Mayekawa/MYCOM
screw compressors

MAYEKAWA
MYCOM

About Mayekawa

Corporate name	MAYEKAWA MFG. CO., LTD.
Established in	May 15, 1924
Headquarters	3-14-15 Botan, Koto-ku, Tokyo 135-8482, Japan TEL: 03-3642-8181
Capital	1 BLN JPY
Main Businesses	• Production & Sales of industrial-use refrigeration and various types of gas compressors. • Design & construction of cooling facilities for manufacturing process (Agriculture, Fishery, Food & Beverage) • Design & construction of cooling facilities for refrigerated warehouse, Design & construction of heat insulation • Design & construction of heat pumps and heat storage AC • Plant engineering (e.g. energy-saving system)

TODAY

Worldwide network

99 offices

in 40 countries overseas

(including 6 production sites)

Moriya plant

Saku plant

Higashihiroshima plant

Nashville Plant
Mayekawa U.S.A., Inc.

Corporate office, Tokyo, Japan

Torrance plant, U.S.A.
MAYEKAWA U.S.A., INC.

Brussels Plant, Belgium
N.V. MAYEKAWA EUROPE S.A.

Changwon Plant, South Korea
MYCOM KOREA CO., LTD. CHANGWON FACTORY

Cuernavaca Plant, Mexico
MAYEKAWA DE MEXICO, S.A. DE C.V.

Aruja Plant, Brazil
MAYEKAWA DO BRASIL LTDA.

* Employees : Japan **2500**, Oversea **1900**, Total **4400**
* Factories : **3** in Japan, **6** in overseas

Moriya Plant, Japan

Moriya Plant

Total area: 220,000m2
Capacity : 3,500 screw compressors/year, 400 packages/year
Products : Compressors, Package units, Standard refrigeration unit, Standard/Special chiller unit, Process cooling unit, API-applied unit Process gas compressor, Food machinery (robots, freezers etc.)
Standards: ISO90001, METI Roukihou (regulation for nuclear devices), API, ASME, HPSL, SEL, DNV-GL

Mycom Compressors

* Oil Flooded Screw Compressors

* Reciprocating Compressors

History Technology/Product

1920's – 1950's | 1960's | 1990's | 2000's | 2010's

1924
Vertical Compressor

1958
Multi-Cylinder Compressor

1964
Screw Compressor

1968
Dual-Stage Screw Compressor

1968
UD/G-Series
C-Series

UD/G-series
C-series
Widely used single and two-stage gas compressor series (with cast steels casing / compliant to API 619)

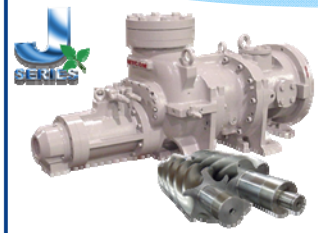
1998
VR-Series

VR-series
The line of rugged, oil injected, integral gear box screw compressors designed specifically for engine driven field gas application.

2003
GH-Series

GH-series
High pressure with high efficiency, due to a new rotor profile.

2011
J-Series

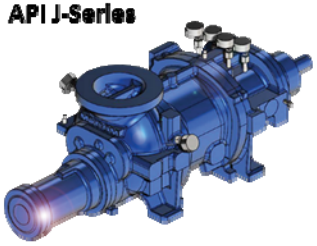


J-series
Mayekawa's new standard single-stage screw compressor for premium efficiency with the new rotor profile, J profile. The completely new design provides more CFM for less HP.

2011
FX-Series

FX-series
Oil flooded screw compressor for On & Offshore VRU, FGRU, Gas Compression, Process Refrigeration applications. The benefits of both Dry & Wet screw compressors with much simpler construction than Dry screw compressors.

2017
API J-Series



API J-series
All the benefit of the J-series compressor, with API compliance.

Standard Screw Compressor

SINGLE-1

UD/SCV Series
6 FRAME SIZES
125, 160, 200, 250, 320 & 400

i-Series
2 FRAME SIZES
125 & 160

Standard Screw Compressor

SINGLE-2

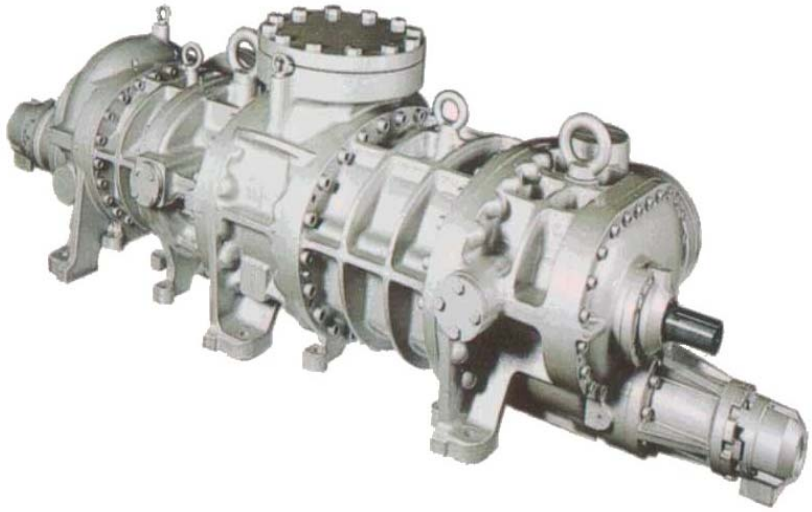
VR Series
3 FRAME SIZES
160, 200, 250

GLR Series
1 FRAME SIZES
160 (3 type)

