

WE LOVE TECHNOLOGY



EXPLORE FIBRO ADVANTAGE + SAFETY **GAS SPRINGS**



MEMBER OF THE LÄPPLE GROUP



FIBRO ADVANTAGE EXTENSION OF GAS SPRING TECHNOLOGY

FIBRO Gas Springs are an ideal supplement to and expansion of the traditional FIBRO product lines of helical, disc and elastomer springs for manufacturing tools, devices, moulds and machines.

FIBRO Gas Springs are designed and developed to fulfil the wishes of customers, i.e., higher forces from smaller space, longer stroke lengths. FIBRO Gas Springs take care of both demands, even in combination.

BENEFITS OF THE GAS SPRING, COMPARED TO A TYPICAL MECHANICAL SPRING:



Smaller but
Stronger



FIBRO ADVANTAGE EXTENSIVE PRODUCT RANGE

FIBRO PROVIDES WIDE RANGE OF GAS SPRINGS TO SUIT VARIOUS APPLICATIONS & FORCE REQUIREMENTS

Features:

- Delivers force from min 5 kg to max 20 tons
- Available for high-temperature environments
- Stroke lengths available from 10 mm to 300 mm
- Approved Design & Manufacturing from European Pressure Equipment Directive (2014/68/EU)

ISO Standard Gas Springs

Original Standard Gas Springs, setting ISO standard for springs



Power Line Gas Springs

The World's shortest and most powerful Piston Rod Sealed Gas Springs offering impressive force in a very compact format



Gas Springs Standard - Heavy Duty

Crossover between the standard ISO Series and the Power Line Series available with forces up to 200,000 N and 300 mm stroke lengths



Compact Gas Springs

Super compact Gas Springs provide extreme forces with minimal cylinder diameters and high stroke rates



Gas Spring - Compact Extreme

Provides extreme forces & allow for higher pressures & high stroke rates



Gas Spring (Spring Plunger) with Hexagon Socket VDI 3004

Ejector pin with rounded top for panel lifting with fully adjustable force



Dampened LCF Gas Springs

Innovative Low Contact Force Gas Springs reducing shock loads & noise levels



Speed Control Gas Springs

Reduce or eliminate blank holder bounce associated with increased return stroke speeds



Controllable Gas Springs

Springs with Lockable piston rod & delayed return, eliminating the need for a hydraulic cushion or double action press



Parts Lifter

Maintenance free Lifter providing guiding, damping gas spring force and long life time



Die Separation Springs

Energy saving, very slow return spring function, reduces wear of Dies and Presses

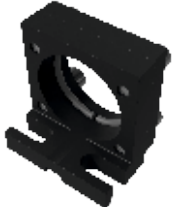





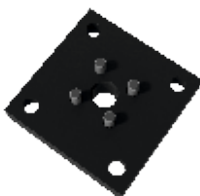


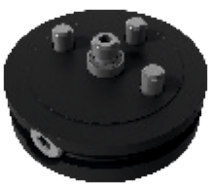



FIBRO ADVANTAGE

WIDEST CHOICE OF MOUNTS

Standard Mounts

All FIBRO Gas Springs are available with multiple mounting options to suit various applications. They are all included in most of the automotive standards.

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2480.047.xxxxx	2480.00.20.xxxxx	2480.057.XXXX	
			

Special and OEM Standard Mounts



FIBRO ADVANTAGE

ACCESSORIES TO REDEFINE EFFICEINCY

Shock Absorbing Pressure Plate:

Mounted between tool and the piston rod of the gas spring, Shock absorbing Pressure Plates are designed to reduce-

- Extreme impact loads
- Consequent high costs for press maintenance
- High noise levels
- Risk of production of lower quality parts



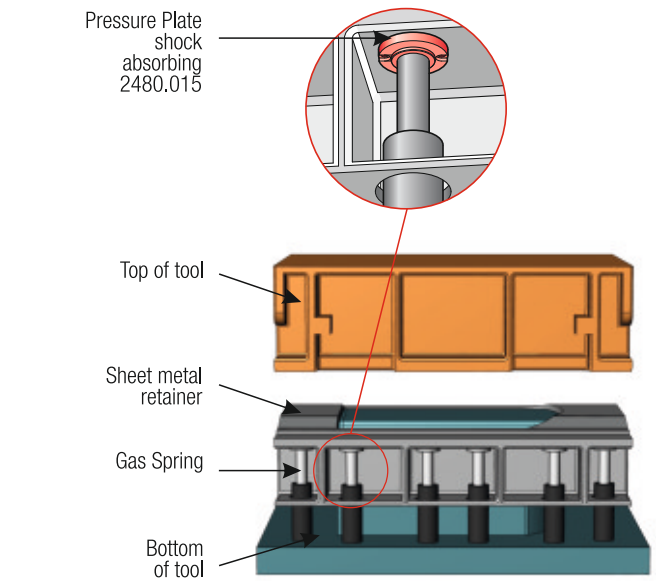
Manifold System & Composite Plates:

