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**DESIGN SERVICES & PRODUCTS**

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# **Section II**

# **Straight Shafts**

All Parts Available In Inch And Metric.

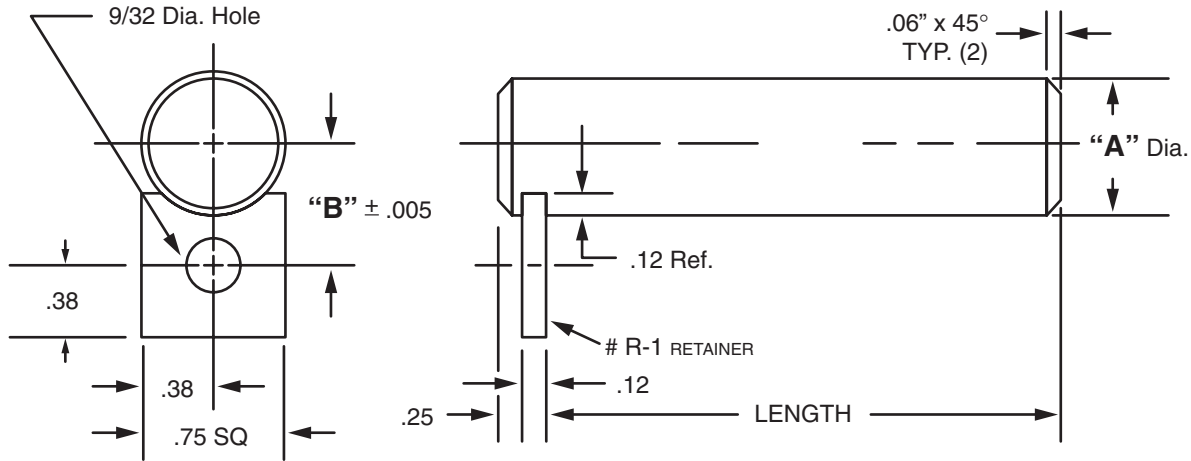


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## MASTERLINE SHAFT ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	Cad File No.	"A" Dia.	"B" Dim.	Cad File No.
.250	.375	Z250	.688	.594	Z688
.312	.406	Z312	.750	.625	Z750
.375	.437	Z375	.812	.656	Z812
.437	.469	Z437	.875	.688	Z875
.500	.500	Z500	.937	.719	Z937
.562	.531	Z562	1.000	.750	Z1000
.625	.562	Z625			

Available in four (4) series:

- "S" – 12L14 CRS
- "M" – T.G. & P. Alloy, HDN R<sub>C</sub> 28-32
- "H" – 12L14 CRS, CARB., HDN. & GR., R<sub>C</sub> 56-60 (.03 min. case)
- "Y" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

Each assembly includes one shaft and one retainer. Stainless steel retainer provided with series "Y".

Other retainers are available on request. (see Section VII, page 17 – 20).

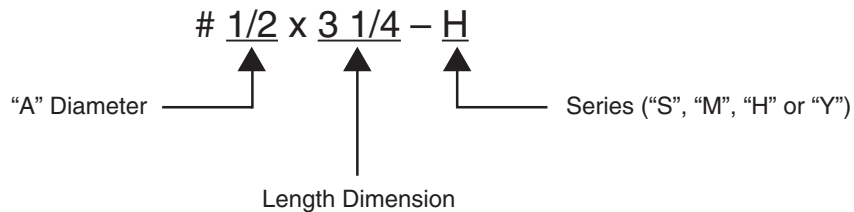
Shafts and retainers may be ordered separately.

Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 3 and Sec. V, page 1 & 4)

### Masterline Shaft Assembly

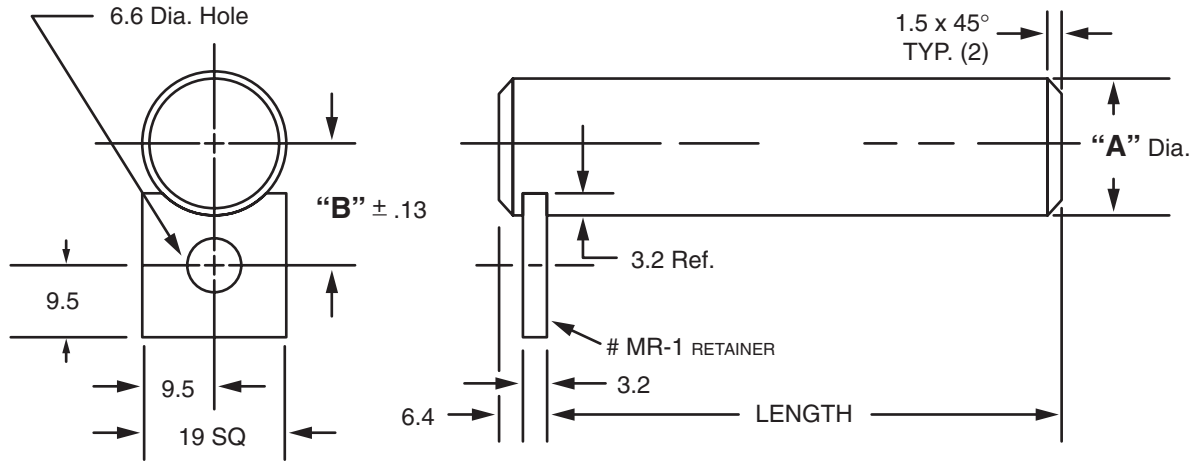
#### How To Order:



All Parts Available In Inch And Metric.



## MASTERLINE METRIC SHAFT ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	Cad File No.	"A" Dia.	"B" Dim.	Cad File No.
6M	9.3	SDZ6-M	15M	13.8	SDZ15-M
7M	9.8	SDZ7-M	16M	14.3	SDZ16-M
8M	10.3	SDZ8-M	18M	15.3	SDZ18-M
10M	11.3	SDZ10-M	20M	16.3	SDZ20-M
12M	12.3	SDZ12-M	22M	17.3	SDZ22-M
13M	12.8	SDZ13-M	24M	18.3	SDZ24-M
14M	13.3	SDZ14-M	25M	18.8	SDZ25-M

Available in four (4) series:

- "S" – 12L14 CRS
- "M" – T.G. & P. Alloy, HDN R<sub>c</sub> 28-32
- "H" – 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.75mm min. case)
- "Y" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

Each assembly includes one shaft and one retainer. Stainless steel retainer provided with series "Y".

Other retainers are available on request. (see Section VII, page 17 – 20).

Shafts and retainers may be ordered separately.

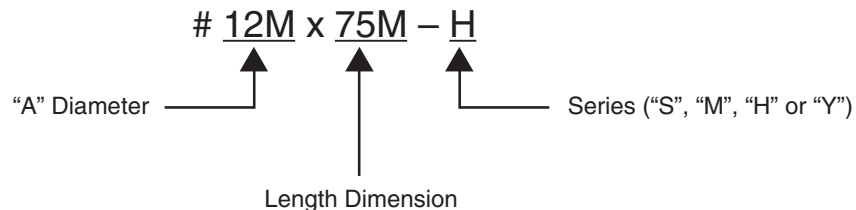
Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 4 and Sec. V, page 1 & 4)

### Masterline Metric Shaft Assembly

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

#### How To Order:



All Parts Available In Inch And Metric.

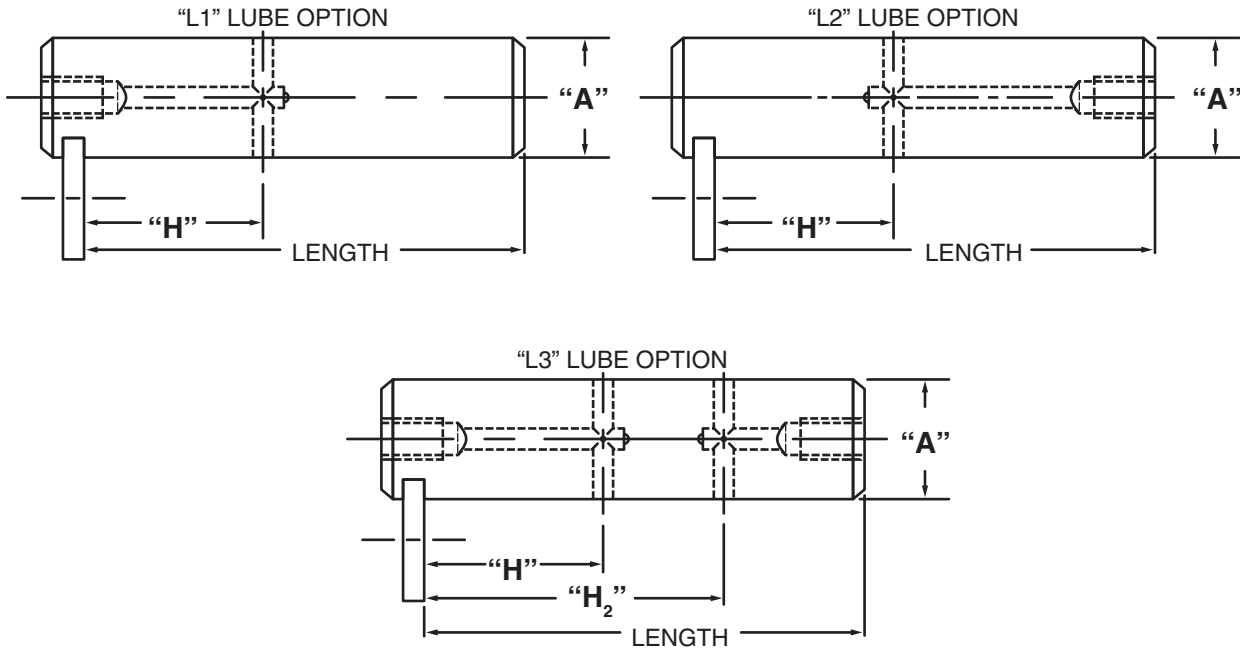


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## MASTERLINE SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

"L1" & "L3" options are not available under 1/2 dia. shaft

"L1" & "L3" options in 1/2 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" options in 3/8 - 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

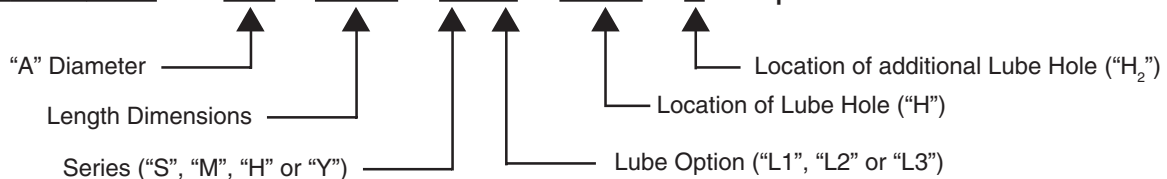
Optional thread for 1/4 – 28 is M6 – 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 1 for additional ordering information)

**How To Order:** # 1/2 x 3 1/4 - H L1 - 1 5/8 - 2 - Optional Thread



All Parts Available In Inch And Metric.

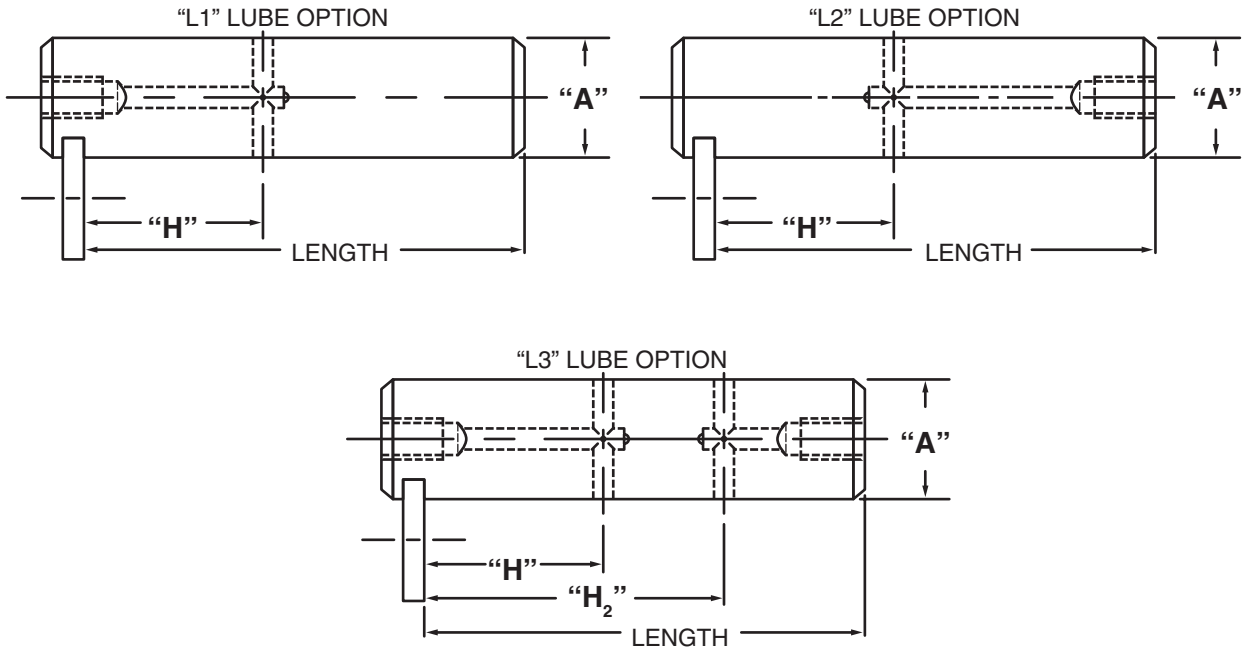


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## MASTERLINE METRIC SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

"L1" & "L3" options are not available under 13M dia. shaft

"L1" & "L3" options in 13M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" options in 10M - 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

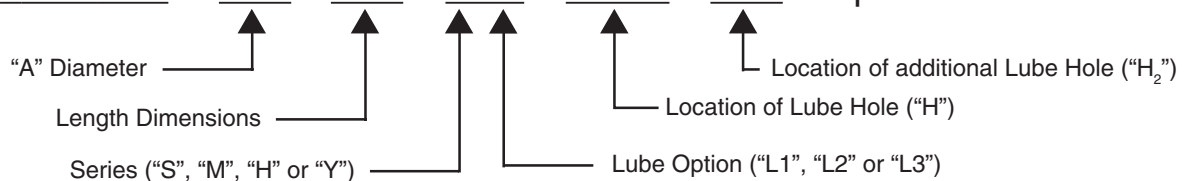
Optional thread for 1/4 – 28 is M6 – 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 250mm or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Metric Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 2 for additional ordering information.)

**How To Order:** # 12M x 75M – H L1 – 12.5M – 20M – Optional Thread



All Parts Available In Inch And Metric.

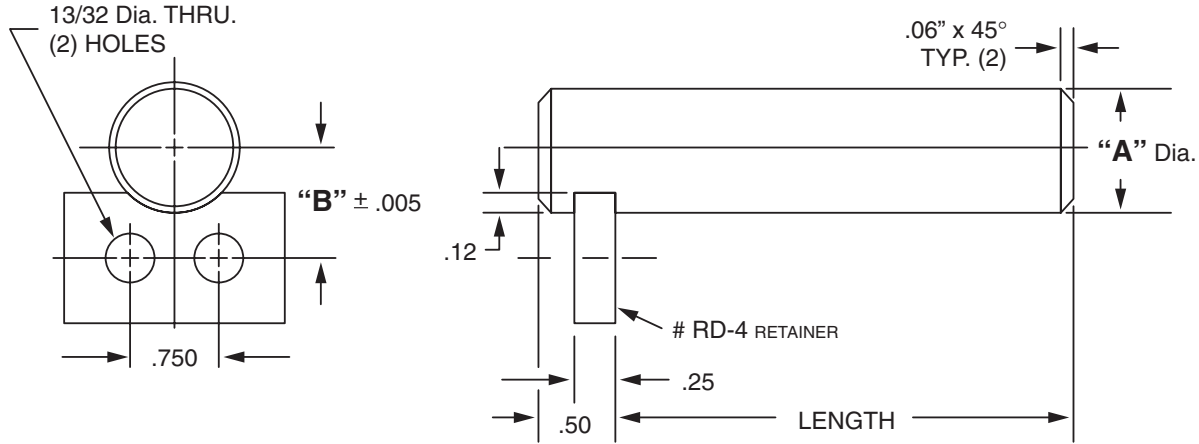


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## MASTERLINE HEAVY DUTY SHAFT ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	Cad File No.	"A" Dia.	"B" Dim.	Cad File No.
1.000	.875	HDZ1000	2.000	1.375	HDZ2000
1.250	1.000	HDZ1250	2.250	1.500	HDZ2250
1.500	1.125	HDZ1500	2.500	1.625	HDZ2500
1.750	1.250	HDZ1750	3.000	1.875	HDZ3000

Available in four (4) series:

- "S" – 12L14 CRS
- "M" – T.G. & P. Alloy, HDN R<sub>C</sub> 28-32
- "H" – 12L14 CRS, CARB., HDN. & GR., R<sub>C</sub> 56-60 (.03 min. case)
- "Y" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

Each assembly includes one shaft and one retainer. Stainless steel retainer provided with series "Y".

Other retainers are available on request. (see Section VII, page 17 – 20).

