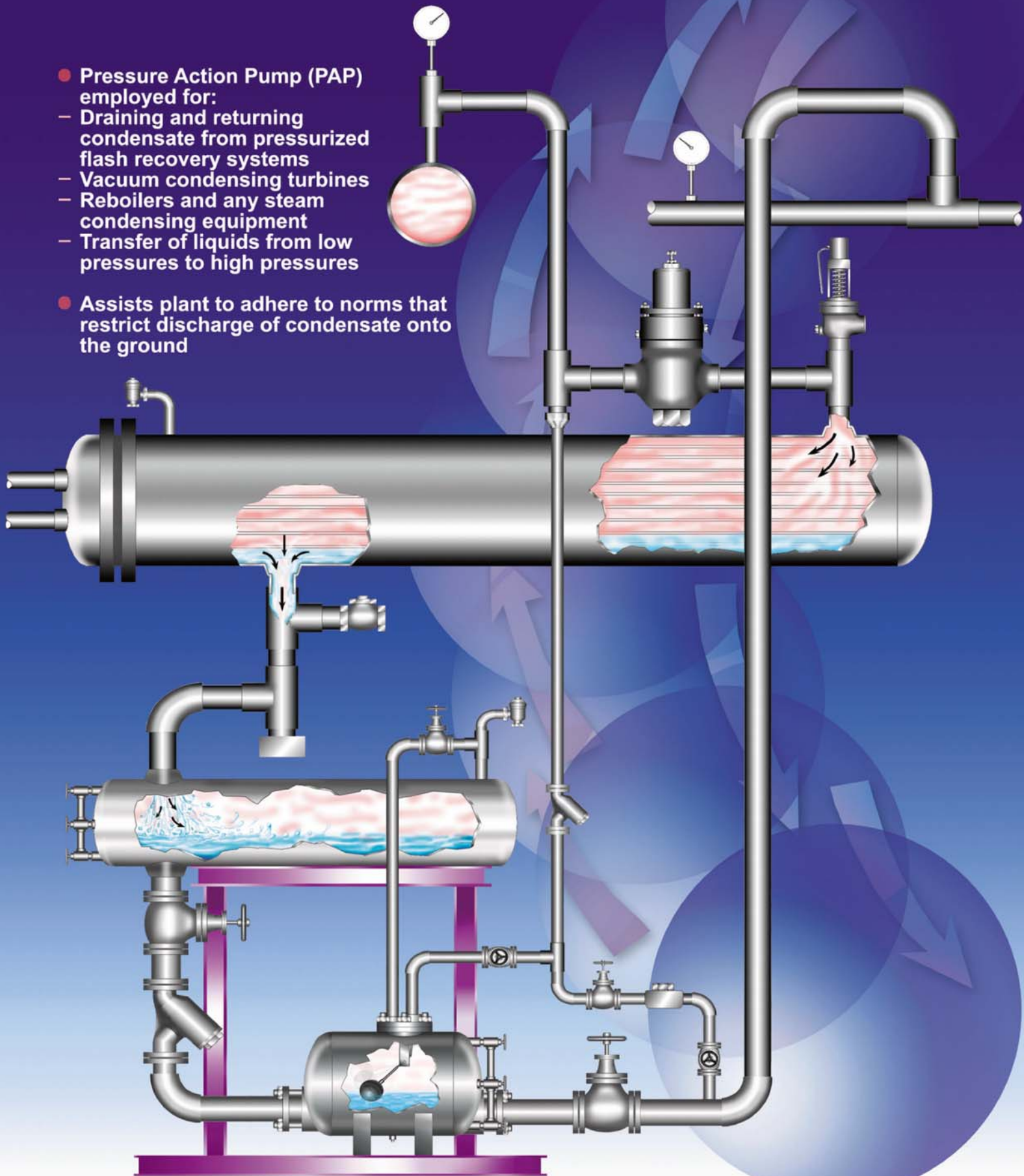


HOTSHOT (PAP) Non-Electric Automated Pump

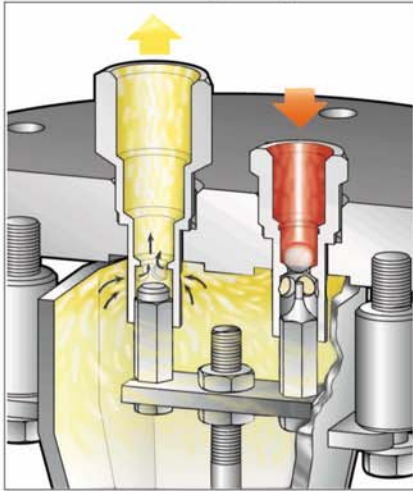
For Condensate and other Industrial Liquids



