



Ro-Flo
Compressors, LLC



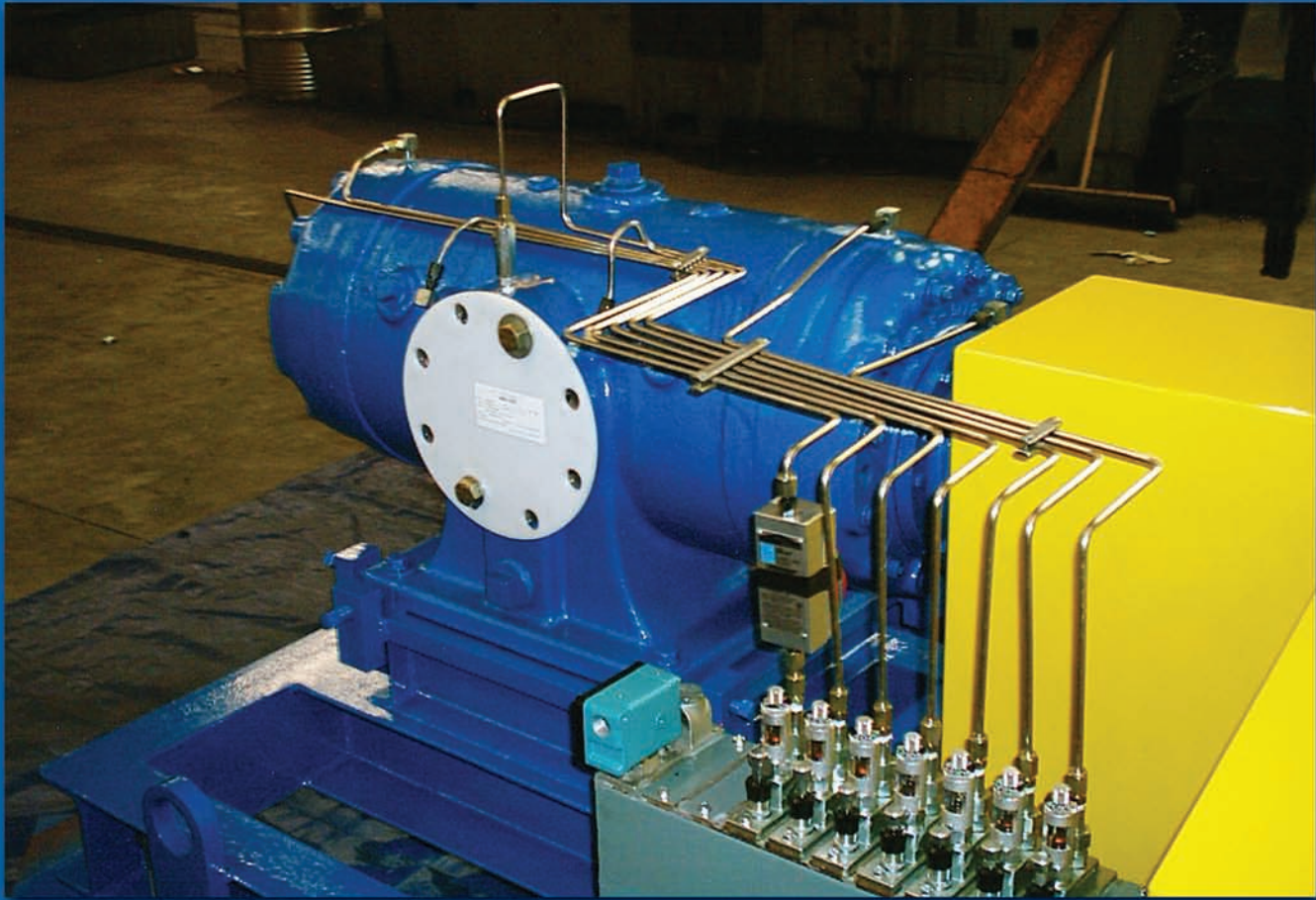
Ro-Flo

Rotary Sliding Vane



**Positive
Displacement
Compressors**

Ro-Flo® Compressors: The Low-Cost, Low-Maintenance Answer to Tough Gas Applications



Designed to provide low-cost, low-maintenance advantages in dirty or corrosive gas applications, Ro-Flo® compressors can meet your specifications. Ro-Flo® compressors are engineered and built to give you years of reliable, continuous service with no loss of volume or pressure. Because the only wearing parts are the bearings, blades and seals, maintenance costs are minimal. When routine maintenance is required, the simplicity of the Ro-Flo® design makes this process easy, on-site, without removing the compressor from the system.