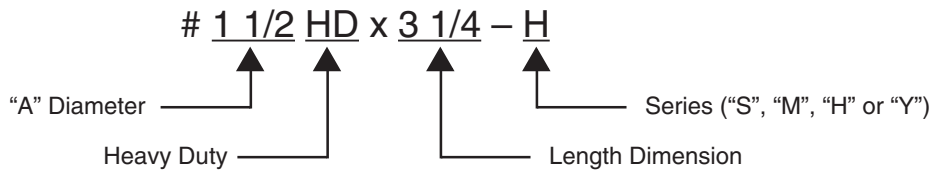
Shafts and retainers may be ordered separately.

Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 7 and Sec. V, page 1 & 4)

### Masterline Heavy Duty Shaft Assembly

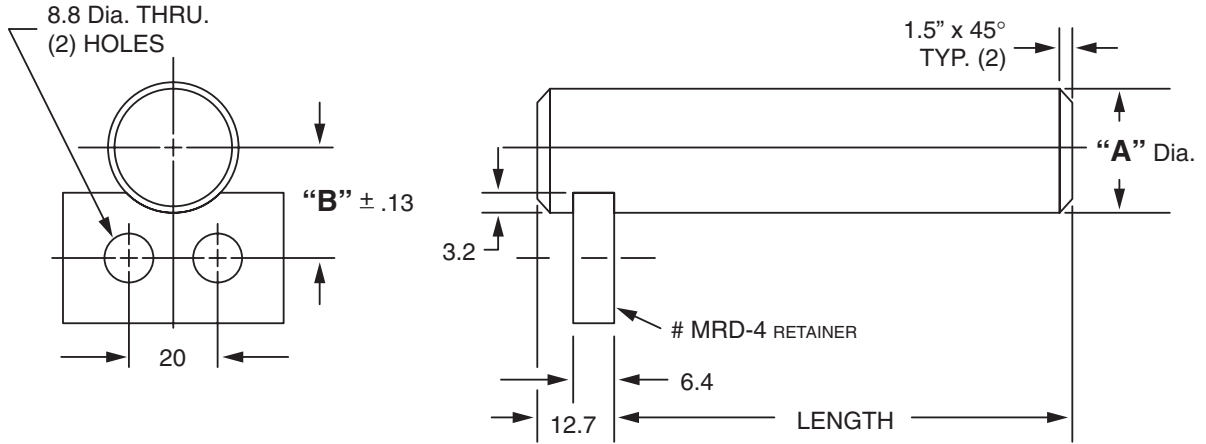
#### How To Order:



All Parts Available In Inch And Metric.



**MASTERLINE METRIC HEAVY DUTY SHAFT ASSEMBLY**



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	"A" Dia.	"B" Dim.
25M	23.3M	55M	35.8M
30M	25.8M	60M	40.8M
40M	28.3M	65M	43.3M
45M	30.8M	70M	45.8M
50M	33.3M	75M	48.3M

Available in four (4) series:

- "S" – 12L14 CRS
- "M" – T.G. & P. Alloy, HDN R<sub>c</sub> 28-32
- "H" – 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.75mm min. case)
- "Y" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

Each assembly includes one shaft and one retainer. Stainless steel retainer provided with series "Y".

Other retainers are available on request. (see Section VII, page 17 – 20).

Shafts and retainers may be ordered separately.

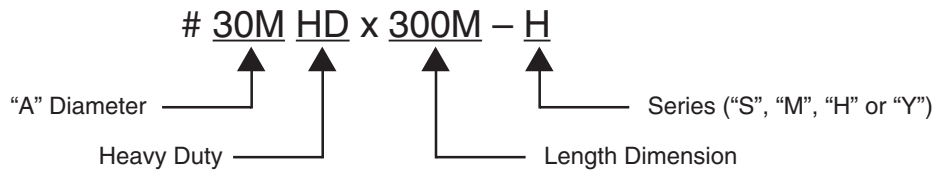
Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 8 and Sec. V, page 1 & 4)

**Masterline Metric Heavy Duty Shaft Assembly**

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

**How To Order:**



All Parts Available In Inch And Metric.

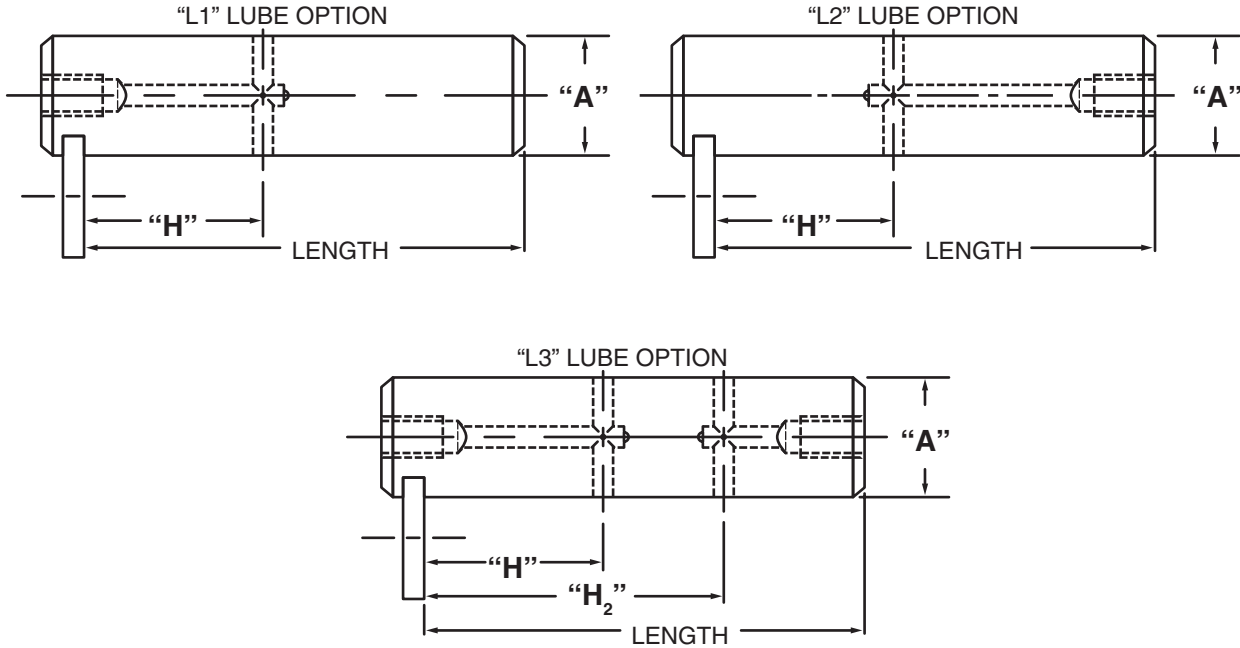


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## MASTERLINE HEAVY DUTY SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

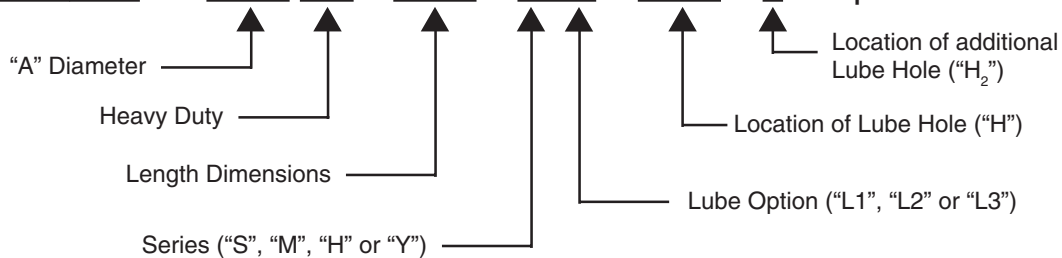
Shafts have 1/8 - 27 N.P.T. in ends. Optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Heavy Duty Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 5 for additional ordering information.)

**How To Order:** # 1 1/2 HD x 3 1/4 - H L1 - 1 5/8 - 2 - Optional Thread



All Parts Available In Inch And Metric.

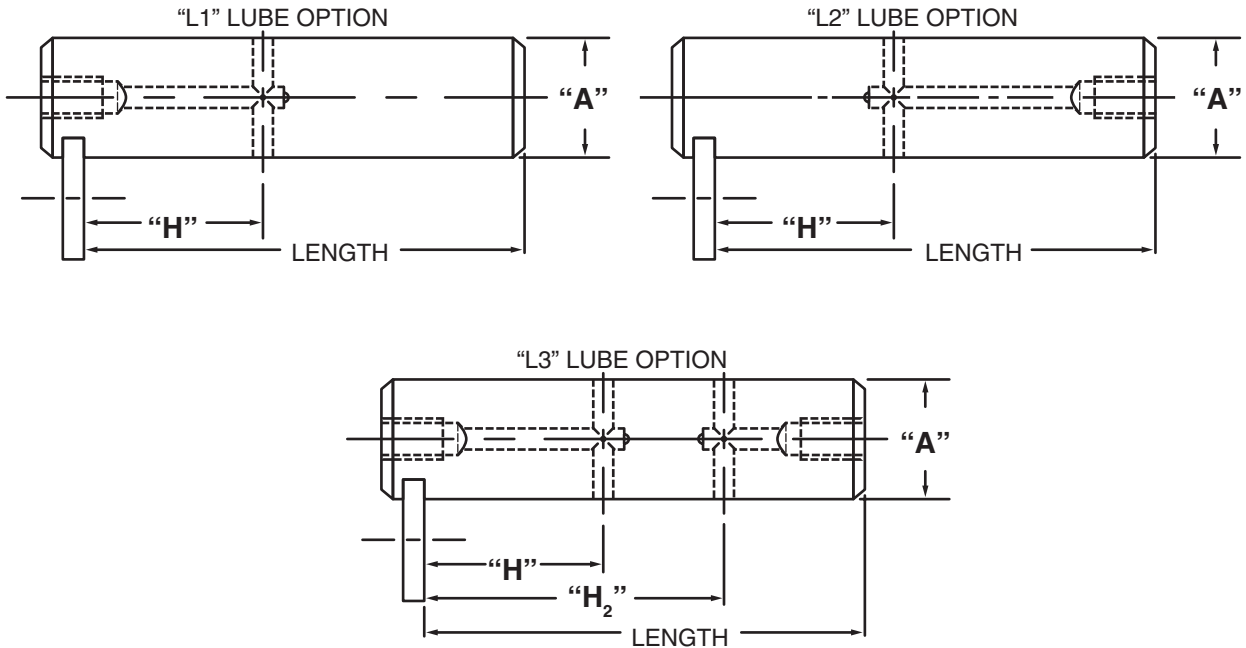


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## MASTERLINE METRIC HEAVY DUTY SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

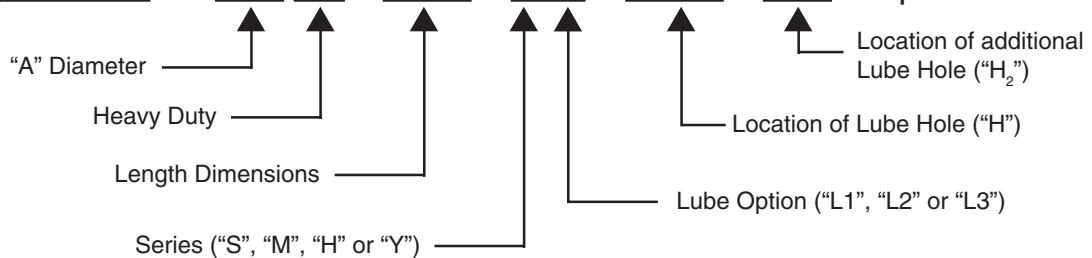
Shafts have 1/8 - 27 N.P.T. in ends. Optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

“L3” option is recommended for use on shafts 250mm or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Metric Heavy Duty Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 6 for additional ordering information.)

**How To Order:** # 30M HD x 300M - H L1 - 12.5M - 20M - Optional Thread



All Parts Available In Inch And Metric.

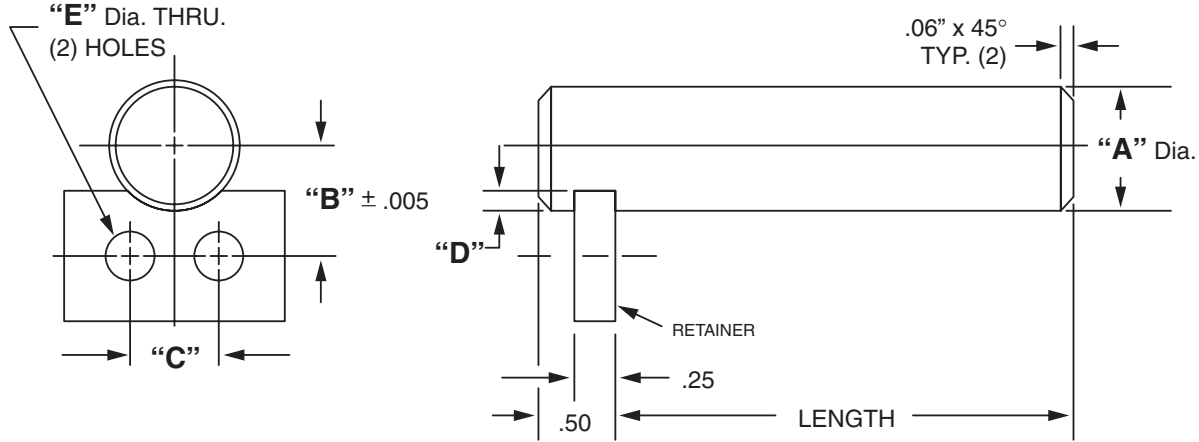


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## MASTERLINE EXTRA HEAVY DUTY SHAFT ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	"C" Dim.	"D" Dim.	"E" Dia.	Retainer	Cad File No.
1.250	1.195	1.12	.25	11/32	RD-8	EUZ1250
1.500	1.320	1.12	.25	11/32	RD-8	EUZ1500
1.750	1.445	1.12	.25	11/32	RD-8	EUZ1750
2.000	1.570	1.12	.25	11/32	RD-8	EUZ2000
2.250	1.695	1.12	.25	11/32	RD-8	EUZ2250
2.500	1.875	1.50	.38	13/32	RD-9	EUZ2500
2.750	2.000	1.50	.38	13/32	RD-9	EUZ2750
3.000	2.125	1.50	.38	13/32	RD-9	EUZ3000
3.500	2.375	1.50	.38	13/32	RD-9	N/A
4.000	2.625	1.50	.38	13/32	RD-9	N/A

Available in four (4) series:

"US" – 12L14 CRS

"UM" – T.G. & P. Alloy, HDN R<sub>C</sub> 28-32

"UH" – 12L14 CRS, CARB., HDN. & GR., R<sub>C</sub> 56-60 (.03 min. case)

"UY" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

Each assembly includes one shaft and one retainer. Stainless steel retainer provided with series "UY".

Other retainers are available on request. (see Section VII, page 17 – 20).

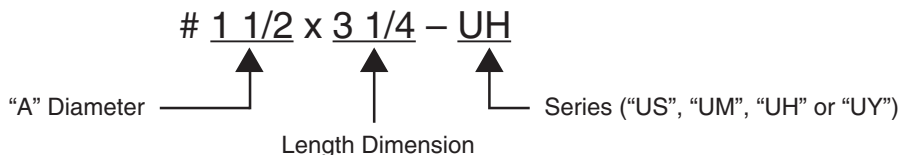
Shafts and retainers may be ordered separately.

Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 11 and Sec. V, page 1 & 4)

### Masterline Extra Heavy Duty Shaft Assembly

#### How To Order:



All Parts Available In Inch And Metric.

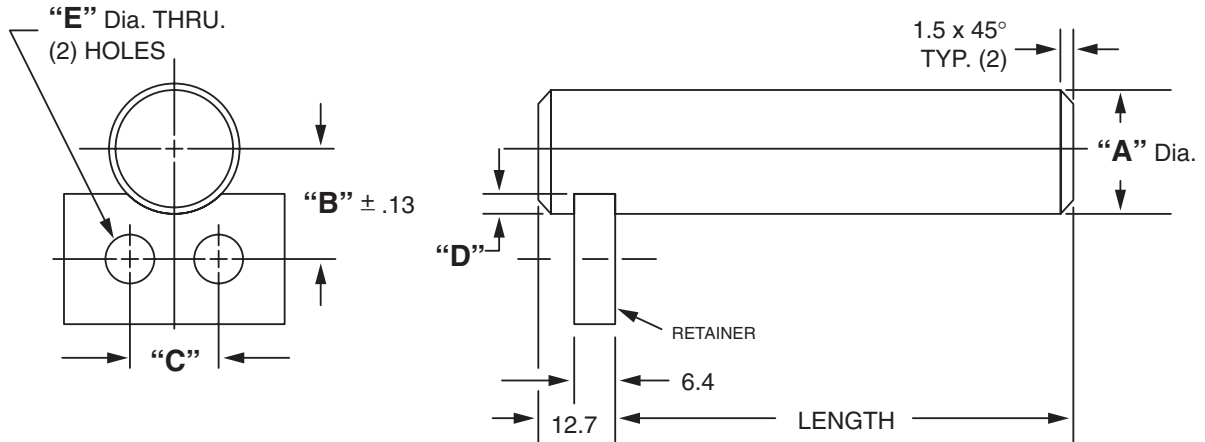


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## MASTERLINE METRIC EXTRA HEAVY DUTY SHAFT ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	"C" Dim.	"D" Dim.	"E" Dia.	Retainer
50M	38.6M	30M	6.4M	8.8M	MRD-8
55M	41.1M	30M	6.4M	8.8M	MRD-8
60M	43.6M	30M	6.4M	8.8M	MRD-8
65M	46.1M	30M	6.4M	8.8M	MRD-8
70M	48.6M	30M	6.4M	8.8M	MRD-8
75M	53.9M	38M	9.5M	8.8M	MRD-9
80M	56.4M	38M	9.5M	8.8M	MRD-9
85M	58.9M	38M	9.5M	8.8M	MRD-9
90M	61.4M	38M	9.5M	8.8M	MRD-9
95M	64.0M	38M	9.5M	8.8M	MRD-9
100M	66.4M	38M	9.5M	8.8M	MRD-9

Available in four (4) series:

"US" – 12L14 CRS

"UM" – T.G. & P. Alloy, HDN R<sub>c</sub> 28-32

"UH" – 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.75mm min. case)

"UY" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

Each assembly includes one shaft and one retainer. Stainless steel retainer provided with series "UY".

