

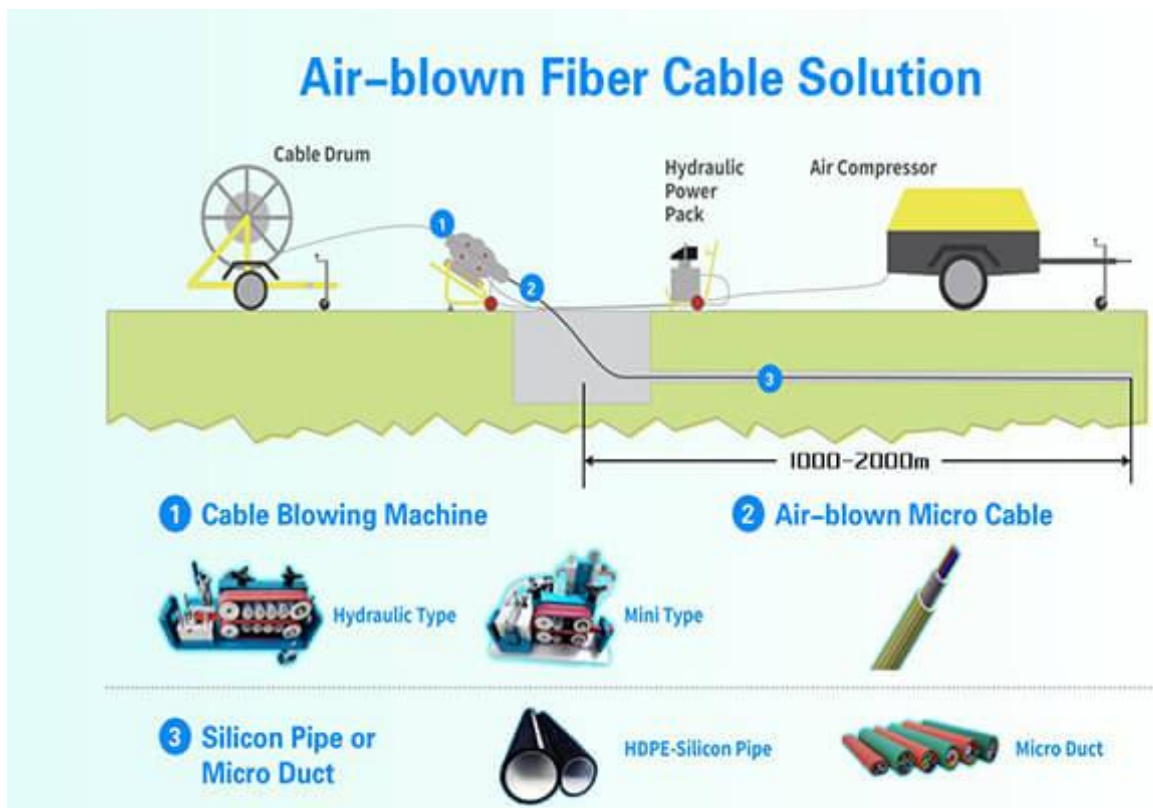
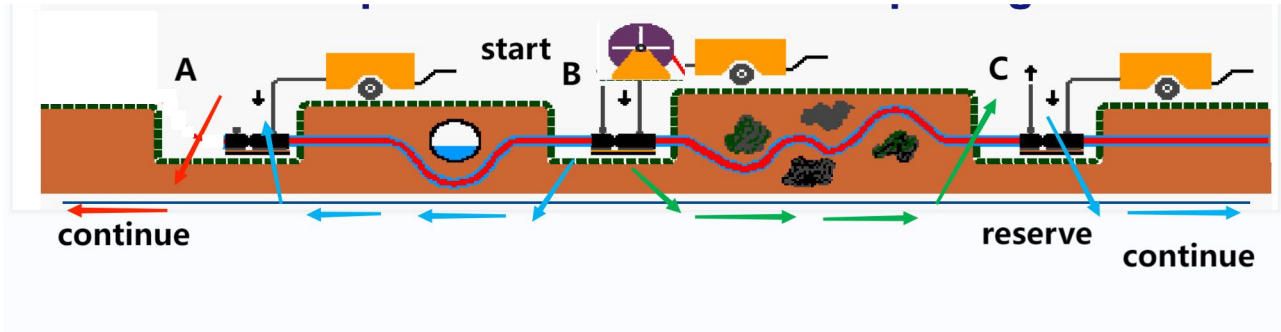
T700CQ Pneumatic Cable Blowing Machine Operation Manual