Dependable and Cost-Effective Ro-Flo® Rotary Compressors Offer:

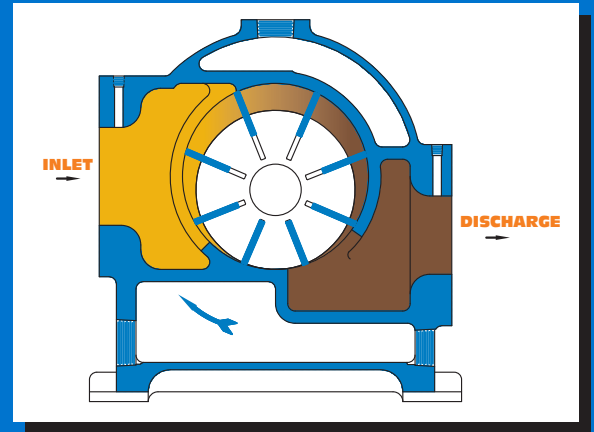
- SMOOTH, CONTINUOUS FLOW:** No reciprocating motion or pulsation. Foundation requirements are minimal.
- EASE OF MAINTENANCE:** Normal maintenance can be done in field. Blades, seals and gaskets can be inspected and replaced without removing compressor from the system.
- MULTIPLE PRESSURES:** Available in low- and high-pressure configurations.
- RELIABLE PERFORMANCE:** Pressures to 150 psig and flows to 2500 acfm (3600 Mscfd) with a $\pm 5\%$ guarantee on performance.
- CONSTANT EFFICIENCY:** Centrifugal force keeps blades in contact with cylinder as they wear.
- LARGE TURNDOWN CAPABILITY:** Compressors can be operated at 40% of maximum speed to facilitate variable flow applications.



Ro-Flo® Compressors

Cut Your Operating Costs and Maintain Constant Efficiency

Ro-Flo® sliding-vane, positive displacement compressors feature a solid, one-piece rotor eccentrically mounted inside a water-jacketed cylinder. Gas is compressed by being trapped between vanes, which form compartments that become smaller as the gas moves closer to the discharge port. As the volume in these compartments is reduced, the pressure is comparably increased until it is equal to the pressure in the discharge port area. Vanes are kept in contact with the cylinder as they wear by centrifugal force, and move radially in and out of the rotor slots during each revolution. This results in a constant level of efficiency and pulsation free compression.



Ro-Flo® Design Features Include:

Rugged, Long-Life Rotor Vanes

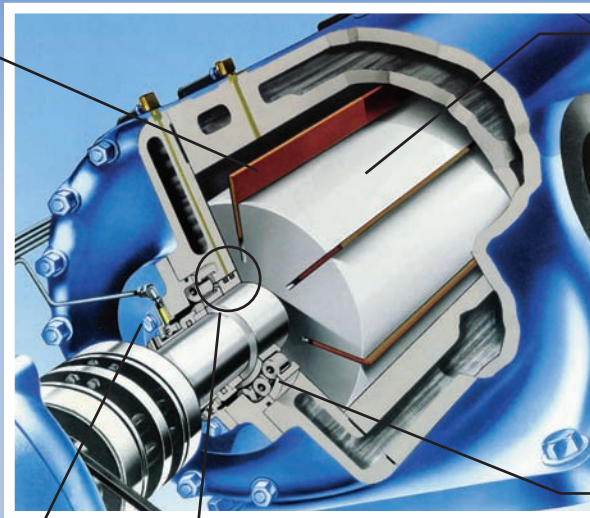
Durable Ro-Flo® rotor blades are the key component in ensuring continuous, reliable compressor service. Years of research and testing has resulted in a sliding vane that stands up to the toughest applications.

Rotor blade features:

- Self-adjusting, radially sliding vanes maintain constant pressure and flow rates.
- Constructed of durable laminated cloth impregnated with phenolic resin, heat-treated to minimize wear at elevated temperatures.

Quality High-Performance Seals

- Ro-Flo® custom-engineered shaft seals are crafted to perform consistently under the dirtiest and most corrosive conditions. "Double bellows" zero-leakage shaft seals are available. Single face mechanical seals are fully field-rebuildable.
- Balanced design and proper selection of seal face materials minimize heat build-up and maximize seal life.



