DETROITAIR

COMPRESSED AIR INNOVATION THROUGH TECHNOLOGY

PRODUCT CATALOGUE

SCREW COMPRESSORS

SCREW COMPRESSORS

Adopting advanced European inverter technology, Detroit Air has developed a full range of variable speed drive systems. The Variable Speed Drive (VSD) Series features stable running user-centred systems, optimised full-function protection and 3D touchscreen with an intuitive user interface. Savings of up to 30% or more are common with the Detroit Air VSD models. Detroit Air offers a full range of variable speed single- and two-stage machines in both the SR and DB ranges.

VECTOR CONVERSION TECHNOLOGY

Vector Conversion Technology guarantees that the motor delivers the proper torque control whilst maintaining minimum motor temperatures through the intelligent control system. The control system calculates (from the motor's magnetic flux and torque references given by the drive's speed control) the exact corresponding current component references required. It also allows for:

- Full torque to be delivered at any RPM.
- The sudden acceleration and deceleration of the system to meet sudden changes in air delivery demand.
- Minimises temperature, noise, and vibration.
- Extends service life while conserving energy.

Detroit Air has brought this technology to the everyday user of compressed air machinery, promoting both profit generation and environment preservation.

- **SR 220V SERIES**
- **SR / DC ECO SERIES**
- **DB PREMIUM SERIES**
- **DB TANK MOUNTED SERIES**
- **DB FULL FEATURE SERIES**
- **OIL-FREE SERIES**

DB PREMIUM SERIES

A user-focused compressed air solution that delivers excellent value and reliable performance combined with an advanced control system that offers total IT integration and off-site control and monitoring.

FEATURES:

- **Intelligent PLC Control System:** This system allows full customisation of the system air output and delivery by the user. The PLC is able to integrate with various IT solutions offering the user full remote control and system monitoring.
- **Cabinet:** European design and maintenance focused configuration for quick servicing and less downtime. This allows for reduced maintenance costs and less production loss, contributing to a very low total cost of ownership.
- **Visual Warning System:** VWS is designed to provide a visual indication of the machine's operating status in noisy environments. This system uses industrial-grade LED strip lights to show the current status of the machine through various colours. The system is programmed to display various colours for normal, fault, service, and emergency operational status (not available in all markets).
- **Directly Driven Motor Structure:** This allows for the direct transfer of energy to the air-end master rotor, increasing efficiency and reducing vibration. This system is used from 10HP up to 50HP in an 8 or 10 bar pressure output. Larger machines use a directly coupled transfer system. Belt drive configuration is available on request.
- **Air-end:** Long bearing life and energy efficiency are core design elements of the new generation of DB air-ends. The DB series provides rock-solid performance coupled with a very long design life. SKF bearings are used and the RPM of the rotors are kept as low as possible. High-tech production machinery ensures consistent quality and superior air delivery.
- **Electric Motor:** Electrical efficiency and performance stability are key points in the design of the DB range of screw compressors, as is motor protection. All DB screws feature full PLC motor protection which covers low/high voltage, high current, high temperature, open phase, reverse phase and overload situations.

DB PREMIUM SERIES 100HP and up

A performance-focused solution that delivers value, world-class efficiency and energy savings combined with an advanced control system that offers total IT integration. Performance and reliability are the core functions of this range.

FEATURES:

- **Intelligent PLC Control System:** This system allows full customisation of the system air output and delivery by the user. The PLC is able to integrate with various IT solutions offering the user full remote control and system monitoring.
- **Cabinet:** European design and maintenance focused configuration for quick servicing and less downtime. This allows for reduced maintenance costs and less production loss, contributing to a very low total cost of ownership.
- **Visual Warning System:** VWS is designed to provide a visual indication of the machine's operating status in noisy environments. This system uses industrial-grade LED strip lights to show the current status of the machine through various colours. The system is programmed to display various colours for normal, fault, service and emergency operational status.
- **Directly Coupled Motor Structure:** This allows for the direct transfer of energy to the air-end master rotor or gear drive increasing efficiency and reducing vibration.
- **Air-end:** Long bearing life and class-leading efficiency are what the SR range focuses on. The SR Series Air-ends provide rock-solid performance coupled with a very long design life. SKF bearings are used and the RPM of the rotors are kept as low as possible. Rotors are balanced and size-matched to enhance air delivery and reduce vibration and noise to an absolute minimum.
- **Electric Motor:** Electrical efficiency and performance stability are key points in the design of the SR range of screw compressors, as is motor protection. Standard IP54 motors are used. IE3 or IE4 motors can be supplied on request to provide you with the highest possible energy savings. All SR screws feature full PLC motor protection which covers low/high voltage, high current, high temperature, open phase, reverse phase and overload situations.
- **Variable Speed Drive:** VSD-equipped models are available to enhance energy efficiency and reduce total cost of ownership to the bare minimum. World-class brand name inverters are used and offer all the standard protection features one would expect in a premium machine.

SR / DC ECO SERIES

Some clients need a solution to a problem. The Eco Series was designed as a "nothing unnecessary" screw air compressor. This range extends from 10HP right up to 350HP. 10HP to 60HP utilises a standard PLC system that offers easy operation and comprehensive protection. IP54 motors are standard in a VSD direct-drive configuration. The bulk of the cost savings are derived from the air-end and motor structure. All fixed speed models utilise IP23 or IP54 motors, VSD models utilise IP54 PMM motor structures. The design, and thus manufacturing process, have been greatly simplified and meaning lower production costs. Models from 75HP up, utilise a more advanced PLC system depending on the model being fixed or variable speed, single- or two-stage. Models from 75HP up use the same air-end structure as the DB premium models, however, motor efficiency is only offered at an IE3 level.

SR Economy Series Screw Compressors still have the benefits of a customer focused cabinet structure allowing for quick and easy servicing. All parts and spares are well-priced and offer cost-saving benefits to solutions-focused clients. Although designed as a cost-effective compressed air solution, durability is not compromised. The SR Eco Series models can work in the same harsh environments as the SR premium models and provide years of stable service.

