

Scroll Type Dry Vacuum Pumps

DIS Series Double wrap

DIS-90 DIS-251 DIS-501

Features

- Double wrap type scroll pump which consists of 1 orbiting and 2 fixed scrolls
- Operation from atmospheric pressure is possible.
- High ultimate pressure level is attainable
- Low vibration and low noise
- Maintenance cycle can be controlled by hour meter.

Applications

- Analytical equipment
- Gas recovery system
- Coating equipment
- Back pump for TMP
- Helium leak detector
- Manufacturing process for semiconductor



DIS-90



DIS-251



DIS-501

Specifications

Model		DIS-90		DIS-251		DIS-501	
	Unit	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Nominal pumping speed	L/min	90	108	250	300	500	600
Ultimate pressure	Pa	5.0		1.6		1.0	
Motor	Single phase	Single phase, 100/115/200/230V, 150W, 4P, Capacitor start & run		Single phase, 100/115/200/230V, 400W, 4P, Capacitor start & run		Single phase, 100/115/200/230V, 600W, 4P, Capacitor start & run	
	Three phase	-		Three phase, 200/208/230/380/400/415/460V, 400W, 4P		Three phase, 200/208/230/380/400/415/460V, 600W, 4P	
Full load current	Single phase	2.6/1.3/1.6 (100/200/230V)	2.1/2.2/1.1/1.1 (100/115/200/230V)	4.8/2.6/2.4 (100/200/230V)	4.8/4.3/2.8/2.4 (100/115/200/230V)	8.5/4.3/3.9 (100/200/230V)	10.0/8.6/4.8/4.0 (100/115/200/230V)
	Three phase	-	-	1.6/0.9/0.9/1.0 (200/380/400/415V)	1.9/1.9/1.8/1.0 (200/208/230/460V)	2.7/1.57/1.57/1.63 (200/380/400/415V)	2.8/2.6/2.5/1.47 (200/208/230/460V)
Weight	Single phase	14.0		25.0		44.0	
	Three phase	-		23.0		38.0	
Inlet, outlet pipe diameter		Inlet pipe KF-25 Outlet pipe KF-16		Inlet pipe KF-25 Outlet pipe KF-16		Inlet pipe KF-40 Outlet pipe KF-25	
Ambient temperature	°C	5 - 40		5 - 40		5 - 40	
Water vapor handling	g/day	≤ 5 (AF open)		≤ 25 (AF open)		≤ 25 (AF open)	
Overall dimensions	Single phase	214(W) × 308(L) × 225(H)		252(W) × 400(L) × 336(H)		290(W) × 443(L) × 397(H)	
	Three phase	-		252(W) × 370(L) × 336(H)		292(W) × 372(L) × 397(H)	

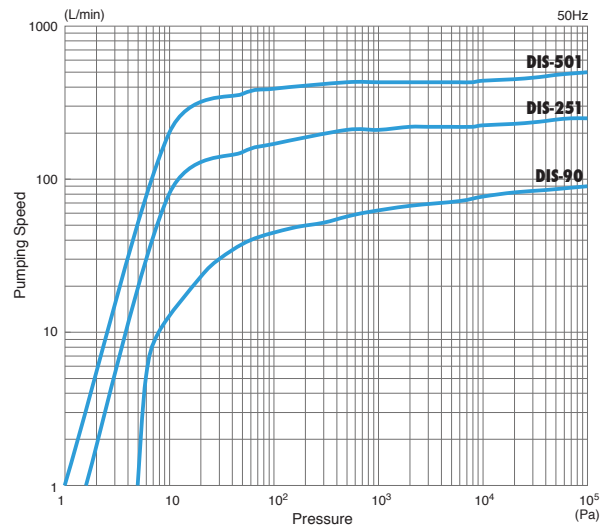
AF = Air flush

Corresponding voltage and Certificate

Model	Voltage	Order Code	CE Marked	cTUV Marked
DIS-90	Single phase, 100-115V	A44620000001	✓	✓
	Single phase, 200-230V		✓	✓
DIS-251	Single phase, 100-115V	A44820000001	✓	✓
	Single phase, 200-230V		✓	✓
	Three phase, 200-230V	A44830000001	✓	✓
Three phase, 380-460V	✓		✓	
DIS-501	Single phase, 100-115V	A44840000001	✓	✓
	Single phase, 200-230V		✓	✓
	Three phase, 200-230V	A44850000001	✓	✓
Three phase, 380-460V	✓		✓	

- : Not Available, ✓ : Available

Pumping speed curves



* Further details can be found on our website. Outside drawing appears in Page 47.