Detail view of dual, oil-buffered seal rings which prevent contamination in corrosive, dirty gas applications by effectively isolating the bearing and seal areas from the process gas.

Durable, Precision-Engineered Rotor Shaft

Our standard ASTM 1144 rotor shaft provides years of continuous worry-free service. Rotor shaft features:

- Resistant to acid gas and solvents, ideal for vapor recovery service.
- Radially machined blade slots are hand finished and fully dressed to ensure longer blade life.

Oversized, Corrosion-Resistant Bearings

Ro-Flo® rotor shafts are supported by two identical cylinder roller bearings. These bearings offer the following special features not found in other bearings:

- Special cage material for corrosion resistance.
- Custom-designed internal clearances for high temperature operation.
- We use 400 Series roller bearings with higher load capacity than standard 300 Series bearings.

Installations

Compression of digester gas at
wastewater treatment plant

Model: 8DB

Number of units: 5

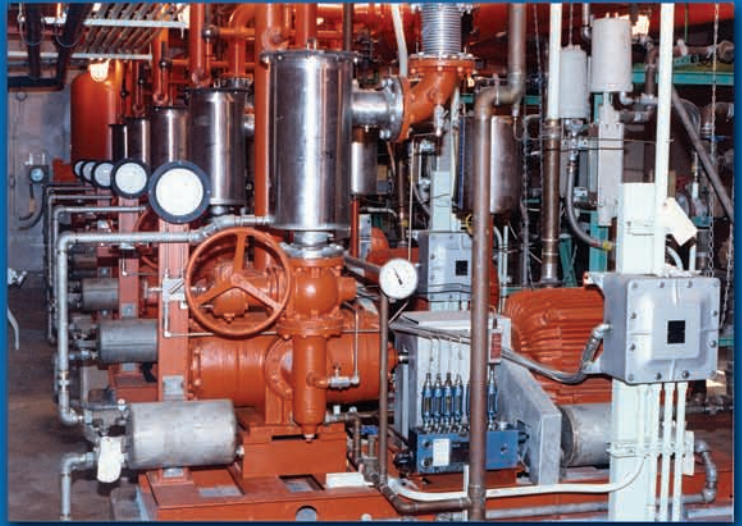
Volume per unit: 220 ACFM/374 m³/hr

Speed: 1,182 rpm

Inlet: 14.3 psia/1.0 bar a

Discharge: 55.0 psia/3.8 bar a

Driver: 60 hp/45 kW electric motors



Compressing landfill gas and feeding an
array of 30kW microturbines

Model: H10GCM

Number of units: 2

Volume per unit: 425 scfm

Inlet: 2.0 psig

Discharge: 80 psig

Driver: 150 hp motor with
jackshaft/v-belt



Wet sour gas (11% H₂S)
boosting at refinery

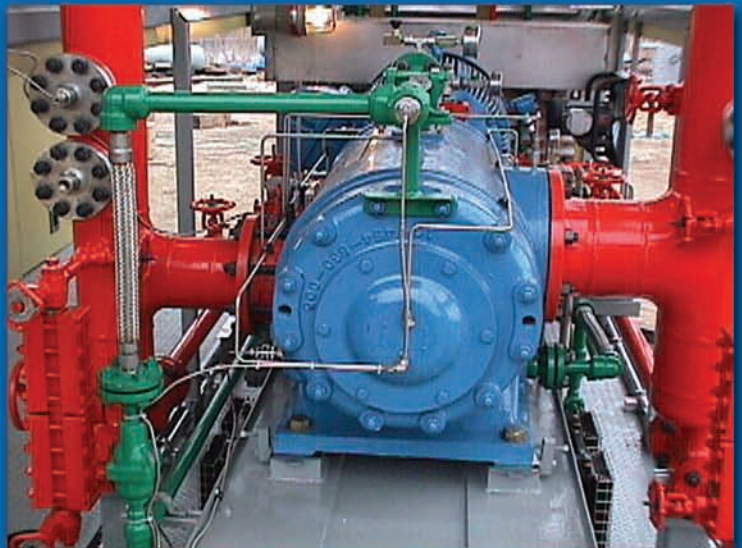
Model: 12S

Number of units: 2

Volume per unit: 912 ACFM/1,550m³/hr

Inlet: 6.0 psig/2.8 bar a

Driver: 125 hp/93 kW electric motors
and variable speed drives



ROTARY COMPRESSORS - TYPICAL PERFORMANCE

PERFORMANCE IS FOR NATURAL GAS (S.G. = .65, k = 1.26) @ P1 = 14.7 psia/1.0 bara, T1 = 60°F/16°C

