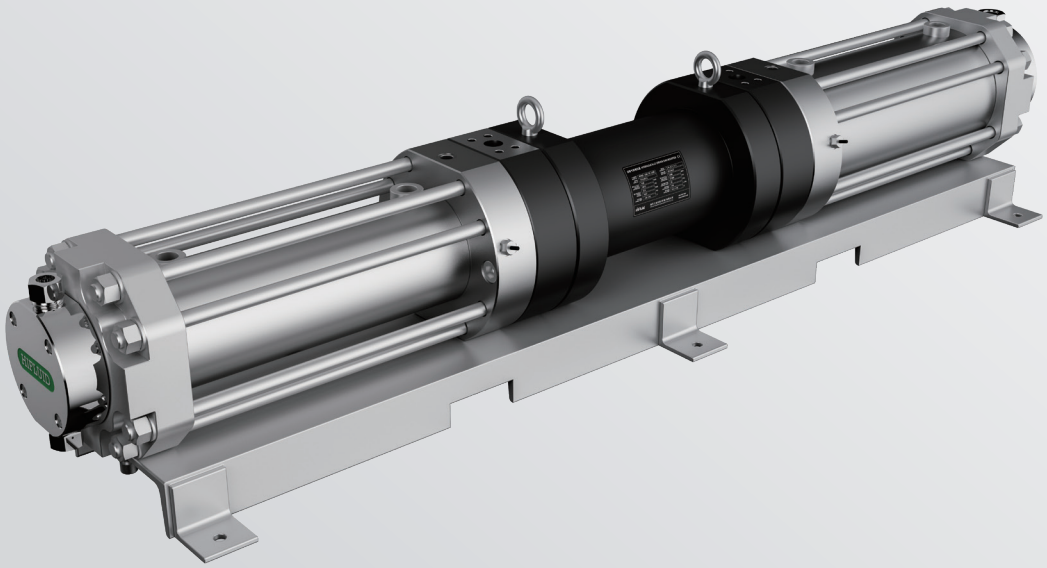
HiFluid
Driven by Reliability & Performance

Hydraulically Driven Gas Boosters



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HiFluid Hydraulically Driven Gas Boosters

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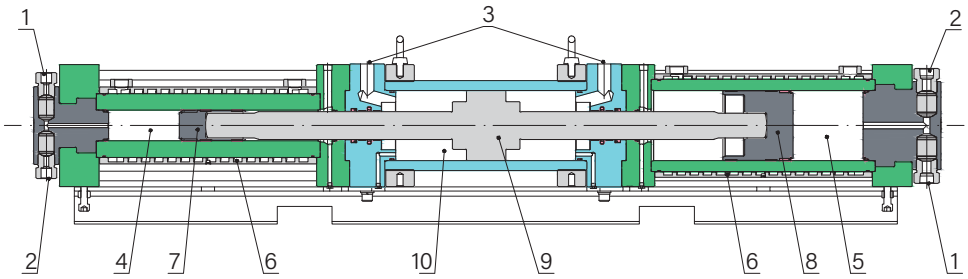
HiFluid offers a comprehensive product portfolio, delivering suitable solutions for a wide range of applications worldwide.

Our hydraulically driven gas boosters use low-pressure hydraulic oil as the driving source to compress gases to the required pressure. The standard design supports a maximum working pressure of 1200bar, with customized solutions available for higher pressure requirements.



1. Gas Inlet
2. Gas Outlet
3. Hydraulic Oil Port
4. Secondary Cylinder
5. Primary Cylinder
6. Cooling Jacket
7. Secondary Piston
8. Primary Piston
9. Drive Piston
10. Hydraulic Cylinder

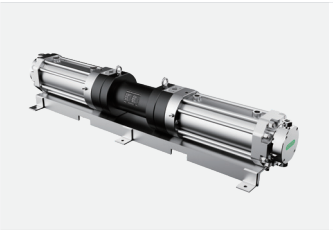
Key Advantages

- Specially designed for high-pressure gas applications; compatible with multiple gases.
- Hydrogen-compatible: materials used in hydrogen-contacting parts provide excellent resistance to embrittlement.
- Robust construction, ideal for frequent start-stop operations and continuous heavy-duty duty cycles.
- Special structure for both drive and compression ends to prevent gas contamination.
- Spiral-guided cooling design ensures uniform and efficient heat dissipation.
- Superior main sealing performance, oil-free lubrication, and extended service life.
- Maintenance-friendly design, significantly reducing seal replacement time.
- Modular design with flexible configurations and diverse options.
- Flow continuously adjustable from 0% to 100%.
- Suitable for explosion-proof environments.

Typical Applications

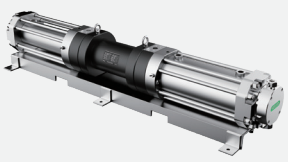
- **Leak Testing:** Supplies high-pressure gas for airtightness tests to detect leaks in components.
- **Hydrogen Refueling:** Provides high-flow, contamination-free hydrogen filling into vessels, equipment, or systems to the required pressure.
- **Airbag Inflation:** Charges helium/argon mixed gases into airbag inflators.
- **Gas-Assisted Molding:** Provides high-pressure, high-flow gas to improve molding processes and product quality.
- **Hot Isostatic Pressing (HIP):** Pressurizes inert gas for HIP furnaces to achieve superior material performance.
- **Chemical Production:** Multi-stage pressurization of ethylene for polymerization in batch and tubular reactors.

Structural Types



Single-Stage Double-Acting

Each cycle delivers two compressions at a single ratio, ensuring continuous high-flow output.