Composite plate consists of multiple nitrogen cylinders and a control panel, which are connected to one another via boreholes in the lower plate. It provides all the benefits of the self-contained gas spring in the linked system.

- Ready to install
- Noexternal hose system required
- Less expensive
- Better performance
- Easy to maintain
- Fitted with pressure reservoir, the pressure increase can be reduced resulting more consistence force



Installation example



Compact Gas Booster:

Developed to compress nitrogen gas, it increases the output pressure of the nitrogen cylinders considerably.

- Compact design & Light weight
- Increase in utilization capacity
- Reduction in cylinder replacement time
- Minimization of number of cylinders
- simple installation directly on all standard nitrogen cylinders



FIBRO ADVANTAGE SPECIAL SOLUTIONS

Speed Control Gas Springs:

Designed to reduce or eliminate blank holder bounce.

- Minimizes damage to the pressing tool and die
- Reduces noise levels
- Increases productivity by increasing part transfer efficiency
- Increases strokes per minute in most implementations
- Is linkable by using a hose-system
- Is available in stroke lengths 80 mm to 300 mm



Controllable Gas Springs:

Gas Springs with a lockable piston rod and delayed return stroke

- Does not follow press ram
- Idea for applications like two step deep draw where immediate return of gas spring can deform the part
- Available with stroke lengths from 5 mm to 160 mm
- Available in 15 kN, 30 kN, 50 kN and 75 kN versions
- Interconnection is possible



LCF Gas Springs:

Designed to reduce excessive shock loads, high noise level and extreme pad bounce

- Improved part transfer efficiency, increased production rate and reduced scrap
- Low maintenance cost, quieter and healthier working environment
- Stroke Length are available from 13 mm to 300 mm
- Available in 750 Kg, 1500 Kg, 3000 Kg, 5000 Kg & 7500 Kg force
- Can reduce shock load by 50%
- 100 % interchangeable with standard ISO gas springs
- Interconnection is possible

FIBRO ADVANTAGE SPECIAL SOLUTIONS



Die Separation Gas Springs:

Specially developed for tool spacing

- Very slow return stroke speed compared to standard gas springs
- Avoids unnecessary wear of the die, press and gas springs
- Uses up to 80 % less energy compared to conventional gas spring
- Stroke lengths available from 50 mm to 300 mm



Gas Springs for Mould Making:

Smart Alternative

- Requires less maintenance
- A long service life of at least 1,000,000 strokes
- Constant operating temperature of 120°C.
- Initial force available from 40 Kg to 1000 Kg
- Can be interconnected



FIBRO ADVANTAGE SAFETY FEATURES

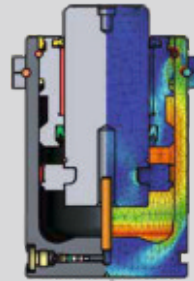
At FIBRO, safety and reliability are paramount. FIBRO Gas Springs – The Safer Choice, provides protection against failure, damage, error, accidents, harm or other events. Below are some examples of what we do to help provide a safer working environment.

1. PED Approval for 2 Million Strokes

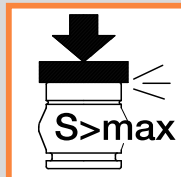


The benefit for you:

- PED approved for 2 million* full strokes
- Guaranteed safety and reliability for the entire service life of the spring

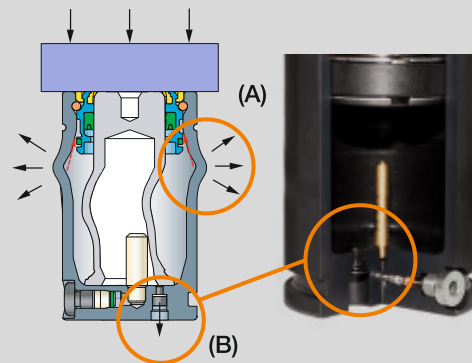


2. Over Stroke Protection

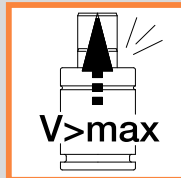


FIBRO GAS SPRINGS ARE DIFFERENT :

The patented protection system against overstroke ensures either deformation of the spring cylinder wall in a predefined manner (A) or rupturing of the bolt by piston rod at the bottom of the cylinder (B) thereby allowing the gas to escape into the atmosphere.