The cable blowing machine is designed to lay communication cables (mainly optical fibers, coaxial cables, and multi strand cables) into pre laid pipelines. T700CQ operates in the "air blowing" mode; Using mechanical cable pushing equipment to push communication optical cables or cables into pipelines, while an air compressor sends a strong airflow through the sealed compartment of the air blower into the pipeline. This high-speed airflow forms a drag force on the surface of the optical cable, driving it forward. Improve work efficiency and protect the outer protective layer of the optical cable.



Air blown fiber optic cable solution

Fiber optic cable blowing method



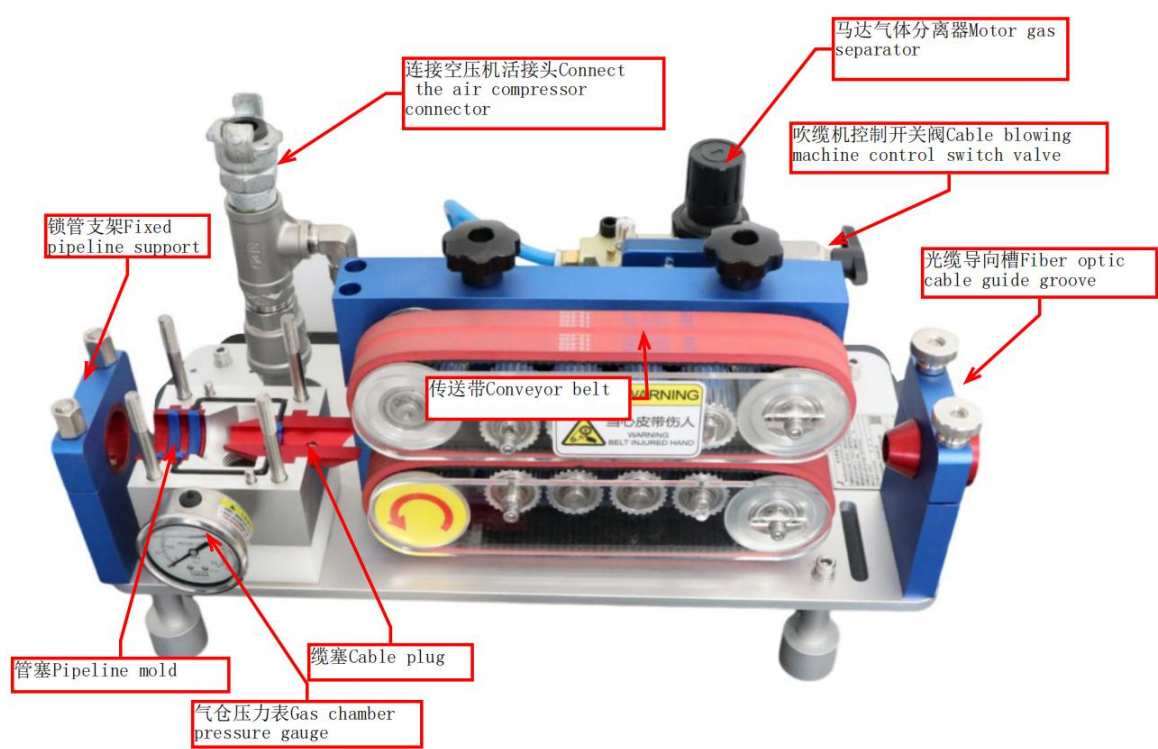
结构及技术参数

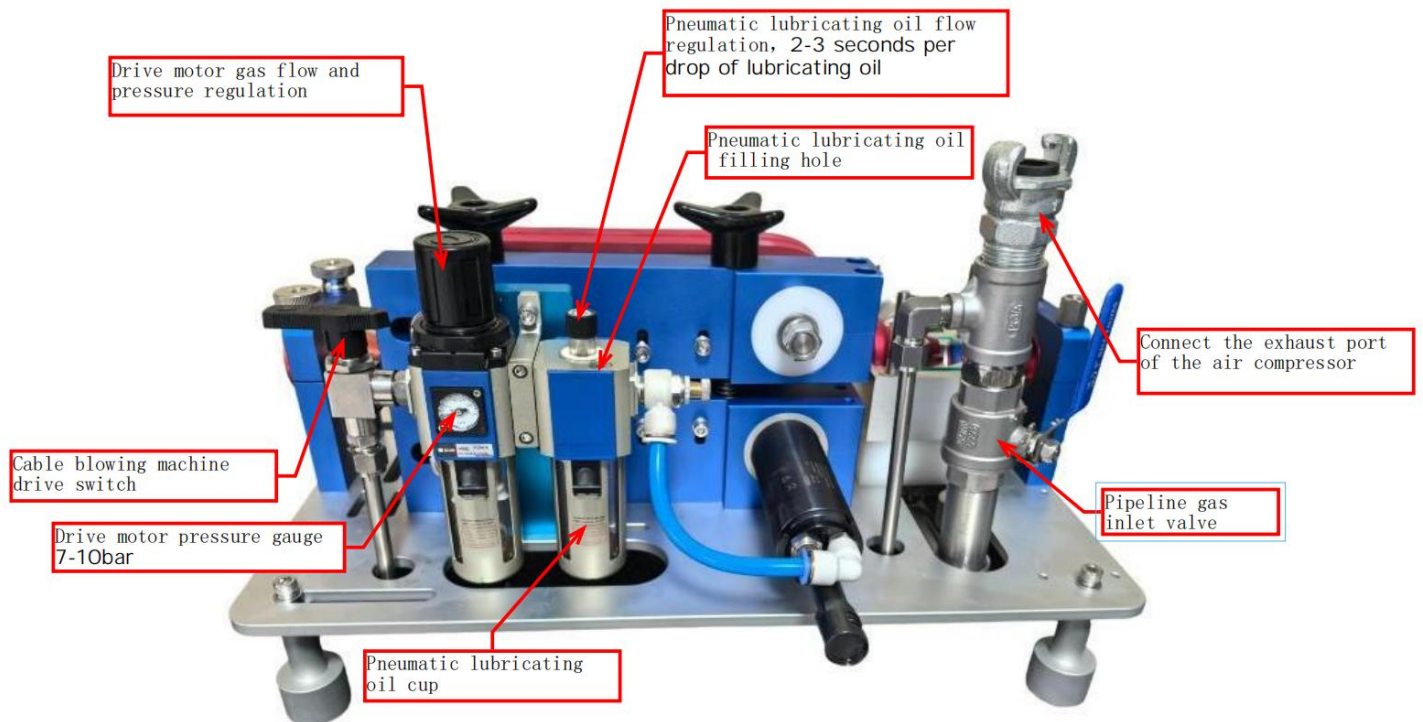
光缆型号 (以2纤递增)	光纤数	缆芯 单元数	松套管内 最大光纤 数	光缆直径 mm	光缆重量 kg/km	允许拉伸力 长期/短期 N	允许压扁力 长期/短期 N/100mm
GYTA-2~30Xn	2~30	5	6	9.2	85	600/1500	300/1000
GYTA-32~36Xn	32~36	6	6	10.2	107	600/1500	300/1000
GYTA-38~60Xn	38~60	5	12	10.4	110	600/1500	300/1000
GYTA-62~72Xn	62~72	6	12	11.4	130	600/1500	300/1000
GYTA-74~96Xn	74~96	8	12	13.6	165	600/1500	300/1000
GYTA-98~120Xn	98~120	10	12	14.8	195	600/2000	300/1000
GYTA-122~144Xn	122~144	12	12	16.4	236	600/2500	300/1000
GYTA-146~216Xn	146~216	18	12	16.4	232	600/2500	300/1000
GYTA-218~288Xn	218~288	24	12	20.0	300	1000/3000	300/1000

