DRESSER

ROOTS Blowers & Vacuum Pumps

XLP®
Extra Low Pulse Blower

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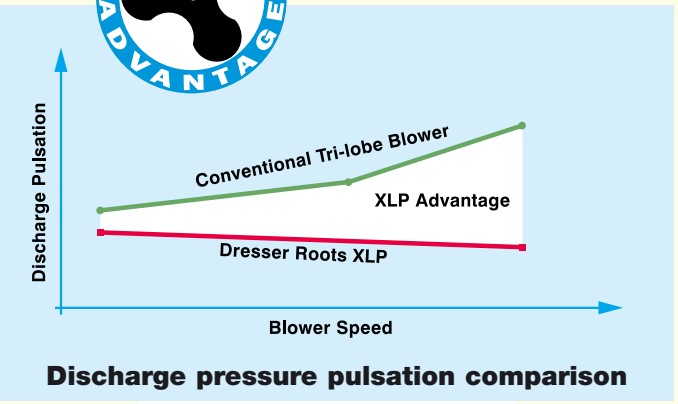
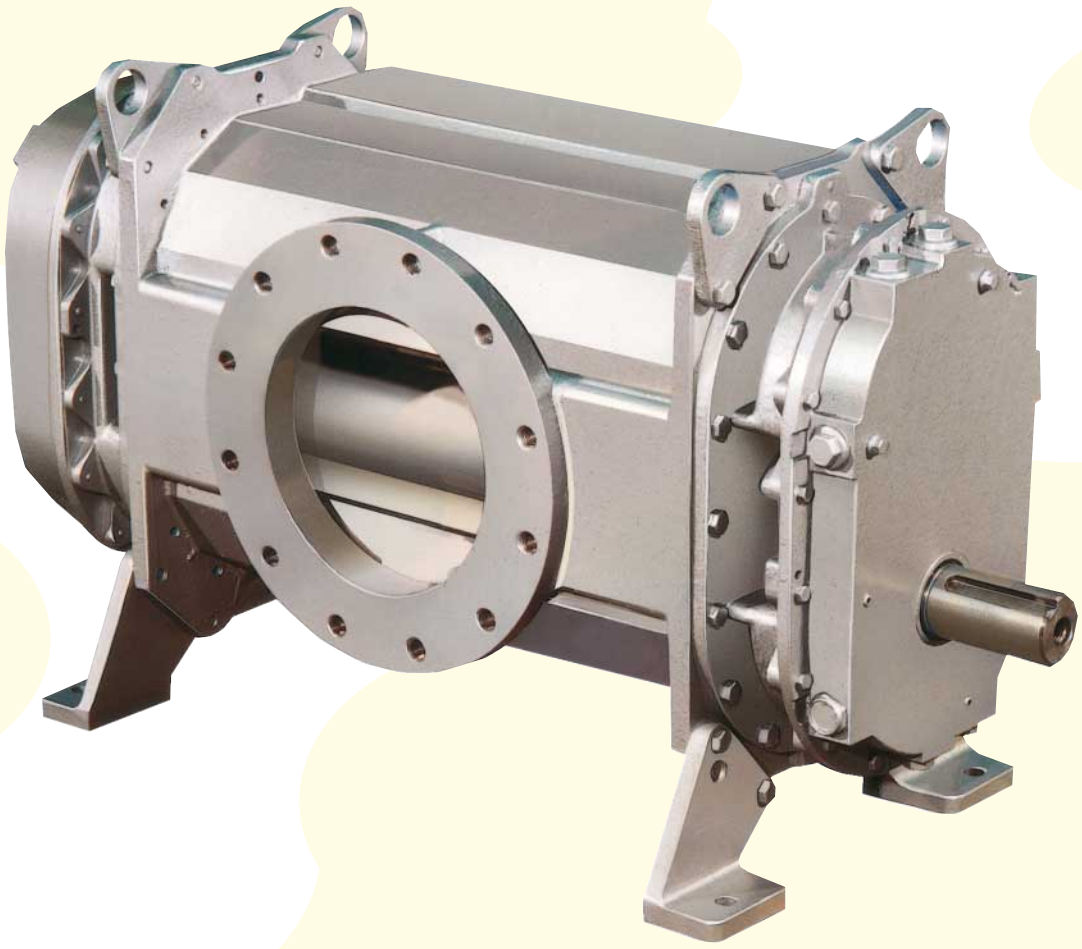
The Roots XLP® is a 3-lobed blower utilising an improved Whispair® chamber design.