Integral gear box type

Standard Screw Compressor

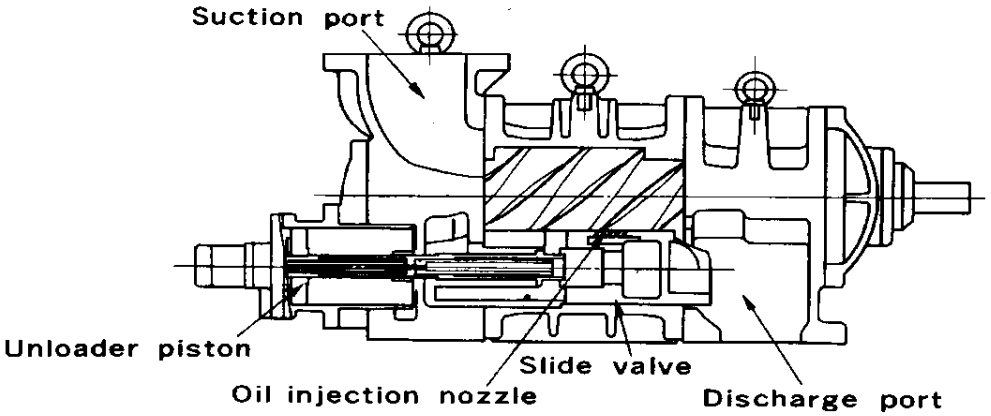
COMPOUND

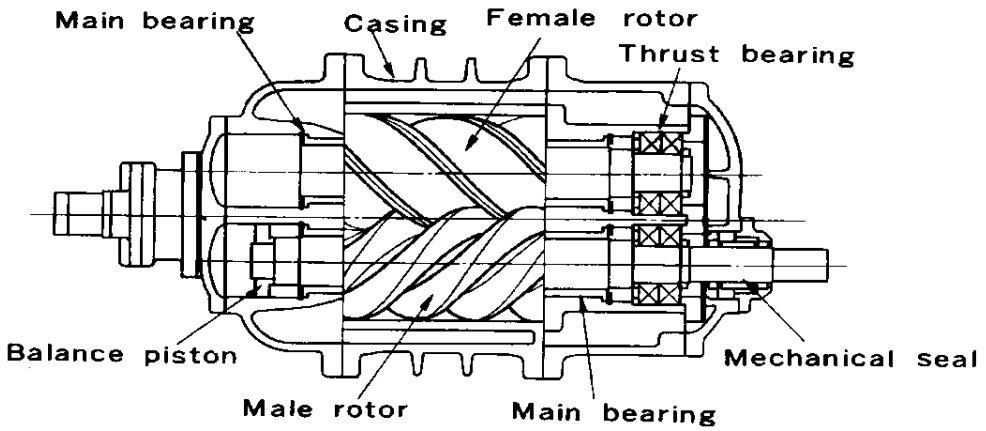


C-Series
6 FRAME SIZES
1610, 1612, 2016, 2520, 3225 & 4032

MHS-Series
2 FRAME SIZES
1290, 1410

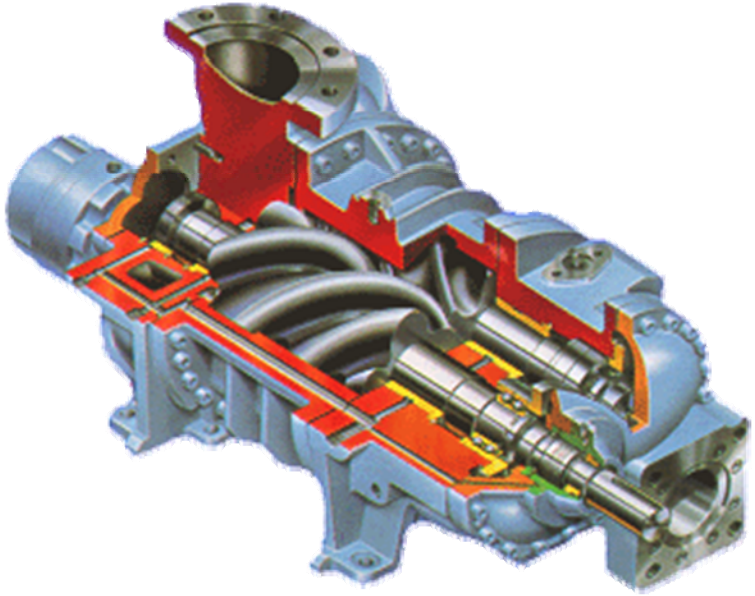
Standard Screw Compressor





Our Basic Models (Single Stage)

V/UD SERIES



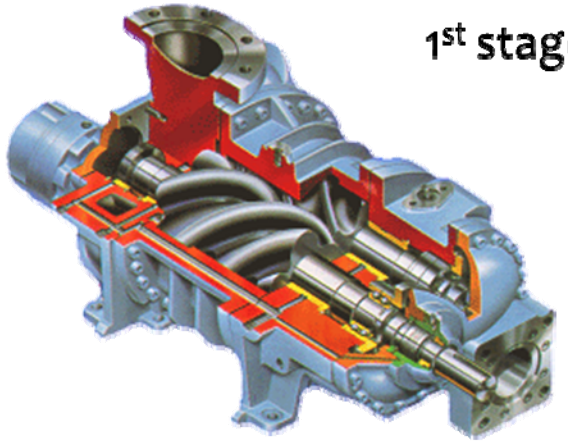
- Our Legend Models
  - 4 x 6 O-profile rotors
  - Fixed Slide Valve (UD series)
  - Manually adjustable Vi (for V-series)

125	S,L
160	S,M,L
200	S,M,L
250	S,M,L,LL
320	S,M,L,LL
400	S,M,L,LL,XL,XXL

Our Basic Models (Integral Compound Stage)