Model ranges include fixed and variable speed, single- and two-stage variable speed and tank mounted package units up to 30HP.

SR 220V SERIES

Tank mounted 220V variable speed

ADVANCED ENGINEERING, EXCELLENT UTILITY

Wider Range: Wider range of models offers a small compact solution that competes with a similar sized piston compressor. Motor powers range from 5hp up to 7.5hp and tank sizes from 100L up to 200L.

Premium Duty: Pressure capabilities suitable for working from 8 Bar to 10 Bar max. operating pressures. Powerful, efficient and silent; only delivering the air you need when you need it. A solution that is an excellent alternative to a piston compressor for both home and small business use.

Feature Packed: All models are air-cooled and feature variable speed function, low energy consumption, super silent running, advanced protection features, simple operation, cost-effective service parts, long service life, robust construction with high-quality powder coating and excellent engineering. All models are backed by our solid warranty and support policy.

TECHNICAL DATA	SR-5VSD	SR-6VSD	SR-7.5VSD
NAME	PARAMETERS	PARAMETERS	PARAMETERS
DISPLACEMENT	360LPM / 13CFM	500LPM / 18CFM	700LPM / 25CFM
EXHAUST PRESSURE	0.8 OR 1.0MPA MAX	0.8 OR 1.0MPA MAX	0.8 OR 1.0MPA MAX
MOTOR POWER	3.7KW	4.5KW	5.5KW
VOLTAGE/FREQUENCY	220/50HZ/1-PHASE	220/50HZ/1-PHASE	220/50HZ/1 PHASE
NOISE LEVEL AT 1M	68±3DB(A)	68±3DB(A)	70DB(A)
COOLING METHOD	AIR COOLED	AIR COOLED	AIR COOLED
AMOUNT OF LUBRICANT	2.5L	2.5L	4.5L
OIL CARRYING CAPACITY OF OUTLET GAS	≤3PPM	≤3PPM	≤3PPM
START MODE	SOFT START / VSD	SOFT START / VSD	SOFT START / VSD
OUTLET SIZE	G1/2"	G1/2"	1/2"
VOLUME OF GAS STORAGE TANK	100L	100L	200L
WEIGHT	120KG	120KG	150KG
DIMENSIONS	1020*500*1035MM	1020*500*1035MM	1270*500*1140MM

SR / DC ECO SERIES

Standalone fixed speed

Reliable Machinery from the Experts.

SOLUTIONS FOCUSED ENGINEERING

Compressed air, the life-blood of countless businesses and industries, comes at a price. Specialist Rotary has focused on the needs of clients that demand a simple solution to their compressed air problem. Characterised by simple design and practical engineering, the ECO Series balances an exceptionally cost effective solution with efficiency and quality. Every part of the Eco Series has been carefully considered; all essential components retain high-quality standards of engineering while non-essential parts and components have been engineered to be more cost-effective.

ENGINEERED COSTS SAVINGS

A large portion of ownership costs go towards energy costs and service costs. ECO Series screw compressors have addressed this by offering highly competitive spare and service parts. The cabinet has been engineered for easy access and quick serviceability which reduces labour costs and saves time. Energy costs can be reduced by opting for the Variable Speed Drive models and choosing between IE1 or IE3 rated IP54 PM motor structures. ECO Series can be customised with various combinations of air-ends and motors to suit the needs and budget of the client.

MODEL		SR-10	SR-15	SR-20	SR-30	SR-40	SR-50	SR-60	DC-75	DC-100	DC-125	DC-150	DC-175
MOTOR POWER	kW	7,5	11	15	22	30	37	45	55	75	90	110	132
UNIT OF MEASURE	MPa (m^3 min)												
FAD/ DISCHARGE PRESSURE	0.7 MPa	1,15	1,91	2,52	3,35	5,10	6,20	7,20	9,55	12,25	15,20	20,90	22,28
	0.8 MPa	1,06	1,71	2,27	3,30	5,00	6,05	7,10	9,10	11,90	14,50	19,40	21,40
	1.0 MPa	0,85	1,47	22,50	3,25	4,90	5,90	7,00	8,30	10,60	13,50	17,60	19,30
UNIT OF MEASURE	(PSI/CFM)												
FAD/ DISCHARGE PRESSURE	100	40,42	67,13	88,57	117,74	179,25	217,91	253,06	335,65	430,55	534,23	734,57	783,07
	116	37,26	60,10	79,78	115,98	175,73	212,64	249,54	319,83	418,25	509,63	681,85	752,14
	145	29,87	51,67	790,80	114,23	172,22	207,37	246,03	291,72	372,55	474,48	618,58	678,33
DRIVE TYPE		Direct											
START SYSTEM		Direct on Line	Star-Delta										
OIL TYPE		46# Mineral Oil											
OIL VOLUME	LTRS	6,5	10	10	18	18	22	22	44	44	44	83	83
MOTOR ENERGY RATING (%)		90,1	91,2	91,9	92,7	93,3	93,7	94	94,3	94,7	95	95,2	95,4
MOTOR POWER FACTOR		0,87	0,88	0,89	0,9	0,9	0,9	0,9	0,91	0,91	0,91	0,91	0,92
FULL LOAD CURRENT AT 380V		16,7	23,9	32,0	46,1	62,4	76,7	92,9	112,1	152,2	180,9	219,9	262,8
FULL LOAD CURRENT AT 400V		15,9	22,8	30,4	43,8	59,3	72,8	88,3	106,5	144,6	171,9	208,9	249,6
FULL LOAD CURRENT AT 415V		15,3	21,9	29,3	42,2	57,2	70,2	85,1	102,7	139,4	165,7	201,4	240,6
COOLING METHOD		Air Cooled											
COOLER FAN POWER	kW	0,56	0,65	0,86	0.86*2	0.86*2	0.86*2	1.1*2	1.1*2	4.5*2	4.5*2	4.5*2	4.2*2
COOLER FAN DISPLACEMENT (m^3/min) PER FAN		1800	2600	3600	5000	6500	8000	11000	12000	16000	18000	22000	27000
REQUIRED CIRCUIT BREAKER	Amp	Consult your electrician, take into account cable losses through installation and length											
MINIMUM CABLE CROSS SECTION (mm^2) PER CORE		6	10	10	16	25	25	35	35	50	50	70	95
DIMENSIONS (mm)	L	900	1080	1080	1380	1380	1500	1500	1700	1700	1700	2300	2300
	W	640	750	750	850	850	960	960	1240	1240	1240	1510	1510
	H	850	1020	1020	1190	1190	1345	1345	1600	1600	1600	1840	1840
NET WEIGHT	Kg	205	245	255	405	495	595	620	950	1000	1480	2570	2900
NOISE	dB(A)	60 ± 2			63±2		65±2			68±2			70±2
OUTLET DIAMETER		G3/4"			G1 1/4	G1 1/2		G2			DN65		