Rocking Piston Type Dry Vacuum Pumps

DOP Series

DOP-40D DOP-80S
DOP-80SP DOP-120S

Features

Rocking type piston vacuum pump creates vacuum by reciprocating motion of cup packing inside the cylinder. Pressurized type is available for DOP-80S which can be used as a small compressor. (DOP-80SP)

Applications

(Vacuum)

- Vacuum chuck, vacuum tweezers
- Absorption and transfer of automatic machines
- Vacuum packing printing machines
- Chip mounter
- Medical equipments
- Oxygen generator

(Pressure)

- Pressure source for automatic machines
- Air pressure unit
- Printing machine
- Otorhinolaryngology, dental unit
- Air pressure meter



DOP-40D



DOP-80S



DOP-80SP



DOP-120S

Specifications

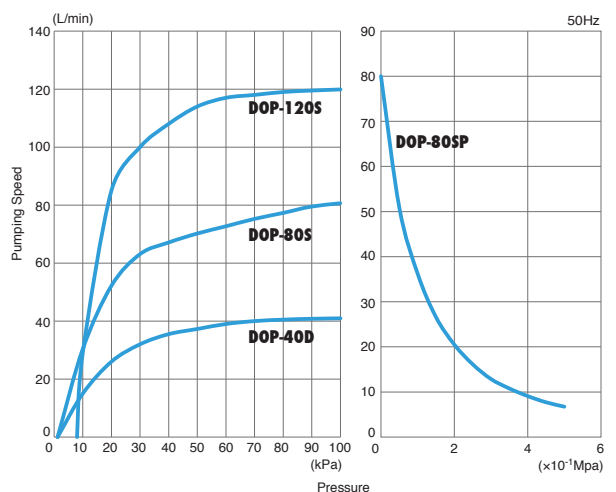
Model	Unit	DOP-40D		DOP-80S		DOP-80SP		DOP-120S	
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Actual pumping speed	L/min	40	44	80	88	80	84	120	140
Ultimate pressure	Pa	1.2 × 10 ³		5.33 × 10 ³		Only for pressure		8.0 × 10 ³	
Maximum pressure	MPa	-		-		0.5		-	
Motor		Single phase, 220V, 210W, 4P, Capacitor run		Single phase, 220V, 210W, 4P, Capacitor run		Single phase, 220V, 300W, 4P, Capacitor run		Three phase, 200 – 220V, 120W, 4P	
Full load current	A	1.7	1.9	1.7	1.9	2.4	2.5	1.4/1.6 (200/220V)	1.4 (200V)
Weight	kg	7.0		7.0		9.0		6.4	
Inlet, outlet pipe diameter	mm	O.D. dia.9 × I.D. dia.5 (Rc 1/4)		O.D. dia.9 × I.D. dia.5 (Rc 1/4)		O.D. dia.9 × I.D. dia.5 (Rc 1/4)		(Rc1/4)	
Ambient temperature	°C	7 – 40		7 – 40		7 – 40		7-40	
Overall dimensions	mm	160(W) × 270(L) × 179(H)		160(W) × 270(L) × 179(H)		168.5(W) × 288(L) × 181(H)		139.5(W) × 255(L) × 167(H)	

Corresponding voltage and Certificate

Model	Voltage	Order Code	CE Marked	TUV Marked	cTUVus Marked	cTUV Marked
DOP-40D	Single phase, 100V	A42340000000	-	-	-	-
	Single phase, 115V	A42340000001	-	-	-	-
	Single phase, 200V	A42340000002	-	-	-	-
	Single phase, 220V	A42340000003	-	-	-	-
DOP-80S	Single phase, 100V	A43268000000	-	-	-	-
	Single phase, 115V	A42360000001	-	-	-	-
	Single phase, 200V	A42360000002	-	-	-	-
	Single phase, 220V	A42360000003	-	-	-	-
DOP-80SP	Single phase, 100V	A42370000003	-	-	-	-
	Single phase, 200V	A42372000000	-	-	-	-
	Single phase, 220V	A42372200000	-	-	-	-
DOP-120S	Three phase, 200–220V	A42372200000	✓	✓	-	✓

- : Not Available, ✓ : Available

Pumping speed curves



* Further details can be found on our website. Outside drawing appears in Page 46 – 47.