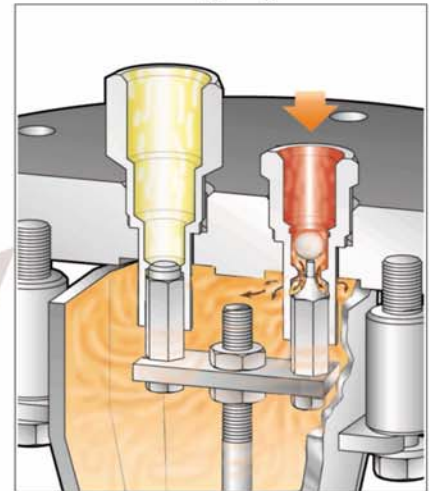
- Pressure Action Pump (PAP) employed for:
 - Draining and returning condensate from pressurized flash recovery systems
 - Vacuum condensing turbines
 - Reboilers and any steam condensing equipment
 - Transfer of liquids from low pressures to high pressures
- Assists plant to adhere to norms that restrict discharge of condensate onto the ground



Discharge Cycle



Filling Cycle



HOTSHOT Operation:

Hotshot pressure action pump (PAP) operates on a pressure displacement principle without the use of electricity and at a temperature above 99 °C (210 °F) limit of centrifugal pumps. Liquid enters the pump body by gravity through the inlet check valve causing the float to rise. As the liquid rises in the pump body a float actuated snap-action (trip mechanism) linkage closes the exhaust valve and opens the inlet valve for the driving gas (Steam / air / nitrogen / any other pressurized gas).

The pressurized gas inside the pump increases above the total back pressure, liquid is forced out through the outlet check valve, until the descending float again trips the snap action mechanism completing the cycle.

Unique Mono Spring Trip Mechanism

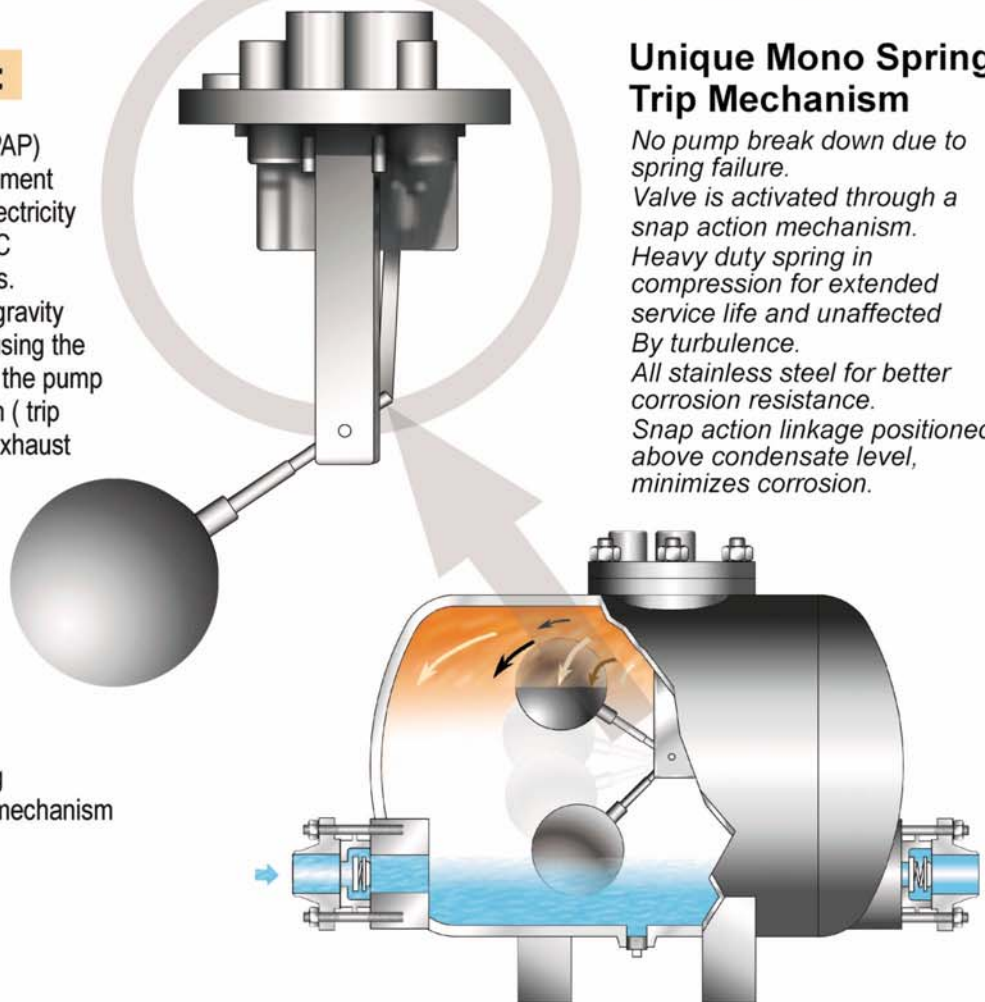
No pump break down due to spring failure.