SR / DC ECO SERIES

Standalone variable speed

Reliable Machinery from the Experts.

MODEL		SR-10 VSD	SR-15 VSD	SR-20 VSD	SR-30 VSD	SR-40 VSD	SR-50 VSD	SR-60 VSD	DC-75 VSD	DC-100 VSD	DC-125 VSD	DC-150 VSD	DC-175 VSD
MOTOR POWER	kW	7,5	11	15	22	30	37	45	55	75	90	110	132
UNIT OF MEASURE	MPa (m^3 min)												
FAD/ DISCHARGE PRESSURE	0.7 MPa	1,15	1,91	2,52	3,35	5,1	6,2	7,2	9,55	12,25	15,2	20,9	22,28
	0.8 MPa	1,1	1,71	2,3	3,3	5,0	6,1	7,1	9,1	11,9	14,5	19,4	21,4
	1.0 MPa	0,85	1,47	22,5	3,25	4,9	5,9	7	8,3	10,6	13,5	17,6	19,3
UNIT OF MEASURE	(PSI/CFM)												
FAD/ DISCHARGE PRESSURE	100	40,42	67,13	88,57	117,74	179,25	217,91	253,06	335,65	430,55	534,23	734,57	783,07
	116	37,26	60,10	79,78	115,98	175,73	212,64	249,54	319,83	418,25	509,63	681,85	752,14
	145	29,87	51,67	790,80	114,23	172,22	207,37	246,03	291,72	372,55	474,48	618,58	678,33
DRIVE TYPE		Direct											
START SYSTEM		Direct on Line	Star-Delta										
OIL TYPE		46# Mineral Oil											
OIL VOLUME	LTRS	6,5	10	10	18	18	22	22	44	44	44	83	83
MOTOR ENERGY RATING (%)		90,1	91,2	91,9	92,7	93,3	93,7	94,0	94,3	94,7	95,0	95,2	95,4
MOTOR POWER FACTOR		0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9
FULL LOAD CURRENT AT 380V		16,7	23,9	32,0	46,1	62,4	76,7	92,9	112,1	152,2	180,9	219,9	262,8
FULL LOAD CURRENT AT 400V		15,9	22,8	30,4	43,8	59,3	72,8	88,3	106,5	144,6	171,9	208,9	249,6
FULL LOAD CURRENT AT 415V		15,3	21,9	29,3	42,2	57,2	70,2	85,1	102,7	139,4	165,7	201,4	240,6
COOLING METHOD		Air Cooled											
COOLER FAN POWER	kW	0,56	0,65	0,86	0.86*2	0.86*2	0.86*2	1.1*2	1.1*2	4.5*2	4.5*2	4.5*2	4.2*2
COOLER FAN DISPLACEMENT (m^3/min) PER FAN		1800	2600	3600	5000	6500	8000	11000	12000	16000	18000	22000	27000
REQUIRED CIRCUIT BREAKER	Amp	Consult your electrician, take into account cable losses through installation and length											
MINIMUM CABLE CROSS SECTION (mm^2) PER CORE		6	10	10	16	25	25	35	35	50	50	70	95
DIMENSIONS (mm)	L	900	1080	1080	1380	1380	1500	1500	1700	1700	1700	2300	2300
	W	640	750	750	850	850	960	960	1240	1240	1240	1510	1510
	H	850	1020	1020	1190	1190	1345	1345	1600	1600	1600	1840	1840
NET WEIGHT	Kg	215	265	275	435	525	625	645	950	1000	1480	1570	1900
NOISE	dB(A)	60 ± 2			63±2		65±2			68±2			70±2
OUTLET DIAMETER		G3/4"			G1 1/4	G1 1/2		G2			DN65		

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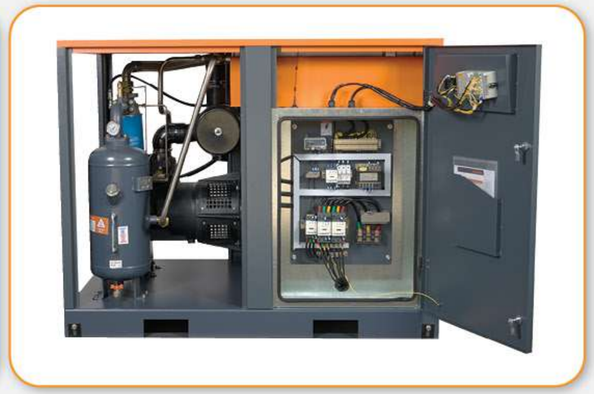
DETROITAIR
COMPRESSED AIR INNOVATION THROUGH TECHNOLOGY

DB PREMIUM SERIES

db standalone

Reliable Machinery from the Experts.



