Why and How to Sell High-Performance HVAC

Dominick Guarino
National Comfort Institute
domg@ncihvac.com

Dawn Mroczek
GV's Heating and Cooling
dvickers@gvshvac.com

Dawn Mroczek

Comfort Specialist at

GVs Heating & Cooling

Dominick Guarino

President & CEO at

National Comfort Institute, Inc.

Nothing Happens Until Somebody Sells Something

Red Motley - 1960

Nothing Happens Until Somebody Sells Something **Buys**

Dominick Guarino - 2024

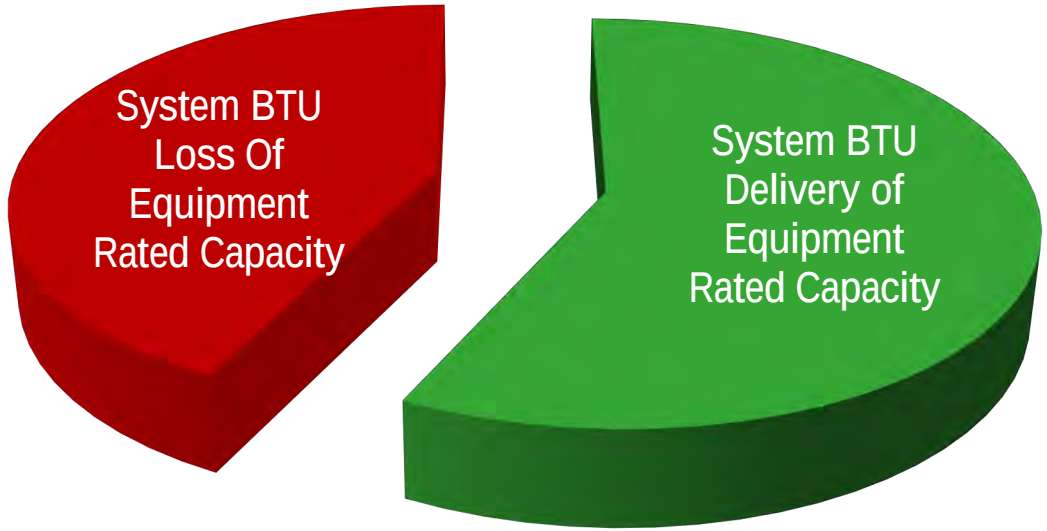
High-Performance HVAC only works if a customer sees it as something they want, need, or must have

What is High-Performance HVAC?

Low-Performance HVAC

Typical U.S. HVAC System Measured Performance

42.7%



57.3%

(Testing conducted in both heating and cooling modes)

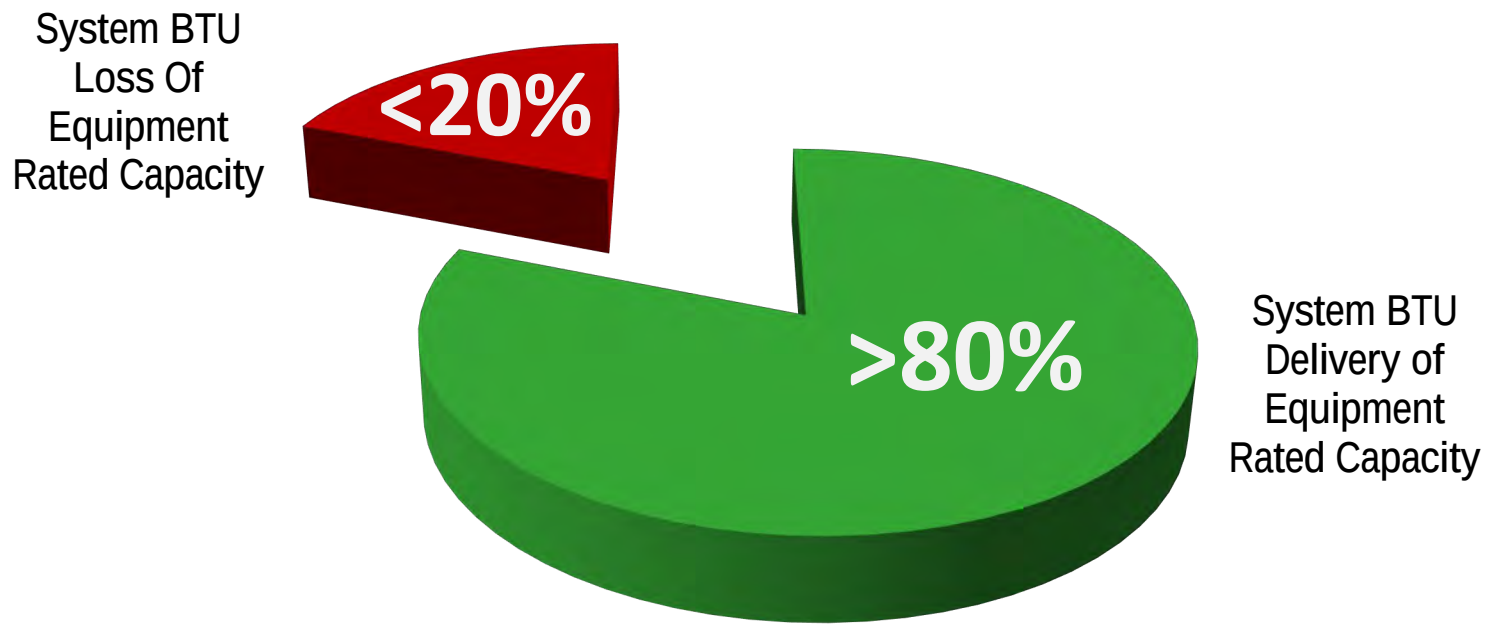
SOURCE: NCI Contractor Testing Results11-05 to 12-23