Other retainers are available on request. (see Section VII, page 17 – 20).

Shafts and retainers may be ordered separately.

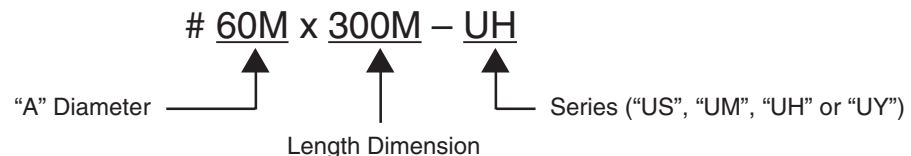
Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 12 and Sec. V, page 1 & 4)

### Masterline Metric Extra Heavy Duty Shaft Assembly

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

#### How To Order:



All Parts Available In Inch And Metric.

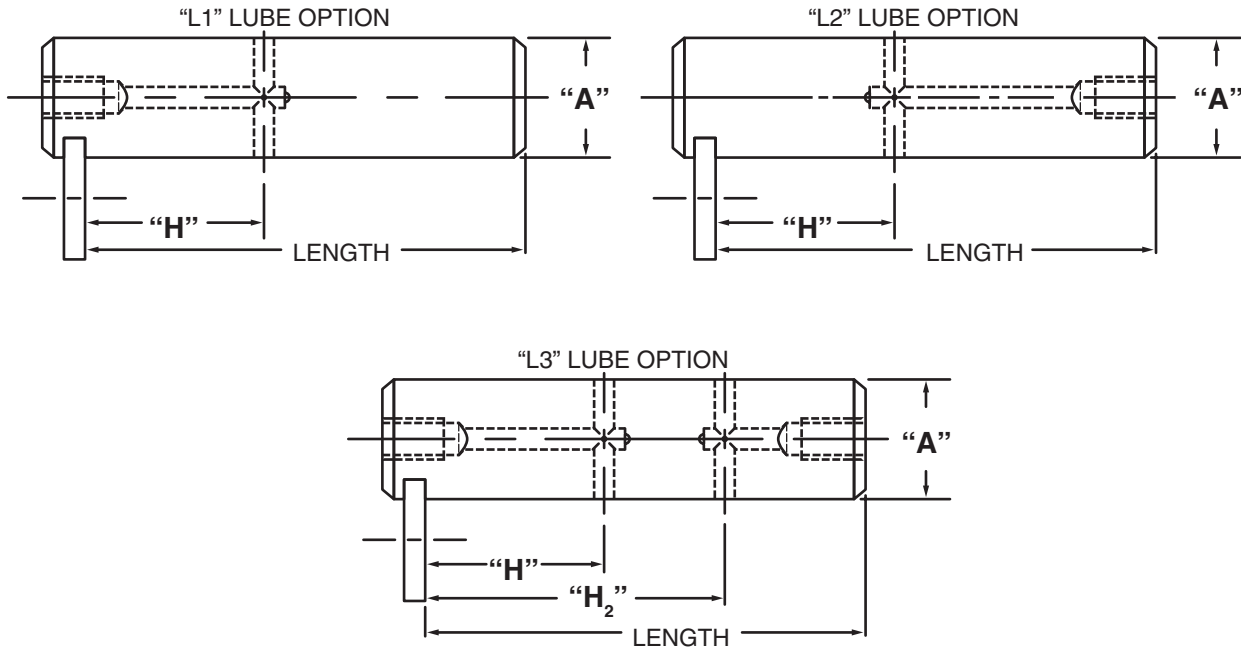


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## MASTERLINE EXTRA HEAVY DUTY SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

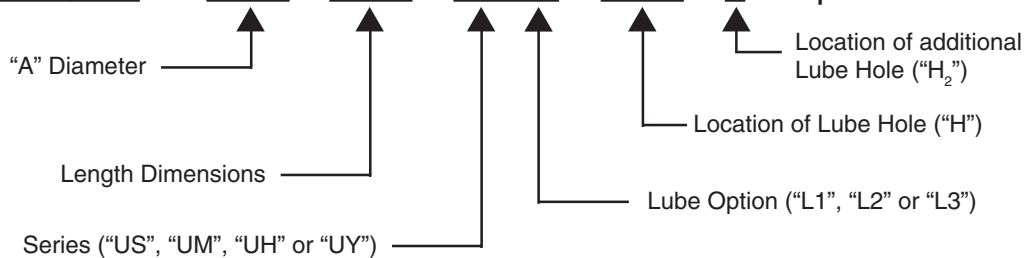
Shafts have 1/8 - 27 N.P.T. in ends. Optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Extra Heavy Duty Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 9 for additional ordering information.)

**How To Order:** # 1 1/2 x 3 1/4 - UH L1 - 1 1/8 - 2 - Optional Thread



All Parts Available In Inch And Metric.

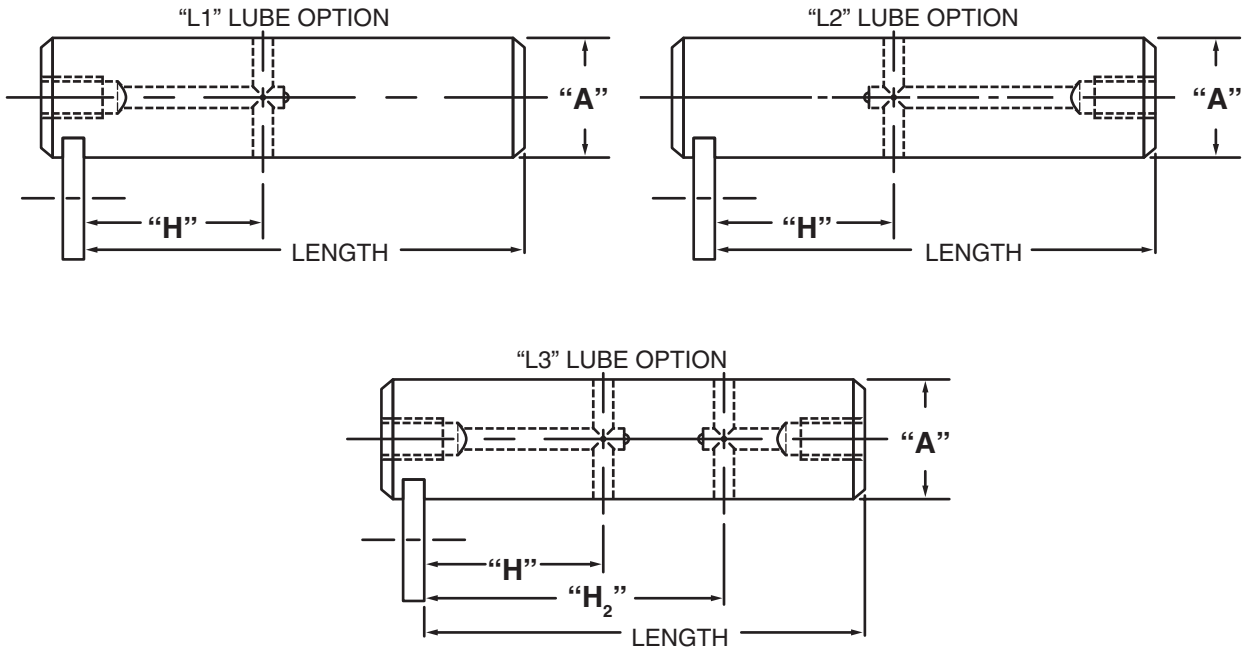


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## MASTERLINE METRIC EXTRA HEAVY DUTY SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

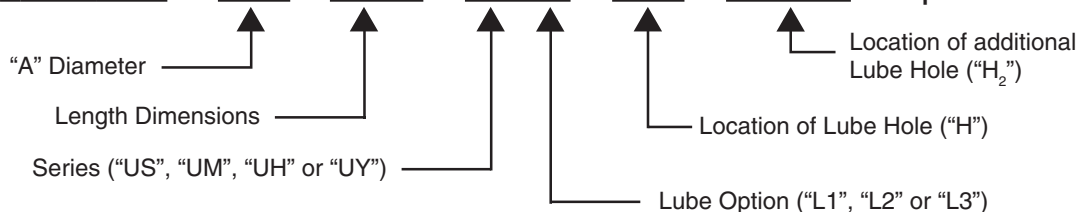
Shafts have 1/8 - 27 N.P.T. in ends. Optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 250mm or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Metric Extra Heavy Duty Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 10 for additional ordering information.)

**How To Order:** # 60M x 300M - UH L1 - 20M - 120.5M - Optional Thread



All Parts Available In Inch And Metric.

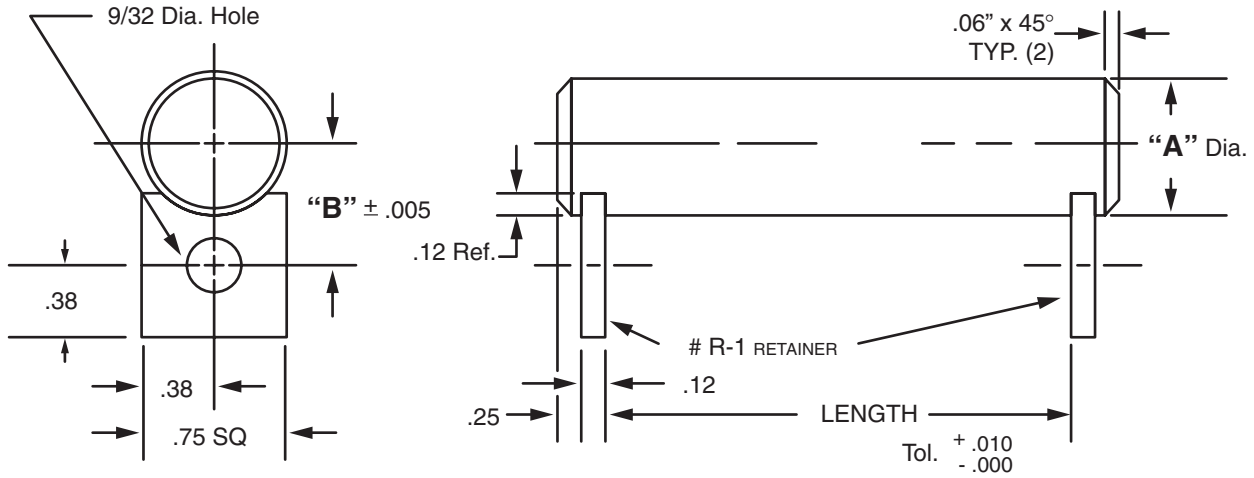


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## MASTERLINE DOUBLE RETAINER SHAFT ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	Cad File No.	"A" Dia.	"B" Dim.	Cad File No.
.250	.375	DZ250	.688	.594	DZ688
.312	.406	DZ312	.750	.625	DZ750
.375	.437	DZ375	.812	.656	DZ812
.437	.469	DZ437	.875	.688	DZ875
.500	.500	DZ500	.937	.719	DZ937
.562	.531	DZ562	1.000	.750	DZ1000
.625	.562	DZ625			

Available in four (4) series:

- "DS" – 12L14 CRS
- "DM" – T.G. & P. Alloy, HDN R<sub>c</sub> 28-32
- "DH" – 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.03 min. case)
- "DY" – 304 Stainless Steel

Other retainers are available on request. (see Section VII, page 17 – 20).

Each assembly includes one shaft and two retainer. Stainless steel retainer provided with series "DY".

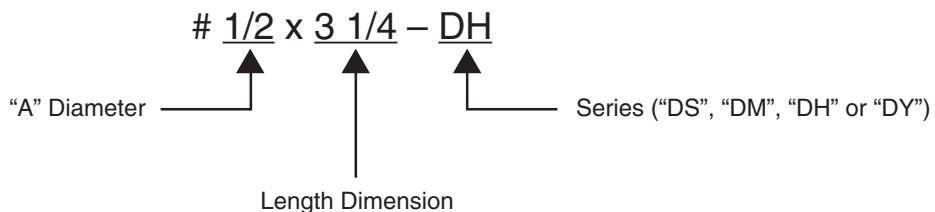
Shafts and retainers may be ordered separately.

Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 15 and Sec. V, page 1 & 4)

### Masterline Double Retainer Shaft Assembly

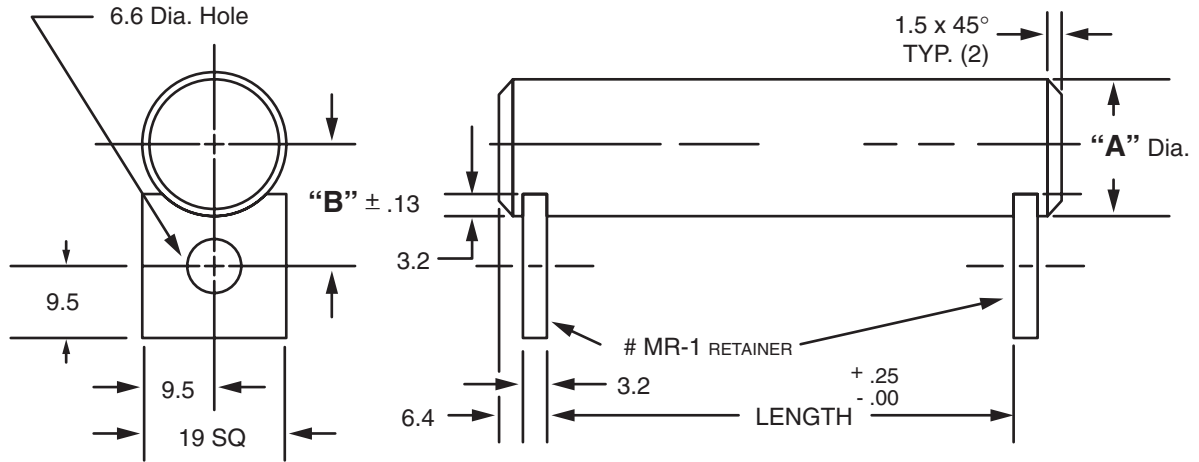
#### How To Order:



All Parts Available In Inch And Metric.



**MASTERLINE METRIC DOUBLE RETAINER SHAFT ASSEMBLY**



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	"A" Dia.	"B" Dim.
6M	9.3M	15M	13.8M
7M	9.8M	16M	14.3M
8M	10.3M	18M	15.3M
10M	11.3M	20M	16.3M
12M	12.3M	22M	17.3M
13M	12.8M	24M	18.3M
14M	13.3M	25M	18.8M

Available in four (4) series:

- "DS" - 12L14 CRS
- "DM" - T.G. & P. Alloy, HDN R<sub>c</sub> 28-32
- "DH" - 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.75mm min. case)
- "DY" - 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

Each assembly includes one shaft and two retainers. Stainless steel retainer provided with series "DY".

Other retainers are available on request. (see Section VII, page 17 - 20).

Shafts and retainers may be ordered separately.

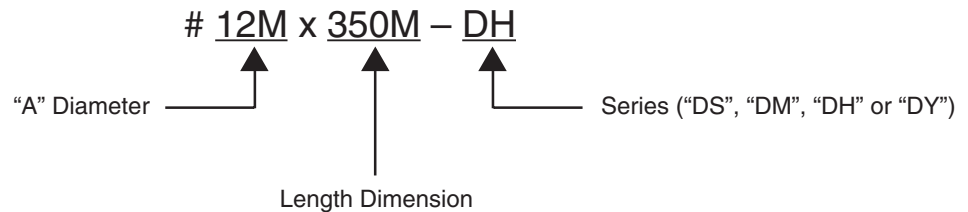
Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 16 and Sec. V, page 1 & 4)

**Masterline Metric Double Retainer Shaft Assembly**

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

**How To Order:**



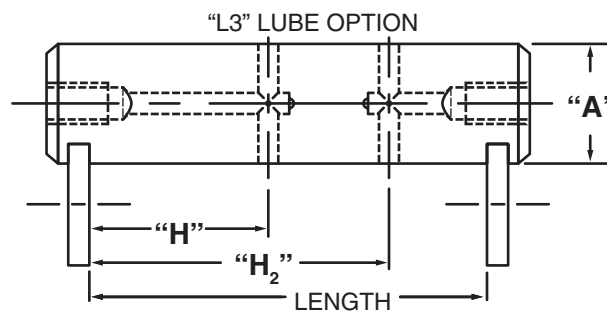
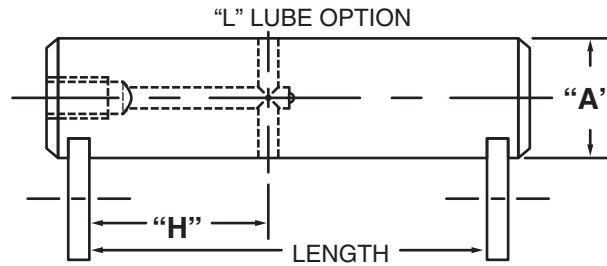


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## MASTERLINE DOUBLE RETAINER SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

Lube options are not available under 1/2 dia. shaft.