Valve is activated through a snap action mechanism.

Heavy duty spring in compression for extended service life and unaffected by turbulence.

All stainless steel for better corrosion resistance.

Snap action linkage positioned above condensate level, minimizes corrosion.

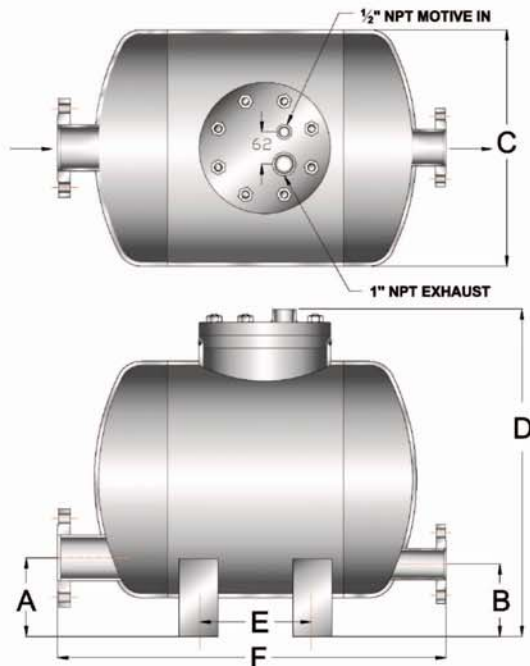
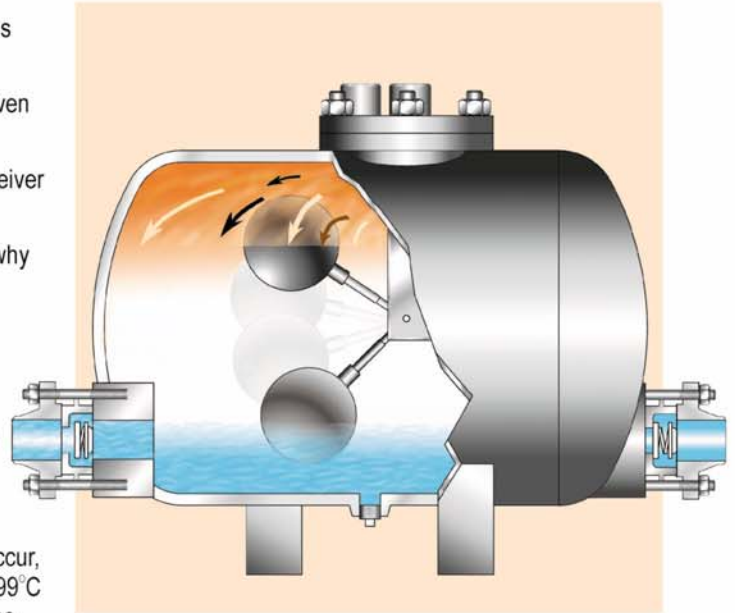


