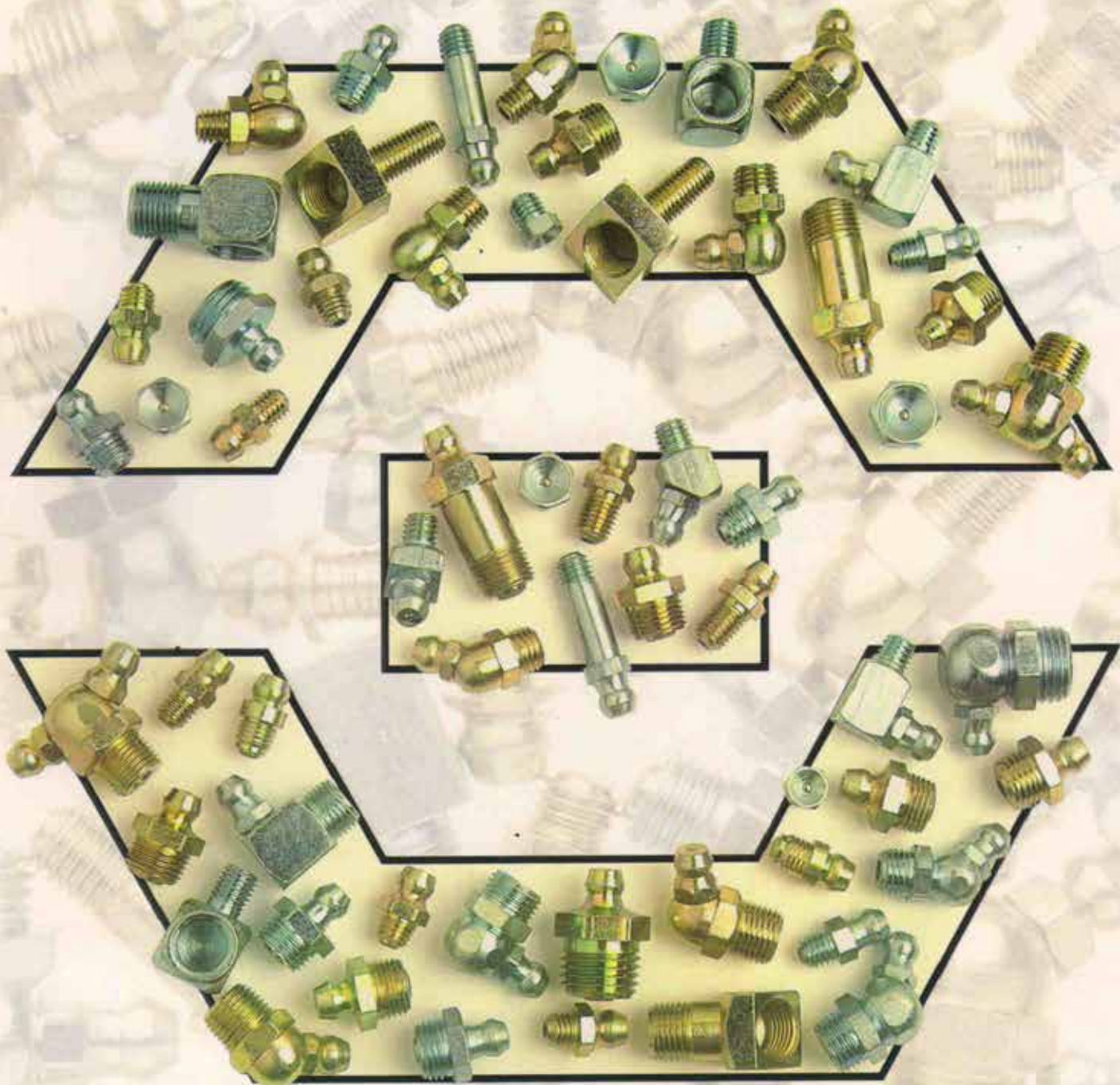




# VIRAL ENGINEERS

MANUFACTURER & EXPORTER



PRECISION BY DESIGN





## About Us

**The final resolve** of a man, dedicated to his extraordinary vision of building a new empire established as **Viral Engineers**. Now emerging as a dynamic manufacturer and exporter of Precision Auto parts & Hydraulic Grease Fittings / Nipples was nothing short of a great ordeal for **Mr. Vinod Gala** & his dedicated team of engineers and qualified staff and thus success story continues for Viral Engineers.