V/UD SERIES

1st stage



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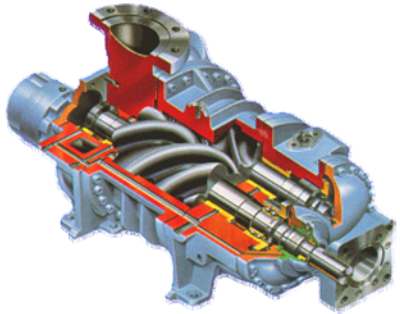
2nd stage



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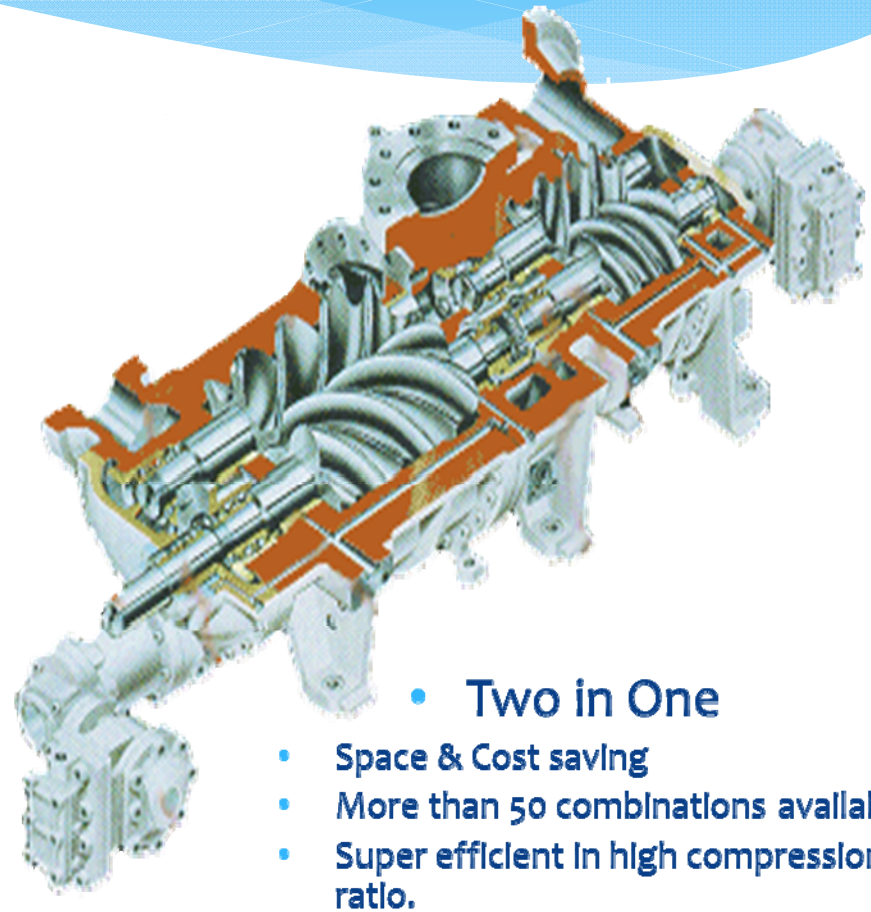
C SERIES



- Two in One
- Space & Cost saving
- More than 50 combinations available
- Super efficient in high compression ratio.

Standard Screw Compressor

* Rotor : Cast Iron
* O-profile 4 Male/ 6 Female

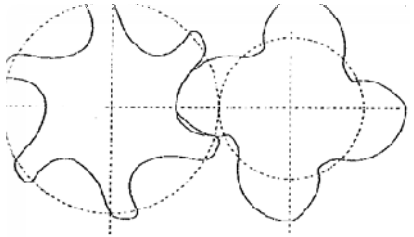


Fig.1-4 Current O-Profile

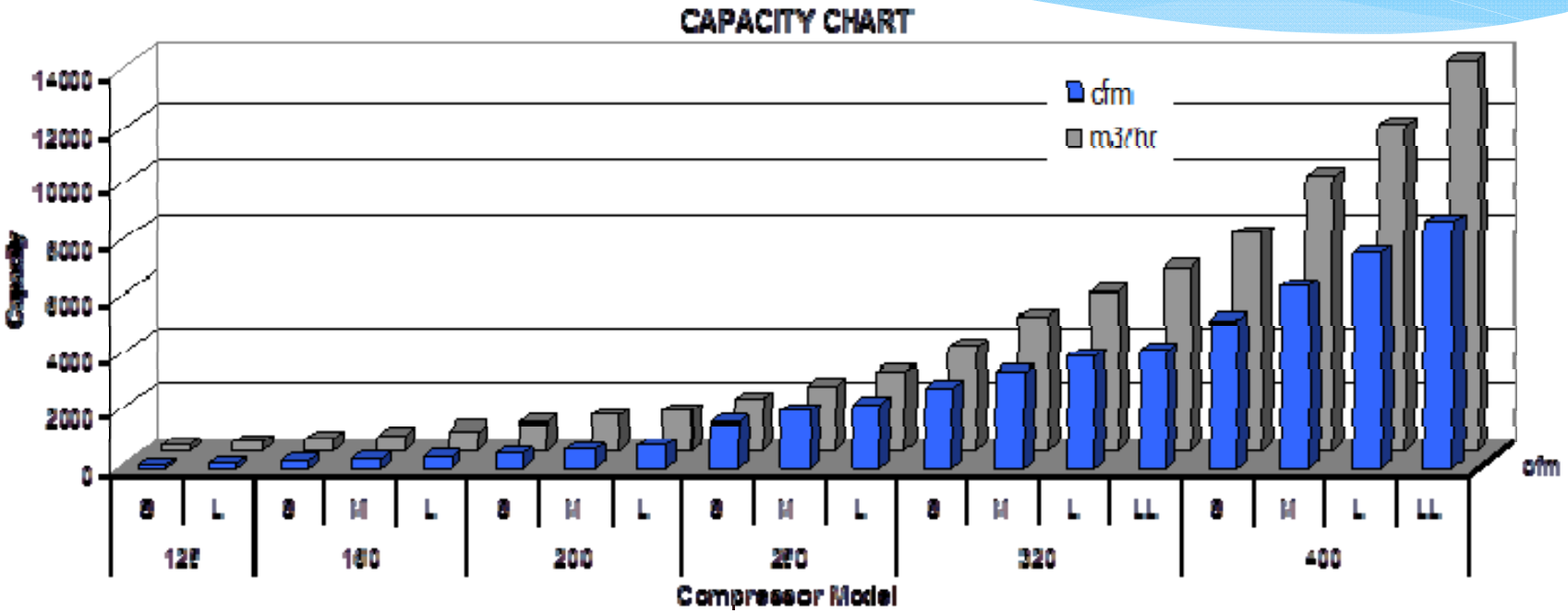
* Capacity control by Slide Valve
* Radial Bearings :