Hotshot-Mechanical Automatic Pumps : Non-Electrical Solution for Returning Condensate and other Industrial Fluids



Advantages of Mechanical Pumps

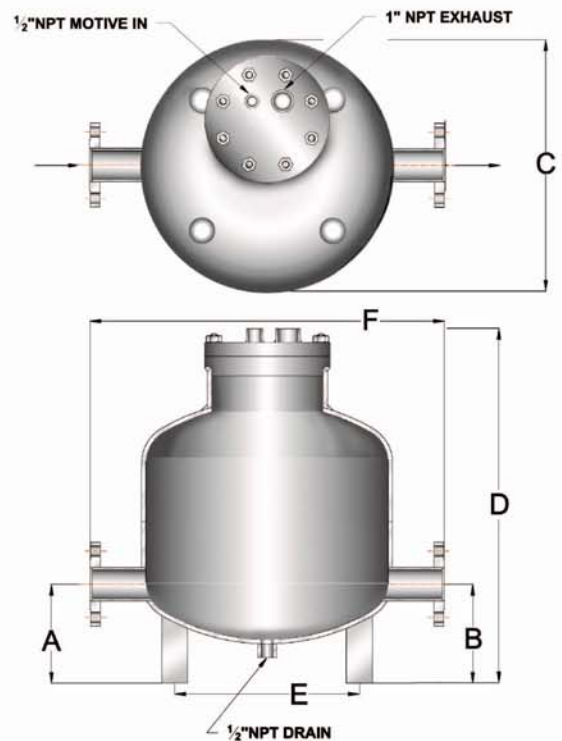
- ▶ On hot condensate applications, mechanical pumps have numerous advantages against electrical Pumps:
- ▶ **No cavitation** : there is no mechanical work, the pressure is given by a motive fluid.
- ▶ **NPSH is not needed** : the required distance between the receiver and the pump is maximum 300 mm.
- ▶ **Low maintenance costs** : cavitation does not occur that is why parts service life is much longer.
- ▶ **System can be closed** : save energy by using all the heat content of steam. Mechanical pumps can even work on vacuum.
- ▶ **Energy efficient** : do not use electrical energy. Receiver size is smaller (condensate accumulation is not needed).
- ▶ **Non-electrical equipment** : can be used in explosive areas, lower installation costs.
- ▶ **Pump handles hot condensate** : as cavitation does not occur, condensate can be close to saturation temperature (more than the 99°C limit of electrical pumps). Higher condensate temperature decreases solubility of non-condensable gases.



HOTSHOT PUMP SPECIFICATION

DIMENSION TABLE (All dimensions are in mm)

PUMP SIZE (in)	A	B	C	D	E	F
1" X 1" (150#)	150	140	457	610	220	750
1 1/2" X 1 1/2" (150#)	150	140	457	610	220	750
2" X 2" (150#)	150	140	457	610	220	750
3" X 2" (150#)	150	140	457	610	220	750



HOTSHOT - JUNIOR - PUMP SPECIFICATION

DIMENSION TABLE (All dimensions are in mm)

PUMP SIZE (in)	A	B	C	D	E	F
1" X 1" (150#)	180	180	457	645	350	645
1 1/2" X 1 1/2" (150#)	180	180	457	645	350	645
2" X 2" (150#)	180	180	457	645	350	645