High-Performance HVAC Focuses on:

- Safety
- Health
- Comfort
- Energy Efficiency

High-Performance HVAC

After System is Upgraded and Tested

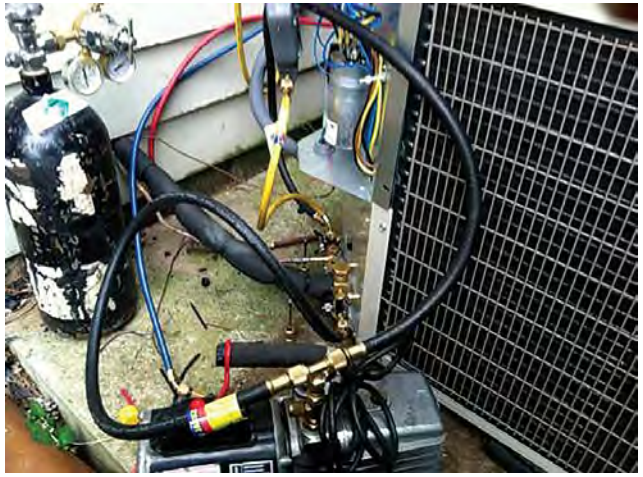


(Testing conducted in both heating and cooling modes)

SOURCE: NCI Contractor Testing Results 11-05 to 12-23





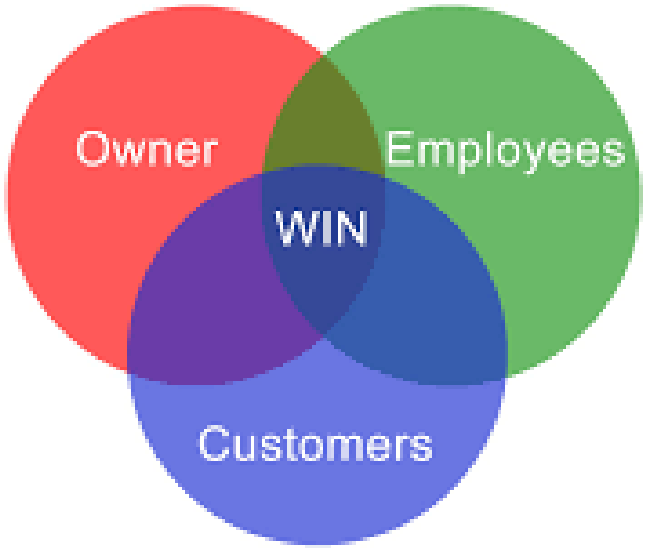


How To Deliver High Performance

- Static Pressures
- Airflow
- BTUs
- Refrigerant Charge
- Combustion Efficiency
- Tested and Balanced

Why Sell High-Performance?