Technical specifications of T700CQ pneumatic cable blowing machine

Suitable pipeline	Mainly suitable for optical cables with a diameter of 6–14mm, suitable for cables with an outer diameter of 10–50mm HDPE or PE pipes.
Host weight	28Kg
volume	600*400*350mm(Length * Width * Height)
source	Cable blowing machine driven motor compresses gas power
working pressure	0.6 ~1 Mpa
	16bar
应用范围 Application scope	GYTA with a diameter of less than 14mm–96 cores or less, non armored non–metallic reinforced core optical cable (micro cable) GCYFY, JET OUFU air blown micro cable, pipeline optical fiber;
Host packaging volume (length, width, height)	750*480*480mm(Length * Width * Height)
Main unit packaging weight	50kg
Laying length	
600~2000 meters (depending on terrain, fiber optic cable diameter, fiber optic cable weight, and HDPE silicon core pipe quality), maximum propulsion speed of 120m/min, recommended speed of 60–80m/min;	

T700CQ diagram





Lock tube bracket	Install HDPE silicon core pipe and fix the silicon core pipe; The installation distance of the silicon core tube from the cable plug is 15–20mm;
High pressure airflow switch	The switch is normally open, and after connecting the air compressor, the airflow enters the pipeline through the high-pressure air pipe; Normal use involves pressure;
Pipe plug	The function is to seal HDPE silicon core pipes, which can be replaced with corresponding pipe plugs according to the outer diameter of the pipe. It is equipped with Ø 10mm, Ø 12mm, Ø 18mm, Ø 32mm, Ø 40mm, Ø 50mm;
Cable plug	Can be replaced according to the diameter of the pipeline; The function is to seal the optical cable and prevent high-pressure airflow leakage from the air chamber; The sealing ring can be replaced according to the outer diameter of the optical cable;
Conveyor belt	Push optical cable, adjustable conveyor belt pressure, the finer the diameter of the optical cable, the smaller the compression pressure, and the thicker the diameter of the optical cable, the greater the compression pressure;
Fiber optic cable guide groove	Cable pushing sequence: Cable guide groove → conveyor belt → Cable plug → HDPE silicon core pipe
Drive motor control on	Control the start switch valve of the cable blowing machine
gas separator	Mainly used to drive the motor intake to separate moisture and oil mist, lubricate and regulate pressure, add pneumatic oil to supply motor lubrication, with a recommended drop every 3 seconds;

Technical specifications of air compressor required for T700CQ cable blowing machine

	project		data
1	name		Diesel mobile screw air compressor
2	Exhaust volume	m ³ /min	2~15 Depending on the diameter of the pipeline
3	Exhaust pressure	bar	12~15
4	Engine properties		Diesel or gasoline engines
5	Engine power	kw	110~150
6	Exhaust oil content	PPM	≤5
7	Exhaust temperature	°C	≅ 50°C
8	Transmission mode		Coupling transmission
9	Cooling method:		Air-cooled
10	Maximum ambient temperature	°C	40
11	Minimum startup temperature	°C	-10

According to the inner diameter of the pipeline, air compressor parameters need to be equipped

Pipe diameter (outer diameter/inner diameter)	outside diameter/mm	inside diameter/mm	Configure the minimum displacement of the air compressor (m ³ /min)	Minimum pressure of air compressor bar
10/8	10	8	2.2	13
12/10	12	10	2.5	13
14/12	14	12	2.8	13
18/14	18	14	3.5	13
32/26	32	26	8	13
32/28	32	28	9	13
40/33	40	33	10	13
46/38	46	38	12	13
50/42	50	42	15	13
The above configuration of air compressor displacement and pressure is based on a pipeline length of 1000 meters				



Technical indicators of air blown optical cable

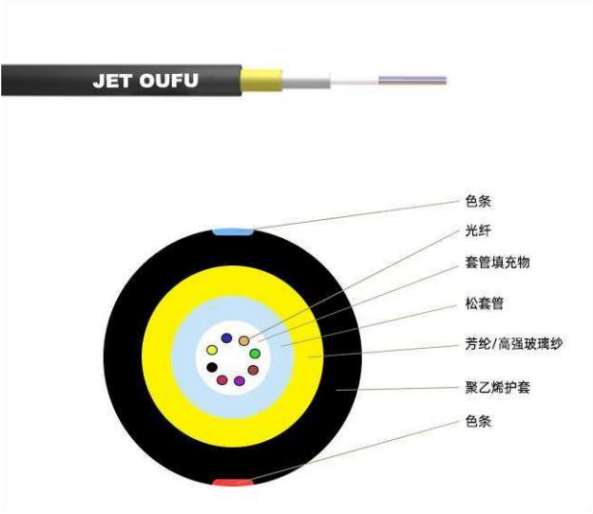
Ordinary pipeline optical cable: GYTA、GYTS