Lube options in 1/2 - 5/8 dia. shafts have a 1/4 - 28 tapped hole in end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

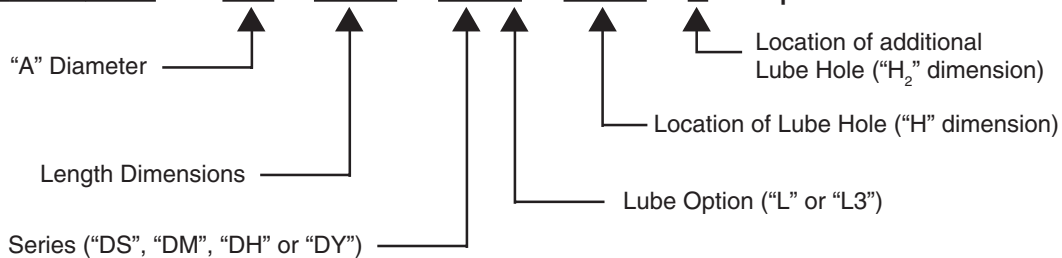
Optional thread for 1/4 - 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Double Retainer Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 13 for additional ordering information.)

**How To Order:** # 1/2 x 3 1/4 - DH L - 1 1/8 - 2 - Optional Thread



All Parts Available In Inch And Metric.

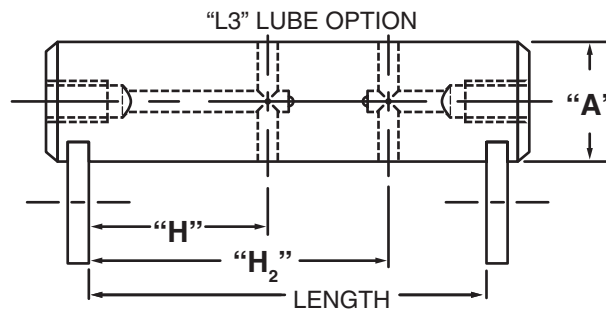
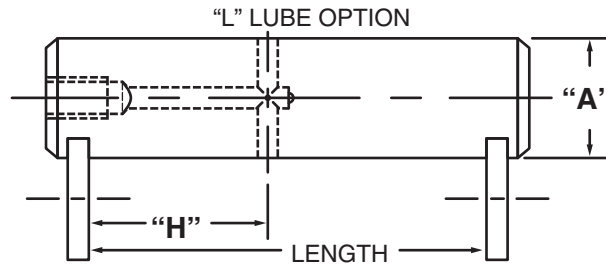


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### MASTERLINE METRIC DOUBLE RETAINER SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

Lube options are not available under 13M dia. shaft.

Lube options in 13M - 16M dia. shafts have a 1/4 - 28 tapped hole in end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

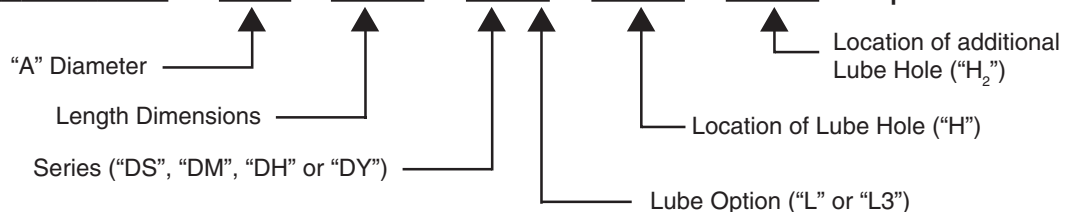
Optional thread for 1/4 - 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 250mm or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Metric Double Retainer Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 14 for additional ordering information.)

**How To Order:** # 12M x 350M - DH L - 100M - 200M - Optional Thread



All Parts Available In Inch And Metric.

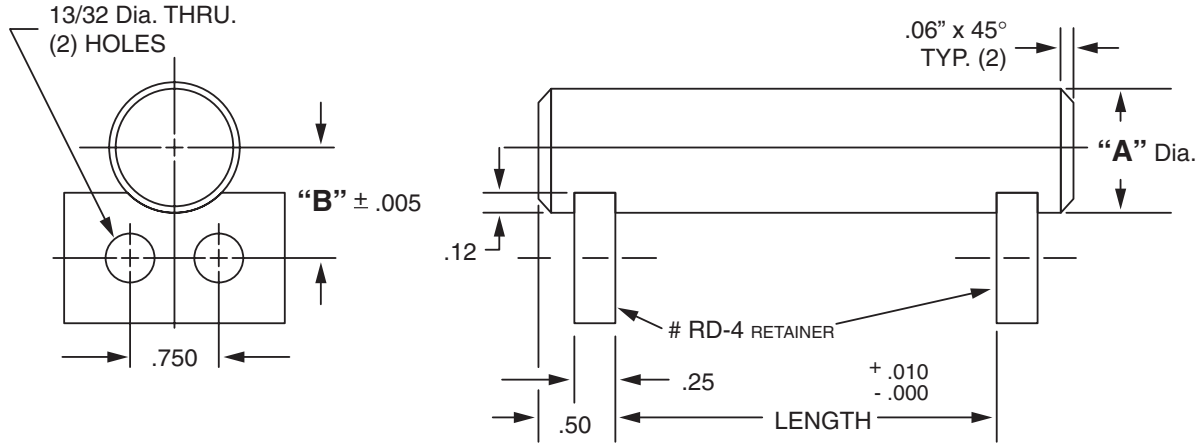


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## MASTERLINE HEAVY DUTY DOUBLE RETAINER SHAFT ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	Cad File No.	"A" Dia.	"B" Dim.	Cad File No.
1.000	.875	HDDZ1000	2.000	1.375	HDDZ2000
1.250	1.000	HDDZ1250	2.250	1.500	HDDZ2250
1.500	1.125	HDDZ1500	2.500	1.625	HDDZ2500
1.750	1.250	HDDZ1750	3.000	1.875	HDDZ3000

Available in four (4) series:

"DS" – 12L14 CRS

"DM" – T.G. & P. Alloy, HDN R<sub>C</sub> 28-32

"DH" – 12L14 CRS, CARB., HDN. & GR., R<sub>C</sub> 56-60 (.03 min. case)

"DY" – 304 Stainless Steel

Other retainers are available on request. (see Section VII, page 17 – 20).

Each assembly includes one shaft and two retainers. Stainless steel retainer provided with series "DY".

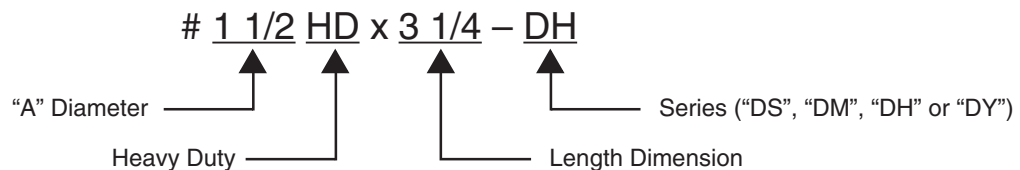
Shafts and retainers may be ordered separately.

Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 19 and Sec. V, page 1 & 4)

### Masterline Heavy Duty Double Retainer Shaft Assembly

#### How To Order:



All Parts Available In Inch And Metric.

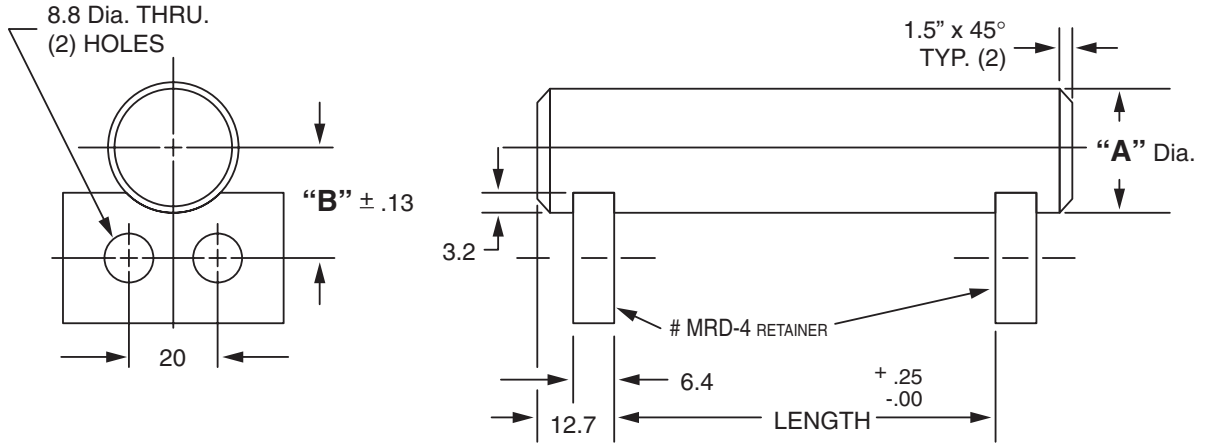


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**MASTERLINE METRIC HEAVY DUTY DOUBLE RETAINER SHAFT ASSEMBLY**



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	"A" Dia.	"B" Dim.
25M	23.3M	55M	35.8M
30M	25.8M	60M	40.8M
40M	28.3M	65M	43.3M
45M	30.8M	70M	45.8M
50M	33.3M	75M	48.3M

Available in four (4) series:

- "DS" – 12L14 CRS
- "DM" – T.G. & P. Alloy, HDN R<sub>C</sub> 28-32
- "DH" – 12L14 CRS, CARB., HDN. & GR., R<sub>C</sub> 56-60 (.75mm min. case)
- "DY" – 304 Stainless Steel

Other retainers are available on request. (see Section VII, page 17 – 20).

Each assembly includes one shaft and two retainers. Stainless steel retainer provided with series "DY".

Shafts and retainers may be ordered separately.

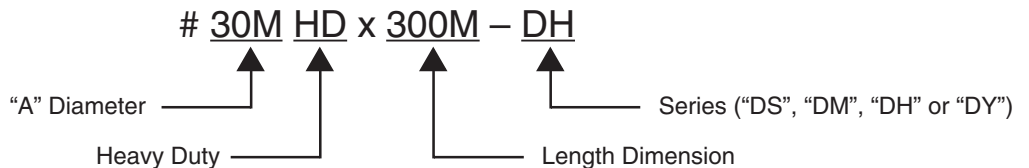
Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 20 and Sec. V, page 1 & 4)

**Masterline Metric Heavy Duty Double Retainer Shaft Assembly**

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

**How To Order:**



All Parts Available In Inch And Metric.

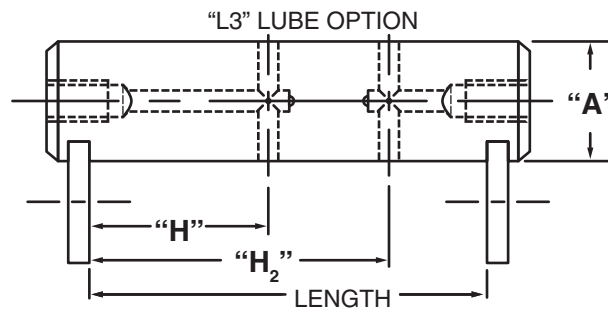
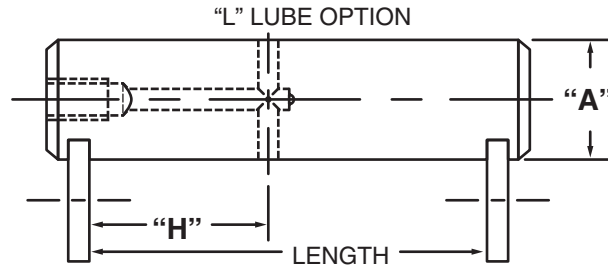


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## MASTERLINE HEAVY DUTY DOUBLE RETAINER SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

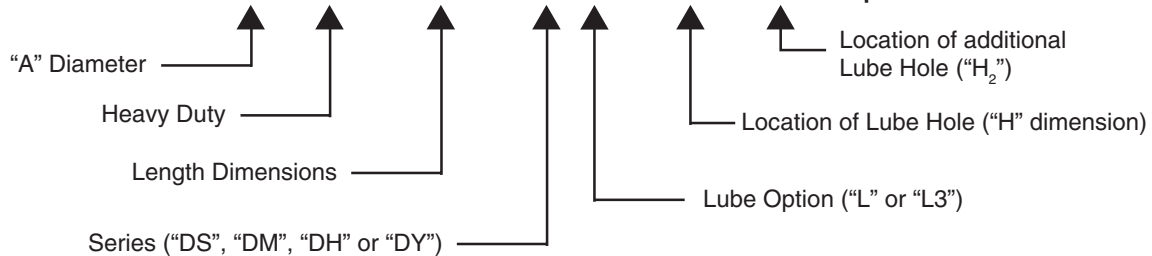
Shafts have 1/8 - 27 N.P.T. in ends. Optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Heavy Duty Double Retainer Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 17 for additional ordering information.)

**How To Order:** # 1 1/2 HD x 3 1/4 - DH L - 1 5/8 - 2 - Optional Thread



All Parts Available In Inch And Metric.

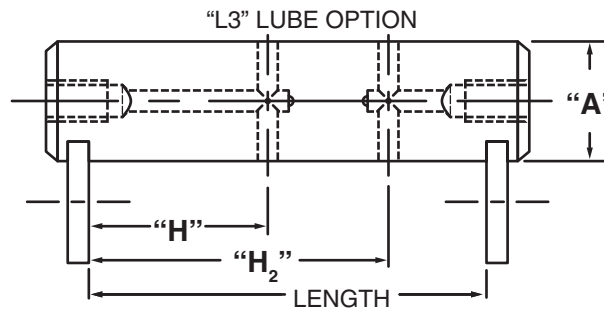
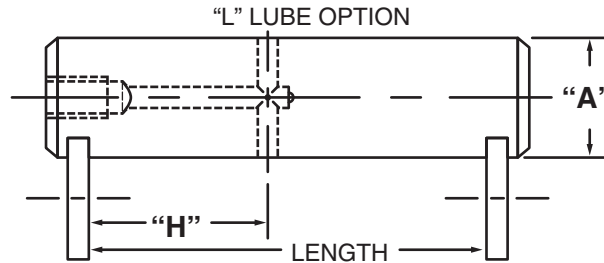


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# MASTERLINE METRIC HEAVY DUTY DOUBLE RETAINER SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

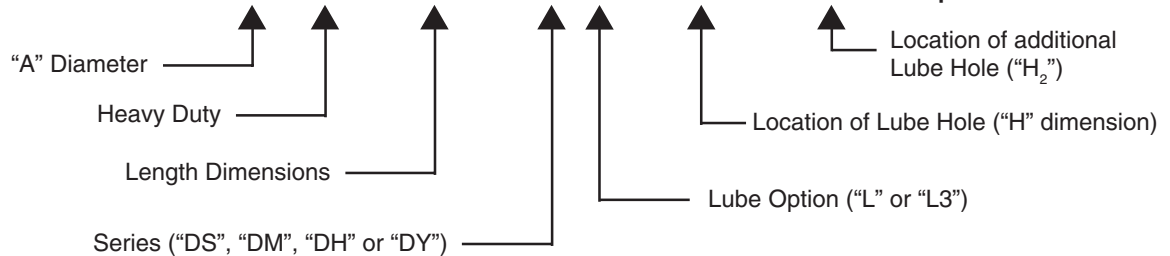
Shafts have 1/8 - 27 N.P.T. in ends. Optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 250mm or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

## Masterline Metric Heavy Duty Double Retainer Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 18 for additional ordering information.)

**How To Order:** # 30M HD x 300M - DH L - 12.5M - 20M - Optional Thread



All Parts Available In Inch And Metric.

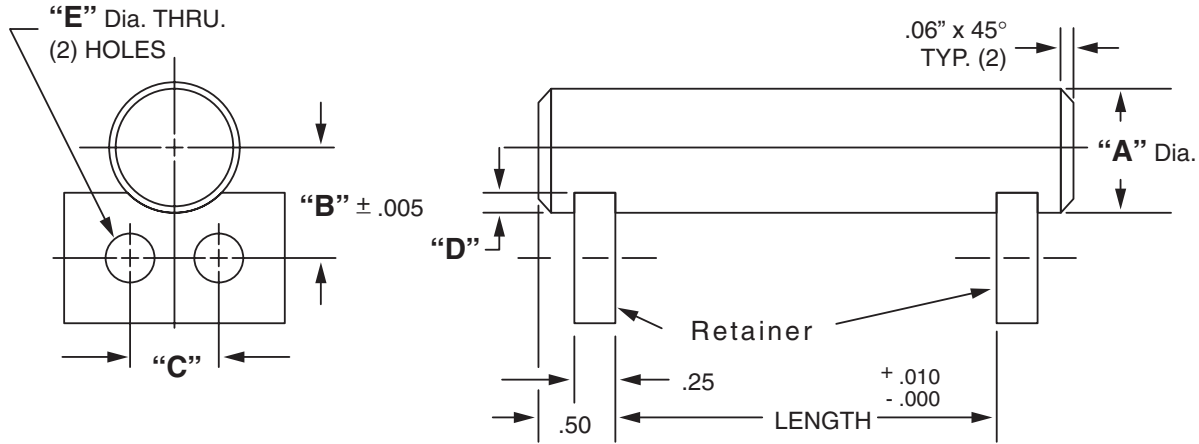


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## MASTERLINE EXTRA HEAVY DUTY DOUBLE RETAINER SHAFT ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	"C" Dim.	"D" Dim.	"E" Dia.	Retainer	Cad File No.
1.250	1.195	1.12	.25	11/32	RD-8	EUDZ1250
1.500	1.320	1.12	.25	11/32	RD-8	EUDZ1500
1.750	1.445	1.12	.25	11/32	RD-8	EUDZ1750
2.000	1.570	1.12	.25	11/32	RD-8	EUDZ2000
2.250	1.695	1.12	.25	11/32	RD-8	EUDZ2250
2.500	1.875	1.50	.38	13/32	RD-9	EUDZ2500
2.750	2.000	1.50	.38	13/32	RD-9	EUDZ2750
3.000	2.125	1.50	.38	13/32	RD-9	EUDZ3000
3.500	2.375	1.50	.38	13/32	RD-9	N/A
4.000	2.625	1.50	.38	13/32	RD-9	N/A

Available in four (4) series:

"UDS" – 12L14 CRS

"UDM" – T.G. & P. Alloy, HDN R<sub>C</sub> 28-32

"UDH" – 12L14 CRS, CARB., HDN. & GR., R<sub>C</sub> 56-60 (.03 min. case)

"UDY" – 304 Stainless Steel

Other retainers are available on request. (see Section VII, page 17 – 20).