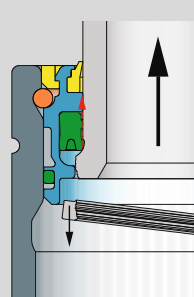


3. Return Stroke Protection



FIBRO GAS SPRINGS ARE DIFFERENT :

If the speed is too high during the return stroke, the collar on the piston rod will automatically break. The integrated patented safety stop in the piston rod then destroys the seal allowing the gas to escape into the atmosphere and the gas spring to become depressurised.

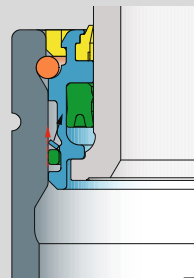


4. Over Pressure Protection



FIBRO GAS SPRINGS ARE DIFFERENT :

If the pressure rises above the maximum permitted value, the safety collar on the sealing set is automatically destroyed allowing the gas to escape into the atmosphere thus de-pressurizing the gas spring.



THE BENEFIT FOR YOU: SAFE WORKING ENVIRONMENT AND REDUCED RISK OF DAMAGE TO THE TOOL

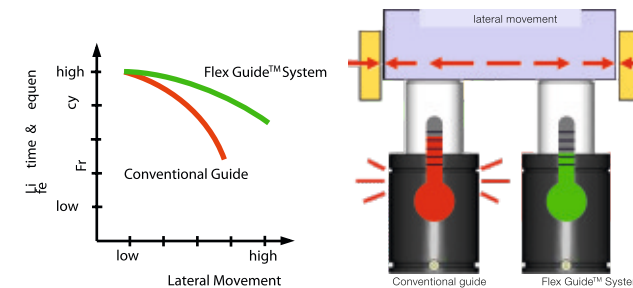
FIBRO ADVANTAGE RELIABILITY FEATURES

1. Flex Guide Solution

The Flex Guide™ System is a flexible guide in the gas spring which absorbs lateral movements of the piston rod. It minimises friction and lowers the operating temperature.

The benefit for you:

- Extended service life
- Increased stroke frequency, i.e. more strokes per minute



2. Safe Hose connection, The Dual Seal System

The FIBRO Dual Seal™ System combines a metal seal with a soft elastomer seal.

The benefit for you:

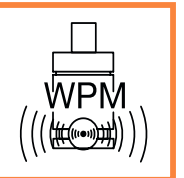
- Leak-tight connection, even under vibrations
- High process reliability
- Minimized tool down time
- Simple installation thanks to anti-rotation function



3. Wireless Pressure Monitoring System (WPM)

The benefit for you:

- Wirelessly monitors the pressure and temperature of FIBRO gas springs
- Preventative quality assurance
- High process reliability
- Minimized tool down time
- Reduced maintenance and costs



4. Protected Piston Rods

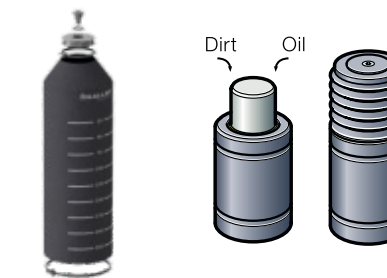
The benefit for you:

- Significantly longer service life for gas springs under harsh operating conditions

Additional feature

Heavy Duty Protection, HDP Series:

1. Double the lifetime of the gas spring
2. Fits all standard gas springs & all mounting options without any modifications



HDP Series

FIBRO ADVANTAGE GAS SPRING INTERCONNECTION SYSTEM

Gas Spring Interconnection Options

Connecting gas springs in one system enables the user to monitor gas spring pressure from outside the tool, to adjust it if necessary, to fill it and to drain it.