Rocking Piston Type Dry Vacuum Pumps

DOP Series

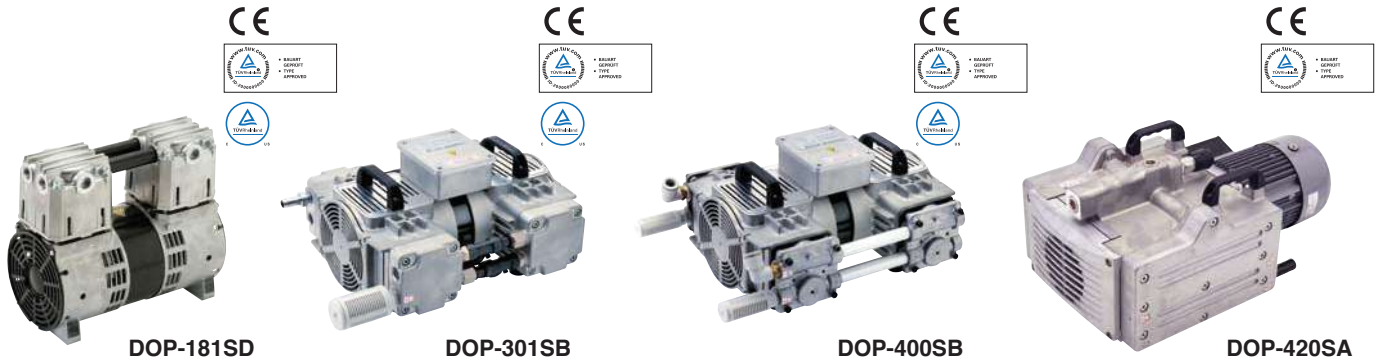
DOP-181S DOP-301SB DOP-400SB DOP-420SA

Features

Rocking type piston vacuum pump creates vacuum by reciprocating motion of cup packing inside the cylinder. Bigger volume of pumping speed with increased number of pump heads.

Applications

- Vacuum chuck, vacuum tweezers
- Semiconductor industry (Handler, Mounter)
- FPD industry (Bonder)
- Printing machine
- Injection molding
- Adsorption and transfer



Specifications

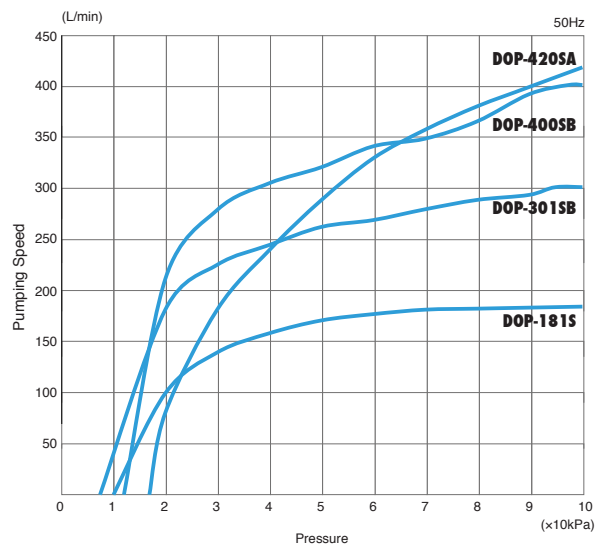
Model	Unit	DOP-181SD		DOP-301SB		DOP-400SB		DOP-420SA	
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Actual pumping speed	L/min	180	200	300	330	400	440	420	460
Ultimate pressure	Pa	10.0 × 10 ³		8.0 × 10 ³		12.0 × 10 ³		17.3 × 10 ³	
Motor		Single phase, 220V, 400W, 4P		Three phase, 200 – 230V, 400W, 4P		Three phase, 200-220V, 400W, 4P		Three phase, 200V, 550W, 4P	
Full load current	A	2.9	2.6	2.1	2.5	2.4	2.8	3.5	3.1
Weight	kg	12.0		20.0		23		33.0	
Inlet, outlet pipe diameter	mm	(Rc 3/8)		O.D. dia.16 × I.D. dia.12 (Rc 1/2)		Application tube outer diameter Φ 16		O.D. dia.26 × I.D. dia.20 (Rc 3/4)	
Ambient temperature	°C	7 – 40		0 – 40		0 – 40		0 – 40	
Overall dimensions	mm	162(W) × 266(L) × 235(H)		315(W) × 443(L) × 231(H)		316(W) × 434(L) × 231(H)		310(W) × 523(L) × 253(H)	