Each assembly includes one shaft and two retainers. Stainless steel retainer provided with series "UDY".

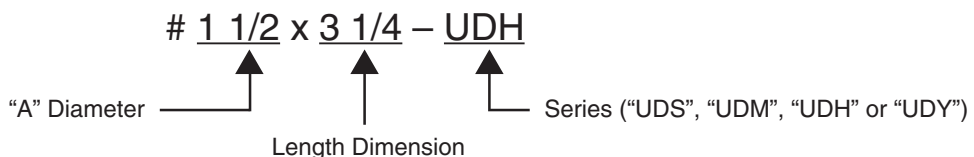
Shafts and retainers may be ordered separately.

Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 22 and Sec. V, page 1 & 4)

### Masterline Extra Heavy Duty Double Retainer Shaft Assembly

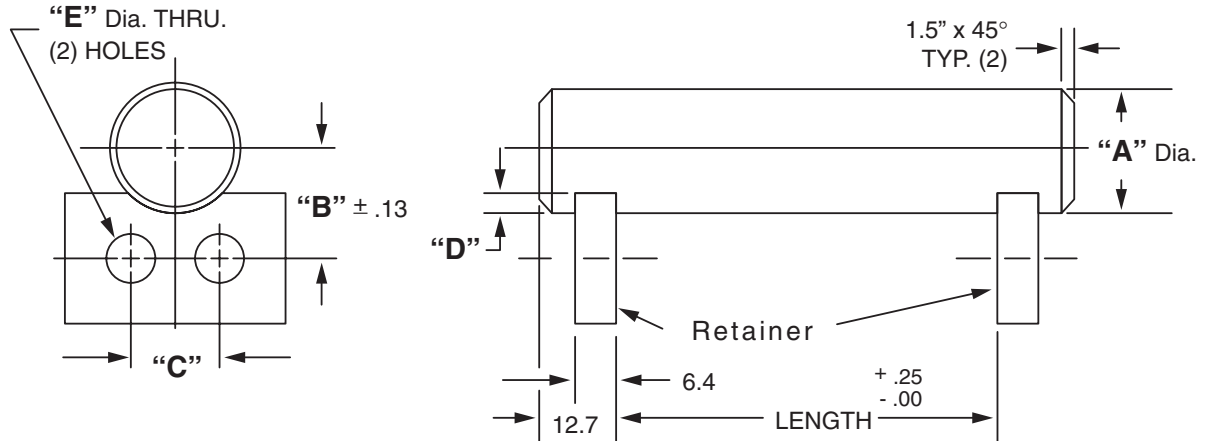
#### How To Order:



All Parts Available In Inch And Metric.



## MASTERLINE METRIC EXTRA HEAVY DUTY DOUBLE RETAINER SHAFT ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	"C" Dim.	"D" Dim.	"E" Dia.	Retainer
50M	38.6M	30M	6.4M	8.8M	MRD-8
55M	41.1M	30M	6.4M	8.8M	MRD-8
60M	43.6M	30M	6.4M	8.8M	MRD-8
65M	46.1M	30M	6.4M	8.8M	MRD-8
70M	48.6M	30M	6.4M	8.8M	MRD-8
75M	53.9M	38M	9.5M	8.8M	MRD-9
80M	56.4M	38M	9.5M	8.8M	MRD-9
85M	58.9M	38M	9.5M	8.8M	MRD-9
90M	61.4M	38M	9.5M	8.8M	MRD-9
95M	64.0M	38M	9.5M	8.8M	MRD-9
100M	66.4M	38M	9.5M	8.8M	MRD-9

Available in four (4) series:

"UDS" – 12L14 CRS

"UDM" – T.G. & P. Alloy, HDN R<sub>c</sub> 28-32

"UDH" – 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.75mm min. case)

"UDY" – 304 Stainless Steel

Other retainers are available on request. (see Section VII, page 17 – 20).

Each assembly includes one shaft and two retainers. Stainless steel retainer provided with series "UDY".

Shafts and retainers may be ordered separately.

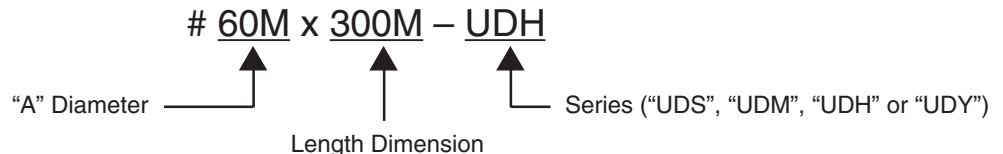
Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 23 and Sec. V, page 1 & 4)

### Masterline Metric Extra Heavy Duty Double Retainer Shaft Assembly

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

#### How To Order:



All Parts Available In Inch And Metric.

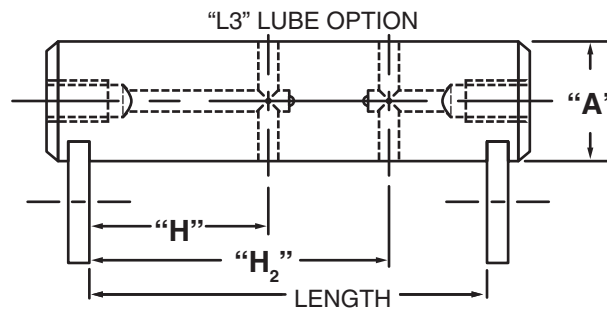
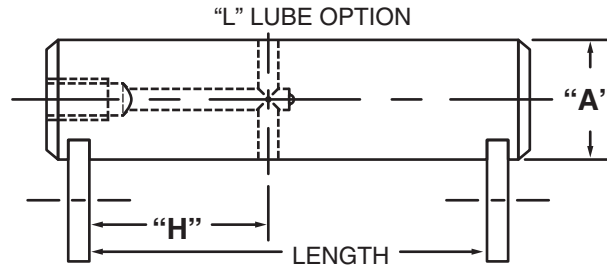


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## MASTERLINE EXTRA HEAVY DUTY DOUBLE RETAINER SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

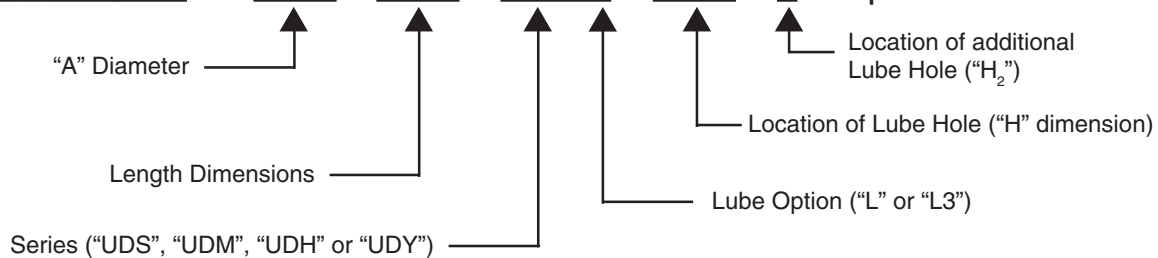
Shafts have 1/8 - 27 N.P.T. in ends. Optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Extra Heavy Duty Double Retainer Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 21 for additional ordering information.)

**How To Order:** # 1 1/2 x 3 1/4 - UDH L - 1 5/8 - 2 - Optional Thread



All Parts Available In Inch And Metric.

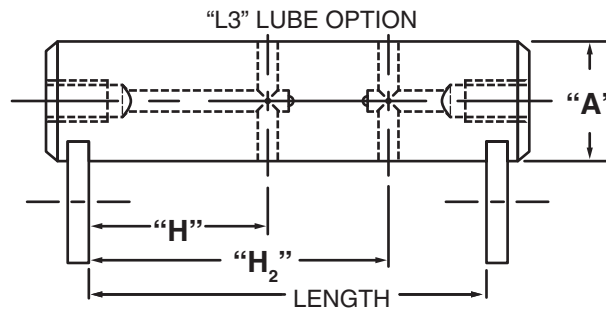
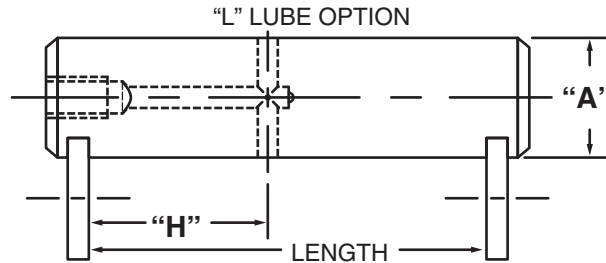


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## MASTERLINE METRIC EXTRA HEAVY DUTY DOUBLE RETAINER SHAFT ASSEMBLY WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

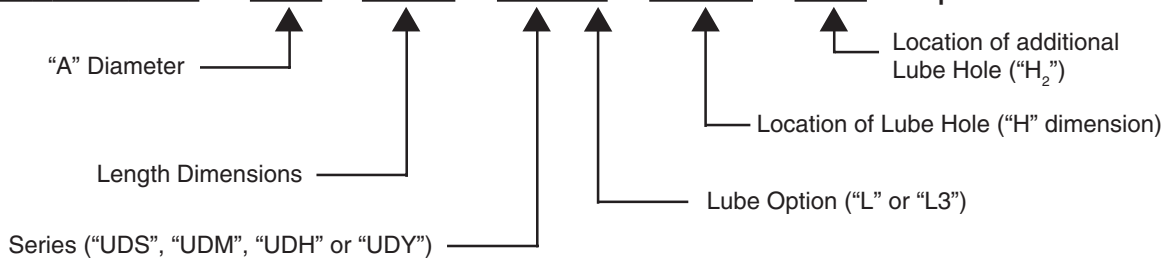
Shafts have 1/8 - 27 N.P.T. in ends. Optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

“L3” option is recommended for use on shafts 250mm or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Metric Extra Heavy Duty Double Retainer Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 22 for additional ordering information.)

**How To Order:** # 60M x 300M – UDH L – 12.5M – 20M – Optional Thread



All Parts Available In Inch And Metric.

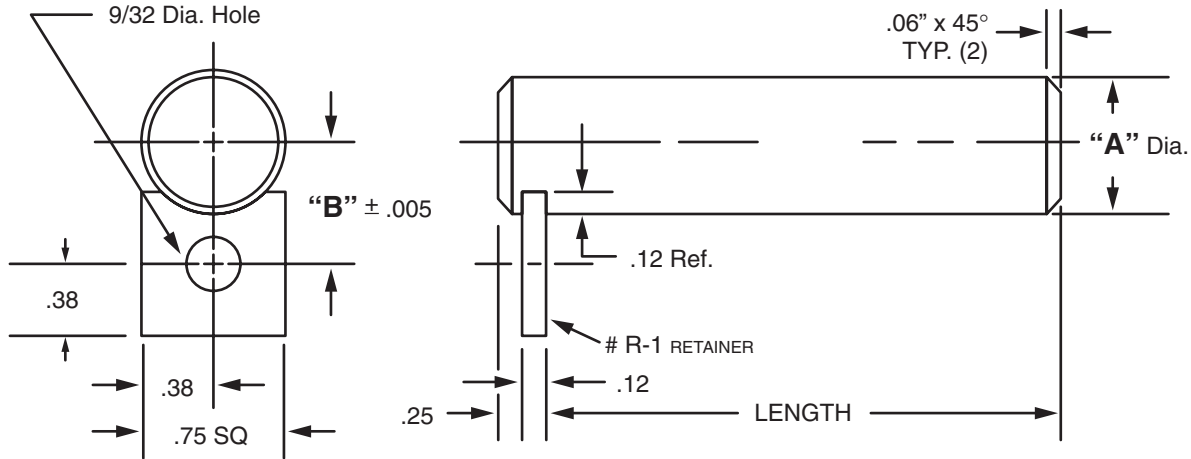


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## MASTERLINE SPECIAL TOLERANCE SHAFT ASSEMBLY (FOR PTFE BEARINGS)



"A" Dia.	"B" Dim.	Cad File No.
1/8	.1243 .1236	.375 SDZ1-8
5/32	.1554 .1547	.390 SDZ5-32
3/16	.1865 .1858	.406 SDZ3-16
1/4	.2490 .2481	.375 SDZ1-4
5/16	.3115 .3106	.406 SDZ5-16
3/8	.3740 .3731	.437 SDZ3-8
7/16	.4365 .4355	.468 SDZ7-16
1/2	.4990 .4980	.500 SDZ1-2

"A" Dia.	"B" Dim.	Cad File No.
9/16	.5615 .5605	.531 SDZ9-16
5/8	.6240 .6230	.562 SDZ5-8
11/16	.6865 .6855	.593 SDZ11-16
3/4	.7491 .7479	.625 SDZ3-4
13/16	.8116 .8104	.656 SDZ13-16
7/8	.8741 .8729	.687 SDZ7-8
1	.9991 .9979	.750 SDZ1

Available in two (2) series:

"SDU" – mild carbon steel, ground to size

"SDY" – 304 Stainless Steel

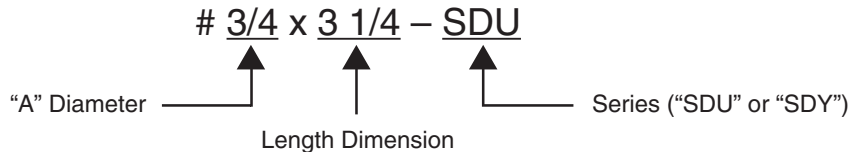
Each assembly includes one shaft and one retainer. Stainless steel retainer provided with series "SDY".

Other retainers are available on request. (see Section VII, page 17 – 20).

Shafts and retainers may be ordered separately.

### Masterline Special Tolerance Shaft Assembly (for PTFE Bearings)

#### How To Order:

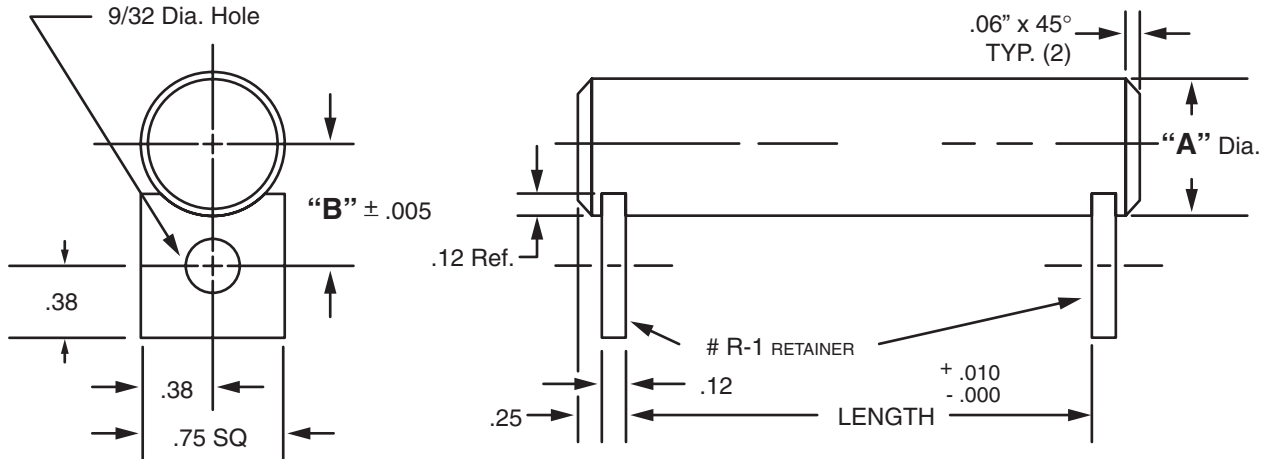


All Parts Available In Inch And Metric.