PREMIUM INDUSTRIAL MODELS

DB Series Premium models feature an all-new service focused cabinet design allowing for easy access to all service parts and critical components. Cabinets are simple, yet offer exceptional sound insulation and vibration damping. Electrical panels are well sealed and service spares are quickly accessible and changed. The cabinet footprint is compact allowing for installation in tight spaces. Ambient operating temperatures up to 55°C are within specification.

REMOTE MONITORING

Remote Wi-Fi based mobile phone Web and Android based App monitoring support is a standard feature for all DB models equipped with a Detroit 6070/6080 or 6090 PLC control system. This system supports full data monitoring, stop and start functions and parameter changes all in real-time.

MODEL		DB-10	DB-15	DB-20	DB-30	DB-40	DB-50	DB-60	DB-75	DB-100	DB-125	DB-150	DB-175	DB-200	DB-250	DB-350
MOTOR POWER	kW	7,5	11	15	22	30	37	45	55	75	90	110	132	160	185	250
UNIT OF MEASURE	MPa (m^3/min)	Air-end air delivery measured according to ISO 1217 suction conditions. Based on 0,8MPa pressure. Applicable pressure 0,8MPa														
FAD/ DISCHARGE PRESSURE	0.7 MPa	1.1	1.65	2.2	3.3	5.1	6.5	7.7	9.7	12.5	16.3	21.0	25.2	29.2	32.2	46.5
	0.8 MPa	1.0	1.5	2.0	3.1	4.9	6.2	7.4	9.2	12.3	15.4	20.0	23.2	27.9	30.4	45.5
	1.0 MPa	0.86	1.38	1.82	3.0	4.7	6	7.2	9.0	12.1	14.1	18.7	22.7	25.7	28.8	35.8
UNIT OF MEASURE	(PSI/CFM)															
FAD/ DISCHARGE PRESSURE	100	38.0	58.3	74.0	117	180	230	272	341	441	576	742	890	1031	1137	1642
	116	35.3	52.7	70.6	110	172	220	261	323	434	544	706	819	985	1074	1607
	145	30.4	48.7	64.3	106	116	212	254	319	427	498	660	802	908	1017	1264
DRIVE TYPE		Direct coupled														
START SYSTEM		Star-Delta												Star-Delta (Soft-start as optional)		
OIL TYPE		#46 Shell Carona S3 Semi Synthetic														
OIL VOLUME	LTRS	6	7.6		10	14			38		52	120				
MOTOR ENERGY RATING (%)		90	90.3	90.3	89.9	90.7	91.2	91.7	92.1	92.7	93	93.3	93.5	93.7	94	94
MOTOR SERVICE FACTOR		1.1		1.15		1.2					1.25			1.2		
FULL LOAD CURRENT AT 380V		16.5	23.7	31.1	43	63	78	87	115	157	190	237	277	335	388	524
FULL LOAD CURRENT AT 400V		15.7	22.6	29.7	41	60	74	82	110	150	181	225	263	319	368	498
FULL LOAD CURRENT AT 415V		15.2	21.7	28.6	39	58	71	79	106	114	175	217	254	308	355	480
COOLING METHOD		Air cooled														
FAN MOTOR POWER	WATT	145	190		450	860			860*2		4800		5200		7500*2	
AIRFLOW OF COOLING FAN (M^3/HR) PER FAN		3110	3900		7000	10800			10800*2		18720		21420		34980	
REQUIRED CIRCUIT BREAKER	Amp	CONSULT YOUR ELECTRICIAN, TAKE INTO ACCOUNT CABLE LOSSES THROUGH INSTALLATION AND LENGTH														
MINIMUM CABLE CROSS SECTION (MM^2) PER CORE		6	10		15	25		35	50	70		95				150
DIMENSIONS (mm)	L	850	900	900	1350	1350	1500	1500	1900	1900	2100	2600	2600	2660	2660	2660
	W	630	750	750	895	895	1000	1000	1300	1300	1510	1510	1510	1715	1715	1715
	H	970	1100	1100	1150	1150	1195	1195	1600	1600	1800	1800	1800	2020	2020	2020
NET WEIGHT	Kg	240	300	330	370	495	505	560	950	1000	1480	1570	1900	4300		
NOISE	dB(A)	65 ± 2	66 ± 2		69 ± 2	71 ± 2		72 ± 2	75 ± 2		78		79	70 ± 3	70 ± 4	70 ± 5
OUTLET DIAMETER		G3/4"	G1"			G1 1/2"			G2"			DN65			DN80	

DB PREMIUM SERIES
variable speed drive

Reliable Machinery from the Experts.

ADVANCED ENERGY SAVINGS

Vector Conversion Technology guarantees that the motor delivers the proper torque control whilst maintaining minimum motor temperatures through the intelligent control system. The control system calculates (from the motor's magnetic flux and torque references given by the drive's speed control) the exact corresponding current component references required. It also allows for:

- Full torque to be delivered at any RPM.
- The sudden acceleration and deceleration of the system to meet sudden changes in air delivery demand.
- Minimises temperature, noise, and vibration.
- Extends service life while conserving energy