HOTSHOT PUMP

Motive Pressure		Back Pressure		Capacity - Size							
Psig	(Kg/Cm ² g)	Psig	(Kg/Cm ² g)	lb/hr 1"x1"	(Kg/hr) 1"x1"	lb/hr 1.5"x1.5"	(Kg/hr) 1.5"x1.5"	lb/hr 2"x2"	(Kg/hr) 2"x2"	lb/h 3"x2"	(Kg/hr) 3"x2"
150	10.5	25	1.8	4251	1930	6178	2805	8301	3769	9684	4397
		40	2.8	3989	1811	5662	2570	6772	3074	7560	3432
		60	4.2	3571	1621	5070	2302	5596	2541	6104	2771
		80	5.6	3010	1367	3979	1807	4486	2036	4832	2194
		100	7.0	2534	1151	3320	1507	3794	1723	4051	1839
		120	8.4	2135	969	2818	1279	3325	1509	3526	1601
125	8.8	25	1.8	4194	1904	5758	2614	8570	3891	9870	4481
		40	2.8	3746	1701	5392	2448	6372	2893	7069	3209
		60	4.2	3253	1477	4410	2002	4976	2259	5406	2455
		80	5.6	2661	1208	3533	1604	4051	1839	4346	1973
		100	7.0	2125	965	2835	1287	3373	1531	3586	1628
		115	8.1	1562	709	3181	1444	2871	1304	3030	1376
100	7.0	15	1.1	3810	1730	6714	3048	9511	4318	11393	5172
		25	1.8	3655	1659	6126	2781	7854	3566	8936	4057
		40	2.8	3010	1367	5282	2398	5922	2689	6531	2965
		60	4.2	2890	1312	3914	1777	4513	2049	4874	2213
		80	5.6	2173	986	2945	1337	3542	1608	3777	1715
		75	5.3	15	1.1	3894	1768	6382	2898	9582	4350
75	5.3	25	1.8	3719	1689	6258	2841	7131	3238	8021	3641
		40	2.8	3262	1481	4578	2079	5323	2417	5818	2642
		60	4.2	2229	1012	3090	1403	3777	1715	4046	1837
		50	3.5	10	0.7	3754	1704	7382	3351	9994	4537
50	3.5	25	1.8	3474	1577	5110	2320	6082	2761	6737	3059
		40	2.8	2290	1040	3296	1496	4138	1878	4462	2026
		25	1.8	5	0.4	4660	2116	8389	3809	11008	4998
25	1.8	10	0.7	3876	1760	6219	2824	7850	3564	8954	4065
		15	1.1	3160	1435	4834	2195	6126	2781	6810	3092
		10	0.7	2	0.1	4488	2038	8278	3758	11616	5274
10	0.7	5	0.4	3320	1507	5563	2526	7766	3526	8868	4026

HOTSHOT - JUNIOR - PUMP

Motive Pressure		Back Pressure		Capacity - Size					
Psig	(Kg/Cm ² g)	Psig	(Kg/Cm ² g)	lb/hr 1"x1"	(Kg/hr) 1"x1"	lb/hr 1.5"x1.5"	(Kg/hr) 1.5"x1.5"	lb/hr 2"x2"	(Kg/hr) 2"x2"
125	8.8	15	1.1	2678	1216	5253	2385	11433	5191
		25	1.8	2530	1149	4825	2191	10100	4585
		40	2.8	2472	1122	4635	2104	9476	4302
		60	4.2	2266	1029	4172	1894	8034	3647
		80	5.6	1957	888	3193	1450	6180	2806
		100	7.0	1751	795	2730	1239	4841	2198
100	7.0	15	1.1	1391	631	1957	888	3914	1777
		25	1.8	2627	1192	5099	2315	10815	4910
		40	2.8	2450	1112	4486	2037	9350	4245
		60	4.2	2369	1076	4120	1870	8446	3834
		80	5.6	2266	1029	3348	1520	6283	2852
		100	7.0	1803	818	2575	1169	5150	2338
75	5.3	15	1.1	2575	1169	4944	2245	10609	4816
		25	1.8	2345	1065	3990	1811	8545	3879
		40	2.8	2266	1029	3399	1543	7416	3367
		60	4.2	2060	935	2524	1146	4429	2011
50	3.5	10	0.7	2472	1122	4532	2058	9888	4489
		25	1.8	2215	1005	3451	1567	7622	3460
		40	2.8	1700	772	2163	982	4223	1917
25	1.8	5	0.4	2781	1263	5150	2338	9991	4536
		10	0.7	2421	1099	3914	1777	8034	3647
		15	1.1	1854	842	3399	1543	6180	2806
10	0.7	2	0.1	2266	1029	3090	1403	8343	3788
		5	0.4	1957	888	2678	1216	5459	2478



Mazda House, Panchwati 2nd Lane,
Ambawadi, Ahmedabad 380006. INDIA.
Phone : +91 (0) 79 6431014 (4 lines)
 : +91 (0) 79 6442036 to 38
Fax : +91 (0) 79 6565605.
E-Mail : info@mazdalimited.com
Please visit us at :
Http://www.mazdalimited.com