## MASTERLINE SPECIAL TOLERANCE DOUBLE RETAINER SHAFT ASSEMBLY (FOR PTFE BEARINGS)



"A" Dia.	"B" Dim.	Cad File No.
1/8 .1243 .1236	.375	SDZ1-8
5/32 .1554 .1547	.390	SDZ5-32
3/16 .1865 .1858	.406	SDZ3-16
1/4 .2490 .2481	.375	SDZ1-4
5/16 .3115 .3106	.406	SDZ5-16
3/8 .3740 .3731	.437	SDZ3-8
7/16 .4365 .4355	.468	SDZ7-16
1/2 .4990 .4980	.500	SDZ1-2

"A" Dia.	"B" Dim.	Cad File No.
9/16 .5615 .5605	.531	SDZ9-16
5/8 .6240 .6230	.562	SDZ5-8
11/16 .6865 .6855	.593	SDZ11-16
3/4 .7491 .7479	.625	SDZ3-4
13/16 .8116 .8104	.656	SDZ13-16
7/8 .8741 .8729	.687	SDZ7-8
1 .9991 .9979	.750	SDZ1

Available in two (2) series:

"DSDU"– mild carbon steel, ground to size

"DSDY"– 304 Stainless Steel

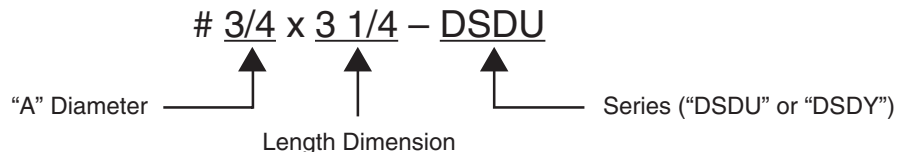
Each assembly includes one shaft and two retainers. Stainless steel retainer provided with series "DSDY".

Other retainers are available on request. (see Section VII, page 17 – 20).

Shafts and retainers may be ordered separately.

### Masterline Special Tolerance Double Retainer Shaft Assembly (for PTFE Bearings)

#### How To Order:



All Parts Available In Inch And Metric.

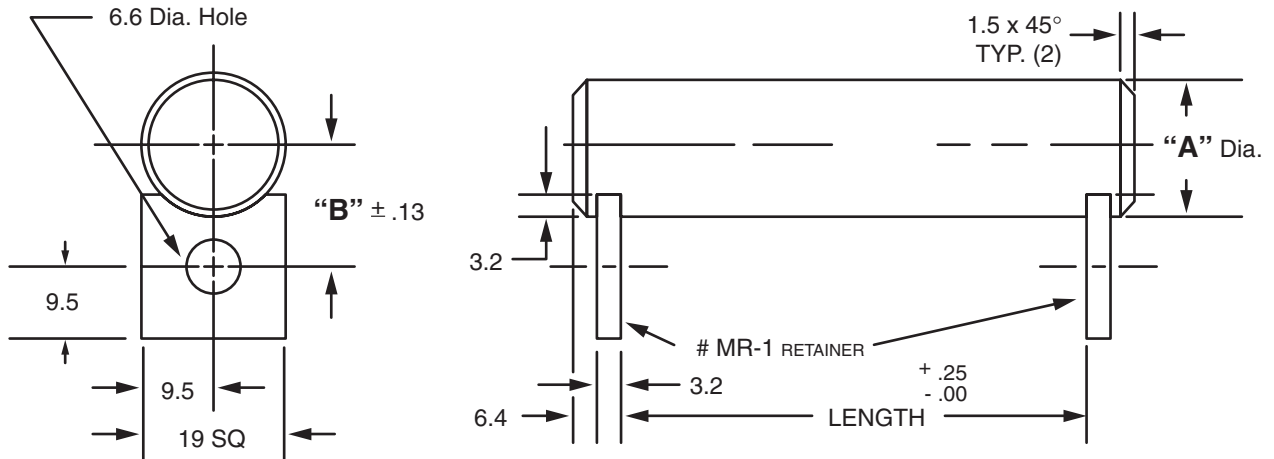


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## MASTERLINE METRIC SPECIAL TOLERANCE DOUBLE RETAINER SHAFT ASSEMBLY (FOR PTFE BEARINGS)



	"A" Dia.	"B" Dim.	Cad File No.		"A" Dia.	"B" Dim.	Cad File No.
5M	4.990 4.978	10.43	SDZ5-M	15M	14.984 14.966	13.84	SDZ15-M
6M	5.990 5.978	9.34	SDZ6-M	16M	15.984 15.966	14.34	SDZ16-M
7M	6.987 6.972	9.84	SDZ7-M	18M	17.984 17.966	15.34	SDZ18-M
8M	7.987 7.972	10.34	SDZ8-M	20M	19.980 19.959	16.33	SDZ20-M
10M	9.987 9.972	11.34	SDZ10-M	22M	21.980 21.959	17.33	SDZ22-M
12M	11.984 11.966	12.34	SDZ12-M	24M	23.980 23.959	18.33	SDZ24-M
13M	12.984 12.966	12.84	SDZ13-M	25M	24.980 24.959	18.83	SDZ25-M
14M	13.984 13.966	13.34	SDZ14-M				

Available in two (2) series:

"DSDU"– mild carbon steel, ground to size

"DSDY"– 304 Stainless Steel

Each assembly includes one shaft and two retainers. Stainless steel retainer provided with series "DSDY".

Other retainers are available on request. (see Section VII, page 17 – 20).

Shafts and retainers may be ordered separately.

### Masterline Metric Special Tolerance Double Retainer Shaft Assembly (for PTFE Bearings)

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

#### How To Order:

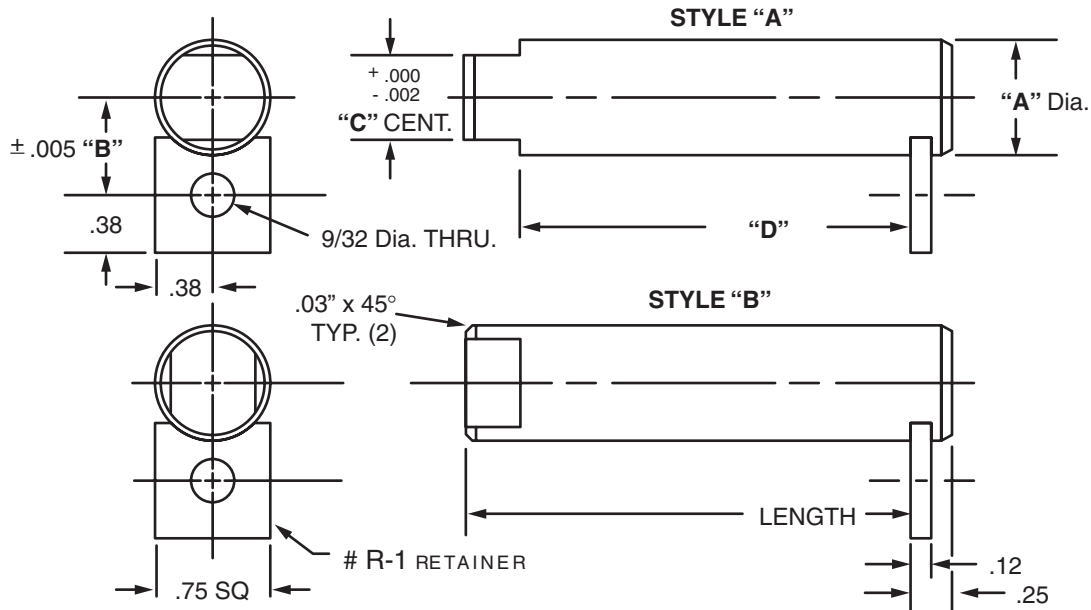
# 12M x 75M – DSDU

"A" Diameter      Length Dimension      Series ("DSDU" or "DSDY")

All Parts Available In Inch And Metric.



## MASTERLINE KEY PIN ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	"C" Dim.	Cad File # style "A"	Cad File # style "B"
.250	.375	.187	KZA250	KZB250
.312	.406	.249	KZA312	KZB312
.375	.437	.249	KZA375	KZB375
.437	.469	.312	KZA437	KZB437
.500	.500	.312	KZA500	KZB500
.562	.531	.374	KZA562	KZB562
.625	.562	.406	KZA625	KZB625
.688	.594	.499	KZA688	KZB688
.750	.625	.499	KZA750	KZB750

"A" Dia.	"B" Dim.	"C" Dim.	Cad File # style "A"	Cad File # style "B"
.812	.656	.499	KZA812	KZB812
.875	.688	.624	KZA875	KZB875
.937	.719	.624	KZA937	KZB937
1.000	.750	.749	KZA1000	KZB1000
1.250	.875	.749	KZA1250	KZB1250
1.375	.937	.874	KZA1375	KZB1375
1.500	1.000	.999	KZA1500	KZB1500
1.750	1.125	.999	KZA1750	KZB1750
2.000	1.250	1.249	KZA2000	KZB2000

Available in four (4) series:

- "KS" - 12L14 CRS
- "KM" - T.G. & P. Alloy, HDN R<sub>c</sub> 28-32
- "KH" - 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.03 min. case)
- "KY" - 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

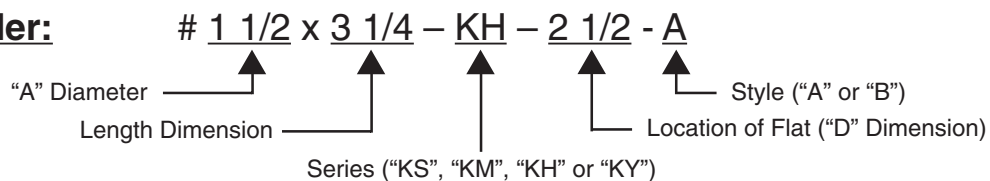
Each assembly includes one shaft and one retainer. Stainless steel retainer provided with series "KY".

Other retainers are available on request. (see Section VII, page 17 - 20).

Shafts and retainers may be ordered separately.

### Masterline Key Pin Assembly

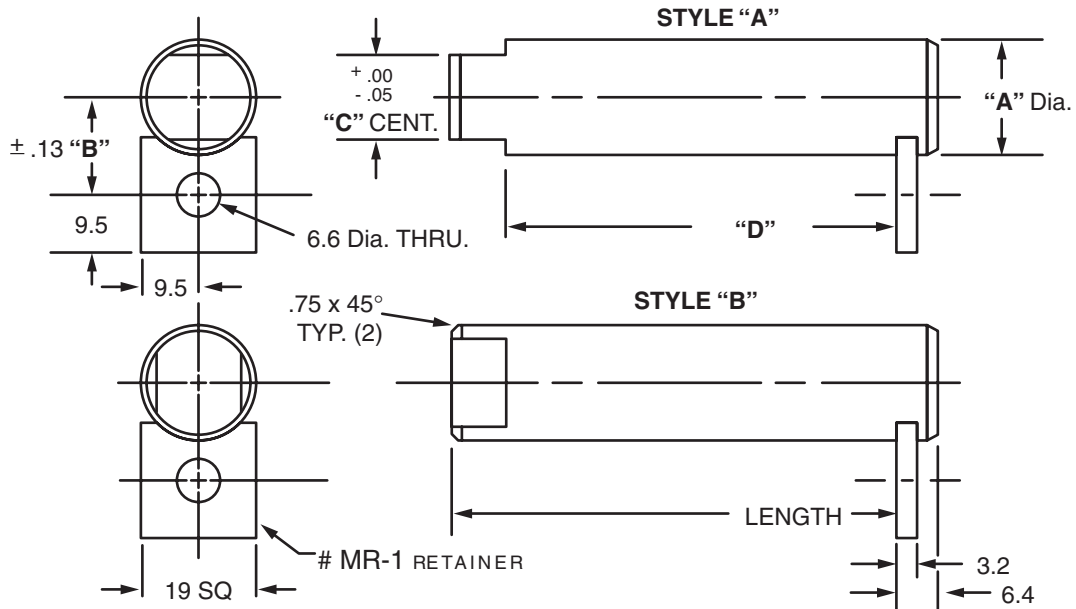
#### How To Order:



All Parts Available In Inch And Metric.



**MASTERLINE METRIC KEY PIN ASSEMBLY**



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dim.	"C" Dim.	Cad File # style "A"	Cad File # style "B"
6M	9.4M	4M	KZA6M	KZB6M
8M	10.3M	6M	KZA8M	KZB8M
9M	10.8M	6M	KZA9M	KZB9M
11M	11.8M	8M	KZA11M	KZB11M
12M	12.3M	9M	KZA12M	KZB12M
14M	13.3M	10M	KZA13M	KZB13M
16M	14.3M	12M	KZA16M	KZB16M
18M	15.3M	12M	KZA18M	KZB18M
19M	15.8M	12M	KZA19M	KZB19M

"A" Dia.	"B" Dim.	"C" Dim.	Cad File # style "A"	Cad File # style "B"
20M	16.3M	12M	KZA20M	KZB20M
22M	17.3M	16M	KZA22M	KZB22M
24M	18.3M	16M	KZA24M	KZB24M
25M	18.8M	19M	KZA25M	KZB25M
32M	22.3M	19M	KZA32M	KZB32M
35M	23.8M	22M	KZA35M	KZB35M
38M	25.3M	25M	KZA38M	KZB38M
44M	28.3M	25M	KZA44M	KZB44M
50M	31.3M	32M	KZA50M	KZB50M

Available in four (4) series:

- "KS" – 12L14 CRS
- "KM" – T.G. & P. Alloy, HDN R<sub>c</sub> 28-32
- "KH" – 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.75mm min. case)
- "KY" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

Each assembly includes one shaft and one retainer. Stainless steel retainer provided with series "KY".

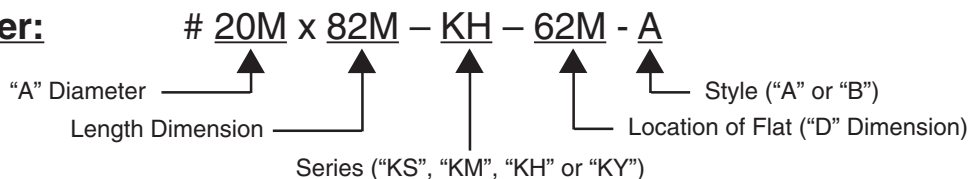
Other retainers are available on request. (see Section VII, page 17 – 20).

Shafts and retainers may be ordered separately.

**Masterline Metric Key Pin Assembly**

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

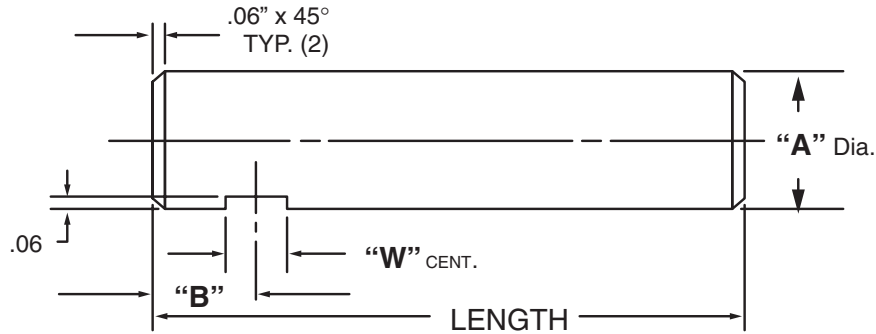
**How To Order:**



All Parts Available In Inch And Metric.



**MASTERLINE SET SCREW SHAFT**



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"W" Dim.	Cad File No.	"A" Dia.	"W" Dim.	Cad File No.
.250	.25	SZ250	1.250	.50	SZ1250
.312	.25	SZ312	1.375	.50	SZ1375
.375	.31	SZ375	1.500	.62	SZ1500
.437	.31	SZ437	1.625	.62	SZ1625
.500	.31	SZ500	1.750	.62	SZ1750
.562	.37	SZ562	2.000	.62	SZ2000
.625	.37	SZ625	2.250	.62	SZ2250
.750	.37	SZ750	2.500	.75	SZ2500
.875	.50	SZ875	2.750	.75	SZ2750
1.000	.50	SZ1000	3.000	.75	SZ3000
1.125	.50	SZ1125			

Available in four (4) series:

- "SS" – 12L14 CRS
- "SM" – T.G. & P. Alloy, HDN R<sub>c</sub> 28-32
- "SH" – 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.03 min. case)
- "SY" – 304 Stainless Steel

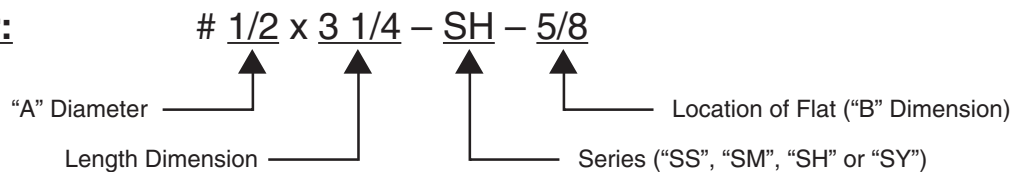
Other diameters are available on request. (see "How To Order")

Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 33 and Sec. V, page 1 & 4)

**Masterline Set Screw Shaft**

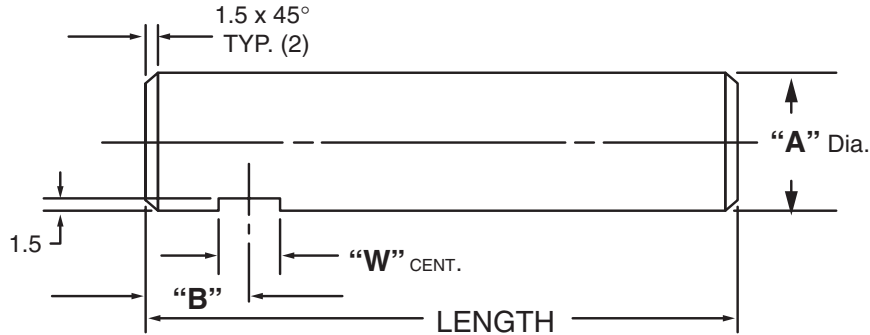
**How To Order:**



All Parts Available In Inch And Metric.