  Sleeve type

* Thrust Bearings :

  Angular Contact (Ball type)

Swept Volume



400XL : 15,600 m3/hr
400XXL : 17,817 m3/hr

Single Comp. Design Data

MYCOM SINGLE STAGE COMPRESSORS 6	125	160	200	250	320	400
Rotor diameter (mm)	125	160	200	250	320	400
Maximum speed (RPM)	4,500	4,500	4,500	4,500	3,600	3,600
Maximum BkW	186	335	635	1150	2330	4960
Maximum suction pressure (bar)*	8.6	8	7	6.5	6.2	6.2
Maximum discharge pressure (bar) Iron casing	26	26	26	26	26	26
Maximum discharge pressure (bar) Steel casing*	28*	28*	28*	28*	28*	28*
Theoretic Maximum Displacement at 3550 rpm (cfm)	360	750	1450	2840	6500	17817

*Please consult Mayekawa for higher than 28 barG

Compound Comp. Design Data

MYCOM COMPOUND COMPRESSORS	1612	2016	2520	3225	4032
Rotor diameter (mm) 1stage/2 stage	160/125	200/160	250/200	320/250	400/320
Maximum speed (RPM)	4,500	4,000	3,600	3,600	3,600
Maximum BkW	186	335	635	1150	2330
Maximum suction pressure (bar)	1.7	1.7	1.7	1.7	1.7
Maximum discharge pressure (bar) Iron casing*	26	26	26	26	26
Maximum discharge pressure (bar) Steel casing*	28*	28*	28*	28*	28*
Theoretic Maximum Displacement at 3550 rpm (m^3/h)	750	1450	2840	6500	17817

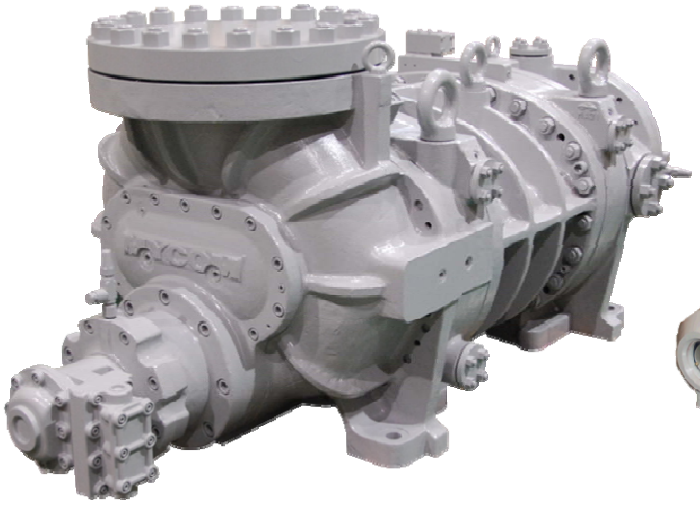
*Please consult Mayekawa for higher than 28 barG

Special Screw Compressor

GH series

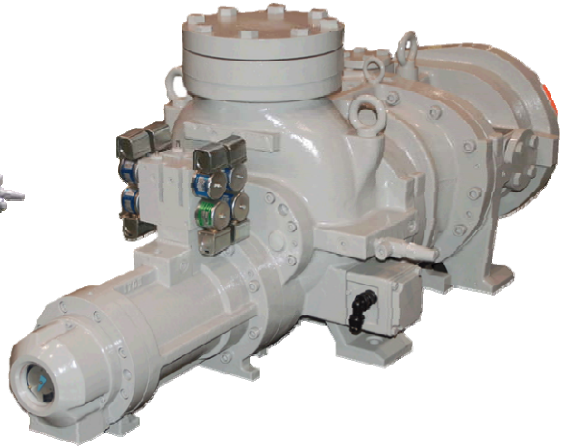
DP : 60 barG
THREE FRAME SIZES
160, 250 & 320