It's A Win-Win All the Way Around



Customers Win

Safer, Healthier

More Comfortable

Reduced Utility bills

More Value for Their Dollar

Equipment will Last Longer

Fewer unexpected breakdowns

Employees Win

Better Career paths

Better Income

Job Stability

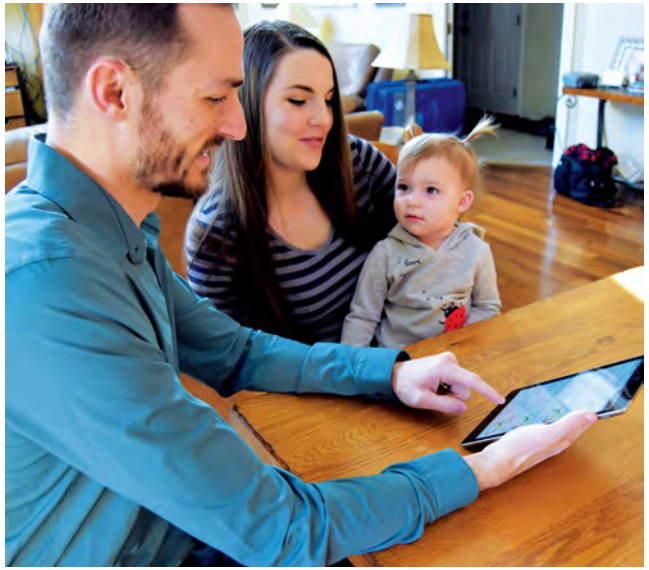
Year-round Work

Personal Growth and Value

Company Wins

- Differentiation
- Higher Profitability
- Better Quality
- Better Trained Employees - Retention
- Fewer Callbacks
- More Referrals
- Year-Round Stability – More Even Cash Flow

Customer Education is the Key



- Teach Your Way Through The Sale Purchase
- Teach Your Customer about their home and system, and how to buy what they want and need

High-Performance Lead Generation & Sources

Three Types of Leads

- Traditional Replacement Leads
- Service-Generated Call Turnovers
- Homeowners Seeking Solutions

Traditional Replacement Leads

- No drastic changes to your current marketing
- Differentiate with words like **“High-Performance,” “Measured Results,”** and **“Proven Results”** into your messaging
- Add questions to your CSRs’ scripts about customer needs and that increase awareness about how you are different
- Mention your techs and comfort specialists are certified to properly test and provide recommendations for improvements based on their needs.
- Document responses for your Comfort Specialist

Service-Generated Leads

- Service Techs test static pressure testing on every service call
- Short customer interview about findings and possible fixes
- Set up follow-up call with Comfort Advisor
- Document what testing was done, conversation, and outcomes
- Documentation sent to Comfort Specialist

Homeowners Seeking Solutions

- Leads from homeowners with often long-standing problems
- Incoming calls may involve detailed conversation
- Ask lots of questions
- Offer testing service for a fee - based on their needs and wants
- Set up appointment for Comfort Advisor and if needed, lead tech to perform testing
- Document the conversation in detail for Comfort Specialist

The High-Performance Sales Call

Why and How to Sell High-Performance HVAC

Three Types of Sales Calls

- Traditional Replacement Leads
- Service-Generated Call Turnovers
- Homeowners Seeking Solutions

Traditional Replacement Leads

- Start with interview – assess needs and wants
- Introduce the concept of testing slowly – your competition likely didn’t
- Bring in only a thermometer and manometer to test temperatures and static pressures
- Interpret airflow from statics or use Truflow tool

Traditional Replacement Leads

- Take the customer with you whenever possible as you test
- Use Airflow Hood if major temperature imbalances
- Educate the homeowner about their system
- At minimum offer an Air Upgrade
- Offer other options based on needs and findings
- Never push – always allow customer to pull – you are there to facilitate the buying process.

Service-Generated Leads

- Start with interview – review finding by your tech and assess needs
- Begin testing fairly quickly. Your existing customer and no competition
- Bring in thermometer and manometer to test temperatures and static pressures.
- Interpret airflow from Static Pressures or use Truflow tool
- Introduce Airflow Hood to diagnose hot and cold rooms

Service-Generated Leads

- Take the customer with you whenever possible as you test
- Educate the homeowner about their system
- Based on findings offer options like an Air Upgrade or System Renovation
- If equipment is older than 10 years or extremely oversized, offer replacement options as well.
- Never push – always allow customer to pull – you are there to facilitate the buying process.

Homeowners Seeking Solutions

- This could be a paid diagnostic call
- Bring in all the tools including manometers, airflow testing and sensible/latent testing tools. Start with interview – review finding by your tech and assess needs and wants
- Bring in thermometer and manometer to test temperatures and static pressures.
- Introduce Airflow Hood to diagnose hot and cold rooms
- Interpret airflow from statics or use Truflow tool

Homeowners Seeking Solutions

- Begin testing quickly. This customer wants answers. Take them with you through the process – Education is key here
- Teach the homeowner about their system and why the issues
- Offer options including Air Upgrades and System Renovations
- If equipment is older than 10 years or extremely oversized, offer replacement options as well.
- Never push – always allow customer to pull – you are there to facilitate the buying process.