This combination of technologies results in a high efficiency blower that dramatically reduces both in-pipe pulsation and noise levels.

- Lowest in-pipe pulsation design
- Based on proven designs
- Oil lubricated both ends
- Smooth running/longer life
- Low power consumption
- Blower or vacuum pump

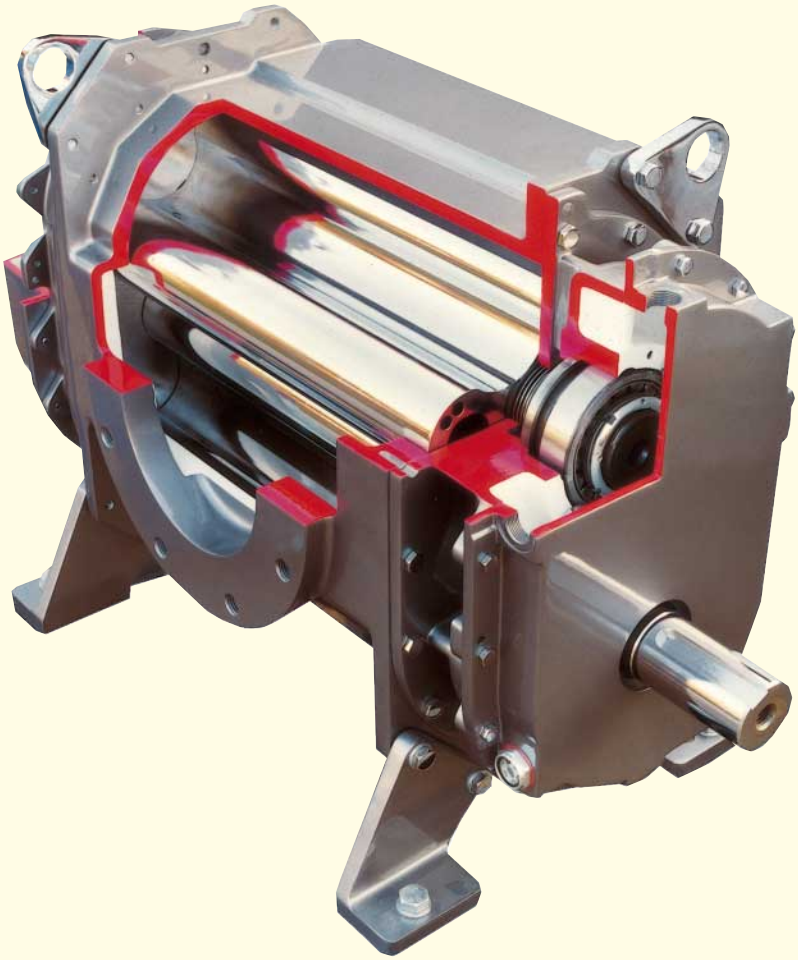


Discharge pressure pulsation comparison



User Benefits

- The delivered air is guaranteed to be oil free because internal lubrication is unnecessary, and because the XLP range of Positive Displacement Air Blowers are constructed with air gaps which completely isolate bearing and gear lubricants from the compression chamber.
- Noise levels are kept to a minimum. Air noise is reduced by carefully designed air ports (utilising the special Whispair feature) and by the elimination of resonant unbraced surfaces. Mechanical noise levels have been reduced by the running accuracy of the taper mounted gears.
- The blower can be installed for either vertical or horizontal air flow simply by repositioning the mounted feet. Installation costs can be reduced by the versatility of mounting arrangements.
- The generous diameter of the drive shaft permits the use of V-belt drives without the need for a double outer bearing.
- XLP can be employed on either pressure or vacuum applications.