FLEX series



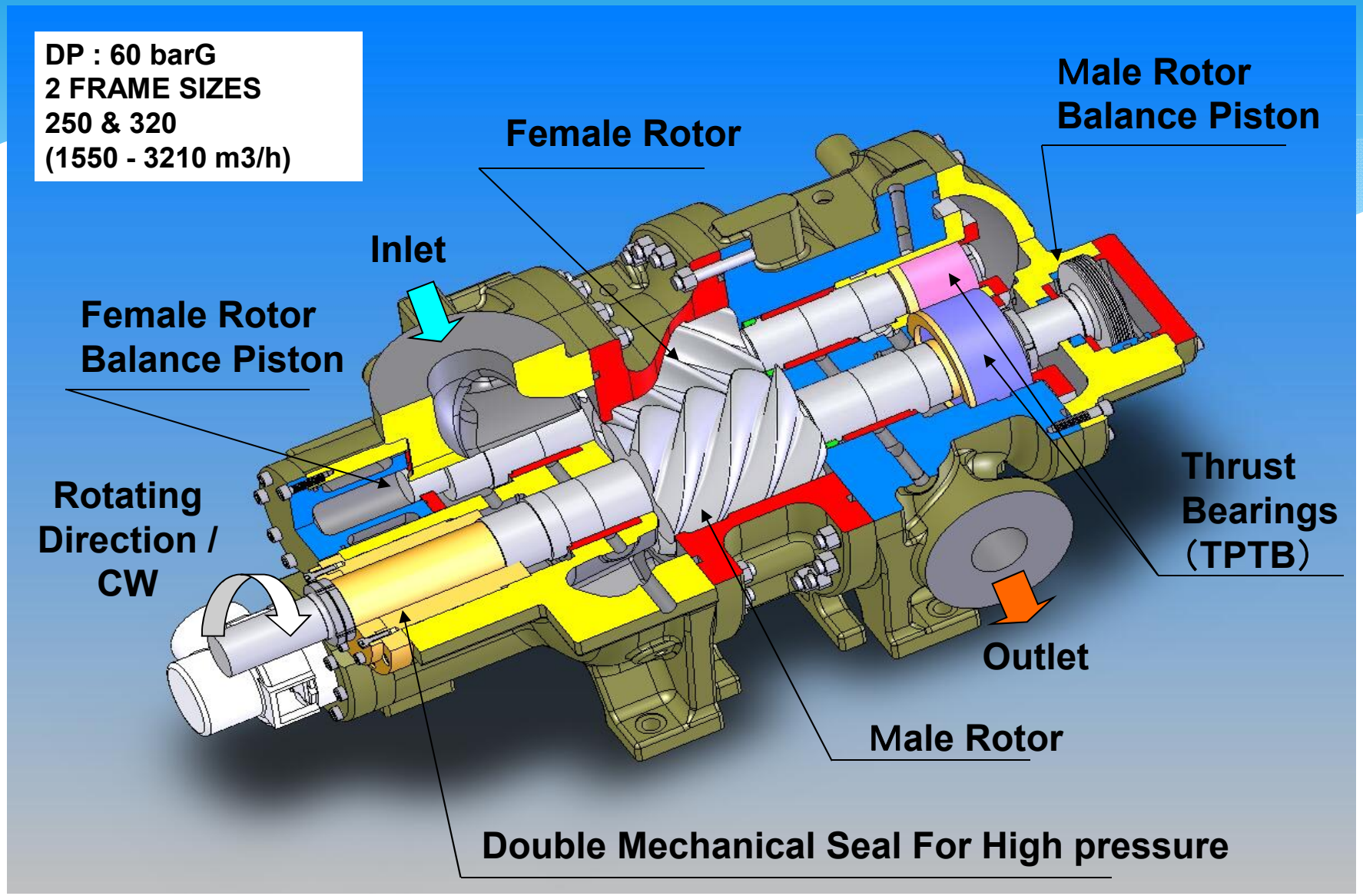
SIX FRAME SIZES
125, 160, 200, 250, 320 & 400

J series

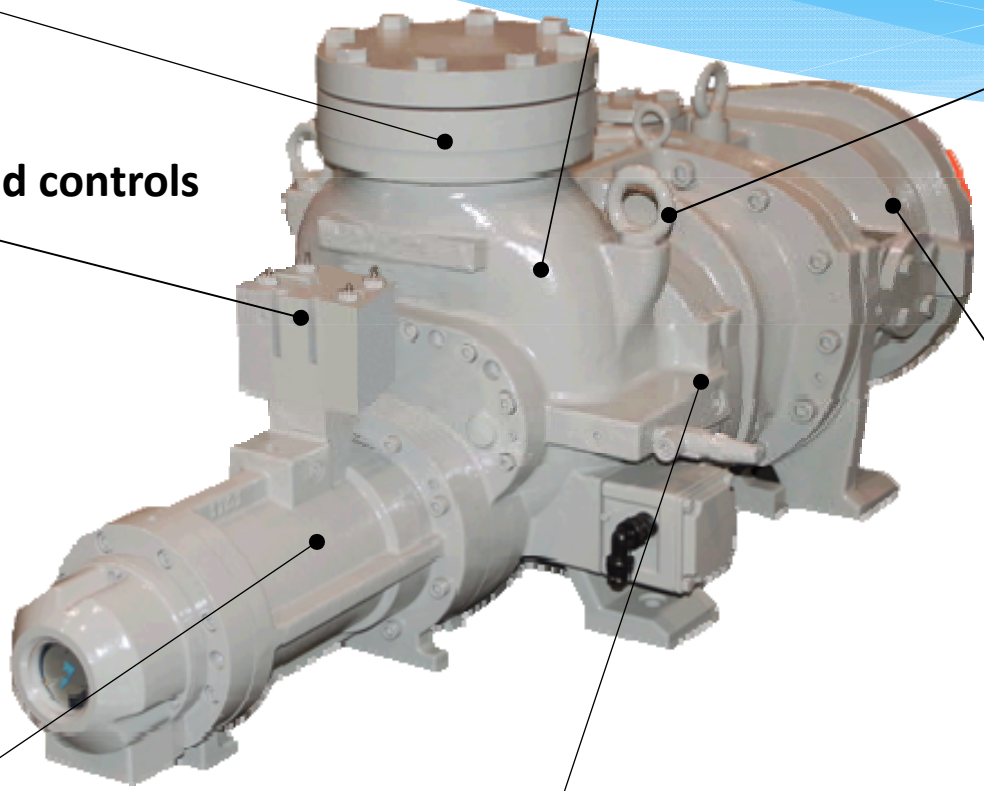


DP : 35 barG
THREE FRAME SIZES
170, 220 & 280

GH Series (High Pressure)



