

Compression Training System

— for all brass instruments —

Silently exercise the muscles of the embouchure to
build power, range, and endurance.



Instructional Videos



Compression Trainer

The Compression Training System

Thank you for purchasing the Compression Training System. The following is a brief explanation of how to assemble the Compression Training System and the correct form to use while exercising.

Your Compression Training System contains the following parts:

- CTS Meter
- Four Rubber Tubes
- Aperture Tool
- Pencil Exercise Attachment
- Mouthpiece Clamp (*for optional mounting of the CTS to your instrument*)

CTS Assembly

1. Connect the **CTS Meter** to a **Rubber Tube**
2. Insert the **Rubber Tube's** open end into your **mouthpiece**

Learn the Correct Form

- ★ **Do not blow air from your lungs** through your mouthpiece.
 - Once your mouthpiece is connected to the tube and the meter, we have a closed system. “Blowing” into the mouthpiece is correct for normal playing but incorrect for exercising on the Compression Training System.
- ★ **Squeeze the air forward**, as if you were spitting water from the mouth without blowing from the lungs
 - The correct form entails trapping compressed air from within your oral cavity and squeezing the air forward as you move the indicator needle up and down. As you squeeze the air forward, the tongue will drive the air like the motion that we use to spurt or spit water from the mouth without blowing from the lungs. This is like using the tongue to spit water through your top teeth only the tongue is pushing the air from the back of your mouth. **No air is to come from the lungs!**
- ★ **Watch the video** in the Members' Area at www.TrumpetLegacy.com
 - Your purchase includes a membership to the videos, tutorials, and full CTS Instruction Book.
- ★ **The Compression Training System is a trapped system.**
 - Just as in circular breathing, the air is driven forward by the compression of the muscles of the oral cavity

Establish your Baseline

Once you learn the correct form of “spurting the air” we are ready to exercise.

- **Warm Up**
 - Connect your mouthpiece to the extra Rubber Tube and buzz for a couple of minutes.
- **Find Your Max Compression**
 - Test your highest level of compression and log that number.

During normal CTS workouts, you should not squeeze to your highest level of compression. Instead, use only a percentage of your maximum level. This is to ensure that you do not injure your muscle fibers. For example, If you can generate 100 Torrs, then your maximum repetitions or lifts will be 85 Torrs.

Using the correct form, you can use the format below to employ the scientific muscle-building techniques of “Progressive Overload Training.” The following represents an aggressively advanced routine of muscle building which will take a few weeks to become comfortable. This is Boot Camp for the brass embouchure.

Know Your Target Ranges

When performing your Compression Training System Workouts, you will be targeting various compression levels based on a percentage of your Maximum Compression.

Max	85%	70%	50%	30%
80	68	56	40	24
90	77	63	45	27
100	85	70	50	30
110	94	77	55	33
120	102	84	60	36
130	111	91	65	39
140	119	98	70	42
150	128	105	75	45
160	136	112	80	48
170	145	119	85	51
180	153	126	90	54
190	162	133	95	57
200	170	140	100	60
210	179	147	105	63
220	187	154	110	66
230	196	161	115	69
240	204	168	120	72
250	213	175	125	75
260	221	182	130	78
270	230	189	135	81
280	238	196	140	84
290	247	203	145	87
300	255	210	150	90

Compression Training System - 7 Day Program

The following is a seven-day program of "Progressive Overload Training." It is important to note; at the beginning of each week, you will need to recalculate your maximum compression target level.

Day One

You must warm- up either on the rubber tube or on your instrument prior to exercising. During your first week accomplish **4** heavy lifting sets at **85%** of your maximum weight load. Each set should contain **8 to 10 slow repetitions** (each movement of the needle from zero to your target level and back down counts as one repetition). Rest at least 3 minutes between sets and buzz on the rubber tube or practice your instrument lightly for 3 minutes in between sets. Choose a repertoire that is light and flexible. I recommend *Clarke's Technical Studies* played softly. At the end of your 4 sets, accomplish one long tone style exercise while unfurling. Maintain **30%** of your maximum weight load. Keep the needle steady at one level until you reach fatigue. After you have rested, do one final set to cover flexibility. Rapidly move the needle between zero and **30%** of your maximum compression level. Continue the rapid movement until you are fatigued. Buzz on the rubber tube in between each exercise.