XLP Construction Features

The XLP Whispair® blower has been specially designed to reduce noise and power loss by utilising an exclusive wrap-around plenum and proprietary double Whispair® jet to control pressure equalisation - (feeding backflow in the direction of impeller movement, thereby aiding rotation).

The computer calculated impeller profiles ensures maximum volumetric efficiency with minimum absorbed power without sacrificing torsional rigidity.

The conservative load carrying capacity of the larger diameter rolling element bearings ensures an extended operating life. Timing gear life is also extended by a controlled lubrication system.

Gear and shaft strengths are substantially increased by the use of taper mounted gears which do not need keyways for location. Setting of the gear wheels to obtain correct timing of the impellers is simplified, a feature that facilitates field maintenance.

- Precision ground and hardened steel gears are used to ensure smooth, silent running and accurate timing of the rotary impellers. A splash lubrication system is provided to ensure efficient operation without waste of energy in the gearcase.
- Specially designed labyrinth seals and oil throwers are used at both ends. This feature eliminates maintenance associated with the use of lip seals.
- XLP Whispair® blowers are constructed with air gaps which isolate bearing and gear lubricants from the compression chamber.
- The high rigidity of the impeller/shafts permits a higher pressure rise to be obtained than with other machines of comparable size. The generous shaft diameter keeps drive stresses low.

Materials of Construction

- The cylinder and headplates are manufactured from cast iron.
- The dynamically balanced impellers are made from ductile iron.
- The bearings at the drive end of the blower are cylindrical roller type of generous proportions to give long operational life.
- Cylindrical roller bearings are fitted at the gear end and are splash lubricated by oil from the gears.
- Timing gears are manufactured from high grade alloy steel.