结构及技术参数

光缆型号 (以2纤递增)	光纤数	缆芯 单元数	松套管内 最大光纤 数	光缆直径 mm	光缆重量 kg/km	允许拉伸力 长期/短期 N	允许压扁力 长期/短期 N/100mm
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GYTA-74~96Xn	74~96	8	12	13.6	165	600/1500	300/1000

Air blown micro cable:



结构和尺寸

光缆型号 (以2纤递增)	光纤数	套管中的 光纤数	光缆直径 (mm)	适用微管 (mm)	气吹距离	光缆重量 (kg/km)	允许弯曲半径 静态 动态
GYCFY-24~60B1.3	24~60	12	5.2±0.2	10/8	> 1Km	24±2.0	10D 20D
GYCFY-62~72B1.3	62~72	12	5.6±0.2	10/8	> 1Km	26.9±2.0	10D 20D
GYCFY-74~96B1.3	74~96	12	6.4±0.2	10/8	> 1Km	29±2.0	10D 20D
GYCFY-98~120B1.3	98~120	12	7.6±0.2	12/10	> 1Km	41±2.0	10D 20D
GYCFY-122~144B1.3	122~144	12	8.0±0.2	12/10	> 1Km	53±2.0	10D 20D

GYCFY
室外气吹微缆

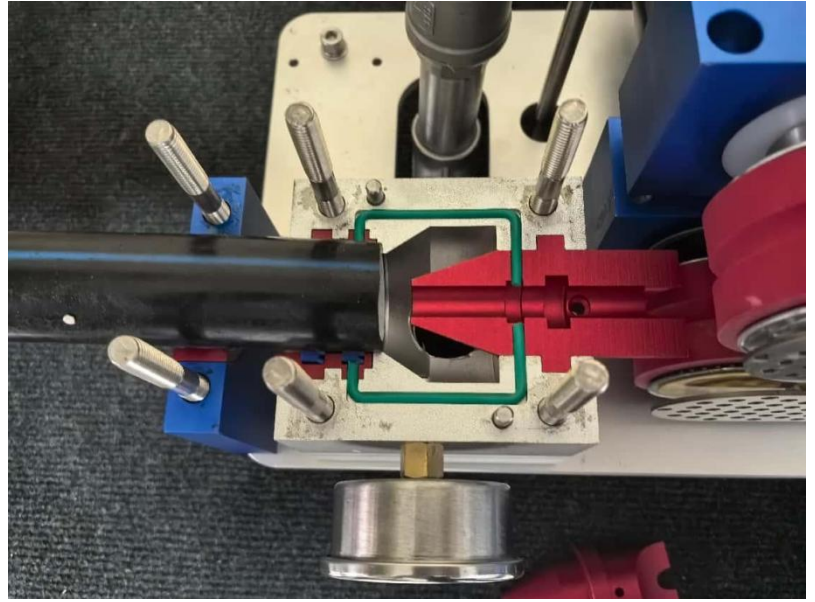
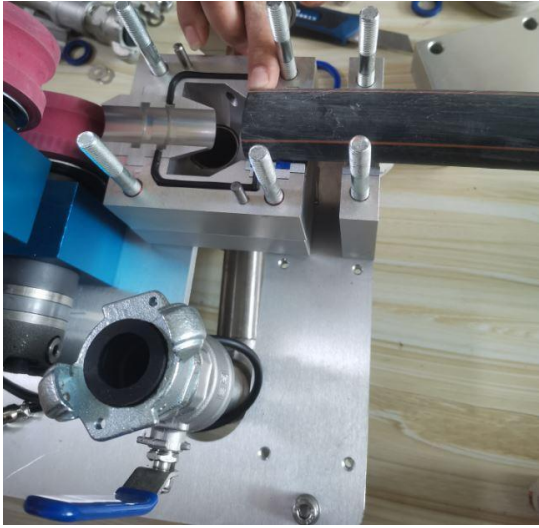
光纤
纤膏
松套管
中心加强件
阻水纱
阻水带
外护套