Certified
Duct System Optimization Specialist
DAWN MROCZEK
Has successfully completed the required training and passed the written exam by the
National Comfort Institute, Inc.
to perform HVAC air distribution system performance and remediation according to NCI practical standards and procedures.
Certified Since
September 11, 2019
as administered and recognized by
National Comfort Institute, Inc.
Rob Falke, President

Certified
Commercial Air Balancer
DAWN MROCZEK
Has successfully completed the required training and passed the written exam by the
National Comfort Institute, Inc.
to perform HVAC commercial system balancing up to 20 tons according to NCI practical standards and procedures.
Certified Since
December 14, 2017
as administered and recognized by
National Comfort Institute, Inc.
Rob Falke, President

Air Balance Report Certification

DATE: **3/17/2021**

PROJECT

Justin Silver
951 Huckleberry Lane
Glenview IL 60025

SYSTEM
2nd Floor

TECHNICIAN
DM

The contents of the report include

- Air Balance Report Certification
- NCI Air Balance Certification
- Field Report

Test data taken from the systems included in this project are enclosed in this report. The test data reflects the operating condition of the system at the time the tests were taken. Any variances from the design quantities which exceed tolerances are noted throughout this report.

I hereby certify that the data presented in this report is an exact record of the system performance and was obtained in accordance with the National Comfort Institute Practical Standards for Testing, Adjusting and Balancing Residential Heating and Cooling Systems.

Dawn Mroczek

Dawn Mroczek
GVS Heating & Cooling

NCI Certification Number 17-351-07
Expiration Date December 14, 2021

National Comfort Institute NCI Certified 17-351-07 Expires: 12/14/21 Residential

GVs Heating and Cooling, INC
1822 Johns Drive, Glenview IL 60025
PHONE (847) 729-9190
www.gvshvac.com

	Project:		Project Number:		
	Location:		Owner:		
	Mechanical Contractor: GVs Heating and Cooling		Date:		
	Certification # 17-351-07		Certified TAB Technician: D. Mroczek		
Notes & Remarks					
ITEM No.	**SYSTEM**	**DATE**	**ISSUE**	**STATUS**	**CONTRACTOR REMARKS**
1	2nd Floor	3/17/2021	Found Supply Plenum restricting air flow	OPEN	Found Supply Plenum only 7" and the supply trunks off the coil and plenum. Restrict too much airflow Item #1
2			Found Return Air drop restrictive and also found filter open to attic.	OPEN	Found restrictive fitting for the return. Recommend installing return plenum with filter that has a closed cabinet to attic space. Item #2
3			Found Coil to be only an upflow coil	OPEN	Due to the Supply plenum and return being restrictive. Recommend installing furnace horizontally. The existing coil cannot be installed horizontally. Recommend installing new coil. Item #3
4			Found Supply Trunk undersized for the east side of the house.	OPEN	Recommend installing a larger duct for the east side of the house: Master / Storage room / Playroom Item #4
5			Based off the Manual J for the storage room and playroom the duct work is undersized.	OPEN	Recommend installing properly sized supplies in storage room and playroom. Also recommend installing return in storage room. Item #5
6			Found Blower wheel dirty	Open	Anytime blower wheel is dirty will decrease the efficiency of the system. We will clean blower wheel to make sure system is running at its highest efficiency as possible. Item #6
7			Found Furnace short cycling. Going off on limit due to low amount of airflow and restrictive supply/return. Furnace is rated at 35-65 degrees (Temperatures rise = supply temp – return temp)	Open	Measured Temperatures: Supply 148 Return – 79 Temperatures rise – 69 degrees Item #7
			Found Return Elbow broken off and not connected in attic	Open	
			Plumbing Venting elbow was unhooked – this possibly caused water staining the ceiling in the bathroom	OPEN	
			Customer stated they smelled gas at basement furnace. We also inspected second floor as well. Found gas leaks present at both nipples going into gas valve at first floor furnace. Found leak at second floor union. Found union cross threaded resulting in leak. All leaks were identified with ultrasonic leak detector.	Open	

	Project:	Justin Silver			
	Location:	951 Huckleberry Lane, Glenview			
	HVAC Contractor:	GVs Heating & Cooling, INC			
	Certifiend Number:	17-351-07 / 19-267-06			