XLP Blower Performance Tables

		XLP N10					XLP N08					XLP 110						XLP 108						XLP 210						XLP 208					
	SPEED	2000	3000	3800	4500	5300	2000	3000	3800	4500	5300	1650	2000	2500	3000	3500	4200	1650	2000	2500	3000	3500	4200	1200	1500	2000	2500	3000	3300	1200	1500	2000	2500	3000	3300
	Vol (m^3/hr)	455	778	1037	1263	1521	609	1040	1386	1688	2033	845	1071	1394	1717	2040	2492	1127	1429	1860	2290	2721	3324	1247	1653	2330	3008	3685	4091	1662	2203	3105	4008	4910	5451
300	Δt (c)	35	31	31	31	31	35	31	31	31	32	31	30	30	29	30	31	31	30	29	29	30	31	32	31	30	30	31	32	32	30	30	30	31	32
mbar	Motor (kw)	7.5	11	15	15	18.5	11	15	18	22	30	11	15	18.5	22	30	30	15	18.5	22	30	37	45	18.5	22	30	37	45	55	22	30	37	55	55	75
	Vol (m^3/hr)	426	749	1007	1233	1491	569	1001	1348	1648	1890	811	1037	1360	1683	2005	2457	1082	1383	1814	2245	2676	3279	1188	1595	2272	2949	3626	4032	1584	2125	3027	3930	4832	5373
400	Δt (c)	49	43	42	41	41	49	43	41	41	41	42	41	39	39	39	40	42	41	39	39	39	40	44	42	40	40	41	41	44	42	40	40	40	41
mbar	Motor (kw)	11	15	18.5	22	30	11	18.5	22	30	30	15	18.5	22	30	37	37	18.5	22	30	37	45	55	22	30	37	45	55	75	30	37	55	75	75	90
	Vol (m^3/hr)	400	723	981	1207	1465	535	966	1312	1614	1959	781	1007	1330	1653	1975	2427	1042	1343	1774	2205	2636	3239	1137	1543	2220	2897	3575	3981	1515	2056	2959	3861	4763	5305
500	Δt (c)	65	55	53	52	52	65	55	52	52	51	55	52	50	49	49	49	55	52	50	49	49	49	57	53	51	50	50	51	57	53	50	50	50	50
mbar	Motor (kw)	11	15	22	30	30	15	22	30	37	37	18.5	22	30	37	45	45	22	30	37	45	55	75	30	37	45	55	75	75	37	45	55	75	90	110
	Vol (m^3/hr)	377	699	958	1184	1442	503	935	1280	1582	1928	754	980	1303	1625	1948	2400	1006	1307	1738	2169	2599	3202	1090	1497	2174	2851	3528	3934	1453	1994	2896	3799	4701	5242
600	Δt (c)	82	68	64	63	62	82	68	64	62	62	68	64	61	59	59	59	68	64	61	59	59	59	72	66	62	60	60	60	72	66	61	60	60	60
mbar	Motor (kw)	15	18.5	30	30	37	18.5	30	30	37	45	22	30	37	45	55	55	30	37	45	55	75	75	30	37	55	75	90	90	45	55	75	90	110	132
	Vol (m^3/hr)	355	678	936	1164	1420	475	906	1251	1554	1899	729	955	1278	1600	1923	2375	972	1274	1705	2135	2566	3169	1047	1454	2131	2808	3485	3891	1396	1937	2839	3742	4644	5185
700	Δt (c)	102	81	76	74	73	102	81	76	73	72	82	76	72	70	69	69	82	76	72	70	69	68	87	79	73	71	70	70	87	79	73	70	69	69
mbar	Motor (kw)	15	22	30	37	45	22	30	37	45	55	22	30	37	45	55	75	37	45	55	75	75	90	37	45	75	75	90	110	55	75	75	110	132	132
	Vol (m^3/hr)		658	916	1142	1400		879	1225	1527	1872	706	932	1254	1577	1900	2352	941	1243	1674	2104	2535	3138	1008	1414	2091	2768	3445	3852	1343	1884	2786	3689	4591	5132
800	Δt (c)		95	88	85	83		95	88	85	83	96	89	83	81	79	78	96	89	83	80	79	78	103	92	84	81	80	80	103	92	84	81	80	79
mbar	Motor (kw)		30	37	37	45		37	45	55	75	30	37	45	55	75	75	37	45	55	75	75	110	45	55	75	90	110	132	55	75	90	110	132	150
	Vol (m^3/hr)		639	897	1123	1381						684	910	1233	1555	1878	2330							970	1376	2054	2731	3408	3814						
900	Δt (c)		110	101	97	94						112	102	95	92	89	88							120	107	96	92	90	90						
mbar	Motor (kw)		30	37	45	55						30	45	45	55	75	75							45	55	75	110	132	132						
	Vol (m^3/hr)			879	1105	1364							889	1212	1535	1858	2310								1341	2018	2695	3372	3779						
1000	Δt (c)			114	108	105							116	107	103	100	98								121	109	103	101	100						
mbar	Motor (kw)			45	45	55							45	55	75	75	90								75	90	110	132	150						

		XLP 310				XLP 308				XLP 410				XLP 408			
	SPEED	1000	1500	2000	2600	1000	1500	2000	2600	800	1000	1500	2000	800	1000	1500	2000
	Vol (m^3/hr)	1958	3278	4598	6183	2610	4371	6131	8244	3685	4847	7751	10655	4913	6462	10334	14205
300	Δt (c)	33	31	31	32	33	31	31	32	31	30	29	31	31	30	29	30
mbar	Motor (kw)	30	45	55	75	37	55	75	110	45	55	90	132	75	90	132	185
	Vol (m^3/hr)	1852	3172	4493	6077	2470	4230	5990	8103	3537	4698	7602	10506	4715	6264	10135	14007
400	Δt (c)	46	42	41	42	46	41	41	41	42	40	39	40	42	40	39	39
mbar	Motor (kw)	37	55	75	110	45	75	110	132	55	75	110	150	90	110	150	220
	Vol (m^3/hr)	1759	3079	4400	5984	2345	4106	5866	7979	3406	4567	7471	10375	4540	6089	9961	13832
500	Δt (c)	60	53	51	51	60	53	51	51	55	52	49	49	55	51	49	49
mbar	Motor (kw)	45	75	90	132	55	90	132	150	75	90	150	185	90	132	185	260
	Vol (m^3/hr)	1675	2995	4316	5900	2233	3994	5754	7867	3287	4449	7353	10257	4382	5931	9803	13675
600	Δt (c)	76	65	62	61	76	65	62	61	68	63	59	59	68	63	59	58
mbar	Motor (kw)	75	75	110	132	75	110	132	185	90	110	185	220	132	150	220	300
	Vol (m^3/hr)	1598	2918	4238	5823	2130	3891	5651	7763	3178	4340	7244	10148	4237	5786	9658	13529
700	Δt (c)	93	77	73	71	93	77	72	71	82	75	69	68	82	75	69	68
mbar	Motor (kw)	75	90	132	150	75	132	185	220	110	132	200	260	132	185	260	335
	Vol (m^3/hr)	1526	2846	4166	5751	2034	3795	5555	7667	3077	4238	7142	10046	4102	5651	9523	13394
800	Δt (c)	111	90	84	82	111	90	84	81	96	88	80	78	96	88	80	78
mbar	Motor (kw)	75	110	132	185	90	132	185	260	110	150	220	260	150	185	300	375
	Vol (m^3/hr)		2778	4099	5683					2982	4143	7047	9951				
900	Δt (c)		104	96	92					112	101	91	88				
mbar	Motor (kw)		110	150	220					132	185	260	335				
	Vol (m^3/hr)		2714	4035	5619						4053	6957	9861				
1000	Δt (c)		118	107	103						115	102	98				
mbar	Motor (kw)		132	185	220						185	260	375				