Corresponding voltage and Certificate

Model	Voltage	Order Code	CE Marked	TUV Marked	cTUVus Marked
DOP-181SA	Single phase, 100V	A42002310002	✓	✓	✓
DOP-181SB	Single phase, 115V	A42002320001	✓	✓	✓
DOP-181SC	Single phase, 200V	A42002330001	✓	✓	✓
DOP-181SD	Single phase, 220V	A42002340001	✓	✓	✓
DOP-181SE	Three phase, 200—220V	A42002350002	✓	✓	✓
DOP-301SB	Three phase, 200—230V	A420D0000001	✓	✓	✓
DOP-400SB	Three phase, 200—220V	A420B0000001	✓	✓	✓
DOP-420SA	Three phase, 200V	A42001600000	✓	✓	—

— : Not Available, ✓ : Available

Pumping speed curves



* Further details can be found on our website. Outside drawing appears in Page 47.

Diaphragm Type Dry Vacuum Pumps

DTC Series

DTC-22 DTC-41 DTC-60

Features

- All contacted parts of the gas are made of PTFE and FPM.
- Suitable for pumping out corrosive gas or organic solvent
- High vacuum down to 1000Pa
- Compact

Applications

- Rotary evaporator
- Evaporating system
- Vacuum Concentrator
- Vacuum filtration
- Exhaust of gas-transfer tube
- Vacuum drying systems
- Laser-gas circulation
- Centrifuge
- Medical/Pharmaceutical equipments
- Analytical/scientific equipments



Specifications

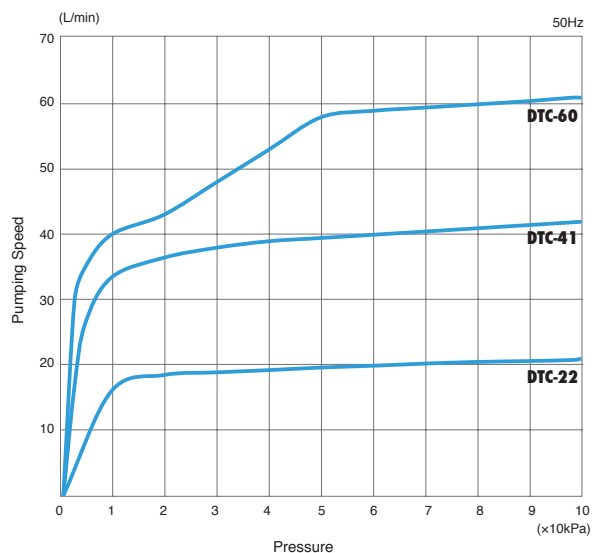
Model	Unit	DTC-22B		DTC-41		DTC-60	
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Actual pumping speed	L/min	20	24	40	46	60	70
Ultimate pressure	Pa	1.0 × 10 ³		1.0 × 10 ³		1.0 × 10 ³	
Motor		Single phase, 220V, 50W, 4P, Capacitor run		Single phase, 220V, 100W, 4P, Capacitor run		Single phase, 220V, 200W, 4P, Capacitor run	
Full load current	A	0.6	0.72	1.1		2.0	2.1
Weight	kg	7.3		10.3		18.0	
Inlet, outlet pipe diameter	mm	O.D. dia.10 × I.D. dia.6 (G1/4)		O.D. dia.10 × I.D. dia.6 (G1/4)		O.D. dia.14 × I.D. dia.9 (G3/8)	
Ambient temperature	°C	0 – 40		0 – 40		0 – 40	
Overall dimensions	mm	142(W) × 288.5(L) × 202(H)		155(W) × 336.5(L) × 217(H)		158(W) × 340(L) × 242(H)	