## The Success Story

Viral Engineers took **wings in 1981** as a manufacturer of Precision Auto Parts and Hydraulic Grease Fittings / Nipples. Today the company has reached new heights and are **leading manufacturer** in this field. **Uncompromising attitude** coupled with strategic planning is the key to the **success of business** entity.

The new state-of-the-art technology has helped to achieve **superior products** at a **competitive price** with improved results to serve **OEM Giants** in India and **Export** of Precision Auto Parts & Hydraulic Grease Fittings / Nipples Directly to **Australia, USA, Germany and other European Countries**.

## Why Choose Viral Engineers ?

Viral Engineers is an **ISO 9001:2000** certified company specialized in manufacturing Hydraulic Grease Fittings / Nipples. In order to maintain International Quality Standards (As per **SAE J 534** and **DIN 71412** Standard), all the Grease Fittings / Nipples manufactured by Viral Engineers are made from top quality raw material and made as per Customers requirement and are inspected at every manufacturing stage according to **ISO 9001:2000** standard.

## Precision by Design

- ★ All Grease Fittings / Nipples The **Tip is only Case Hardened** for longer life to sustain excessive work loads.
- ★ **Tight Fitting Ball check Valve** in the head prevents dirt from getting into the fitting.
- ★ **Plating** in the form of **Zinc Plating (Yellow / White Passivated)**, as well as **Trivalent Plating** is done to protect against corrosion and to prolong life of the fittings.
- ★ **The Springs** used in the Grease Fittings / Nipples are made of **Carbon Steel** and are Stress relieved.
- ★ Grease Fittings / Nipples are **individually inspected** and Batch Tested to **8,000 PSI for Industrial purposes**.
- ★ **Other than Standard types** of Grease Fittings / Nipples we also **manufacture Customised** Grease Fittings required by Various Industries as per their specific requirement.