GYCFY 松套层绞式气吹微缆采用非金属加强件且无铠装的结构，可通过在已敷设的外保护管中牵引或气吹微缆管道，然后再在微管中气吹微缆的方式敷设，突破了现有管道缆布放技术的局限性，提高了管道的利用效率，并且易于扩容。

产品特点

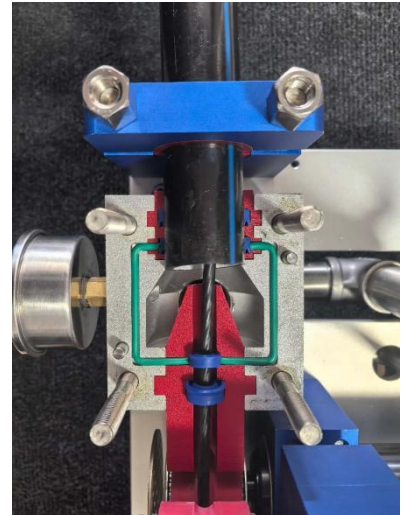
- 直径小，重量轻，软硬适中，气吹敷设时易过弯，操作方便
- 全非金属结构，无需接地，低摩擦系数护套材料及结构设计，气吹距离长
- 充分利用管孔资源，采用气吹敷设施工速度快，一次敷设距离长
- 可随通信业务量的增长分批吹入光缆，投资分步进行，降低前期投入
- 微缆可被吹出，便于今后更换新品种的光纤光缆，在技术上保持领先
- 适合在拥挤的城域网管道中进行施工，避免了以往破坏性的挖掘
- 无须事先决定放置接续盒和光缆分歧的位置，在不影响其它光缆正常运行的情况下，可随时、随地切断外保护管和其中的微管，进行光缆分歧，同时节省人井、手孔和接续头的数量，降低综合成本
- 适合于骨干网、城域网以及接入网

Installation of communication pipelines



- 1、 Due to the narrow space of the communication well, it is not allowed to place the cable blowing machine in the communication well. Placing the cable blowing machine on the ground is more convenient for operation; Connect the pipeline inside the well to the ground;
- 2、 Open the lock pipe bracket (pipe clamp) and air chamber, place the pipe in the position shown in the diagram, and tighten the lock pipe bracket nut;

Installation of optical cable

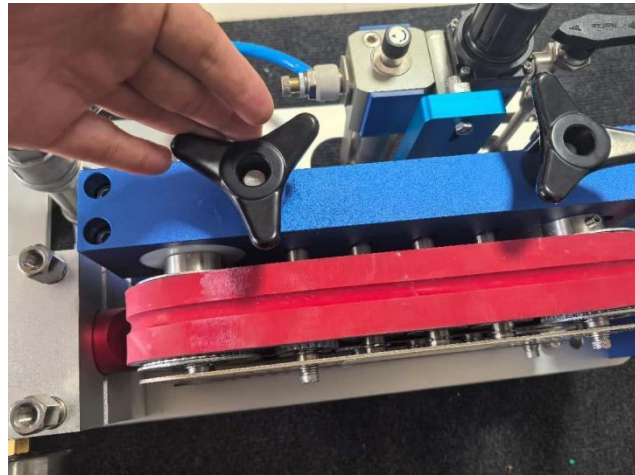
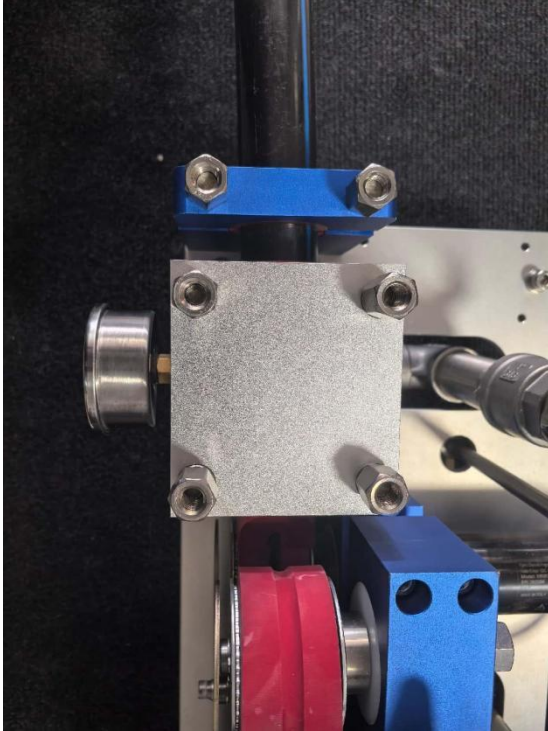