Corresponding voltage and Certificate

Model	Voltage	Order Code	CE Marked	TUV Marked	cTUVus Marked
DTC-22	Single phase, 100V	A42001700000	—	—	—
DTC-22A	Single phase, 115V	A42001900001	✓	✓	✓
DTC-22	Single phase, 200V	A42001720000	—	—	—
DTC-22B	Single phase, 220V	A42002000001	✓	✓	✓
DTC-22C	Single phase, 230V	A42002100001	✓	✓	✓
DTC-41A	Single phase, 100V	A42730000004	✓	—	—
DTC-41	Single phase, 200V	A42738200000	—	—	—
	Single phase, 220V	A42738300000	—	—	—
DTC-41B	Single phase, 230V (50Hz)	A42730000005	✓	—	—
DTC-60	Single phase, 100V	A42668000000	—	—	—
	Single phase, 115V (60Hz)	A42668100000	—	—	—
	Single phase, 200V	A42668200000	—	—	—
	Single phase, 220V	A42668300000	—	—	—

— : Not Available, ✓ : Available

Pumping speed curves



* Further details can be found on our website. Outside drawing appears in Page 46.

Oil-Sealed Rotary Vacuum Pumps

GCD Series

GCD-051X GCD-136X GCD-201X

Features

GCD Series, direct drive, oil rotary vacuum pump is corrosion resistant for toxic and corrosive gases which is ideal for chemical, pharmaceutical applications.

Surface of gas contacted parts are coated with hard plating. Three different sizes are available from 50L to 200L/min

Applications

- Semiconductor industry
- Chemical industry
- Post chemical-treatment drying
- Pharmaceutical industry



GCD-051X



GCD-136X



GCD-201X

Specifications

Model	Unit	GCD-051X		GCD-136X		GCD-201X	
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
Actual pumping speed	L/min	50	60	135	162	200	240
Ultimate pressure*	Pa	G.V. Closed : 0.67 G.V. Open : 6.7		G.V. Closed : 0.67 G.V. Open : 6.7		G.V. Closed : 0.67 G.V. Open : 6.7	
Motor		Single phase, 220 – 230V, 200W, 4P Split phase starting		Single phase, 220V, 400W, 4P Capacitor start & run		Single phase, 220V, 550W, 4P Capacitor start & run	
Full load current	A	2.4/2.5 (220/230V)	2.0	3.6	2.8	3.6	3.3
Oil capacity	mL	500 – 800		1,000		1,100	
Recommended oil		SO-M		SO-M		SO-M	
Weight	kg	14.1		25.4		29.4	
Inlet port diameter	mm	KF-25		KF-25		KF-25	
Ambient temperature	°C	7 – 40		7 – 40		7 – 40	
Overall dimensions	mm	165.5(W) × 419(L) × 222.7(H)		170(W) × 493(L) × 241.1(H)		170(W) × 541.5(L) × 241.1(H)	

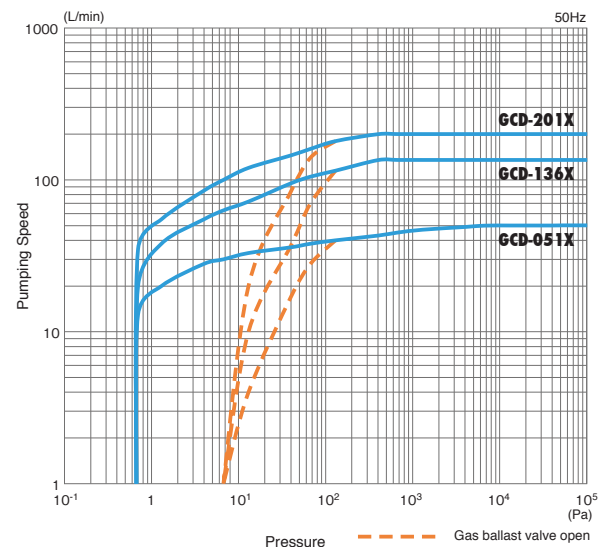
* : Ultimate pressure is measured by Pirani gauge. (In case of macleod gauge, the rate is one digit smaller than this rate.)