MODEL		DB-10 VSD	DB-15 VSD	DB-20 VSD	DB-30 VSD	DB-40 VSD	DB-50 VSD	DB-60 VSD	DB-75 VSD	DB-100 VSD	DB-125 VSD	DB-150 VSD	DB-175 VSD	DB-200 VSD	DB-250 VSD	DB-350 VSD
MOTOR POWER	kW	7,5	11	15	22	30	37	45	55	75	90	110	132	160	185	250
UNIT OF MEASURE	MPa (m³/min)	Air-end air delivery measured according to ISO 1217 suction conditions. Based on 0,8MPa pressure. Applicable pressure 0,8MPa														
NOTE		Pressures higher than 1.0MPa/145PSI need to be specified on order														
FAD/ DISCHARGE PRESSURE	0.7 MPa	1	1.6	2.1	3.36	4.72	6.2	7.8	9.66	12.18	15.2	18.06	22.26	25,2	31,29	44,21
	0.8 MPa	1,0	1,5	2,0	3,5	4,7	6,2	7,1	9,1	11,9	14,5	19,4	21,4	24	29,8	42,1
	1.0 MPa	0.86	1.38	1.82	2.92	4.1	5.36	6.4	8.36	10.55	13.47	15.64	19.27	22	28,3	40
	1.2 MPa	0.8	1.99	1.63	2.56	3.67	4.88	5.84	7.6	9.76	11.9	14.4	17.6	20,95	26,95	38,1
UNIT OF MEASURE	(PSI/CFM)															
FAD/ DISCHARGE PRESSURE	100	36	57	74	119	167	219	276	342	431	537	638	786	885,7	1099,74	1552,95
	116	34	54	71	113	159	209	257	324	410	512	608	749	773,23	994,65	1405,87
	145	31	49	65	104	145	190	225	296	373	476	553	681	803,25	997,5	1409,21
	174	29	42	58	91	130	173	206	269	345	420	509	622			
UNIT OF MEASURE	MPa (m³/min)															
FAD/ DISCHARGE PRESSURE - FULL LOAD	0.7 MPa	1	1,6	2,1	3,36	4,72	6,2	7,8	9,66	12,18	15,2	18,06	22,26	25,2	31,29	44,21
	0.8 MPa	0,95	1,52	2	3,2	4,5	5,9	7,3	9,2	11,6	14,5	17,2	21,2	24	29,8	42,1
	1.0 MPa	0,86	1,38	1,82	2,92	4,1	5,36	6,4	8,36	10,55	13,47	15,64	19,27	22	28,3	40
	1.2 MPa	0,8	1,99	1,63	2,56	3,67	4,88	5,84	7,6	9,76	11,9	14,4	17,6	20,95	26,95	38,1
UNIT OF MEASURE	(PSI/CFM)															
FAD/ DISCHARGE PRESSURE - FULL LOAD	100	36	57	74	119	167	219	276	342	431	537	638	786	885,7	1099,74	1552,95
	116	34	54	71	113	159	209	257	324	410	512	608	749	773,23	994,65	1405,87
	145	31	49	65	104	145	190	225	296	373	476	553	681	803,25	997,5	1409,21
	174	29	42	58	91	130	173	206	269	345	420	509	622	765	950	1342,1
DRIVE TYPE		Direct coupled														
START SYSTEM		VSD														
OIL TYPE		#46 Shell Carona S3 Semi Synthetic														
OIL VOLUME	LTRS	6,5	10		18		22		44		52	120			170	
MOTOR ENERGY RATING (%)		92,1	93	93,4	94,4	94,5	94,8	95,1	95,4	95,6	95,8	96	96	96	96	96
MOTOR POWER FACTOR		1,2									1,25			1,2		
FULL LOAD CURRENT AT 380V		15,4	22,4	30,5	44,2	60,2	74	89,8	108,8	148	177,3	216,2	259,5	335	388	524
FULL LOAD CURRENT AT 400V		14,6	21,28	28,9	42	57,2	70,3	85,3	103,4	140,6	168,4	205,39	246,5	319	368	498
FULL LOAD CURRENT AT 415V		14,1	20,5	27,9	40,7	55,1	67,7	82,2	99,6	135,5	162,3	198	237,6	308	355	480
COOLING METHOD		Air cooled														
FAN MOTOR POWER	WATT	145	190		450	860			860*2		4800		5200		7500*2	
COOLER FAN DISPLACEMENT (M³/HR) PER FAN		3110	3900		7000	10800			10800*2		18720		21420		34980	
REQUIRED CIRCUIT BREAKER	Amp	CONSULT YOUR ELECTRICIAN, TAKE INTO ACCOUNT CABLE LOSSES THROUGH INSTALLATION AND LENGTH														
MINIMUM CABLE CROSS SECTION (MM²) PER CORE		6	10			16		25		35	50	70	95			150
DIMENSIONS (mm)	L	850	900	900	1350	1350	1500	1500	1900	1900	2100	2600	2600	2900	2600	3600
	W	630	750	750	895	895	1000	1000	1300	1300	1510	1510	1510	1880	170	2000
	H	970	1100	1100	1150	1150	1195	1195	1600	1600	1800	1800	1800	1945	1900	2100
NET WEIGHT	Kg	205	245	255	850	850	1900	2000	2200	2380	2480	2570	2900	4200	4500	4800
NOISE	dB(A)	60 ± 2			63±2		65±2			78			79	82		
OUTLET DIAMETER		G3/4"			G1 1/4	G1 1/2		G2				DN65		DN80		

DB SERIES
two-stage variable speed drive

Reliable Machinery from the Experts.

ULTIMATE ENERGY SAVINGS

Unbeatable efficiency is the goal of the two-stage air compressor, and quite simply put, a two-stage model can produce up to 15% more air volume than its single-stage equivalent. Packaged together with optional IE3 or IE4 motors, these machines can provide real-world savings of up to 50% on energy costs compared to a standard single-stage model of the same size.

Two-stage air-ends are exceptionally durable and have a very long service life and ultra-high efficiency. Designed for heavy-duty applications, two-stage models offer huge benefits in terms of power consumption, service life, air delivery and total cost of ownership and parts/service costs. For unmatched performance and savings, choose a DB or SR series two-stage screw compressor; they are quite simply the best on offer.