- **warm-up - buzz on tube or light playing**
- **heavy set - 85% of MAX 8-10 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **heavy set - 85% of MAX 8-10 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **heavy set - 85% of MAX 8-10 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **heavy set - 85% of MAX 8-10 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **unfurled low compression - 30% of MAX until fatigued**
- **3 minute rest, buzz on tube, or light playing**
- **rapid compressions - 0-30% of MAX until fatigued**

Day Two

Start by warming up using the rubber tube or on your instrument prior to using the CTS. Accomplish **4** light lifting sets at **50%** of our maximum weight load doing **15 to 20 repetitions** (more if needed to reach your maximum level of fatigue). Rest for three minutes then practice lightly for at least three minutes in between sets, either on the rubber tube or on your instrument. At the end of your exercise, accomplish one long tone style exercise while unfurling. Maintain **30%** of your maximum weight load. Keep the needle steady at one level until you reach fatigue. After you have rested, do one final set to cover flexibility. Rapidly move the needle between zero and **30%** of your maximum Compression level. Continue the rapid movement until you are fatigued. Buzz on the rubber tube in between each exercise.

- **warm-up - buzz on tube or light playing**
- **light set - 50% of MAX 15-20 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **light set - 50% of MAX 15-20 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **light set - 50% of MAX 15-20 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **light set - 50% of MAX 15-20 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **unfurled low compression - 30% of MAX until fatigued**
- **3 minute rest, buzz on tube, or light playing**
- **rapid compressions - 0-30% of MAX until fatigued**

Day Three

Start by warming up using the rubber tube or on your instrument prior to using the CTS. Accomplish **3** medium lifting sets at **70%** of our maximum weight load doing **8 to 12 repetitions**. Rest three minutes. Then practice lightly on the rubber tube or on your Instruments for at least three minutes in between sets. At the end of your three sets, accomplish one long tone style exercise while unfurling. Maintain **30%** of your maximum weight load. Keep the needle steady at one level until you reach fatigue. After you have rested do one final set to cover flexibility. Rapidly move the needle between zero and **30%** of your maximum Compression level. Continue the rapid movement until you are fatigued. Buzz on the rubber tube in between each exercise.

- **warm-up - buzz on tube or light playing**
- **medium set - 70% of MAX 8-12 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **medium set - 70% of MAX 8-12 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **medium set - 70% of MAX 8-12 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **unfurled low compression - 30% of MAX until fatigued**
- **3 minute rest, buzz on tube, or light playing**
- **rapid compressions - 0-30% of MAX until fatigued**

Day Four

Start by warming up using the rubber tube or on your instrument prior to using the CTS. Accomplish **3** heavy lifting sets (adding a set per week) at **85 %** of our maximum weight load doing **8 to 10 slow repetitions**. Just as before, rest for three minutes then play or buzz for three minutes. At the end of your exercise session, accomplish one long tone style exercise while unfurling. Maintain **30%** of your maximum weight load. Keep the needle steady at one level until you reach fatigue. After you have rested do one final set to cover flexibility. Rapidly move the needle between zero and **30%** of your maximum Compression level. Continue the rapid movement until you are fatigued. Buzz on the rubber tube in between each exercise.

- **warm-up - buzz on tube or light playing**
- **heavy set - 85% of MAX 8-10 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **heavy set - 85% of MAX 8-10 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **heavy set - 85% of MAX 8-10 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **unfurled low compression - 30% of MAX until fatigued**
- **3 minute rest, buzz on tube, or light playing**
- **rapid compressions - 0-30% of MAX until fatigued**

Day Five

Start by warming up using the rubber tube or on your instrument prior to using the CTS. Accomplish **4** light lifting sets at **50%** of our maximum weight load doing **15 to 20 repetitions**. Rest three minutes after each set. Play or buzz for three minutes in between each set. At the end of your exercise, accomplish one long tone style exercise while unfurling. Maintain **30%** of your maximum weight load. Keep the needle steady at one level until you reach fatigue. After you have rested do one final set to cover flexibility. Rapidly move the needle between zero and **30%** of your maximum Compression level. Continue the rapid movement until you are fatigued. Buzz on the rubber tube in between each exercise.