**MASTERLINE METRIC SET SCREW SHAFT**



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"W" Dim.	"A" Dia.	"W" Dim.
6M	6.3M	25M	12.7M
7M	6.3M	30M	12.7M
8M	6.3M	35M	12.7M
10M	7.8M	40M	15.9M
12M	7.8M	45M	15.9M
13M	7.8M	50M	15.9M
15M	9.5M	55M	15.9M
16M	9.5M	60M	15.9M
18M	9.5M	65M	19.1M
20M	12.7M	70M	19.1M
22M	12.7M	75M	19.1M
24M	12.7M		

Available in four (4) series:

- "SS" - 12L14 CRS
- "SM" - T.G. & P. Alloy, HDN R<sub>c</sub> 28-32
- "SH" - 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.75mm min. case)
- "SY" - 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

Shafts are available with lube holes, lube grooves and extractor options.

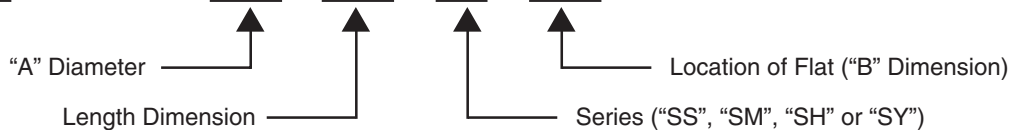
(refer to Sec. II, page 34 and Sec. V, page 1 & 4)

**Masterline Metric Set Screw Shaft**

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

**How To Order:**

# 20M x 75M - SH - 19M



All Parts Available In Inch And Metric.

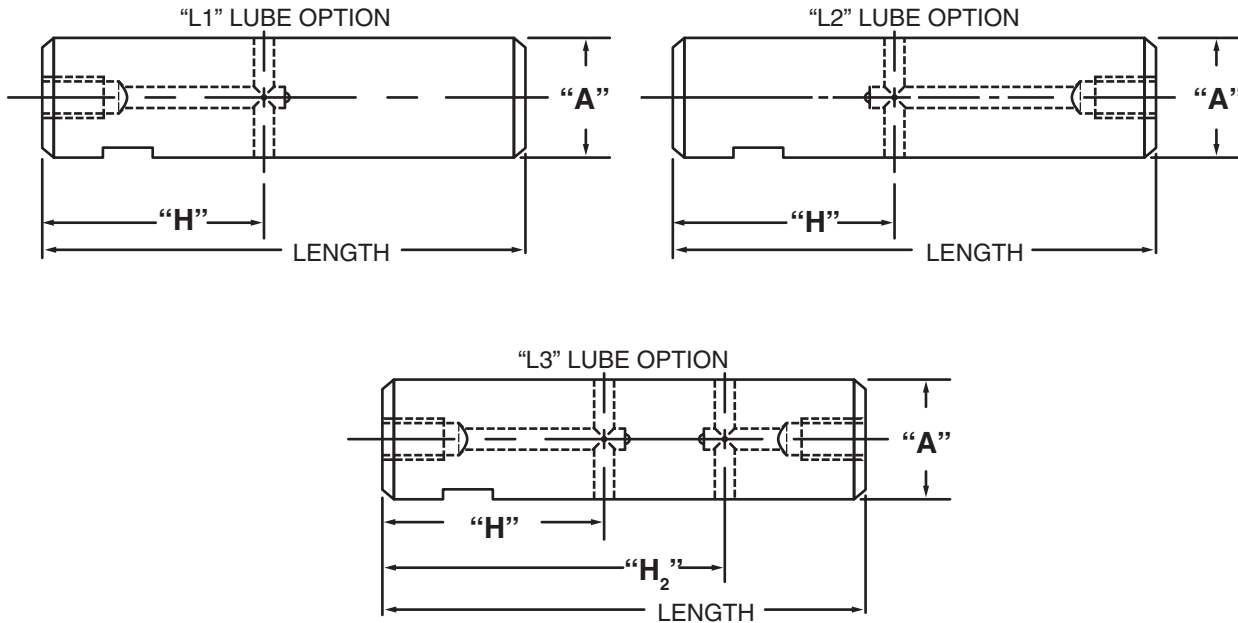


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## MASTERLINE SET SCREW SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

"L1" & "L3" options are not available under 1/2 dia. shaft

"L1" & "L3" options in 1/2 – 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" options in 3/8 - 5/8 dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

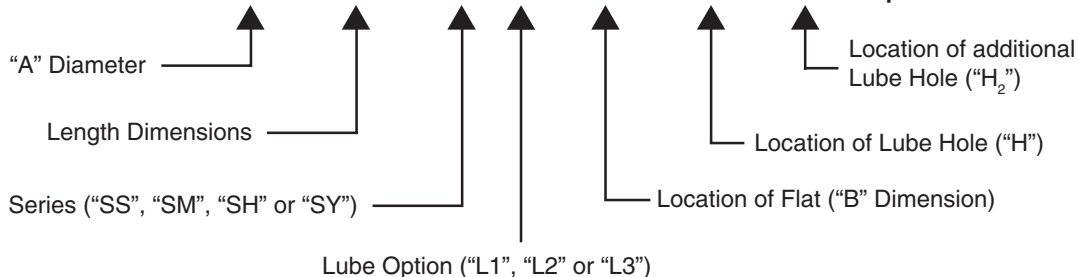
Optional thread for 1/4 – 28 is M6 – 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Set Screw Shaft with Lube Hole

(Note: Refer to Section II, page 31 for additional ordering information)

**How To Order:** # 1/2 x 3 1/4 – SH L1 – 5/8 - 1 5/8 – 2 – Optional Thread



All Parts Available In Inch And Metric.

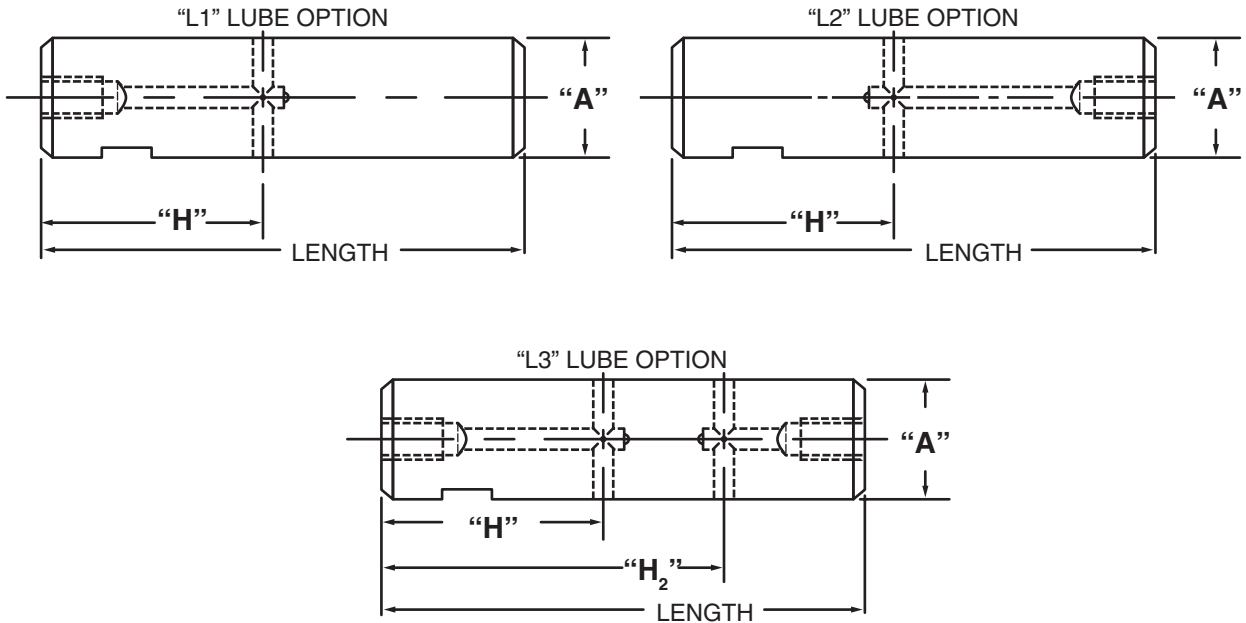


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## MASTERLINE METRIC SET SCREW SHAFT WITH LUBE HOLE



Note: Dimensions to lube holes are taken from inside of slot.

"L1" & "L3" options are not available under 13M dia. shaft

"L1" & "L3" options in 13M – 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

"L2" options in 10M - 16M dia. shafts have a 1/4 - 28 tapped hole in the end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

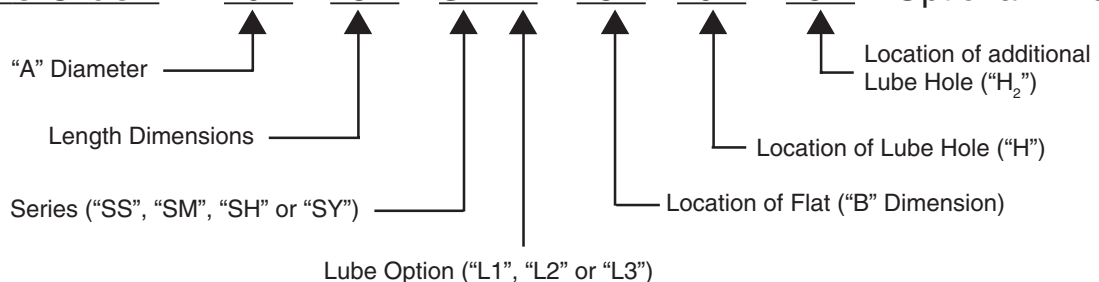
Optional thread for 1/4 – 28 is M6 – 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 250mm or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Metric Set Screw Shaft with Lube Hole

(Note: Refer to Section II, page 32 for additional ordering information)

**How To Order:** # 20M x 75M – SH L1 – 13M – 19M – 25M – Optional Thread



All Parts Available In Inch And Metric.

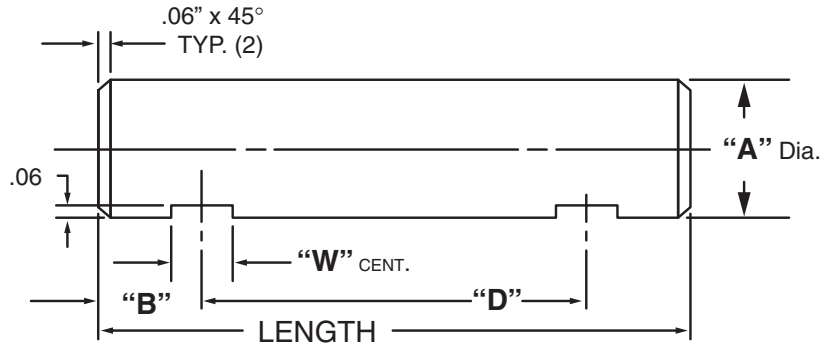


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## MASTERLINE DOUBLE-FLAT SET SCREW SHAFT



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"W" Dim.	Cad File No.	"A" Dia.	"W" Dim.	Cad File No.
.250	.25	SDZ250	1.250	.50	SDZ1250
.312	.25	SDZ312	1.375	.50	SDZ1375
.375	.31	SDZ375	1.500	.62	SDZ1500
.437	.31	SDZ437	1.625	.62	SDZ1625
.500	.31	SDZ500	1.750	.62	SDZ1750
.562	.37	SDZ562	2.000	.62	SDZ2000
.625	.37	SDZ625	2.250	.62	SDZ2250
.750	.37	SDZ750	2.500	.75	SDZ2500
.875	.50	SDZ875	2.750	.75	SDZ2750
1.000	.50	SDZ1000	3.000	.75	SDZ3000
1.125	.50	SDZ1125			

Available in four (4) series:

"SDS" – 12L14 CRS

"SDM" – T.G. & P. Alloy, HDN R<sub>c</sub> 28-32

"SDH" – 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.03 min. case)

"SDY" – 304 Stainless Steel

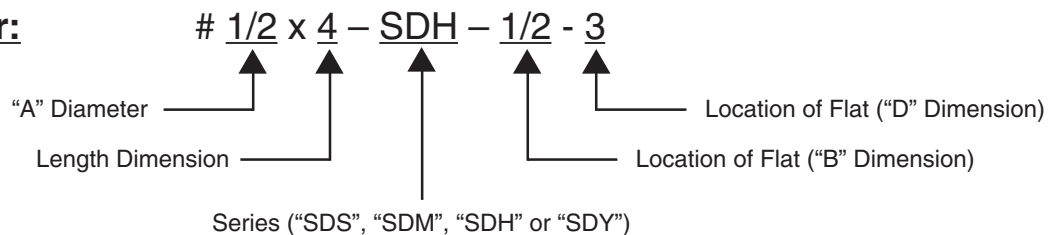
Other diameters are available on request. (see "How To Order")

Shafts are available with lube holes, lube grooves and extractor options.

(refer to Sec. II, page 37 and Sec. V, page 1 & 4)

### Masterline Double-Flat Set Screw Shaft

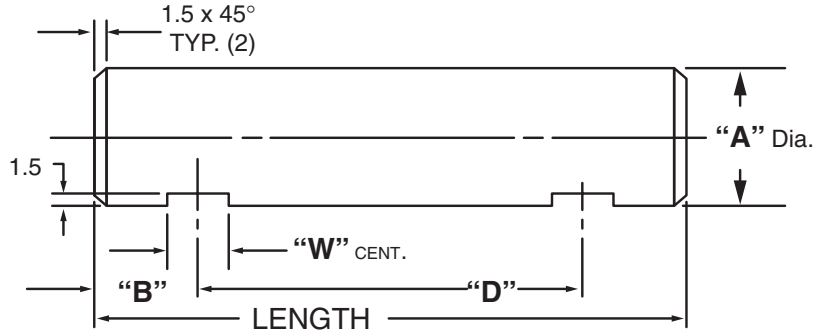
#### How To Order:



All Parts Available In Inch And Metric.



**MASTERLINE METRIC DOUBLE-FLAT SET SCREW SHAFT**



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"W" Dim.	"A" Dia.	"W" Dim.
6M	6.3M	25M	12.7M
7M	6.3M	30M	12.7M
8M	6.3M	35M	12.7M
10M	7.8M	40M	15.9M
12M	7.8M	45M	15.9M
13M	7.8M	50M	15.9M
15M	9.5M	55M	15.9M
16M	9.5M	60M	15.9M
18M	9.5M	65M	19.1M
20M	12.7M	70M	19.1M
22M	12.7M	75M	19.1M
24M	12.7M		

Available in four (4) series:

- "SDS" – 12L14 CRS
- "SDM" – T.G. & P. Alloy, HDN R<sub>c</sub> 28-32
- "SDH" – 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.75mm min. case)
- "SDY" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

Shafts are available with lube holes, lube grooves and extractor options.

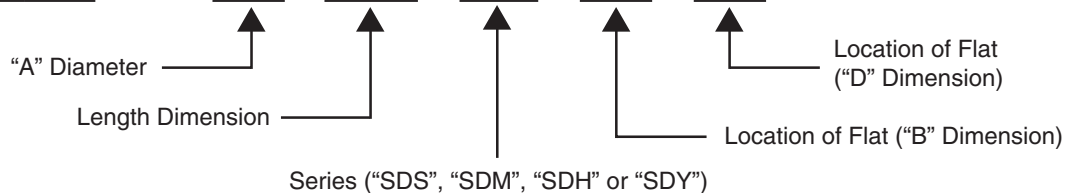
(refer to Sec. II, page 38 and Sec. V, page 1 & 4)

**Masterline Metric Double-Flat Set Screw Shaft**

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

**How To Order:**

# 20M x 100M – SDH – 20M – 60M



All Parts Available In Inch And Metric.

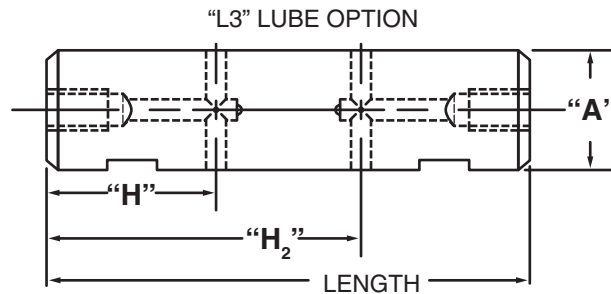
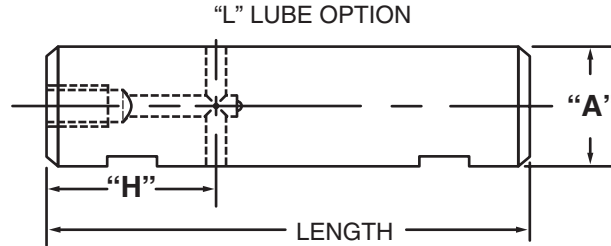


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## MASTERLINE DOUBLE-FLAT SET SCREW SHAFT WITH LUBE HOLE



Lube options are not available under 1/2 dia. shaft.

Lube options in 1/2 - 5/8 dia. shafts have a 1/4 - 28 tapped hole in end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

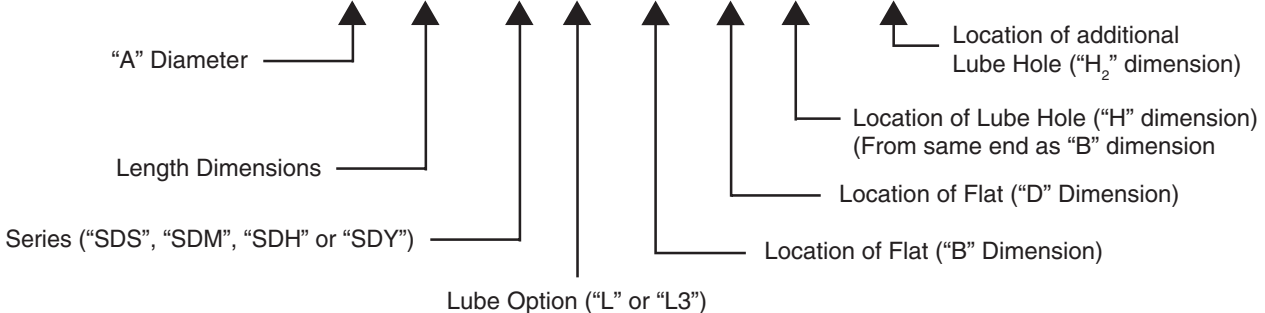
Optional thread for 1/4 - 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Double-Flat Set Screw Shaft with Lube Hole

(Note: Refer to Section II, page 35 for additional ordering information.)