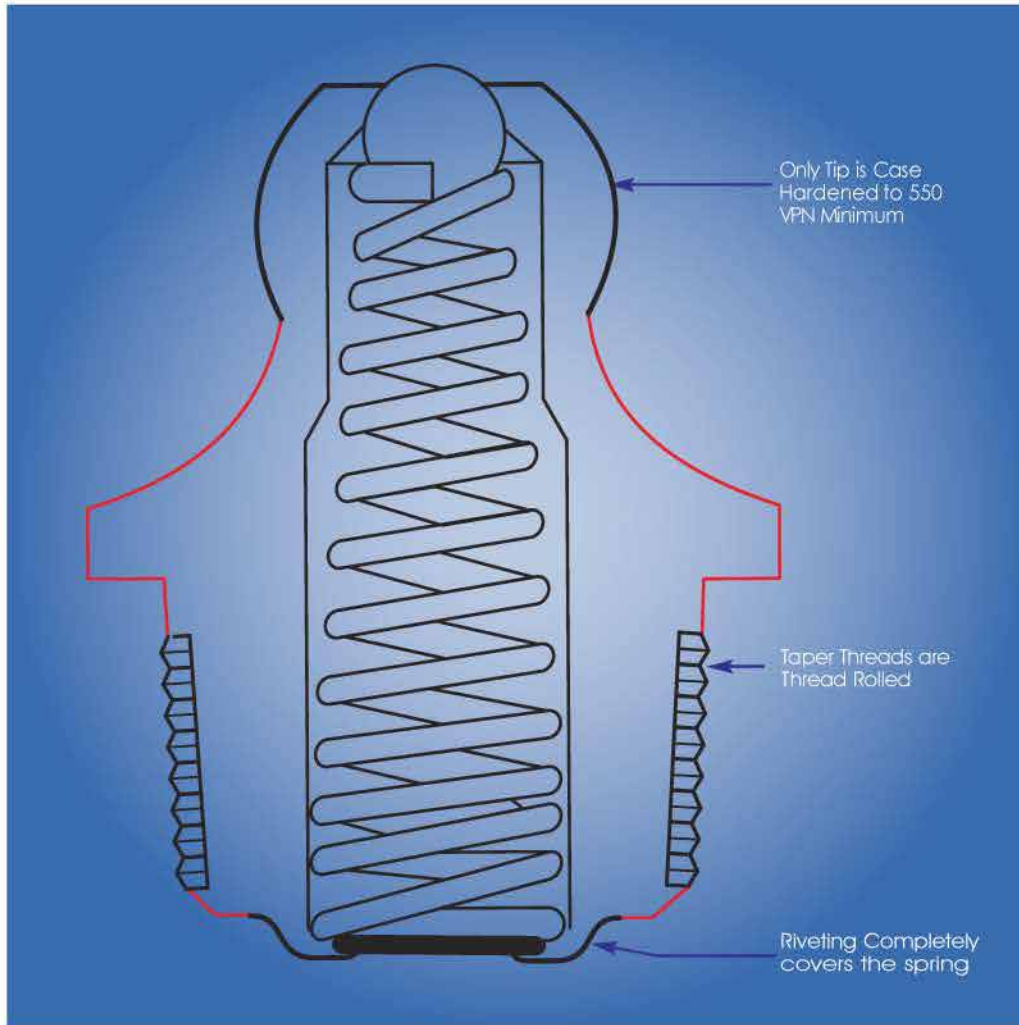


**Mr. Vinod Gala**  
Managing Director

**"Quality through Perfection and Excellence through Hard Work"**



## Salient Features



1. Normally Full Case Hardened Grease Fittings / Nipples tend to harm and damage the female part due to hardened threads of Grease Fitting / Nipple. Viral Engineers employs a process called **Tip Hardening** in which only the Tip of the Fitting / Nipple is hardened, thereby preventing damage / replacement of the entire female part.
2. **Thread Rolled taper threads** are stronger and durable due to work hardening and toughening of threads which is not achievable in cut thread process, as the threads become brittle on the periphery. Thread rolling process gives consistency in size and threads are well maintained as per gauge with smooth finish.
3. **The Riveting** is done in such a manner that a Dome shape is formed. This type of Dome shaped Riveting completely covers the spring, securing the spring in its place.

***"Quality through Perfection and Excellence through Hard Work"***

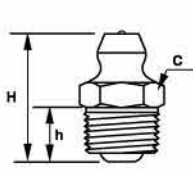


Fig - 1

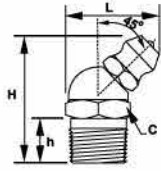


Fig - 2

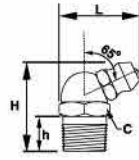


Fig - 3

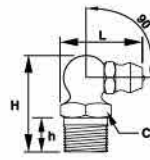


Fig - 4

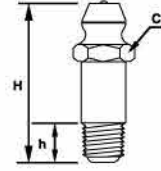


Fig - 5

**1/4" X 28 SAE – LT THRE ADS (TAPER THREADS):**

DESCRIPTION	FIG	H ±0.04"	h ±0.03"	L ±0.04"	C(A/F)
1/4 " X 28 Straight	1	.54 "	.20 "	—	5/16 "
1/4 " X 28 Straight 11/16"	5	.69 "	.31 "	—	5/16 "
1/4 " X 28 Straight 15/16"	5	.95 "	.31 "	—	5/16 "
1/4 " X 28 Straight 1-1/16"	5	1.13 "	.31 "	—	5/16 "
1/4" X 28 45°	2	.80 "	.21 "	.58 "	3/8 "
1/4" X 28 65°	3	.79 "	.29 "	.65 "	3/8 "
1/4" X 28 90°	4	.75 "	.21 "	.66 "	3/8 "