Model	4CC			5CC			7D			8D			8DE			10G			11S			11L			12S			12L			17S			17L			19S			19L			
	min	max	RPM	min	max	RPM	min	max	RPM	min	max	RPM	min	max	RPM	min	max	RPM	min	max	RPM	min	max	RPM	min	max	RPM	min	max	RPM	min	max	RPM	min	max	RPM	min	max	RPM	min	max	RPM	
20	ACFM	25	61	81	865	1740	2200	690	1160	1465	600	1160	1465	450	1160	1300	400	865	1000	400	865	1000	380	865	920	380	865	920	310	690	760	275	575	640	275	575	640	275	575	640			
	bhp	2	4	5	36	84	111	75	148	198	114	263	343	141	338	446	165	595	674	262	727	862	299	851	986	326	953	1029	368	1078	1159	424	1223	1594	491	1423	1594	629	1669	1895	718	1907	2165
	m ³ /h	2	4	5	27	63	81	71	133	178	77	173	225	77	173	191	77	173	191	77	173	191	77	173	191	77	173	191	62	139	153	53	113	124	47	101	111	37	77	85	41	87	96
	kW	1	3	4	13	31	40	27	54	72	43	100	130	53	124	167	61	246	281	102	312	364	118	343	394	122	360	394	137	303	333	118	249	271	106	287	322	122	342	381	121	324	362
	m ³ /h	43	104	138	61	143	189	128	252	337	194	447	583	240	575	758	281	1012	1146	445	1236	1645	508	1413	1676	554	1620	1741	626	1833	1970	721	2089	2340	835	2419	2710	1069	2837	3222	1221	3242	3681
	kW	1	3	4	1	4	5	3	5	7	5	10	12	7	13	16	7	20	23	12	25	29	13	39	44	16	45	49	19	42	46	24	53	58	24	53	58	28	61	67	31	65	72
25	ACFM	24	59	78	35	82	108	73	145	194	112	257	336	138	331	436	162	583	660	257	713	846	293	815	967	319	934	1004	360	1056	1134	416	1204	1349	482	1396	1564	617	1639	1860	705	1870	2123
	bhp	2	5	6	3	6	7	6	10	12	9	17	22	12	23	29	13	36	41	20	44	51	24	51	59	29	66	70	33	74	81	33	74	81	48	101	112	54	114	127	54	114	127
	m ³ /h	41	100	133	60	139	184	124	247	330	180	437	571	235	563	741	275	991	1122	437	1212	1482	486	1386	1644	542	1588	1707	612	1795	1920	707	2047	2293	819	2313	2659	1099	2786	3142	1199	3179	3609
	kW	1	4	4	1	4	4	4	7	9	7	13	16	9	17	22	10	27	31	15	33	38	18	44	48	18	42	44	22	55	55	30	67	75	36	75	84	40	85	95			
30	ACFM	22	57	75	34	80	106	71	142	189	109	251	328	135	323	425	158	570	646	252	699	829	288	799	948	313	916	984	353	1033	1110	407	1179	1322	473	1369	1534	606	1608	1825	691	1834	2082
	bhp	3	6	8	3	7	9	7	12	15	11	21	27	14	28	35	16	44	49	25	54	62	29	62	72	36	71	75	35	77	84	40	90	99	49	110	121	59	123	136	67	140	155
	m ³ /h	37	97	128	58	136	180	121	241	321	185	427	558	230	549	729	269	969	1098	428	1188	1409	490	1358	1612	532	1557	1673	600	1756	1887	692	2004	2247	804	2327	2668	1030	2734	3103	1175	3110	3539
	kW	2	4	6	2	5	7	5	8	10	8	16	20	10	21	26	12	33	37	19	40	46	22	46	54	22	50	53	26	58	63	30	67	74	37	82	90	44	92	101	50	104	116
35	ACFM	21	55	73	33	73	103	69	139	189	106	246	321	131	315	415	158	558	633	247	686	811	282	783	929	302	897	964	345	1011	1088	399	1155	1294	463	1343	1500	594	1578	1791	677	1798	2041
	bhp	3	7	9	4	8	10	8	14	18	12	25	31	17	32	40	19	51	57	29	63	72	33	72	83	35	79	84	40	92	97	45	105	115	57	127	139	69	144	160	78	163	181
	m ³ /h	36	94	124	56	133	175	117	236	315	180	418	546	223	536	706	264	949	1076	420	1166	1382	479	1331	1579	502	1525	1639	587	1719	1846	678	1964	2204	787	2283	2557	1010	2683	3045	1151	3057	3476