J Series Compressor



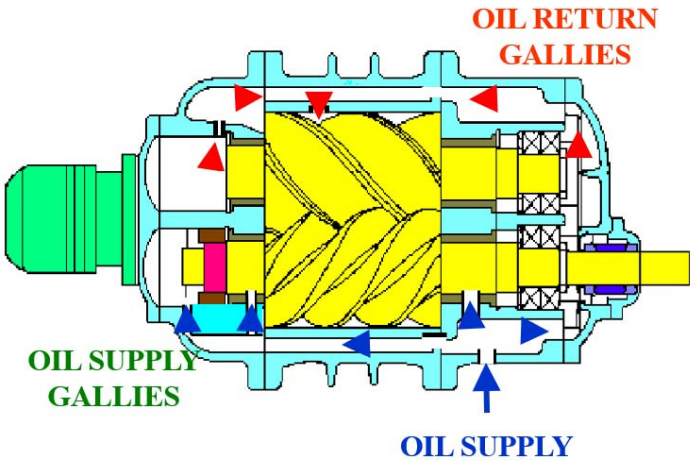
DP : 35 barG
3 FRAME SIZES
170, 220 & 280
(390 - 3190 m3/h)

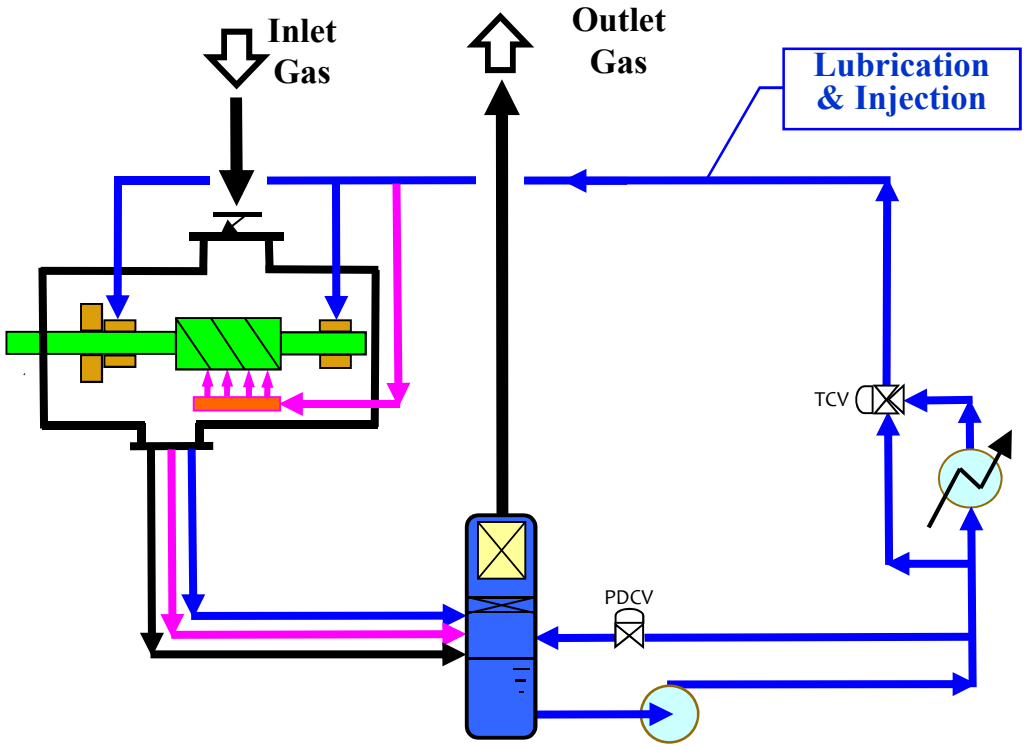
FLEXIBLE OPTIONS

- TO CONTROL SYSTEM **DISCHARGE TEMPERATURE** ***(20~30 °C above Dew Point)***
  TO **MINIMIZE OIL DILUTION** AT VARIOUS OPERATING CONDITIONS
    - **REMOVING BEARING OIL** FROM THE COMPRESSION CHAMBER
    - **CONTROLING INJECTION OIL RATE** AND/OR **TEMPERATURE**
- TO COVER A **LARGE VARIATION** OF MOLECULAR WEIGHTS (up to **65**)
- TO SELECT THE **PROPER OIL** FOR THE APPLICATION TO OPERATE IN **LOW DILUTION REGION AND/OR TO AVOID BEARING OIL PREMATURE FAILURE**