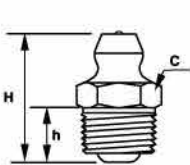


Fig - 1

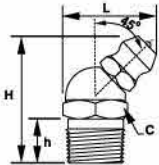


Fig - 2

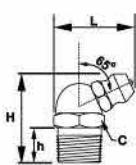


Fig - 3

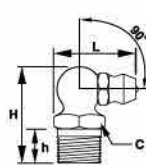


Fig - 4

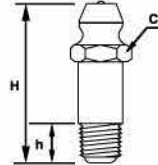


Fig - 5

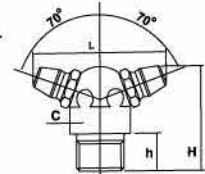


Fig - 6

**AMERICAN PIPE THREADS:**

DESCRIPTION	FIG	H ±0.04"	h ±0.03"	L ±0.04"	C(A/F)
1/8 " X 27 PTF Straight	1	.63 "	.28 "	—	7/16 "
1/8 " X 27 PTF 30°	2	.90 "	.29 "	.56 "	7/16 "
1/8 " X 27 PTF 45°	2	.89 "	.29 "	.65 "	7/16 "
1/8 " X 27 PTF 65°	3	.84 "	.29 "	.69 "	7/16 "
1/8 " X 27 PTF 90°	4	.85 "	.29 "	.72 "	7/16 "
1/8 " X 27 PTF ST. 1-1/4"	5	1.25 "	.31 "	—	7/16 "
1/8 " X 27 PTF 70° Two Face	6	.81 "	.29 "	1.12 "	1/2 "

***"Quality through Perfection and Excellence through Hard Work"***

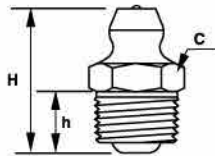


Fig - 1

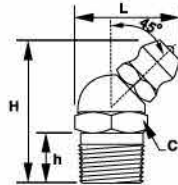


Fig - 2

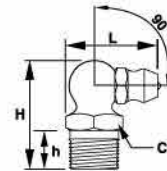


Fig - 3

**METRIC THREADS:**

DESCRIPTION	FIG	H (max)	h +0.5	L (approx)	C
M6 X 1 Straight	1	16 mm	5 mm	--	7 mm A/F
M6 X 1 45° (Hex)	2	23.5 mm	5 mm	14.5 mm	9 mm A/F
M6 X 1 90° (Hex)	3	18 mm	5 mm	18.8 mm	9 mm A/F
M8 X 1 Straight	1	16 mm	5 mm	--	9 mm A/F
M8 X 1 45° (Hex)	2	23.5 mm	5 mm	14.5 mm	9 mm A/F
M8 X 1 90° (Hex)	3	18 mm	5 mm	18.8 mm	9 mm A/F
M8 X 1.25 Straight	1	16 mm	5 mm	--	9 mm A/F
M10 X 1 Straight	1	16 mm	5 mm	--	11 mm A/F
M10 X 1 45° (Hex)	2	23.5 mm	5 mm	16.5 mm	11 mm A/F
M10 X 1 90° (Hex)	3	18 mm	5 mm	20.8 mm	11 mm A/F
M10 X 1.5 Straight	1	16 mm	5 mm	--	11 mm A/F
M10 X 1.5 45° (Hex)	2	23.5 mm	5 mm	16.5 mm	11 mm A/F
M10 X 1.5 90° (Hex)	3	18 mm	5 mm	20.8 mm	11 mm A/F
M6 X 1 45° (Square)	2	21 mm	5 mm	14.5 mm	9 mm sq.
M6 X 1 90° (Square)	3	18 mm	5 mm	18.8 mm	9 mm sq.
M8 X 1 45° (Square)	2	21 mm	5 mm	14.5 mm	9 mm sq.
M8 X 1 90° (Square)	3	18 mm	5 mm	18.8 mm	9 mm sq.
M10 X 1 45° (Square)	2	21 mm	5 mm	16.5 mm	11 mm sq.
M10 X 1 90° (Square)	3	18 mm	5 mm	20.8 mm	11 mm sq.
M8 X 1.25 45° (Square)	2	21 mm	5 mm	14.5 mm	9 mm sq.

***"Quality through Perfection and Excellence through Hard Work"***

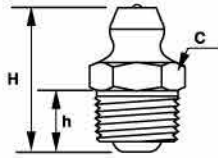


Fig - 1

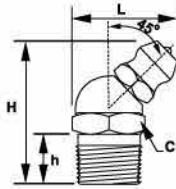


Fig - 2

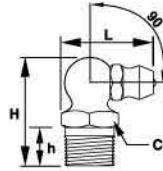
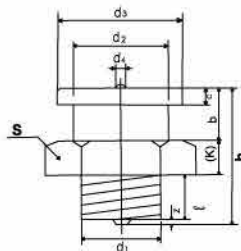