Corresponding voltage and Certificate

Model	Voltage	Order Code	CE Marked	TUV Marked	cTUVus Marked
GCD-051X	Single phase, 100V	A41778000001	—	—	—
	Single phase, 200V	A41778100000	—	—	—
	Single phase, 220-230V	A41778200000	—	—	—
GCD-136X	Single phase, 100V	A41780000006	—	—	—
	Single phase, 200V	A41780000001	—	—	—
	Single phase, 220V	A41780000002	—	—	—
	Three phase, 200V	A41780000003	—	—	—
GCD-201X	Single phase, 100V	A41790000001	—	—	—
	Single phase, 200V	A41790000005	—	—	—
	Single phase, 220V	A41790000002	—	—	—
	Three phase, 200V	A41790000007	—	—	—

— : Not Available, ✓ : Available

Pumping speed curves



* Further details can be found on our website. Outside drawing appears in Page 49.

Oil-Sealed Rotary Vacuum Pumps

GHD Series

GHD-031 GHD-100

Features

- Wide range voltage motor and correspond to CE, cTUVus
- Magnet coupling for no oil leakage from shaft seal and realized longer lifetime.
- Integrated check valve below the inlet port for backflow prevention.

Applications

- Helium leak detector
- Analytical equipment (GC/MS, ICP/MS, LC/MS)
- Laboratory experiment



GHD-031B



GHD-100D

Specifications

Model	Unit	GHD-031B		GHD-100D	
		50Hz	60Hz	50Hz	60Hz
Actual pumping speed	L/min	30	36	100	120
Ultimate pressure*	Pa	0.67		G.V. Closed : 0.67 G.V. Open : 6.7	
Motor		Single phase, 200 – 240V, 100W, 2P, Capacitor run		Single phase, 220 – 240V	
Full load current	A	0.94 (200V) 0.84 (240V)	1.02 (200V) 1.03 (240V)	2.5	2.7
Oil capacity	mL	370		1,000	
Recommended oil		R-2		R-2	
Weight	kg	9.3		22.0	
Inlet port diameter	mm	KF-16		KF-25	
Ambient temperature	°C	7 – 40		7 – 40	
Overall dimensions	mm	120(W) × 288.5(L) × 163(H)		150(W) × 413.5(L) × 234.5(H)	

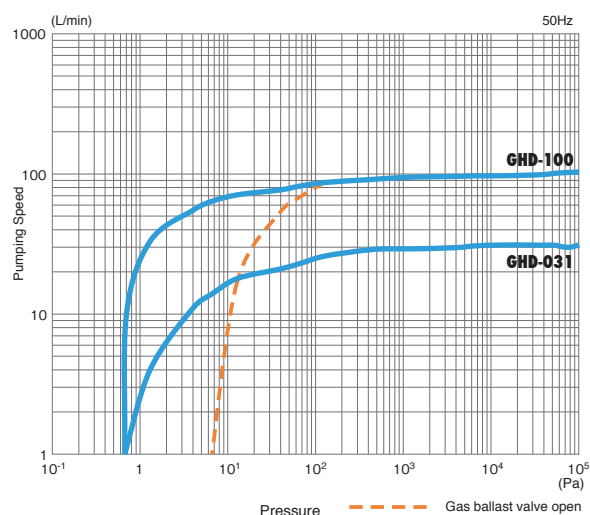
* : Ultimate pressure is measured by Pirani gauge.
(In case of macleod gauge, the rate is one digit smaller than this rate.)

Corresponding voltage and Certificate

Model	Voltage	Order Code	CE Marked	TUV Marked	cTUVus Marked
GHD-031A	Single phase, 100–120V	A41000311002	✓	✓	✓
GHD-031B	Single phase, 200–240V	A41000322002	✓	✓	✓
GHD-100A	Single phase, 100V	A41000354000	✓	✓	✓
GHD-100B	Single phase, 115–120V	A41000365000	✓	✓	✓
GHD-100C	Single phase, 200V	A41000375000	✓	✓	✓
GHD-100D	Single phase, 220–230V	A41000385000	✓	✓	✓

— : Not Available, ✓ : Available

Pumping speed curves



* Further details can be found on our website. Outside drawing appears in Page 49.