CONVENTIONAL DESIGN

CONTROL POINT: INJECTION RATE & *CONSTANT* TEMPERATURE



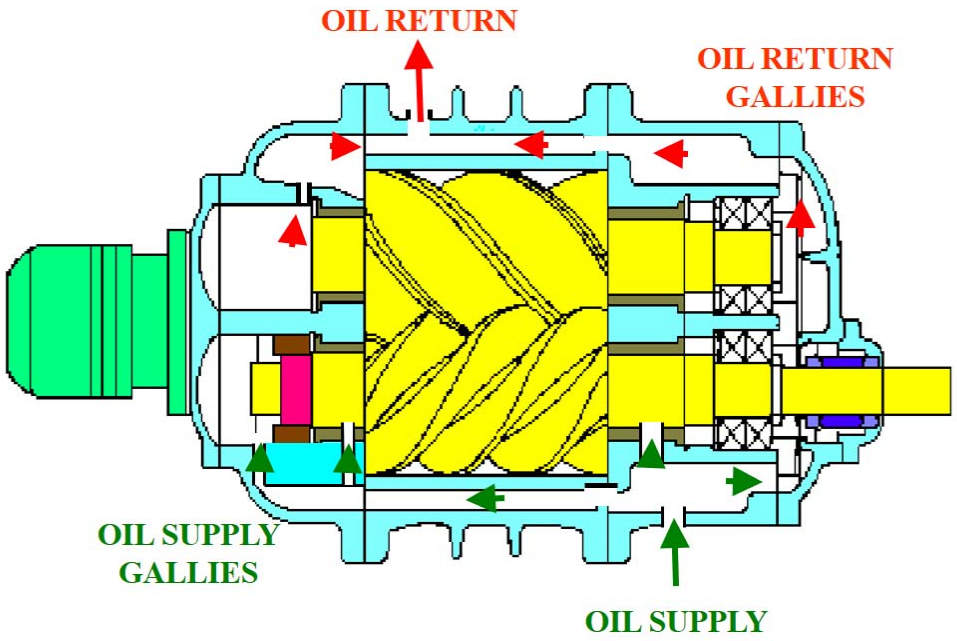


CONVENTIONAL DESIGN

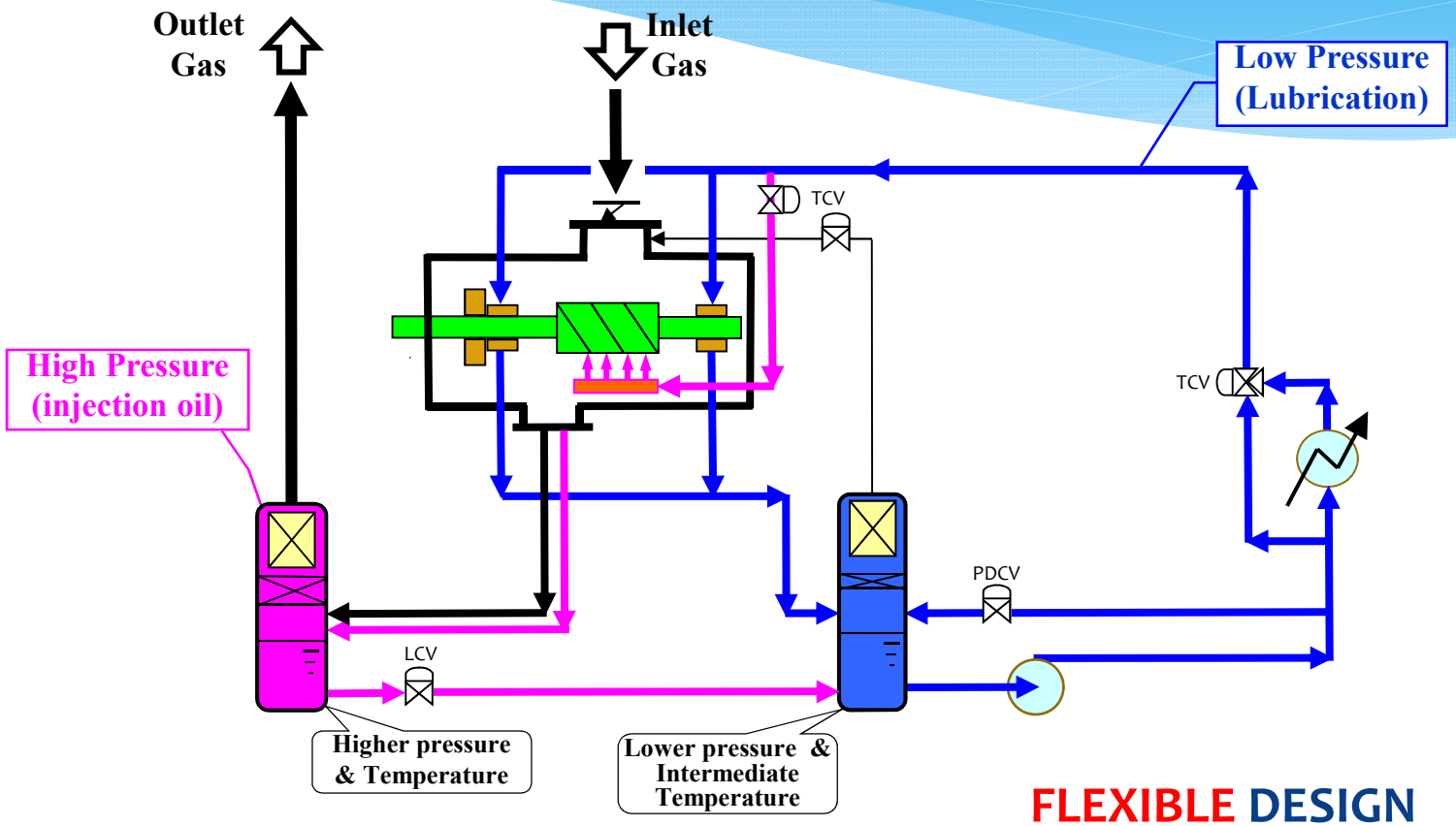
Low MW (<44)