Fig - 3

**BSP THREADS (TAPER THREADS):**

DESCRIPTION	FIG	H (max)	h +0.5	L (approx)	C
1/8 BSP Straight	1	16 mm	5 mm	--	11 mm A/F
1/8 BSP 45° (Hex)	2	23.5 mm	5 mm	16.5 mm	11 mm A/F
1/8 BSP 90° (Hex)	3	18 mm	5 mm	20.8 mm	11 mm A/F
1/8 BSP 45° (Square)	2	21 mm	5 mm	16.5 mm	11 mm sq.
1/8 BSP 90° (Square)	3	18 mm	5 mm	20.8 mm	11 mm sq.
1/4 BSP Straight	1	16 mm	5 mm	--	14 mm A/F
1/4 BSP 45° (Hex)	2	23.5 mm	5 mm	19.8 mm	14 mm A/F
1/4 BSP 90° (Hex)	3	22 mm	6 mm	22.8 mm	14 mm A/F



**BUTTON HEAD:**

	d 1	b	c	d 2	d 3	d 4	h	(k)	l	s	z
		± 0.1	- 0.1	h 12	h 12	min	max	j 16	- 0.5	h 13	max
1) M10 X 1 2) G 1/8 3) G 1/4		6.5	2	12	16	2.9	17.6	4.5	5.5	17	1
1) M16X 1.5 2) G 1/4 3) G 3/8		8.5	3	18	22	5	23.1	5.5	7.5	22	1.5

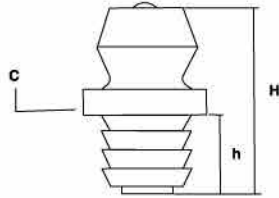


Fig - 7

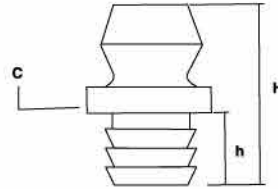


Fig - 8

**DRIVE FITTINGS:**

DESCRIPTION	FIG	H ±0.04"	h ±0.03"	C(Round)
3/16" Drive Fit	7	.50"	.25"	5/16" Ø
3/16" Drive Fit - No Ball Check	8	.41"	.12"	5/16" Ø
1/4" Drive Fit	7	.56"	.26"	5/16" Ø
1/4" Drive Fit - No Ball Check	8	.45"	.12"	5/16" Ø
5/16" Drive Fit	7	.56"	.26"	.375" Ø
5/16" Drive Fit - No Ball Check	8	.62"	.21"	.375" Ø

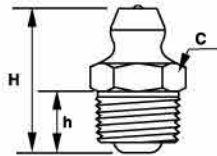


Fig - 1

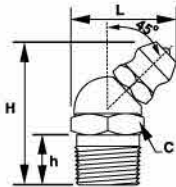


Fig - 2

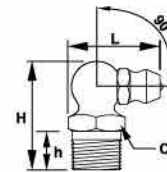


Fig - 3

**SELF FORMING THREADS:**

DESCRIPTION	FIG	H ±0.04"	h ±0.03"	L ±0.04"	C(A/F)
1/4 " X 28 Special Taper St.	1	.55 "	.21 "	--	5/16 "
1/8 " X 27 Special Taper St.	1	.63 "	.24 "	--	7/16 "
1/4 " X 28 Special Taper 45°	2	.81 "	.20 "	.58 "	3/8 "
1/4 " X 28 Special Taper 90°	3	.75 "	.20 "	.67 "	3/8 "
1/8 " X 27 Special Taper 45°	2	.81 "	.20 "	.63 "	7/16 "
1/8 " X 27 Special Taper 90°	3	.76 "	.20 "	.72 "	7/16 "

***"Quality through Perfection and Excellence through Hard Work"***

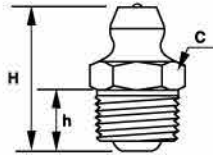


Fig - 1

**UNF THREADS (PARALLEL THREADS):**

DESCRIPTION	FIG	H ±0.04"	h ±0.03"	L	C(A/F)
1/4 " X 28 UNF Straight	1	.51 "	.17 "	--	9/32 "
5/16 " X 24 UNF Straight	1	.63 "	.21 "	--	3/8 "
3/8 " X 24 UNF Straight	1	.63 "	.25 "	--	7/16 "