Your Benefits :

- Ease of maintenance
- Reliability
- Improvement in the quality of gas spring use in the tool
- Single point for Gas Filling and Release
- Avoid Uneven forming due to uniform pressure in all Gas Springs
- Improved Part Quality
- Cost effective

FIBRO offers three different systems for hose connections for gas springs:

A. Mininess- System 2480.00.23./24.

B. 24° - Cone System 2480.00.25/26.

C. Connector System, 24° Conus Micro 2480.00.27/28.

B. 24°-cone-system 2480.00.25./26.

Recommended application:

- + Suitable for connecting to a pressure reservoir
- + Wide range of connection adapters
- + Vibration-proof (O-ring seal)
- + High pressure resistance
- + Maximum Permissible Pressure 315 Bar

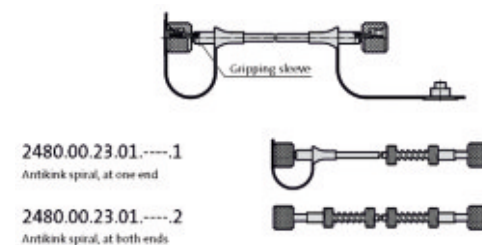


A. Mininess-System 2480.00.23./24.

Recommended application:

Most used system for all gas springs with G1/8 gas connection.

- + Small external hose diameter = 5 mm
- + Small bending radius $R_{min} = 20$
- + High pressure resistance up to 630 bar
- + Temperature range from 0 to 100°C
- + Vibration-proof measurement couplings
- + Connector with valve
- + No tools needed for connecting / disconnecting hose to adapter
- + Swaged non-detachable hose fitting



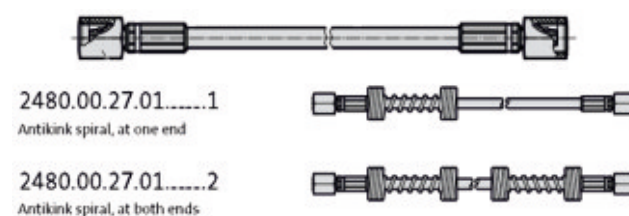
C. Connector System, 24° Conus Micro 2480.00.27/28.

Recommended application:

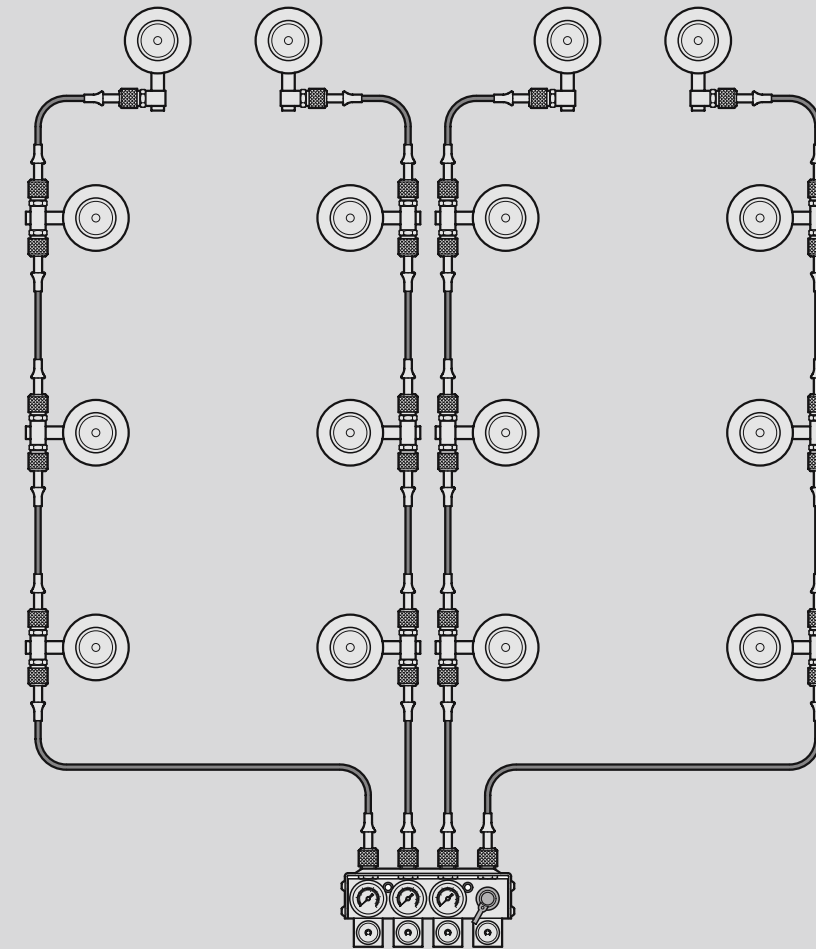
For all gas springs with M6 gas connection.

G 1/8 & G 1/4 connection ports can be connected with the use of an appropriate adaptor.