FLEXIBLE DESIGN

CONTROL POINT: INJECTION RATE & *CONSTANT* TEMPERATURE



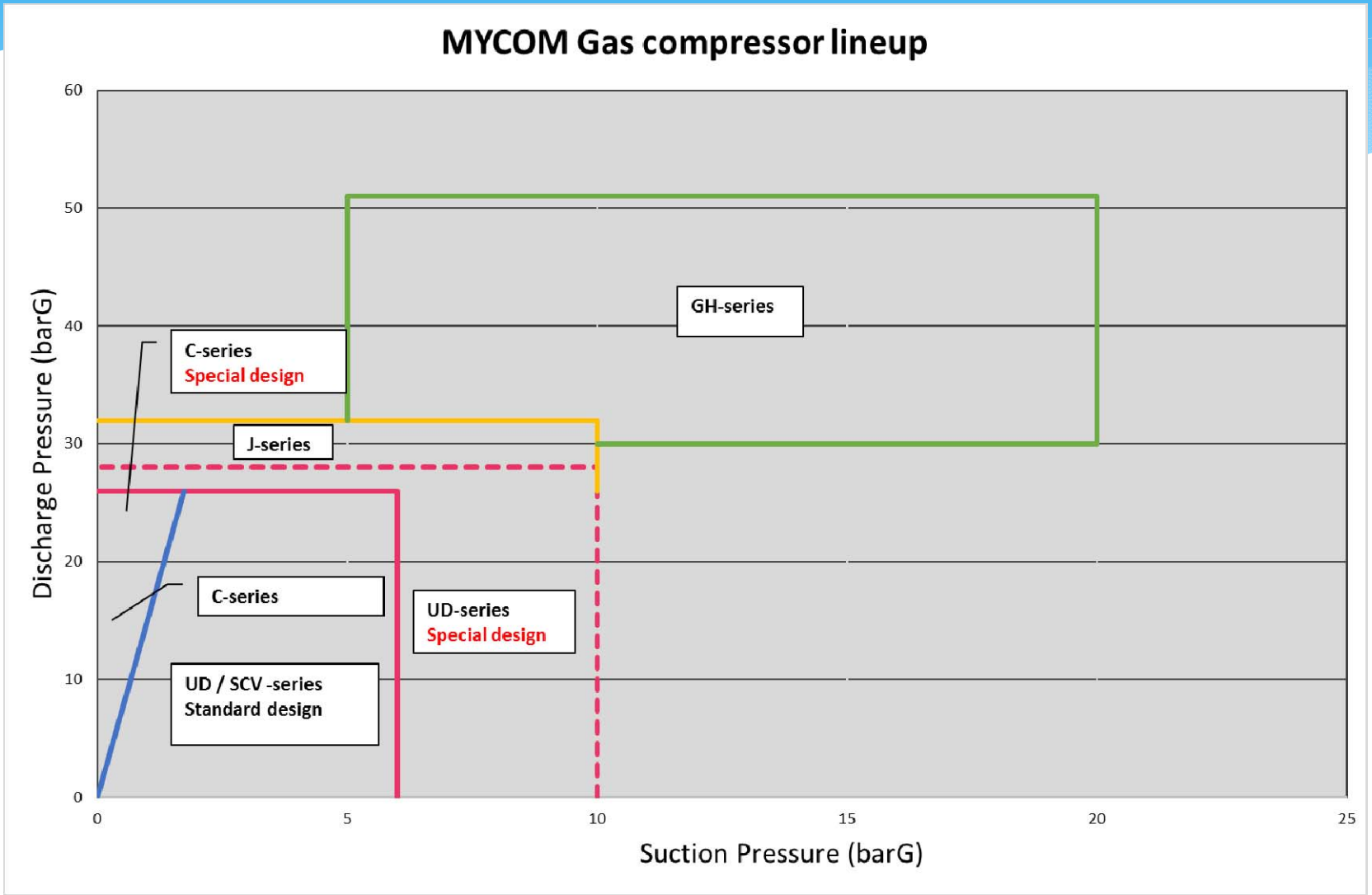
FLEXIBLE DESIGN



FLEXIBLE DESIGN

High MW (>44) & Low Temperature

Operating range



Option for Gas Compressors

* Cast Steel Casing
* Low temperature Cast Steel Casing (-45°C, -60°C)
* O-rings: NBR, HNBR, FKM(Viton), FFKM, Kalrez
* Shaft Seal : Double seal, Dry type with N2 gas
* Intrinsically Safe Indicator

  cCSAus: Class I, Div 1, Gr A,B,C,D T4

  ATEX/IECEx: II 2G Ex ib IIC T4 Gb
* Sensor holes (NPT threads) for bearing temp & vibration
* Technical Passport according to Russian rule (TR CU)

Extra option for API-619

* Tilting Pad Thrust Bearings
* ANSI 300# Flanges (only Cast Steel casing)
* Tapered shaft
* Mechanical seal according to API Plan
* Sensor holes (NPT threads) for Axial sensor
* Name plate according to API

Lead time

* Std. single model : 3 months, Exw Japan
* Std. compound model : 3 / 4 months, Exw Japan
* Special model : 8 / 9 months, Exw Japan

*Please consult Mayekawa for shorter delivery time

Typical compressor packages

* Single compressor (UD Series)

Typical compressor packages

* Single compressor (UD Series)

Typical compressor packages

* Compound compressor (C-Series)

Typical compressor packages

* Compound compressor (GH-Series)

Typical compressor packages

* Compound compressor (i-Series)

Typical compressor packages

* Small Compound compressor (MHS-Series)

Service, Spare Parts

* Spare Parts warehouse for Oil/Gas market : Belgium, Dubai, Houston, Singapore, Brazil, Korea, Japan
* Spare Parts warehouse for standard : more than 50 in the world

Service, Spare Parts

Mayekawa Middle East in Dubai