Double-Stage Single-Acting

Each cycle delivers a single compression at double ratio, achieving high output pressure even with low inlet pressure.

Type Coding

HF HG1 - 100 - 700 - H_2

- HF — HiFluid
- HG1 — Hydraulically Driven Gas Booster
- 100 — Cylinder Diameter (mm) (two-stage models indicated with "/")
- 700 — Maximum Working Pressure (bar)
- H_2 — Medium Gas Code

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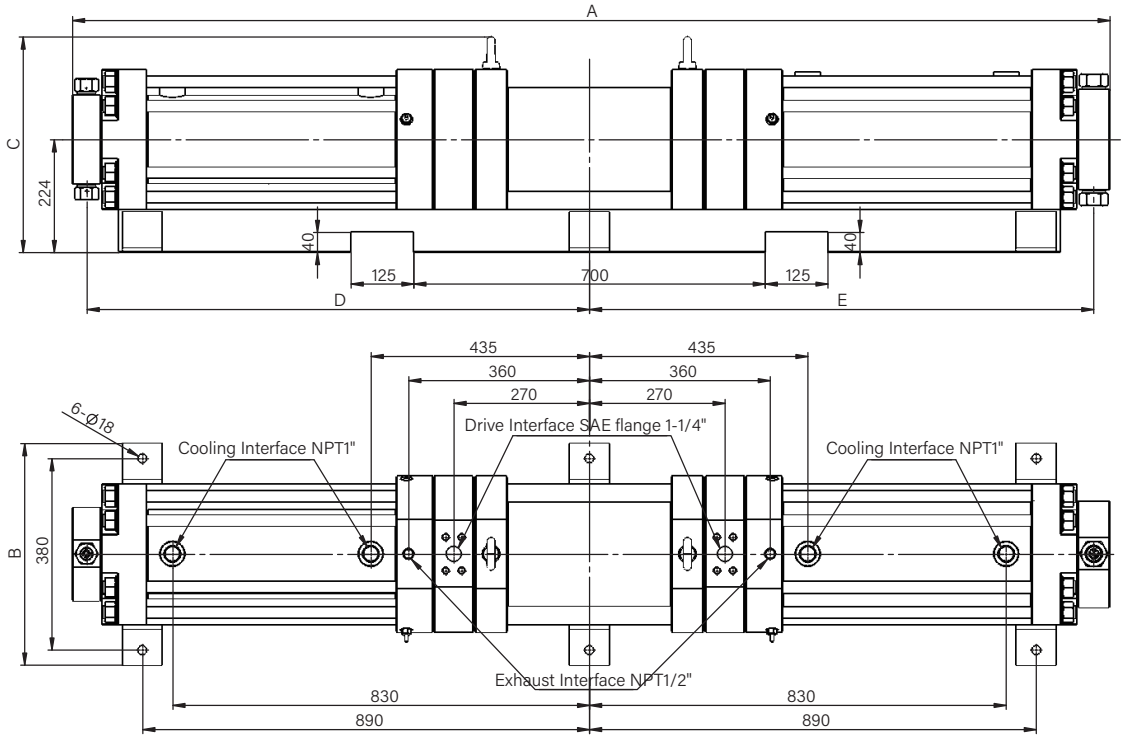
Product Parameters

Type	Model	Pressure Ratio	Displacement /Cycle(ml)	Pressure Limit						15 times per minute typical flow rate reference				
				Max. Outlet Pressure		Min. Inlet Pressure		Min. Outlet Pressure		Inlet Pressure		Outlet Pressure		Flow Rate Nm^3/h
				bar	psi	bar	psi	bar	psi	bar	psi	bar	psi	
Single-Stage Double-Acting	HFHG1-160-350	1:0.8	12868	350	5075	3.4	50	350	5075	55	797.5	220	3190	496
	HFHG1-100-700	1:2.1	5026	700	10150	3.4	50	700	10150	100	1450	450	6525	339
	HFHG1-70-1200	1:4.4	2463	1200	17400	3.4	100	1200	17400	420	6090	900	13050	651
Double-Stage Single-Acting	HFHG1-160/100-700	1:0.8/1:2.1	6434	700	10150	6.9	50	350	5075	30	435	400	5800	135
	HFHG1-160/70-1200	1:0.8/1:4.4	6434	1200	17400	3.4	50	350	5075	40	580	900	13050	180
	HFHG1-100/70-1200	1:2.1/1:4.4	2513	1200	17400	3.4	50	700	10150	80	1160	900	13050	136

Installation Dimensions

Type	Model	Connection Interface			Dimensions(mm)					Weight (kg)
		Drive Port	Medium Inlet	Medium Outlet	A	B	C	D	E	
Single-Stage Double-Acting	HFHG1-160-350	SAE flange1 1/4″ 6000PSI	NPT 1″	NPT 1″	2074	440	430	1005	1005	620
	HFHG1-100-700	SAE flange1 1/4″ 6000PSI	MP 3/4″	MP 3/4″	2074	440	430	1005	1005	600
	HFHG1-70-1200	SAE flange1 1/4″ 6000PSI	MP 3/4″	MP 3/4″	2060	440	430	1001	1001	580
Double-Stage Single-Acting	HFHG1-160/100-700	SAE flange1 1/4″ 6000PSI	NPT 1″	MP 3/4″	2074	440	430	1005	1005	610
	HFHG1-160/70-1200	SAE flange1 1/4″ 6000PSI	NPT 1″	MP 3/4″	2067	440	430	1001	1005	600
	HFHG1-100/70-1200	SAE flange1 1/4″ 6000PSI	MP 3/4″	MP 3/4″	2067	440	430	1001	1005	590



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