- **warm-up - buzz on tube or light playing**
- **light set - 50% of MAX 15-20 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **light set - 50% of MAX 15-20 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **light set - 50% of MAX 15-20 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **light set - 50% of MAX 15-20 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **unfurled low compression - 30% of MAX until fatigued**
- **3 minute rest, buzz on tube, or light playing**
- **rapid compressions - 0-30% of MAX until fatigued**

Day Six

Start by warming up using the rubber tube or on your instrument prior to using the CTS. Accomplish **3** medium lifting sets at **70%** of our maximum weight load doing **8 to 12 repetitions**. Rest for three minutes then play or buzz for three minutes in between each set. At the end of your exercise, accomplish one long tone style exercise while unfurling. Maintain **30%** of your maximum weight load. Keep the needle steady at one level until you reach fatigue. After you have rested do one final set to cover flexibility. Rapidly move the needle between zero and **30%** of your maximum Compression level. Continue the rapid movement until you are fatigued. Buzz on the rubber tube in between each exercise.

- **warm-up - buzz on tube or light playing**
- **medium set - 70% of MAX 8-12 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **medium set - 70% of MAX 8-12 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **medium set - 70% of MAX 8-12 repetitions**
- **3 minute rest, buzz on tube, or light playing**
- **unfurled low compression - 30% of MAX until fatigued**
- **3 minute rest, buzz on tube, or light playing**
- **rapid compressions - 0-30% of MAX until fatigued**

On the Seventh Day We Rest

After you have rested a complete day without playing your instrument or exercising with *The Compression Trainer*, you should re-test your maximum level of compression. But before you do so, please warm-up to prepare your muscles for the rigors of exercise.

After retesting and finding your new maximum level, use the percentages listed to find the correct target levels to use during the next week of exercise. Repeat the previous week's format each week, recalculating using your new maximum level of compression.

You will be able to watch your growth as your maximum level of compression grows steadily higher on a weekly basis. It may take you two full weeks to experience gains on your maximum compression. Be patient and growth will occur. The added strength will become apparent in your performance on your chosen brass instrument. As you gain strength with the program, you may wish to add exercise sets on your heavy lifting days.

The adage "less is more" certainly applies to this system of exercise. I exercise 6 days per week, provided that I do not have a performance to play. Just as a football player would not go to the gym on game day, be careful. You need to give yourself ample rest in order to build the muscle fibers that you have just torn down by exercising at a high compression weight load before performing.

During the first couple of weeks of the program, you may not want to exercise at your maximum level the day before a performance. At any time during the suggested routines err on the side of caution. You may need more rest than you think in order to fully recover.

The Pencil and Aperture Tool Attachments

The Aperture Tool

I use these attachments after my routine as listed above. Attach the latex tubes to the Compression Training System.

First, use the aperture tool. Place the button between your teeth and your lips and compress holding the air inside of your mouth. Try not to allow the air to escape however, a little leakage is ok.

You will not be able to generate high levels of compression with the attachments. They are meant to work at low compression. Hold compression between 20 and 60 Torrs until you experience a healthy muscular burn. Rest and repeat using your intuition as a guide. you may maintain one level of move between lower and higher levels of compression. I prefer movement in the muscle fibers.

The Pencil Attachment

This idea comes to us from the genius of Roy Stevens. Place the pencil attachment between your teeth. Close your lips by saying "M." Compress and hold until you reach fatigue. You may move between 20 and 60 Torrs to allow the muscle fibers to stretch. This will produce a warm and flexible feeling in your corner muscles, Use your intuition to know how much exercise to accomplish. Keep in mind that these low compression exercises will not overtax your muscles.

The Intuitive Approach

Both the systematic approach of “Progressive Overload” and the intuitive approach work well if you know what you are doing. At some level of our development, we learn that only we as individuals know what our embouchures need in order to maintain and grow.