MODEL		DB 302 SVSD	DB 402 SVSD	DB 502 SVSD	DB 602 SVSD	DB 752 SVSD	DB 1002 SVSD	DB 1252 SVSD	DB 1502 SVSD	DB 1752 SVSD	DB 2002 SVSD	DB 2502 SVSD	DB 3502 SVSD
MOTOR POWER	kW	22	30	37	45	55	75	90	110	132	160	185	250
UNIT OF MEASURE	MPa (m³/min)												
FAD/ DISCHARGE PRESSURE	0.7	4.53	5.98	7.24	8.82	10.92	15.24	18.05	22.3	26.24	31.7	41.3	53.1
	0.8	4,3	5.69	6.9	8.39	10.4	14.52	17.27	21.5	25	30.7	37.6	51
	1.0	3.87	5.04	6.21	7.55	9.36	13.06	15.71	19.61	22.72	27.2	34.9	47.4
	1.2						11.8	13.8	17.2	20	24	32.5	44.1
NOTE		Pressure requirements need to be specified on order											
UNIT OF MEASURE	(PSI/CFM)												
FAD/ DISCHARGE PRESSURE	100	160	211	256	312	386	539	638	787	927	1120	1356	1465
	116	152	201	244	297	368	513	610	760	883	1085	1257	1408
	145	137	178	220	267	331	462	555	693	803	961	1120	1260
	174						417	488	608	707	848	989	1134
POWER	kW						100	90	110	132	160	185	200
UNIT OF MEASURE	MPa (m³/min)												
FAD/ DISCHARGE PRESSURE - FULL LOAD	0.7						15,24	18,05	22,3	26,24	31,7	38,4	41,48
	0.8						14,52	17,27	21,5	25	30,7	35,6	39,86
	1.0						13,06	15,71	19,61	22,72	27,2	31,7	35,68
	1.2						11,8	13,8	17,2	20	24	28	32,1
UNIT OF MEASURE	(PSI/CFM)												
FAD/ DISCHARGE PRESSURE - FULL LOAD	100						539	638	787	927	1120	1356	1465
	116						513	610	760	883	1085	1257	1408
	145						462	555	693	803	961	1120	1260
	174						417	488	608	707	848	989	1134
UNIT OF MEASURE	MPa (m³/min)												
FAD/ DISCHARGE PRESSURE - 50% LOAD	0.7						7,62	9,025	11,15	13,12	15,85	19,2	20,74
	0.8						7,26	8,635	10,75	12,5	15,35	17,8	19,93
	1.0						6,53	7,855	9,805	11,36	13,6	15,85	17,84
	1.2						5,9	6,9	8,6	10	12	14	16,05
UNIT OF MEASURE	(PSI/CFM)												
FAD/ DISCHARGE PRESSURE - 50% LOAD	100						269,5	319	393,5	463,5	560	678	732,5
	116						256,5	305	380	441,5	542,5	628,5	704
	145						231	277,5	346,5	401,5	480,5	560	630
	174						208,5	244	304	353,5	424	494,5	567
DRIVE TYPE		Direct											
START SYSTEM		VSD											
OIL TYPE		46# Shell Carona S3 Semi Synthetic											
OIL VOLUME	LTRS							52	120	120	120	170	170
MOTOR ENERGY RATING (%)							94,8	95,1	95,4	95,4	95,6	95,8	95,8
MOTOR POWER FACTOR							1,2	1,25	1,25	1,2	1,2	1,2	1,2
NOTE		Full load current is measured per motor for dual motor systems											
FULL LOAD CURRENT AT 380V							73,1	88,3	107,9	128,9	156,3	182	195,7
FULL LOAD CURRENT AT 400V							69,4	83,9	102,5	122,5	148,4	172,9	185,9
FULL LOAD CURRENT AT 415V							66,9	80,9	98,8	118	143,1	166,7	179,2
COOLING METHOD		Air cooled											
COOLER FAN POWER	WATT						4,8			5,2		7,5*2	
COOLER FAN DISPLACEMENT (M³/HR) PER FAN							18720			21420		34980	
REQUIRED CIRCUIT BREAKER	Amp	CONSULT YOUR ELECTRICIAN, TAKE INTO ACCOUNT CABLE LOSSES THROUGH INSTALLATION AND LENGTH											
MINIMUM CABLE CROSS SECTION (MM²) PER CORE							35	50	70	95	95	95	150
DIMENSIONS (mm)	L	1100	1150	1550	1730	1730	2100	2100	2600	2600	2900	2600	3600
	W	900	950	1150	1300	1300	1510	1510	1510	1510	1880	170	2000
	H	1400	1400	1420	1570	1570	1800	1800	1800	1800	1945	1900	2100
NET WEIGHT	Kg	850	850	1900	2000	2200	2480	2480	2570	2900	4200	4500	4800
NOISE	dB(A)	63±2			65±2			78		79		82	
OUTLET DIAMETER		G1 1/4	G1 1/2		G2					DN65		DN80	

DB PAK SERIES
tank mounted

PREMIUM INDUSTRIAL MODELS

The DB PAK Series of screw compressors feature a small footprint and compact design. The pressure vessel size is limited to allow for installation in a small space. PAK models ofter a great alternative to a large piston machine and are very cost-effective

REMOTE MONITORING

These systems are modular and can be broken down into their two main components of a screw and tank. The screw component is interchangeable with the same size VSD variant of a standalone unit, no modifications needed. This also allows for easier transport of separate components.

MODEL		DB 10 PAK	DB 15 PAK	DB 20 PAK	DB 30 PAK
MOTOR POWER	kW	7,5	11	15	22
UNIT OF MEASURE	MPa (m^3/min)				
MAX FAD/ DISCHARGE PRESSURE	0.7	1	1.6	2.1	3.36
	0.8	0.95	1.52	2	3.2
	1.0	0.86	1.38	1.82	2.92
	1.2	0.8	1.99	1.63	2.56
NOTE		Available in VSD with soft start - Pressures higher than 1.0MPa need to be specified on order			
UNIT OF MEASURE	(PSI/ CFM)				
MAX FAD/ DISCHARGE PRESSURE	100	36	57	74	119
	116	34	54	71	113
	145	31	49	65	104
	174	29	42	58	91
NOTE		Pressures higher than 1.0MPa/145PSI need to be specified on order			
COOLING METHOD		Air Cooled			
DRIVE TYPE		Direct			
START SYSTEM		Direct	Star Delta		
DIMENSIONS (mm)	L	1740	1800	1800	2500
	W	600	700	700	750
	H	1450	1750	1750	1900
NET WEIGHT	Kg	390	580	610	650
NOISE	dB(A)	64 ± 2	64 ± 2	64 ± 2	66 ± 2
OUTLET DIAMETER		G3/4"	G3/4"	G3/4"	G13/4"
PRESSURE VESSEL		270	360	360	500

DB FF SERIES
full feature tank mounted

PREMIUM INDUSTRIAL MODELS

The DB-FF Series screw compressors are an all-in-one solution to compressed air. The dryer, tank, and screw are assembled in a modular and efficient assembly that allows for easy installation and maintenance of the machine. The dryers feature a compact and high-efficiency aluminium plate heat-exchange unit. VSD models are available on request.