- + Small external hose diameter = 5 mm
- + Hose: small bending radius $R_{min} = 20$ mm
- + Pipe: Min. bending radius = 12 mm (3x da)
- + High pressure resistance
- + Small connection fitting
- + Vibration-safe due to O-ring seal



FIBRO ADVANTAGE SERVICES AT YOUR DOORSTEP NOW!



Multiple connections with independent functioning

With extensive use of Gas Springs in Tool & Dies, interconnection of Gas Springs is becoming mandatory these days such as in draw applications. Until now, due to incorrect hose lengths in interconnection, toolmakers were facing unnecessary delay in tool commissioning and bearing the extra cost. Understanding this situation, we are now providing this value addition service of gas spring interconnection to our customers at their works.

The FIBRO battery-operated handheld Hose-Crimping Machine enables simple & fast in-die hose crimping. This quick crimping of hoses benefits the customer to have accurate lengths of hoses done by our skilled team.



Your benefits:

- Simplicity: Simple and fast in-die hose crimping.
- Efficient: No additional work in and outside die required.
- Accuracy: Correct hose lengths are obtained with correct crimp force.
- Cost effective: Additional cost due to incorrect hose lengths are eliminated.





FIBRO ADVANTAGE KNOW HOW

GAS SPRINGS CONFIGURATOR

A unique online tool for gas springs selection with 3 Basic Inputs in configurator - Total Force, No. of Springs required, and Nominal Stroke.

Benefits:

- Convenient way of gas spring selection
- Filters can be increased to find accurate gas spring for the application
- Time saver
- Automatically calculates filling pressure, temperature & force required from individual gas springs in case of multiple gas springs.
- Download Technical data sheet and 3D data along with

FIBRO GAS SPRING TRAINING PROGRAM

Training customer employees being one of our top priorities, we offer Various In-house as well as Customer's doorstep training programs for all Gas Springs which includes

- Gas spring selection for the application
- Safe use of Gas springs
- Gas spring Filling and Servicing

Because Gaining knowledge leads us to continuous growth: both our customers and ourselves.



SCAN QR CODE FOR
GAS SPRING CONFIGURATOR

FIBRO ADVANTAGE QUICK AND EASY ECOMMERCE



CHAT LIVE WITH FIBRO INDIA

Now, don't wait for a perfect time to connect with us. We are now just one click away from you!

Benefits:

- Convenient way for you to interact with our Technical Support
- Real-time, Online Chat
- Over 60 years of Technical Expertise assisting you to find the right solution for your requirement
- Instant connection to the same team of professionals that take your calls and emails
- Visit our website www.fibro-india.com to start conversation



STANDARD PARTS WEBSHOP

Do you know your FIBRO Article Number? Now Get your order done in just few steps on our Webshop. Visit our website www.fibro-india.com to access the Webshop specially developed to serve our Indian Customers more efficiently.

Benefits:

- Quick Order
- One login and you have all processes at glance
- Webshop open 24 X 7 / 365
- Create your own quotations & place order
- Greater flexibility
- Track your orders online

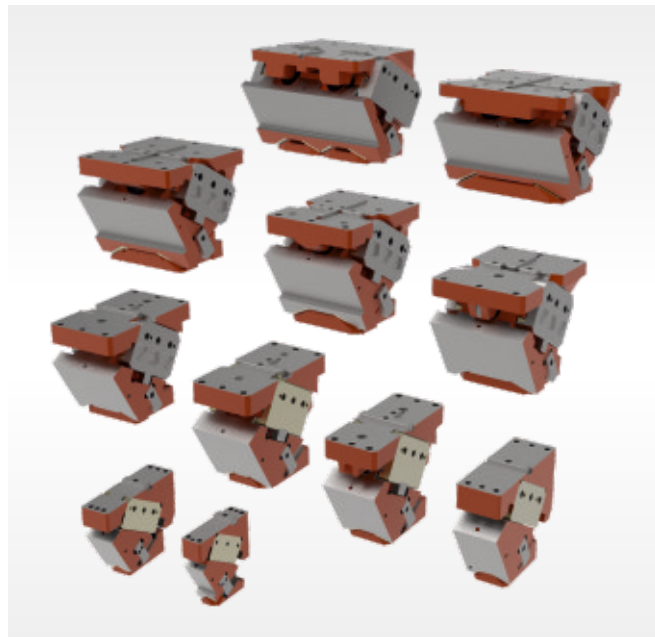


SCAN QR CODE FOR
WEBSHOP STANDARD PARTS

FIBRO ADVANTAGE NEW PRODUCTS

CAM UNITS

Reduces the number of tools and the associated costs



EXTENDED RANGE OF LIFTING ELEMENTS

Utmost Safety for your Tool Transport !



