

**MegaPerformance**  
**MegaVersatility**  
**MegaSimplicity**  
**MegaValue**



**MEGASYS® PRODUCTS**

**GATES NEXT GENERATION HYDRAULICS**



As advanced hydraulic systems are designed and engineered into more and more high-powered, high-pressure equipment, the importance of high-quality, flexible, durable hose assemblies that won't fail has never been more critical. As the industry leader in hydraulic hose technology, Gates has developed an integrated solution to meet the expanding needs of today's hydraulic systems – and tomorrow's.

Gates MegaSys® hydraulic hose and coupling products offer a combination of technology, performance and flexibility that is unmatched by anything on the market today – or for the foreseeable future!

The fully integrated MegaSys hose line is designed to provide maximum flexibility and performance in a wide range of high-pressure hydraulic applications while simplifying hose selection and assembly fabrication.

MegaSys products and features save time, space and money. Color-coded laylines and constant pressure ratings through all sizes make hose identification and selection easier and faster while reducing inventory requirements. Couplings provide leak-free performance. A bend radius up to one-third the SAE specification enables use of shorter hose lengths and savings of up to 64 percent. It all adds up to more value for your money.





## Constant Pressure Hoses

The MegaSys® line consists of constant pressure spiral-wire and wire-braid hoses that can be bent up to one-third SAE specifications. Combined with innovative couplings specifically designed to crimp on these hoses, leak-free performance is guaranteed up to maximum working pressures as high as 8,000 psi.

### MegaSys Benefits

- Simplifies hose selection with constant pressure ratings
- Bends up to one-third SAE bend radius specifications
- Saves overall hose assembly length
- Facilitates easier routing in tight applications
- Requires fewer bent tube fittings
- Eases installation with higher flexibility
- Lowers inventory requirements
- Extends life in bending, flexing applications
- Available with abrasion-resistant XtraTuff™ or MegaTuff® covers
- Reduces costs by as much as 64 percent



# The MegaSys® Hose Line

## MegaSys® Spiral-Wire Constant Pressure Hoses

### EFG3K, EFG4K, EFG5K, EFG6K and G8K Hoses

- Each hose features a constant working pressure
- Four alternating layers (six in some larger sizes) of spiraled, high tensile steel
- Nitrile tube for use with biodegradable hydraulic fluids
- Tested to industry-leading 1,000,000 impulse cycles
- Temperature range -40°F to +250°F (-40°C to +121°C)
- Available with abrasion-resistant MegaTuff® cover

### MegaSys Hose Pressure Color Key

|          |           |
|----------|-----------|
| 3000 psi | M3K/EFG3K |
| 4000 psi | M4K/EFG4K |
| 5000 psi | M5K/EFG5K |
| 6000 psi | M6K/EFG6K |
| 8000 psi | G8K       |





## MegaSys® Wire-Braid Constant Pressure Hoses

### M3K, M4K, M5K and M6K Hoses

- Each hose features a constant working pressure
- Two braids of high-tensile steel wire (one braid in M3K -3, -4, -5, -6 and -8 sizes)
- Nitrile tube for use with biodegradable hydraulic fluids
- Tested to industry-leading 600,000 cycles
- Temperature range -40°F to +212°F (-40°C to +100°C)
- Available with abrasion-resistant XtraTuff™ or MegaTuff® covers