MODULAR DESIGN

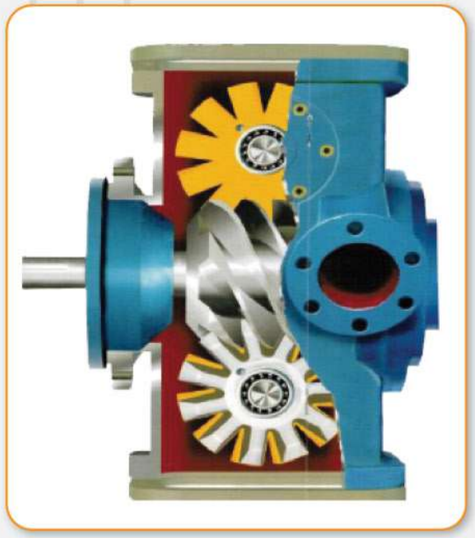
FF models are a cost-effective, all-in-one solution and ofter an alternative to a larger piston model. The dryer component is also a modular component and can be removed and replaced with the standard model of Detroit DT Series dryers.

MODEL		DB 10 FF	DB 15 FF	DB 20 FF	DB 30 FF	AIR DRYER
MOTOR POWER	kW	7,5	11	15	22	0.28/0.38/0.38/0.75
UNIT OF MEASURE	MPa (m^3/min)					
MAX FAD/ DISCHARGE PRESSURE	0.7	1	1.6	2.1	3.36	
	0.8	0.95	1.52	2	3.2	
	1.0	0.86	1.38	1.82	2.92	
	1.2	0.8	1.99	1.63	2.56	
NOTE		Available in VSD with soft start - Pressures higher than 1.0MPa need to be specified on order				
UNIT OF MEASURE	(PSI/ CFM)					
MAX FAD/ DISCHARGE PRESSURE	100	36	57	74	119	
	116	34	54	71	113	
	145	31	49	65	104	
	174	29	42	58	91	
NOTE		Available in VSD with soft start - Pressures higher than 145PSI need to be specified on order				
COOLING METHOD		Air Cooled				
DRIVE TYPE		Direct				
START SYSTEM		Direct	Star Delta			Direct
DIMENSIONS (mm)	L	1740	1800	1800	2500	650/780/750/640
	W	600	700	700	750	700/900/900/520
	H	1450	1750	1750	1900	710/710/760/890
NET WEIGHT	Kg	390	580	610	650	32/32/39/49
NOISE	dB(A)	64 ± 2	64 ± 2	64 ± 2	66 ± 2	
OUTLET DIAMETER		G3/4"	G3/4"	G3/4"	G13/4"	G13/4"
PRESSURE VESSEL		360	500	500	500	

OIL-FREE SCREW COMPRESSORS

GENERAL FEATURES

- Efficient cooling system with low noise fans
- Fully regulated Intake Valve allows for full flow adjustment range for energy savings and stability
- Advanced inverter system for superior energy savings and management
- IE3 or IE4 IP54 rated Permanent Magnet Motor for enhanced energy efficiency
- Robust after-cooler suitable for harsh environments and high ambient temperatures
- Triple stage air filtration system to keep intake air clean
- Air-end with high-volumetric efficiency designed for long bearing life
- Water-Air separator allows for cool operation in hot environments
- Unique air-end internal design reduces bearing load to almost nothing, extending service life



FEATURES AND BENEFITS

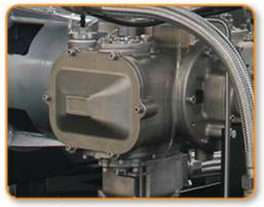
FEATURE	BENEFIT
Dual star-wheel arrangement	Ideal force balance of bearing load. Extended service life
Oil-free system	Water is used to lubricate, cool, seal and reduce noise. Totally environmentally friendly if discharged
Balanced air-end structure	Vibration and harmonic noise is very low
Inverter motor control system	Variable speed allows for production of only air that is needed at any one time, saving energy costs
Intelligent cabinet design	Quick removal of panels allows direct access to service parts. Easy access to all parts of the system
Intelligent PLC	Advanced PLC control allows monitoring and control over mobile APP or a web portal

FLOAT SWITCH

The standard fitted auto-water-level-switch automatically controls the supply of water to the cooling and lubricating systems of the compressor, ensuring system temperature stability.

AIR-END

The single-screw air-end is manufactured using Japanese processing equipment. The rotor is made from stainless steel and forms part of a symmetrical assembly incorporating two polymer star-wheels. The design results in cancellation of radial and axial forces on the bearings and significantly extends bearing life.



DIRECT DRIVE MOTOR STRUCTURE

Specifically adapted for use in oil-free screw compressors, the IP54 Permanent Magnet Motor is directly coupled to maximise power transmission and energy savings. A higher service factor and availability of IE3 or IE4 rated models further enhance reliability and efficiency.

JAPANESE FLOW CONTROL

High-quality Japanese solenoid valves are used throughout the system to ensure excellent flow-control of liquids and ensure long-term trouble-free operation. Downtime is avoided through leak prevention; quality of these components is guaranteed.