Prior to the advent of *The Compression Training System*, all we had was only the intuitive approach. Using intuition and following well-coached routines has produced many virtuosos.

After years of maintaining our embouchures at a professional level, we learn what it takes to maintain our skills. With *The Compression Trainer*, you can produce the same muscular fatigue as a Big Band set, or you can get a slow burn as if you were playing an hour of soft flexibility exercises.

The following outlines specific exercises that you can use on your own, using intuition as a guide to establishing rest periods and the number of sets accomplished. You will always feel better after a full day of rest from intensive training. The Compression Training System or CTS is intense training!

Be careful not to exceed your limits.

First, you must warm up either on the rubber tube or on your instruments. Play pedals, lip slurs, and tonguing exercises. After you are completely warmed up, accomplish one or more sets (using intuition as a guide), lifting 85% of your highest compression level, accomplishing your maximum amount of repetitions needed to reach muscular exhaustion.

Rest three minutes then buzz for three minutes on the rubber tube or play your instrument lightly. The following should be accomplished using a slow burn in the muscles of your embouchure, first in the normal setting, and secondly in the over-exaggerated Maynard Ferguson unfurled position.

Hold Compression at 20 to 30% of your maximum weight load. Maintain a steady needle position as you work against the resistance of *The Compression Trainer* until you reach fatigue. How long it takes to reach that level of fatigue is up to your own level of strength.

This exercise involves generating low levels of compression while holding the needle steady at 20 to 30% of your maximum weight load for as long as you possibly can. Listen to your muscles. They will tell you when enough is enough. Use your intuition. The important thing is to stop and rest after feeling the muscular burn created by the waste product of muscular energy called lactic acid.

When you have reached muscular exhaustion, your muscles have spent the fuel of muscular energy which is oxygen and glucose. The waste product of the muscular

metabolism is lactic acid which builds up causing muscular failure. The fuel is spent. You are out of gas! We must rest in order to rejuvenate the muscles with fresh blood and oxygen.

The length of the exercise is not important. The healthy burn from the fatigue is. Once you feel that burn, stop and rest because you can easily overwork your muscles. Log and record your endurance times so that you may observe them increasing. This is a low compression exercise that will challenge the muscle fibers that are tasked with endurance.

During this long tone style exercise, you are free to breathe through your nose just as you would in circular breathing. You do not have to master circular breathing to gain from this exercise. Only the motion of circular breathing is used to generate compression. Accomplish at least two long tone type sets in both the unfurled and normal positions. You may do more if you feel strong enough. Always use the rubber tube or your instrument to play at low volume for three minutes after you have rested in between sets. Use your intuition. Make your chops feel good.

You may want to experiment with the Cat Anderson teeth closed position on the long tone style exercises. This has the effect of centering the fatigue in the center of the orbicularies muscles. I add a set in this position to the routine listed above.

The last exercise involves rapid motion at low compression. Rapidly move between zero and 30% of your maximum weight load repeating the motion until you reach fatigue. The fatigue will not set in until you have accomplished multiple repetitions. Try to accomplish 20 or more fast movement reps between zero and 30 % of your maximum level.

After your sets are completed, you are free to buzz on the rubber tube for as long as you see fit. Because we are accomplishing concentrated effort with a heavy weight load, this is sufficient time to maintain and indeed grow your embouchure strength. The entire maintenance routine can be accomplished in 20 to 30 minutes.

I often buzz on the rubber tube resting often throughout a full-length movie, alternating between exercising and buzzing. Use your own intuition gained from reading your body's needs as you exercise your embouchure. You may decide to format your own routine of exercise using your intuition as a guide.

In Closing

Congratulations! Whether you employ the detailed techniques of “Progressive Overload” or take the intuitive approach, you may now copy my success. Once you have learned the proper way to exercise, I suggest that you experiment on your own following the guidelines laid out in this document. If you have a full playing schedule, you may want to try working out every other day. Let your intuition guide you.

No matter how much fatigue you feel after your exercise, have full confidence that your body will respond by becoming stronger.

Stay connected with us through our email newsletter, website, and the Compression Training System Facebook Group to receive updates to the program routines.