Test and Balance Deficiency Report - Corresponding Pictures

ITEM #1
Restrictive Supply Plenum

ITEM#2
Restrictive Return Air Drop

ITEM#3
Evaporator Coil

ITEM #4
Supply Trunk undersized

ITEM #5
Undersized ducts
Toy room / Storage Room

ITEM #6
Blower Wheel dirty

	Project:	Justin Silver			
	Location:	951 Huckleberry Lane, Glenview			
	HVAC Contractor:	GVs Heating & Cooling, INC			
	Certifiend Number:	17-351-07 / 19-267-06			

Test and Balance Deficiency Report - Corresponding Pictures

ITEM#7
High Temperature Rise

ComfortMaxx VERIFY

Heating System Verify Test
Visual Report (Test Out)

Customer Details	Contractor Details
Justin Silver Glenview, IL 60025 773-957-6841	**GV's Heating & Cooling Inc.** 1822 Johns Drive Glenview, IL 60025 847-729-9190

Location	Address	Main Contact
"Glenview" (Residential)	951 Huckleberry Lane Glenview, IL 60025	

Tested by	System	Area Served
Dawn Vickers on **Sep 10, 2021 1:55 PM** Test ID: T-8438-10881	**2nd Floor** Split Gas-Electric with No Outside Air	2nd Floor 2230 Sq. Ft.

Performance Results

Heating Equipment Performance Score

Your heating equipment is designed by the manufacturer to deliver a specific amount of warm air into your home. The Heating Equipment Performance Score is the percentage of the measured heating capacity delivered into your home compared to the equipment rated heating capacity. The ideal score is 100%, but a score of 90% or better is excellent compared to most installed equipment.

100% Efficiency

Heating System Performance Score

A heating system is made up of the heating equipment in and a duct system that delivers warm air from the equipment into your home. The ideal Heating System Performance Score is 100%. A lower score reveals unseen problems in your heating system that increase utility bills and reduce your comfort. A System Performance Score of 80% or better is excellent compared to most installed systems.

93% Efficiency

Total Static Pressure

Entering Pressure	Exiting Pressure	Total Static Pressure	Rated Total Static Pressure	Percent of Rated
0.2 in. w.c.	0.35 in. w.c.	0.55 in. w.c.	0.5 in. w.c.	110%

High static pressure can best be compared to high blood pressure. Just as high blood pressure causes deteriorates health and shortens life, high static pressure has the same effect on a heating system. High pressure is the most common reason for low airflow, which can reduce system performance and lead to hot and cold spots in your home.

Air Filter

Entering Pressure	Exiting Pressure	Pressure Drop	Pressure Budget	Percent of Rated
0.1 in. w.c.	0.2 in. w.c.	0.1 in. w.c.	0.1 in. w.c.	100%

Air filters are intended to clean the air in a heating system. However, when air filters are too restrictive, system performance can be substantially reduced. This percentage represents a snapshot of the current performance of the air filter. Percentages above 100% indicate the air filter is restricting airflow.

Supply Duct System Pressure

Supply Duct Pressure	Pressure Budget	Percent of Budget
0.05 in. w.c.	0.1 in. w.c.	50%

Conditioned air is supplied through a duct system into each room of your home. Improperly sized or restricted supply ducts directly affect comfort of individual rooms and heating equipment performance. This percentage represents a snapshot of the current performance of your supply ducts. Percentages above 100% may indicate undersized or restrictive supply ducts.

Return Duct System Pressure

Return Duct Pressure	Pressure Budget	Percent of Budget
0.1 in. w.c.	0.1 in. w.c.	100%

Your return duct system brings back the air in your home to be heated again. 90% of homes require return duct modifications to improve comfort and heating equipment performance. This percentage represents a snapshot of the current performance of your return ducts. Percentages above 100% may indicate undersized or restrictive return ducts.

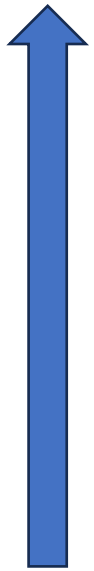
Fan Airflow

Required Fan Airflow	Measured Fan Airflow	Percent of Required Fan Airflow
1200 CFM	1139 CFM	95%

The system's fan moves heated air from your equipment through your duct system. To achieve the comfort and efficiency you expect and deserve, fan airflow should be 90% or higher. Low fan airflow is a leading cause of poor system performance, discomfort, high utility bills, and premature equipment failure. High static pressure is the most common cause of low fan airflow.

Content and illustrations

Next Steps



Training Path to High-Performance

- Air Balancing
- Residential System Performance
- CO & Combustion Testing
- Duct System Optimization
- Airflow Testing & Diagnostics

Come See Us at Booth S-9043!

800-633-7058

www.nationalcomfortinstitute.com

Questions?