ENERGY SAVINGS

Designed in co-operation with Delta, the custom inverter has been specifically engineered to tolerate higher temperatures and harsher environments. Special attention has been given to the engineering of the power inlet circuit enhancing stability in scenarios of power instability. Specifically designed for the matching PM Motor, the inverter perfectly manages the motor and ensures best power savings across the RPM range. Benefiting from the Delta partnership, worldwide support is available on these inverters.

OIL-FREE SCREW COMPRESSORS

MODEL		DT-10WF	DT-15WF	DT-20-WF	DT-30WF	DT-40WF	DT-50WF	DT-60WF	DT-75WF	DT-100WF	DT-125WF	DT-150WF	DT-175WF	DT-220WF	DT-250WF	DT-350WF
MOTOR POWER	kW	7,5	11	15	22	30	37	45	55	75	90	110	132	160	185	250
UNIT OF MEASURE	MPa/(M³/MIN)	Air-end air delivery measured according to ISO 1217 suction conditions; based on 0,8MPa pressure; applicable pressure 0,8MPa														
NOTE		Pressures higher than 1.0MPa/145PSI need to be specified on order														
MAX FAD/ DISCHARGE PRESSURE	0.7MPa	1.3	1.6	2,5	3,7	5,3	6,2	7,5	10	13	15	20	23,5	26	32,5	42
	0.8MPa	1.2	1,5	2,3	3,5	5,0	5,9	7,0	9,5	12,5	13,5	18,5	23,0	24	31	40
	1.0MPa		1,4	2	3	4,3	5	6	7,9	10	12,8	16,5	20	23	28	38
	1.2MPa															
UNIT OF MEASURE	(PSI/CFM)															
MAX FAD/ DISCHARGE PRESSURE	100	46,4	571,4	89,3	132,1	189,3	221,4	267,9	357,1	464,3	535,7	714,3	839,3	928,6	1160,7	1500,0
	116	46,4	53,6	82,1	125,0	178,6	210,7	250,0	339,3	446,4	482,1	660,7	821,4	857,1	1107,1	1428,6
	145		50,0	71,4	107,1	153,6	178,6	214,3	282,1	357,1	457,1	589,3	714,3	821,4	1000,0	1357,1
	174															
UNIT OF MEASURE	MPa/(M³/MIN)															
FAD/ DISCHARGE PRESSURE - FULL LOAD	0.7	1,3	16,0	2,5	3,7	5,3	6,2	7,5	10,0	13,0	15,0	20,0	23,5	26,0	32,5	42,0
	0.8	1,3	1,5	2,3	3,5	5,0	5,9	7,0	9,5	12,5	13,5	18,5	23,0	24,0	31,0	40,0
	1.0		1,4	2,0	3,0	4,3	5,0	6,0	7,9	10,0	12,8	16,5	20,0	23,0	28,0	38,0
	1.2															
UNIT OF MEASURE	(PSI/CFM)															
FAD/ DISCHARGE PRESSURE - FULL LOAD	100	46,4	571,4	89,3	132,1	189,3	221,4	267,9	357,1	464,3	535,7	714,3	839,3	928,6	1160,7	1500,0
	116	46,4	53,6	82,1	125,0	178,6	210,7	250,0	339,3	446,4	482,1	660,7	821,4	857,1	1107,1	1428,6
	145		50,0	71,4	107,1	153,6	178,6	214,3	282,1	357,1	457,1	589,3	714,3	821,4	1000,0	1357,1
	174															
DRIVE TYPE		Direct														
START SYSTEM		VSD														
COOLING METHOD		Water cooled or air cooled														
WATER VOLUME	LTRS															
MOTOR ENERGY RATING	%	92,1	93	93,4	94,4	94,5	94,8	95,1	95,4	95,6	95,8	96	96	96	96	96
MOTOR POWER FACTOR		1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,25	1,25	1,2	1,2	1,2	1,2
FULL LOAD CURRENT AT 380V		15,4	22,4	30,5	44,2	60,2	74	89,8	108,8	148	177,3	216,2	259,5	335	388	524
FULL LOAD CURRENT AT 400V		14,6	21,28	28,9	42	57,2	70,3	85,3	103,4	140,6	168,4	205,39	246,5	319	368	498
FULL LOAD CURRENT AT 415V		14,1	20,5	27,9	40,7	55,1	67,7	82,2	99,6	135,5	162,3	198	237,6	308	355	480
COOLING METHOD																
FAN MOTOR POWER	WATT	121	216	290	450	500	735	780	975	1325	1605	2140	2140	3000	3000	4375
COOLER FAN DISPLACEMENT	(M³/MIN) PER FAN	35	42	55	70	85	105	120	140	180	210	250	250	320	320	465
REQUIRED CIRCUIT BREAKER	AMP	Consult your electrician; take into account cable losses through installation and length														
MINIMUM CABLE CROSS SECTION	MM² PER CORE	6	10	10	10	16	16	25	25	35	50	70	95	95	95	150
DIMENSIONS (MM)	L	1100	1100	1520	1520	1760	1760	1900	1900	1900	2000	2100	2100	2300	2300	3200
	W	845	845	1100	1100	1250	1250	1250	1250	1250	1250	1850	1850	1900	1900	2100
	H	1260	1260	1400	1400	1600	1600	1360	1360	1360	1360	1700	1700	1900	1900	2000
NET WEIGHT	Kg	520	580	620	830	980	1100	1250	1450	1600	2000	2500	2650	2800	3000	4800
NOISE	dB (A)	60 ± 2	60 ± 2	63 ± 2	63±2	70±2	70±2	72±2	72±2	75	75	78	78	80	82	85
OUTLET DIAMETER		G3/4	G3/4	G3/4	G1	G1 1/2	G1 1/2	G1 1/2	G2	G2	G2	DN65	DN65	DN80	DN80	DN100

DetroitAir

COMPRESSED AIR INNOVATION THROUGH TECHNOLOGY

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