- 1.Distinguish between the A and B ends of the optical cable, and cut the exposed part of the metal reinforcement core of the cable to prevent the pipe joint from getting stuck during the cable blowing process;
- 2.Wrap the end of the optical cable with electrical tape and seal all ends of the cable;
- 3.Before inserting the optical cable into the pipeline, add 500 milliliters (adjust the amount of lubricant according to the diameter of the pipeline) of cable blowing lubricant to the pipeline, and then place the sponge

When entering the pipeline, the gas will push the sponge forward when the air compressor is turned on, and the lubricant will be evenly applied to the inner wall of the pipeline to provide lubrication, reduce the resistance of the optical cable and pipeline, and increase the length of the air blowing.

4.Release the screw handle, automatically raise the upper transmission bracket, and insert the optical cable into the upper and lower conveyor belt slots, insert the optical cable sealing ring, and then enter the pipeline;

5.Adjust the tightness of the conveyor belt up and down with the handle screw;



6.Close the air chamber and tighten the air chamber nuts (evenly apply force to all four nuts to maintain a balanced tightness) until there is no gap; Attention: Do not open the air chamber when there is pressure in the pipeline or air chamber;

7.Lock the nut of the fiber optic cable guide groove bracket;

Connect the cable blowing machine to the air compressor

High pressure tracheal connection



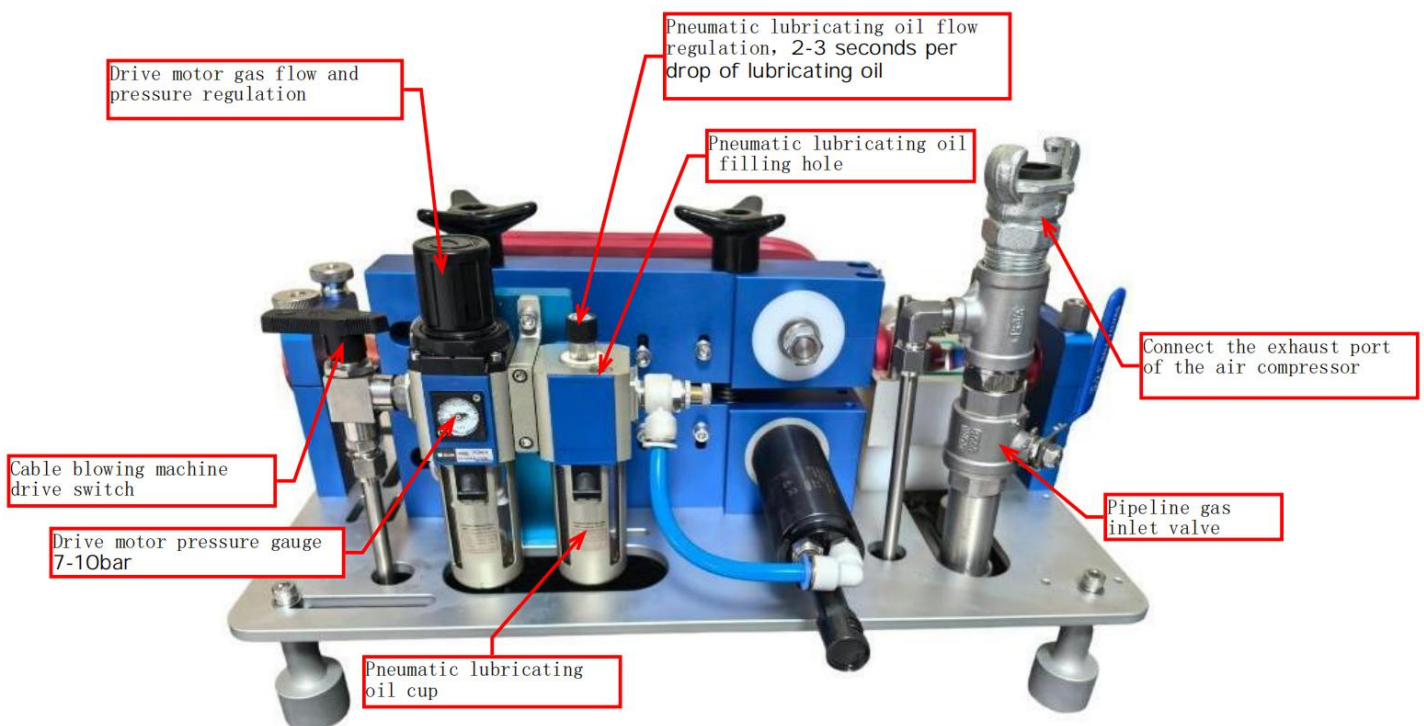
1、 Align the flexible joint with the buckle, press down, and then rotate. After installation, be sure to fix and lock it with a pin to prevent detachment;