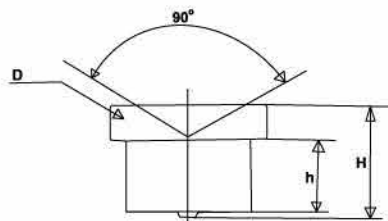


Fig - 9

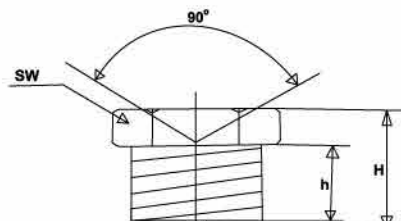


Fig - 10

**FUNNEL:**

DESCRIPTION	FIG	H (max)	h +0.5	C
6 mm Ø Funnel	9	9.5	5	8 mm Ø
8 mm Ø Funnel	9	9.5	5	10 mm Ø
G 1/8 Funnel	10	9.5	5	11 mm A/F
M6 X 1 Funnel	10	9.5	5	7 mm A/F
M8 X 1 Funnel	10	9.5	5	9 mm A/F
M10 X 1 Funnel	10	9.5	5	11 mm A/F

***"Quality through Perfection and Excellence through Hard Work"***





## **Stainless Steel Hydraulic Grease Fittings**

Viral Engineers has been manufacturing Stainless Steel Grease Fittings since **1995**. Due to rising demand and popularity of Stainless Steel Grease Fittings among various companies worldwide and therefore we have specially developed and included this type of Grease Fittings in our Catalogue.

Stainless Steel Grease Fittings are **mainly used** for lubrication of bearings where the conditions for functioning of Mild Steel Grease Fittings is not feasible. Stainless Steel Grease Fittings have the **ability to withstand** extreme conditions and also have long lasting capacity, therefore they are mainly used in **Marine, Food and Drug** Processing machinery and also for **Chemical and Industrial** applications.

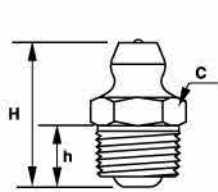


Fig - 1

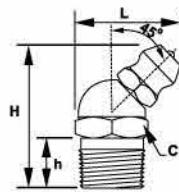


Fig - 2

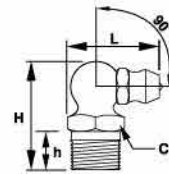


Fig - 3

### **1/4" X 28 SAE – LT THREADS (TAPER THREADS) IN STAINLESS STEEL:**

DESCRIPTION	FIG	H ±0.04"	h ±0.03"	L ±0.04"	C(A/F)
1/4 " X 28 Straight	1	.54 "	.20 "	--	5/16 "
1/4 " X 28 45°	2	.80 "	.21 "	.58 "	3/8 "
1/4 " X 28 90°	3	.75 "	.21 "	.66 "	3/8 "

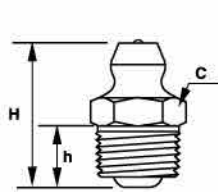


Fig - 1

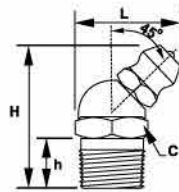


Fig - 2

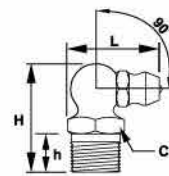


Fig - 3

### **AMERICAN PIPE THREADS IN STAINLESS STEEL:**

DESCRIPTION	FIG	H ±0.04"	h ±0.03"	L ±0.04"	C(A/F)
1/8 " X 27 PTF Straight	1	.63 "	.28 "	--	7/16 "
1/8 " X 27 PTF 45°	2	.89 "	.29 "	.65 "	7/16 "
1/8 " X 27 PTF 90°	3	.85 "	.29 "	.72 "	7/16 "