	kW	2	5	7	3	6	7	6	10	13	9	19	23	13	24	30	14	38	43	22	47	54	25	54	62	25	59	63	30	67	72	35	78	86	40	87	95	51	107	119	58	122	137
40	ACFM	20	53	70	32	77	101	67	136	181	103	240	314	128	308	405	152	546	619	242	672	797	276	767	910	300	879	944	338	989	1063	390	1130	1264	454	1316	1475	583	1548	1757	664	1762	2000
	bhp	3	8	10	4	9	11	9	16	20	14	28	36	19	36	46	22	58	65	33	71	83	38	82	94	40	96	104	111	53	119	131	64	143	151	79	146	184	89	186	207		
	m ³ /h	34	90	119	54	131	172	114	231	308	175	408	534	218	524	689	258	928	1052	411	1142	1395	469	1304	1547	510	1494	1605	575	1681	1807	663	1921	2154	772	2237	2508	991	2632	2987	1122	2995	3400
	kW	2	6	7	3	7	8	7	12	15	10	21	27	14	27	34	16	43	48	25	53	61	28	61	70	30	67	72	34	78	83	40	89	98	48	107	117	59	124	137	66	139	154
45	ACFM	18	51	68	31	75	99	65	133	177	100	235	307	125	300	395	148	535	606	237	658	781	270	752	891	294	861	925	330	967	1040	382	1106	1240	445	1290	1446	572	1518	1724	650	1727	1960
	bhp	4	9	11	5	10	13	10	18	23	16	32	40	21	40	51	24	66	74	37	80	93	42	91	106	45	91	106	51	117	124	60	134	147	72	159	175	89	187	208	100	209	232
	m ³ /h	31	87	116	53	128	168	111	226	301	170	400	522	213	510	672	252	910	1030	403	1119	1388	459	1278	1515	500	1444	1573	561	1644	1768	649	1880	2108	757	2193	2458	972	2581	2931	1105	2935	3336
	kW	3	7	8	4	7	10	13	17	22	16	30	38	18	49	55	28	80	89	45	60	69	31	68	79	34	76	81	38	87	92	45	100	110	54	119	130	66	139	155	75	156	173
50	ACFM	17	49	65	30	73	96	64	130	173	98	230	300	122	293	385	155	523	593	232	645	765	265	736	873	288	843	905	323	946	1014	374	1082	1213	437	1264	1417	561	1489	1690	637	1692	1920
	bhp	4	9	12	5	11	14	11	20	25	18	35	44	24	42	53	26	72	80	40	87	101	47	101	117	50	114	121	57	130	138	66	148	162	79	176	193	99	206	230	111	232	258
	m ³ /h	29	83	111	51	124	163	109	221	294	167	391	510	207	498	655	247	898	1008	394	1097	1301	451	1251	1484	490	1433	1539	549	1608	1727	636	1839	2062	743	2149	2409	954	2531	2873	1083	2876	3264
	kW	3	7	9	4	8	10	8	15	19	13	26	33	17	33	42	20	54	60	30	65	75	35	75	87	40	83	90	43	97	102	49	110	121	54	124	144	74	154	172	83	173	192
55	ACFM	16	47	62	29	71	94	62	127	169	95	225	293	119	285	376	142	511	579	227	632	749	259	721	855	282	825	866	31														

Reliability for the Toughest Gas Applications

Industries

Vapor recovery
Oil and gas production
Solid waste facilities
Waste water treatment
Chemical and petrochemical
Coal bed methane
Cogeneration
Refining
Power plants/utilities
Industrial refrigeration
Offshore drilling
Synthetic fuels production

Applications

Hydrocarbon vapors
Natural gas/fuel gas
Coal bed methane
Landfill gas
Digester gas
Acid gas
Sour gas (up to 90% H₂S)
Refrigeration
Condenser vacuum
Wellhead pressure reduction
Process vacuum
Polymerizing gas

The information contained herein is general in nature and is not intended for specific construction, installation or application purposes. Ro-Flo Compressors, LLC reserves the right to make changes in specifications shown herein or add improvements at any time without notice or obligation.



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