- 2、 Install the matching flexible joint at the exhaust end of the air compressor. One end of the high-pressure air pipe is connected to the exhaust port of the air compressor;
 - 3、 An air compressor generally has two exhaust ports, one connected to a cable blower and the other for pressure relief; One end of the air compressor exhaust port connected to the cable blower is normally open;
- The other end (pressure relief) is normally closed and requires a pipeline or air compressor to release pressure. Open the pressure relief valve;

Air compressor operation

- 1、 Check the oil, screw oil, antifreeze, and fuel (gasoline or diesel) of the air compressor before starting it;
- 2、 Turn on the main switch or start key of the air compressor battery; After power on, the screen will display normally;
- 3、 The cable blower, pipeline, and air compressor have been connected and personnel are in place;
- 4、 Press the start button of the air compressor and let it idle for 30-60 seconds before loading;

Blowing cable operation



- 1、 Firstly, add a sponge of appropriate size to the pipeline to remove debris and water from the pipeline;
- 2、 Add an appropriate amount of cable blowing lubricant, and then add sponge in sequence to evenly distribute the lubricant on the pipe wall, reducing friction between the optical cable and the pipeline and achieving longer distance laying;
- 3、 The silicon core tube is fixed at the front end of the cable blowing machine;
- 4、 Adjust the tightness of the upper and lower conveyor belts to ensure that the inlet valve of the cable blowing machine is fully opened and the exhaust valve of the air compressor is fully opened;
- 5、 After the preheating of the air compressor is completed, press the loading button. The pressure should not exceed 13 bar (1.3 MPa), and the airflow has been sent into the pipeline;
- 6、 Slowly open the start switch valve of the cable blowing machine, and the conveyor belt runs slowly to push the optical

cable; The push speed should be controlled between 60-80m/min;

7、Start sequence: Install pipelines on the cable blowing machine → Install optical cables → Preheat the air compressor → Connect high-pressure air pipes → Pressurize (load) the compressor → Start the cable blowing machine;

Equipment maintenance and operation safety precautions

- 1、It is strictly prohibited to squeeze the high-pressure gas pipe to prevent gas leakage;
- 2、The loading of air compressors and cable blowers should be firm to prevent loosening or tilting during transportation;
- 3、A dedicated person is responsible for equipment maintenance and operation, regularly checking for loose screws, oil and water leaks, and promptly addressing them;
- 4、When the exhaust temperature of the air compressor exceeds 70 °C, stop the cable blowing construction, idle and cool down the engine, and take measures to cool down the exhaust temperature; If the exhaust temperature is too high and the temperature of the cable blowing machine's air chamber rises, the silicon core tube will burst, causing personal injury;
- 5、Construction workers must wear safety goggles, helmets, reflective clothing, and other safety protection measures;
- 6、Place traffic reflective cones, flashlights, warning lights, warning signs and other warning signs on the construction site as required;
- 7、Replace the engine oil, air filter, and screw oil after 500 hours of operation of the air compressor;
- 8、Timely observe the lubricating oil storage tank of the cable blower separator and add lubricant in a timely manner; During operation, the lubricating oil of the driving motor enters the motor through the airflow pipe for lubrication, with a recommended drop every 2-3 seconds;
- 9、The pressure of the hollow compressor during cable blowing construction shall not exceed 13 bar (1.3 Mpa);
- 10、If the cable blowing stops for more than 2 days or is not used for a long time, 20 milliliters of lubricating oil should be added through the intake pipe of the drive motor to maintain long-term lubrication of the drive motor;