***"Quality through Perfection and Excellence through Hard Work"***

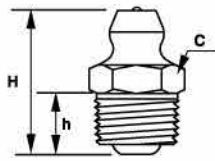


Fig - 1

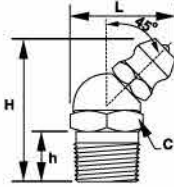


Fig - 2

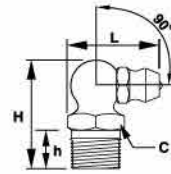


Fig - 3

**METRIC THREADS IN STAINLESS STEEL:**

DESCRIPTION	FIG	H (max)	h +0.5	L (approx)	C
M6 X 1 Straight	1	16 mm	5 mm	--	7 mm A/F
M6 X 1 45° (Hex)	2	23.5 mm	5 mm	14.5 mm	9 mm A/F
M6 X 1 90° (Hex)	3	18 mm	5 mm	18.8 mm	9 mm A/F
M8 X 1 Straight	1	16 mm	5 mm	--	9 mm A/F
M8 X 1 45° (Hex)	2	23.5 mm	5 mm	14.5 mm	9 mm A/F
M8 X 1 90° (Hex)	3	18 mm	5 mm	18.8 mm	9 mm A/F
M8 X 1.25 Straight	1	16 mm	5 mm	--	9 mm A/F
M10 X 1 Straight	1	16 mm	5 mm	--	11 mm A/F
M10 X 1 45° (Hex)	2	23.5 mm	5 mm	16.5 mm	11 mm A/F
M10 X 1 90° (Hex)	3	18 mm	5 mm	20.8 mm	11 mm A/F
M10 X 1.5 Straight	1	16 mm	5 mm	--	11 mm A/F
M10 X 1.5 45° (Hex)	2	23.5 mm	5 mm	16.5 mm	11 mm A/F
M10 X 1.5 90° (Hex)	3	18 mm	5 mm	20.8 mm	11 mm A/F

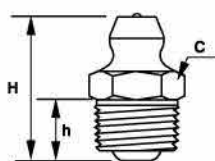


Fig - 1

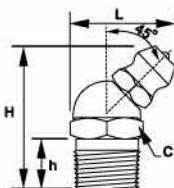


Fig - 2

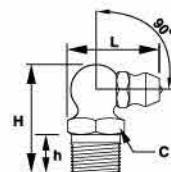


Fig - 3

**BSP THREADS (TAPER THREADS) IN STAINLESS STEEL:**

DESCRIPTION	FIG	H (max)	h +0.5	L (approx)	C
1/8 BSP Straight	1	16 mm	5 mm	--	11 mm A/F
1/8 BSP 45° (Hex)	2	23.5 mm	5 mm	16.5 mm	11 mm A/F
1/8 BSP 90° (Hex)	3	18 mm	5 mm	20.8 mm	11 mm A/F
1/4 BSP Straight	1	16 mm	5 mm	--	14 mm A/F
1/4 BSP 45° (Hex)	2	23.5 mm	5 mm	19.8 mm	14 mm A/F
1/4 BSP 90° (Hex)	3	22 mm	6 mm	22.8 mm	14 mm A/F

**"Quality through Perfection and Excellence through Hard Work"**



MD's Office



Production Planning

Precision Machine Shop



Machine Shop



Thread Rolling



Inspection & Testing



Packing



***"Quality through Perfection and Excellence through Hard Work"***



## **VIRAL HYDRAULIC GREASE FITTINGS / NIPPLES**

- \* Mfd. as per SAE-J-534 / DIN-71412 / BSS-1486 / JIS-B-1575 / IS-4009
- \* Nipple Head (Tip) only, case hardened to 550 HV minimum
- \* Mfd. from high quality Bright Steel
- \* Taper / Parallel thread as per customer requirement
- \* Thread Roll threads are Toughened and Stronger
- \* Dome Type Riveting to hold spring

## **O.E. SUPPLIERS TO**

- Mahindra & Mahindra Ltd. (All Divisions of Jeep & Tractor)
- Tata Motors Limited
- Force Motors Limited
- VE Commercial Vehicles Ltd.
- Mahindra Sona Ltd. (Propeller Shaft)
- Bajaj Tempo Ltd.

**Exporters to USA, Australia, Germany & European Countries**



Known for our  
popular Brand



### **Registered Office**

C/1103, Priyadarshini Mahila Co-Op. Hsg. Society. Ltd., Bhavani Shankar Road, Dadar West, Mumbai 400 028. India.  
Tel: +91 22 2422 5405 - 2422 0651- 2368 1185 Email: viraleng@vsnl.com Website: www.viralengineers.com

### **Factory**

74/A, Virwani Industrial Estate, 1st Floor, Western Express Highway, Goregaon East, Mumbai 400 063. India.  
Tel: +91 22 2876 1073 - 2878 8838 - 4003 8838 Fax: +91 22 2875 5239.

**"Quality through Perfection and Excellence through Hard Work"**