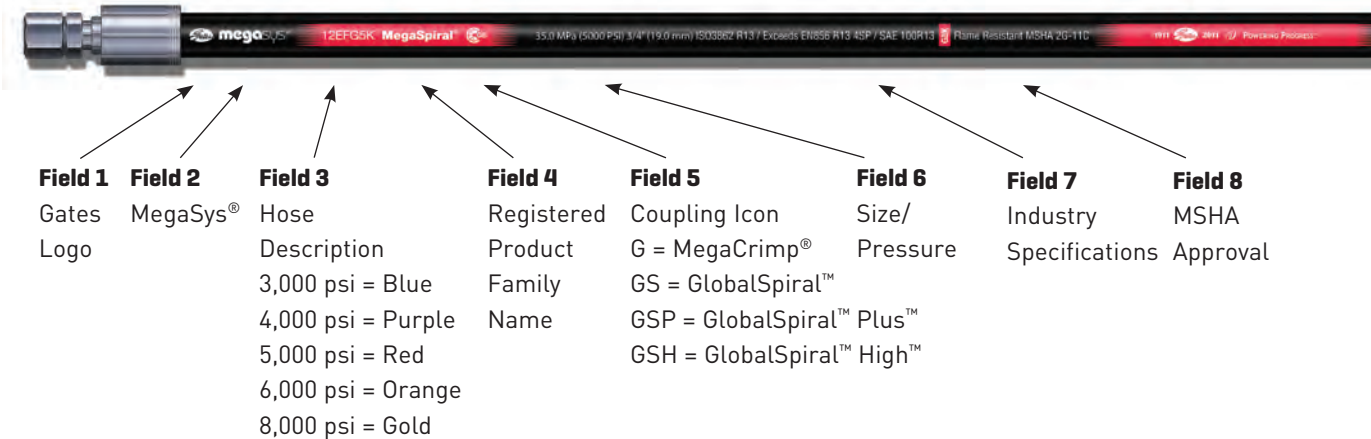
### MegaSys Hose Pressure Color Key

|          |           |
|----------|-----------|
| 3000 psi | M3K/EF63K |
| 4000 psi | M4K/EF64K |
| 5000 psi | M5K/EF65K |
| 6000 psi | M6K/EF66K |

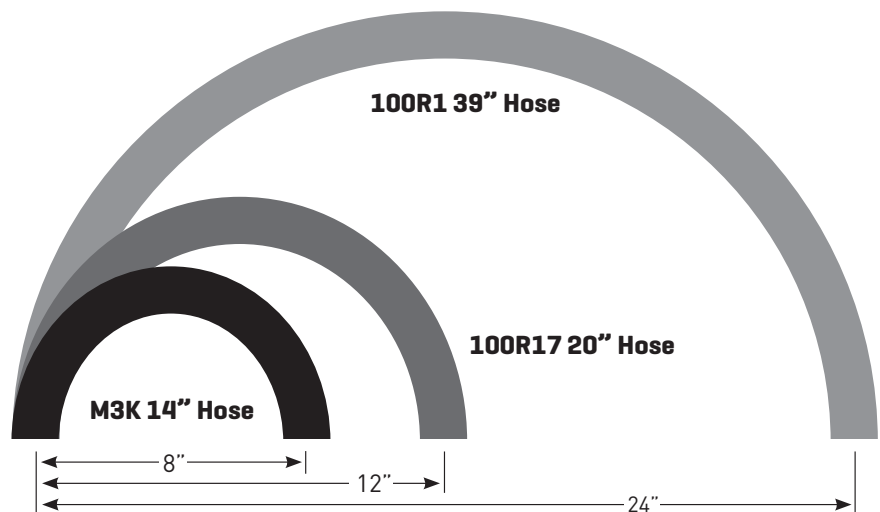


# MegaSys® Hose Layline System

These newly developed laylines are used exclusively on MegaSys hoses. Distinctive design and pressure color coding makes MegaSys hoses easy to identify in stock or in service.



## MegaSys Hoses Bend – And Bend Some More



### Up to One-Third SAE Bend Radius Specification

Illustration of 16M3K hose flexibility and reduced hose length requirements

# MegaSys® Size/Pressure Matrix

Use the charts below for easy hose selection. Just find the required pressure and the chart will show you which hose meets that pressure in the applicable size.

## SAE Specifications (Chart colors do not correspond to MegaSys hose color key system)

| I.D.     | -4    | -5  | -6        | -8        | -10       | -12       | -16   | -20   | -24   | -32   |
|----------|-------|-----|-----------|-----------|-----------|-----------|-------|-------|-------|-------|
| 3000 psi | M3K*  | M3K | M3K       | M3K       | M3K       | M3K       | M3K   | EF63K | EF63K | EF63K |
| 4000 psi | M4K** | M4K | M4K/EF64K | M4K/EF64K | M4K/EF64K | M4K/EF64K | EF64K | EF64K |       |       |
| 5000 psi | M5K   | M5K | M5K       | M5K/EF65K | EF65K     | EF65K     | EF65K | EF65K | EF65K | EF65K |
| 6000 psi | M6K   |     | EF66K     | EF66K     | EF66K     | EF66K     | EF66K | EF66K | EF66K | EF66K |
| 8000 psi |       |     |           |           |           | G8K       | G8K   |       |       |       |

|                   |                    |                          |
|-------------------|--------------------|--------------------------|
| Exceeds SAE 100R1 | Exceeds SAE 100R12 | *M3K Exceeds SAE 100R17  |
| Exceeds SAE 100R2 | Exceeds SAE 100R13 | **M4K Exceeds SAE 100R19 |
|                   | Exceeds SAE 100R15 |                          |