PUNCHES

Our Precision Punches results exceptionally long Die Life by reducing the need for tool changes



ADVANTAGE FIBRO INDIA



FIBRO LOGISTICS FASTEST DELIVERY

FIBRO India manufacturing facility owns committed Logistics center in Pune and is equipped with systematic Storage systems and state-of-the-art conveyance.

- Over 3000 Gas Springs in stock
- Guaranteed dispatch within 48 hrs
- Flexible choices of Logistics to ensure prompt delivery at multiple locations Globally
- Bar code system ensures accuracy of items & speed at the time of Dispatch

TRUST IN COMPETENCE GLOBAL SERVICE SUPPORT

Our Service Engineer can be quickly available to you upon your one request. For instance, they can professionally integrate all types of gas spring networks into your production facility. The service will be provided Globally as smoothly as your operations.



Visit us at www.fibro-India.com

FIBRO INDIA PRECISION PRODUCTS PRIVATE LIMITED**THE LÄPPLE GROUP****Head Office & Works:**

Plot No-A-55, Phase II, Chankan M.I.D.C.,
Tal - Khed, Pune - 410501, INDIA.
Phone: +91-2135-670-900
Email: info@fibro-india.com



LÄPPLE AUTOMOTIVE
FIBRO
FIBRO LÄPPLE TECHNOLOGY
LÄPPLE AUS- UND
WEITERBILDUNG

North & East Region**Mr Sourabh Mittal**

Area Manager – Business Development
Phone +91-8743025880
Email: sourabh@fibro-india.com

Mr Harshit Dixit

Asst. Area Manager –
Business Development
Phone: +91-8699228140
Email: h.dixit@fibro-india.com

Mr. Jayendrasinh Parmar

Regional Manager – Business Development
Phone: +91-9998766193
Email: jayendra@fibro-india.com

West Region**Mr Prasad Ambikar**

Regional Manager –
Business Development
Phone: +91-9922 940 831
Email: prasad.ambikar@fibro-india.com

Mr Rohit Tiwari

Area Manager –
Business Development
Phone +91-9607978965
Email: r.tiwari@fibro-india.com

South Region**Mr Anbalagan Shan**

Regional Manager –
Business Development
Phone: +91-7871732930
Email: anbalagan@fibro-india.com

Mr Mohammed Ismail

Regional Manager –
Business Development
Phone: +91-9886246126
Email: ismail@fibro-india.com

Our Exclusive Channel Partners**VETO CLAMPING SYSTEMS**

Plot no S-712, Village Saran,
Near Saran Police station, NIT,
Faridabad-121001
Phone: +91-9999837100
Email: info@vetoclamps@gmail.com

SARASWATI INDUSTRIAL CORPORATION

N-6, Shivalik Nagar, B.H.E.L.,
Ranipur, Haridwar, Uttarakhand-249403
Phone: +91-9760030835
Email: Saraswatiindcorp@gmail.com

HYDRO SERVE SYSTEMS

68A /2, Sidco industrial estate,
Ambattur, Chennai-600098.
Phone: +91-9884488901
Email: hydroserve-system@gmail.com

GM MASTER TOOL

92 Mehar Singh Colony, Tripuri,
Patiala-147004, Punjab, India
Phone: +91-9914967965, +91-7889123088
Email: info.gmprecision@gmail.com

S. K ENTERPRISE

Shop No. 1, Yadav Market,
Near Govt College, Sidharwali, Gurgaon (HR)
Phone: +91-9466286510
Email: 007skenterprises@gmail.com

LEGEND TOOLS TECH

Ground floor, Highway No -84,
Surya City Phase-1, Anekal Chandapura Road,
Chandapura Bangalore Rural,
Karnataka - 560099.
Email: hydroserve-system@gmail.com
Phone: +91-9900731169, +91-8712331280

AURA ENGINEERING

#218-A2, 3rd Floor, Sathyamoorthy Road,
Opp. Tharakaram Silk House, Ram Nagar,
Coimbatore-641009, Tamil Nadu, India.
Phone: +91-8754015484, +91-9787876739
Email: sales@auraengg.in

R&W TOOLING SOLUTION PVT. LTD.

Office No 17, Ganesham Commercial-A,
Pimple Saudagar, Pune-411027, Maharashtra-
Phone: +91 -8237708069
Email: dnyaneshwar.waman@randwtoolings.com