Inlet volumes are based on 15˚C and 1013 mbar

Vacuum pump data available on request.

A 3-lobe blower range from 'The Original Roots'

The leading name in Positive Displacement Blowers

With over **100 years'** experience in blower manufacturing in our Connersville facility in the USA and over **70 years'** experience in our Huddersfield plant in the UK, Dresser Roots is extremely well qualified to develop and build the latest state-of-the-art range of positive displacement blowers.

Quality is an integral feature in the new XLP range and all machines are manufactured under stringent Quality Control procedures which have been approved to the ISO 9001 Standard.

Another quality product from the Original Roots blower Company and the leader in the world-wide blower market.

Not Just Another 3-Lobe Blower

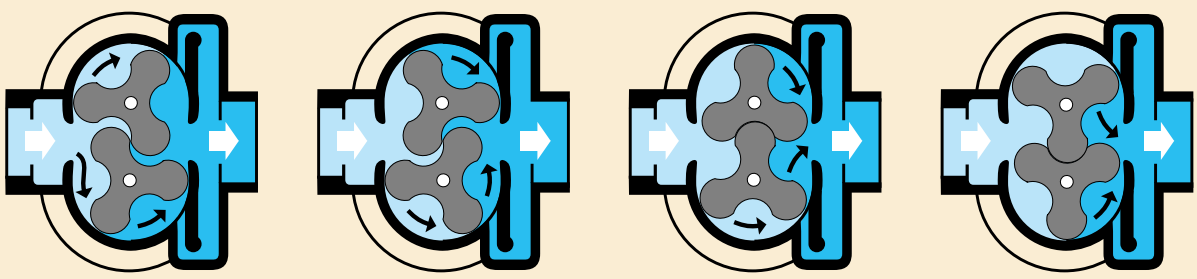
The XLP Whispair® blower is designed to reduce noise and power loss by utilising an exclusive wrap-around plenum and proprietary double jet Whispair® feature to control pressure equalisation and increase reliability.

The proven design concepts of the 3 lobe impeller profile together with the double jet Whispair® feature, combine to produce such low pulsation levels that inlet and discharge silencers are no longer required in many cases to control in-pipe noise and pulsation. This in turn allows for an extremely compact and cost competitive package unit design.

This design also demonstrates the added benefit that pulsation levels reduce as the blower speed increases. A feature which presents a considerable improvement over other commercially available 3-lobe blower designs and clearly demonstrates the **Dresser Roots XLP ADVANTAGE.**

Not just another 3-lobe blower .....
..... better than the rest.

XLP Operating Principle



The original ROOTS blower™

Your single source for air and gas handling equipment

The original ROOTS blower™

BS EN ISO 9001 : 1998
APPROVAL CERT
No. 929559

DRESSER
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Due to continuous development we reserve the right to amend our specification without notice.