## European Norm (EN) Specifications (Chart colors do not correspond to MegaSys hose color key system)

| I.D.      | 04  | 05  | 06        | 08        | 10        | 12        | 16    | 20    | 24    | 32    |
|-----------|-----|-----|-----------|-----------|-----------|-----------|-------|-------|-------|-------|
| 210bar/3K | M3K | M3K | M3K       | M3K       | M3K       | M3K       | M3K   | EF63K | EF63K | EF63K |
| 280bar/4K | M4K | M4K | M4K/EF64K | M4K/EF64K | M4K/EF64K | M4K/EF64K | EF64K | EF64K |       |       |
| 350bar/5K | M5K | M5K | M5K       | M5K/EF65K | EF65K     | EF65K     | EF65K | EF65K | EF65K | EF65K |
| 420bar/6K | M6K |     | EF66K     | EF66K     | EF66K     | EF66K     | EF66K | EF66K |       |       |
| 560bar/8K |     |     |           |           |           | G8K       | G8K   |       |       |       |

|                 |             |
|-----------------|-------------|
| Exceeds 1SN/1SC | Exceeds 4SP |
| Exceeds 2SN/2SC | Exceeds 4SH |



## MegaCrimp® Couplings



## GlobalSpiral™ Couplings



### Solid, Leak-Free Couplings

The majority of hydraulic hose failures occur at the couplings due to blow-offs or leaks. Gates has designed and engineered innovative, robust couplings for MegaSys hoses that provide connections you can count on for superior performance – guaranteed.

#### The Versatile “No-Weep” Coupling with the Patented “C” Insert

It's what's inside the pre-assembled MegaCrimp coupling that gives it world-class, leak-proof performance. It is designed with a patented “C” insert, attached to the ferrule, that accommodates hoses of different constructions and wall thicknesses. The insert's design ensures crimping forces are evenly distributed to form a concentric seal.



During crimping, only the MegaCrimp coupling's outside shell takes on the shape of the dies. The “C” insert starts round, stays round – like the hose.

The “C” insert simplifies inventory requirements since one MegaCrimp coupling size can accommodate various hose outside diameters, on both one- and two-wire braid hydraulic hoses.

#### No-Skive Convenience, Reduced Inventory

GlobalSpiral couplings are specially engineered to provide superior performance for extreme high-pressure, high-impulse spiral-wire hydraulic hose applications. They can be used with all Gates MegaSys four- and six-spiral wire hoses up to 8,000 psi.

The innovative, two-piece, no-skive design reduces assembly time, labor, fabrication errors and contamination of the fluid power system. The work area stays clean, and the odors and dust normally created by skiving are eliminated.

#### Key Features

- Robust “bite-the-wire” crimp
- Low profile
- Full-stem insertion
- Full-length crimp
- Tested to industry-leading 600,000 impulse cycles
- Simplifies inventory management
- Environmentally-friendly TuffCoat™ plating for 500 percent better corrosion resistance



Once inserted, MegaCrimp couplings stay put. They don't fall out.

MegaCrimp couplings have an optimum insertion force — not too tight, not too loose — so you can feel them “hit bottom” when inserted.



In addition, the two-piece design reduces parts inventory by 30 percent because only one stem is required for all spiral-wire hose types.

#### Key Features

- “Bite-the-wire” crimp for improved coupling retention.
- Over 30 thread configurations to maximize application coverage
- Tested to industry-leading 1,000,000 impulse cycles at +250°F (+121°C)





## Tough Covers that Extend MegaSys Hose Life

Gates abrasion-resistant covers available on MegaSys hoses are tested and proven to stand up under the harshest operating conditions. These covers increase hose service life, lower maintenance and replacement costs, and eliminate the need for costly hose protectors such as spring guards and nylon sleeves.

### MegaTuff® Hose Cover

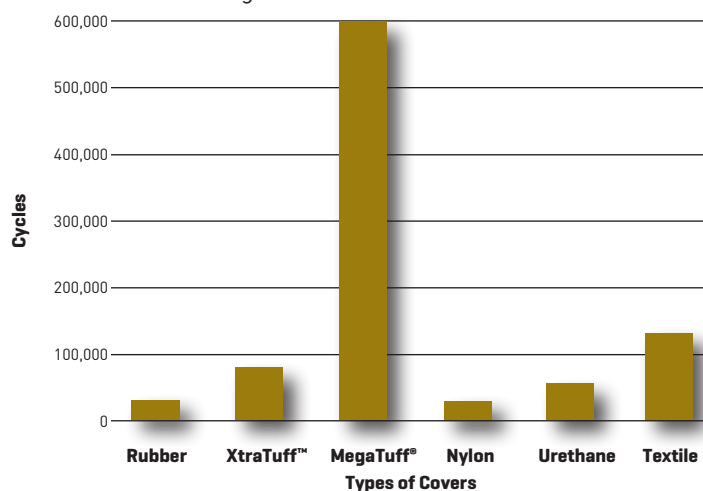
- Super-tough cover solves abrasion and wear problems
- 300 times the abrasion resistance of standard hose covers
- Tested to 1,000,000 cycles without failure
- Resistant to oil, ozone and UV rays
- Outperforms any other abrasion-resistant hose cover on the market today

### XtraTuff™ Hose Cover

- Mid-range abrasion-resistant cover
- 25 times the abrasion resistance of standard hose covers
- Resistant to oil, ozone and UV rays

### Abrasion Testing

ISO6945 — Metal-to-hose rubbing cycles to lose one gram of weight



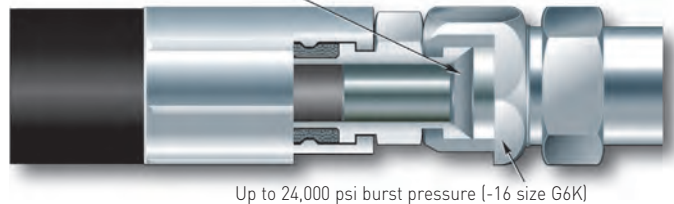
## Full-Torque Nut™ Technology

One of the most common causes of hydraulic leaks is a cracked coupling nut or seat due to over-torquing. Gates has engineered a solution – Full-Torque Nut technology which is standard on all MegaCrimp® and GlobalSpiral™ couplings.

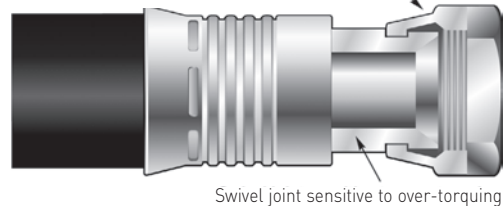
Full-Torque Nut couplings are stronger and more durable than traditional staked-nut fittings. A large holding shoulder evenly distributes stress forces at the nut for higher resistance against cracking, even when inadvertently over-torqued. Increase equipment uptime by eliminating damaged couplings and leaks from too much torque.

### Over-Torque Protection

Robust swivel joint allows for maximum torque



Staked-nut provides less burst pressure protection



## TuffCoat™ Plating

### 500+ Percent Better than the 72-Hour SAE Standard

TuffCoat plating sets the global standard in both corrosion resistance and environmental friendliness. Gates has removed all hexavalent chromium from its plating process. This metal, common in industrial plating, is toxic to the environment. Gates engineered TuffCoat plating to be stronger and more resistant to corrosion, without the toxicity of hexavalent chromium.

TuffCoat plating is standard on MegaCrimp® and GlobalSpiral™ couplings.



**Competitor    Gates    Competitor    Competitor    Competitor**

Tested under SAE J516 and ASTM-B-117 salt-spray conditions, TuffCoat plating provided more than 400 hours of protection from red rust formation – over 500 percent better than the 72-hour SAE standard.

The Gates coupling with TuffCoat plating shows no red rust formation. White patches on couplings are salt residue, not corrosion.

# MegaTested for Superior Quality, Reliability and Value

All components of the MegaSys product line are tested against industry standards and competitive products. Whether it's a new concept under development or an existing product advancement, the goal is to continually meet or exceed industry standards and outperform the competition.

- MegaSys hoses meet tough flex-impulse testing, up to 1,000,000 cycles, that bends hose during testing and simulates severe equipment applications
- Hose covers are exposed to conditions simulating harsh operating environments to prove they will stand up to abuse, abrasion, oil, chemicals and weathering far beyond ordinary hoses
- Coupling engineering and designs are put to the test to guarantee leak-free performance at today's higher and higher equipment operating pressures
- Component materials, from hose construction to coupling plating, are proven in the lab and in the field to resist the harshest environmental conditions
- Standardized hose, coupling and crimp assembly procedures ensure consistent, reliable performance

Rigorous testing and product validation have always been central to the Gates philosophy. From product development to the manufacturing line, Gates strives to provide the global marketplace with products that deliver long life, unrivaled performance and the highest possible value.





**Gates Corporation**  
**P.O. Box 5887, Denver, Colorado 80217**