**How To Order:** # 1/2 x 4 - SDH L - 1/2 - 3 - 1 - 1 7/8 - Optional Thread



All Parts Available In Inch And Metric.

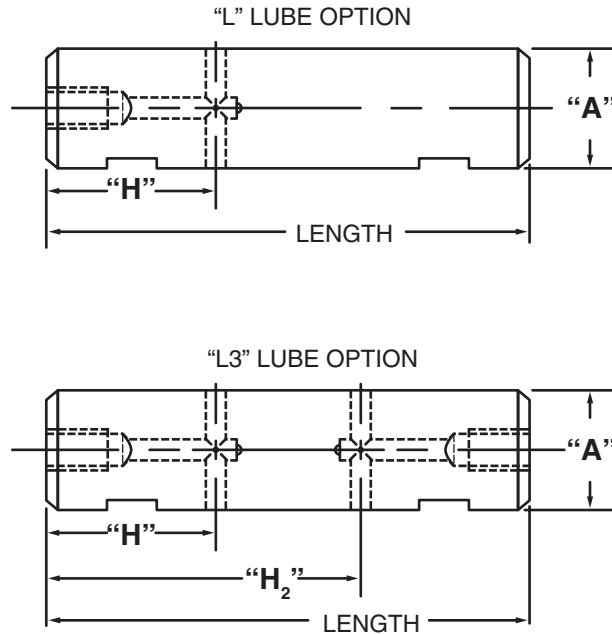


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## MASTERLINE METRIC DOUBLE-FLAT SET SCREW SHAFT WITH LUBE HOLE



Lube options are not available under 13M dia. shaft.

Lube options in 13M - 16M dia. shafts have a 1/4 - 28 tapped hole in end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

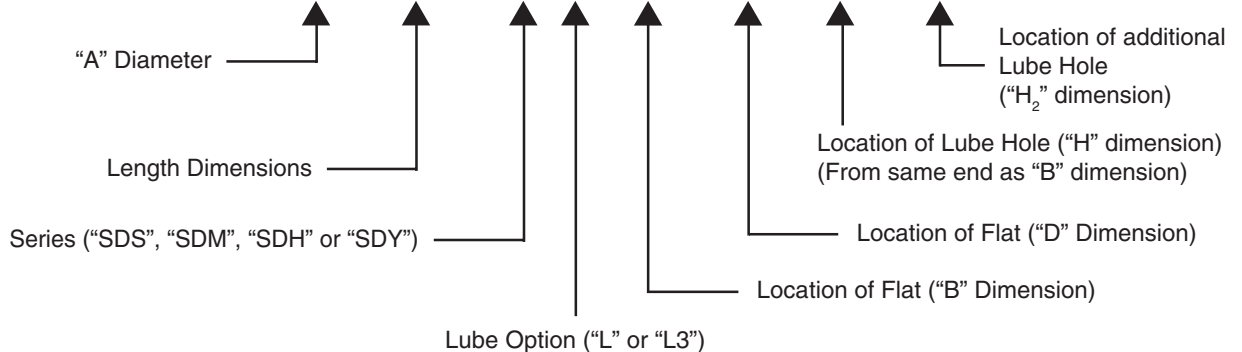
Optional thread for 1/4 - 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 250mm or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Metric Double-Flat Set Screw Shaft with Lube Hole

(Note: Refer to Section II, page 36 for additional ordering information.)

**How To Order:** # 20M x 100M - SDH L - 20M - 60M - 35M - 65M - Optional Thread



All Parts Available In Inch And Metric.

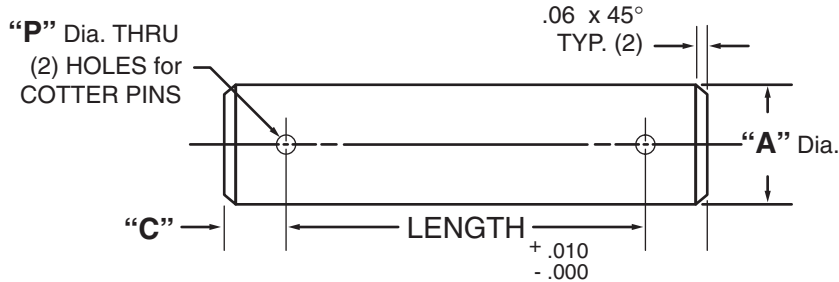


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## MASTERLINE HEADLESS COTTER PIN SHAFT



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"C" Dim.	"P" Dia.	Cad File No.	"A" Dia.	"C" Dim.	"P" Dia.	Cad File No.
.250	3/16	7/64	HCZ250	1.250	3/8	13/64	HCZ1250
.312	1/4	9/64	HCZ312	1.375	3/8	13/64	HCZ1375
.375	1/4	9/64	HCZ375	1.500	1/2	17/64	HCZ1500
.500	5/16	11/64	HCZ500	1.750	1/2	17/64	HCZ1750
.625	5/16	11/64	HCZ625	2.000	1/2	17/64	HCZ2000
.750	5/16	11/64	HCZ750	2.250	1/2	17/64	HCZ2250
.875	3/8	13/64	HCZ875	2.500	1/2	17/64	HCZ2500
1.000	3/8	13/64	HCZ1000	2.750	5/8	5/16	HCZ2750
1.125	3/8	13/64	HCZ1125	3.000	5/8	5/16	HCZ3000

Available in four (4) series:

"HCS" – 12L14 CRS

"HCM" – T.G. & P. Alloy, HDN R<sub>c</sub> 28-32

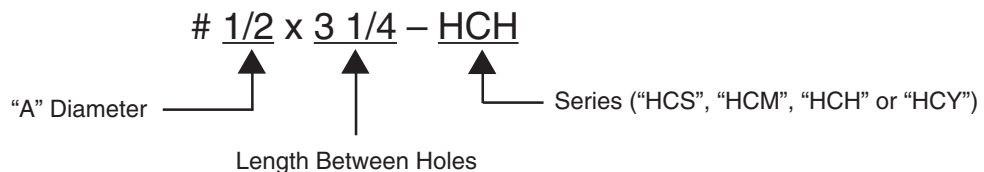
"HCH" – 12L14 CRS, CARB., HDN. & GR., R<sub>c</sub> 56-60 (.03 min. case)

"HCY" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

### Masterline Headless Cotter Pin Shaft

#### How To Order:



All Parts Available In Inch And Metric.

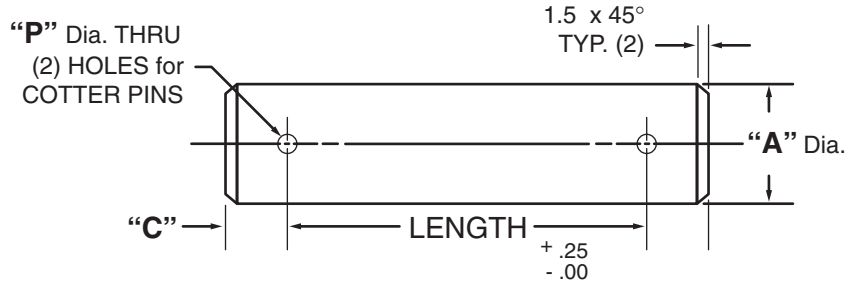


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## MASTERLINE METRIC HEADLESS COTTER PIN SHAFT



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"C" Dim.	"P" Dia.	"A" Dia.	"B" Dim.	"P" Dia.
6M	4.8M	2.8M	35M	9.5M	5.2M
8M	6.4M	3.6M	40M	12.7M	6.8M
10M	6.4M	3.6M	45M	12.7M	6.8M
12M	6.4M	3.6M	50M	12.7M	6.8M
13M	7.9M	4.4M	55M	12.7M	6.8M
15M	7.9M	4.4M	60M	12.7M	6.8M
16M	7.9M	4.4M	65M	15.9M	8.0M
20M	9.5M	5.2M	70M	15.9M	8.0M
25M	9.5M	5.2M	75M	15.9M	8.0M
30M	9.5M	5.2M			

Available in four (4) series:

"HCS" – 12L14 CRS

"HCM" – T.G. & P. Alloy, HDN R<sub>C</sub> 28-32

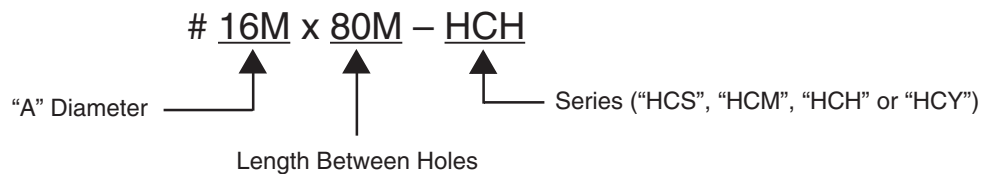
"HCH" – 12L14 CRS, CARB., HDN. & GR., R<sub>C</sub> 56-60 (.75mm min. case)

"HCY" – 304 Stainless Steel

Other diameters are available on request. (see "How To Order")

### Masterline Metric Headless Cotter Pin Shaft

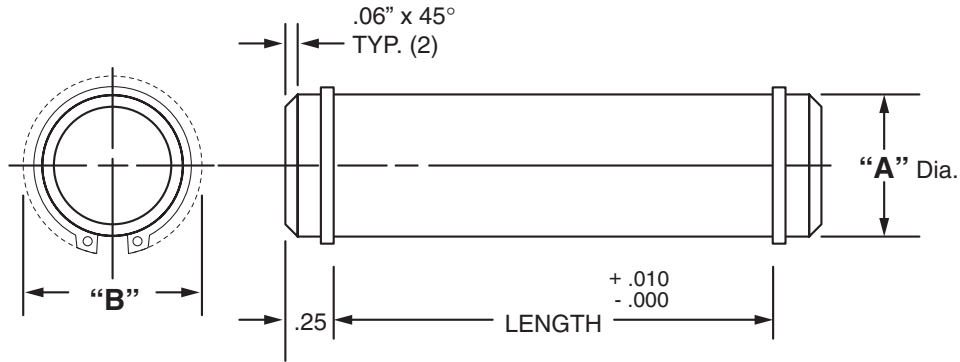
#### How To Order:



All Parts Available In Inch And Metric.



## MASTERLINE DOUBLE SNAP RING SHAFT ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dia.	Cad File No.	"A" Dia.	"B" Dia.	Cad File No.
.250	.43	DRZ250	1.125	1.49	DRZ1125
.375	.59	DRZ375	1.250	1.62	DRZ1250
.500	.74	DRZ500	1.500	1.90	DRZ1500
.625	.87	DRZ625	1.750	2.21	DRZ1750
.750	1.05	DRZ750	2.000	2.44	DRZ2000
.875	1.16	DRZ875	2.250	2.74	DRZ2250
1.000	1.35	DRZ1000	2.500	2.98	DRZ2500

Available in four (4) series:

"DRS" – 12L14 CRS

"DRM" – T.G. & P. Alloy, HDN R<sub>C</sub> 28-32

"DRH" – 12L14 CRS, CARB., HDN. & GR., R<sub>C</sub> 56-60 (.03 min. case)

"DRY" – 304 Stainless Steel

Each assembly includes one (1) shaft and two (2) snap rings.

NOTE: Snap rings under 1/4" diameter are made of copper/beryllium.

Stainless steel snap rings provided with "DRY" series.

Shafts and snap rings may be ordered separately.

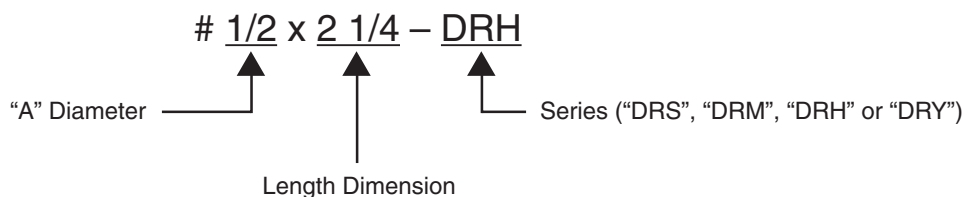
Other diameters are available on request. (see "How To Order")

Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. II, page 43 and Sec. V, page 1 & 4)

### Masterline Double Snap Ring Shaft Assembly

#### How To Order:



All Parts Available In Inch And Metric.

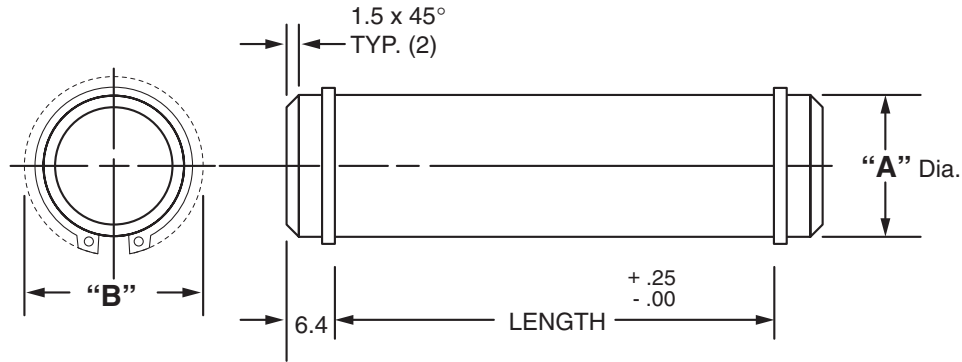


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## MASTERLINE METRIC DOUBLE SNAP RING SHAFT ASSEMBLY



For Tolerance on "A" Dia., see Section I, page 7

"A" Dia.	"B" Dia.	"A" Dia.	"B" Dia.
6M	9.1	20M	28.4
8M	13.7	25M	35.6
9M	14.7	27M	37.8
10M	15.7	30M	41.1
12M	17.5	35M	46.0
14M	20.6	38M	50.8
17M	23.9	45M	59.4
19M	27.7	50M	64.8

Available in four (4) series:

"DRS" – 12L14 CRS

"DRM" – T.G. & P. Alloy, HDN R<sub>C</sub> 28-32

"DRH" – 12L14 CRS, CARB., HDN. & GR., R<sub>C</sub> 56-60 (.75mm min. case)

"DRY" – 304 Stainless Steel

Each assembly includes one (1) shaft and two (2) snap rings.

NOTE: Snap rings under 7mm diameter are made of copper/beryllium.

Stainless steel snap rings provided with "DRY" series.

Shafts and snap rings may be ordered separately.

Other diameters are available on request. (see "How To Order")

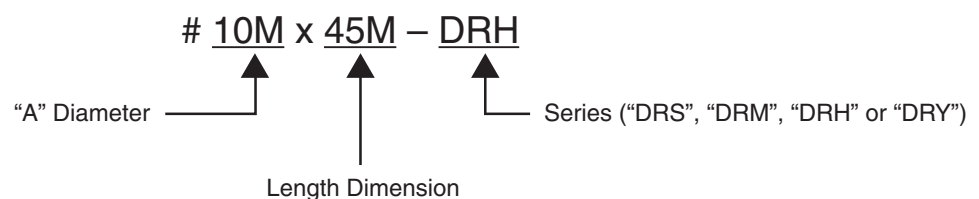
Shafts are available with lube holes, lube grooves and extractor option.

(refer to Sec. II, page 44 and Sec. V, page 1 & 4)

### Masterline Metric Double Snap Ring Shaft Assembly

To specify metric (millimeters) when ordering, use a capital "M" behind each dimension.

#### How To Order:



All Parts Available In Inch And Metric.

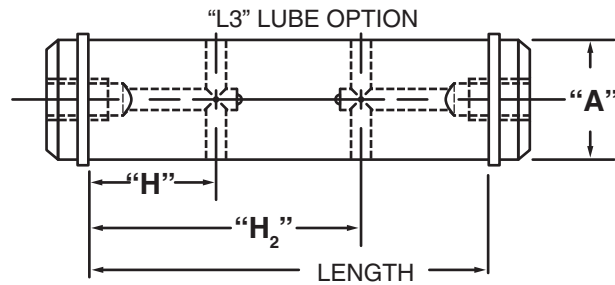
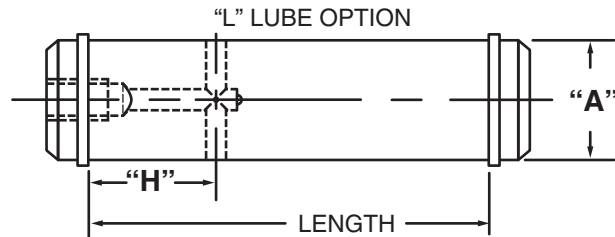


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## MASTERLINE DOUBLE SNAP RING SHAFT ASSEMBLY WITH LUBE HOLE



Lube options are not available under 1/2 dia. shaft.

Lube options in 1/2 - 5/8 dia. shafts have a 1/4 - 28 tapped hole in end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

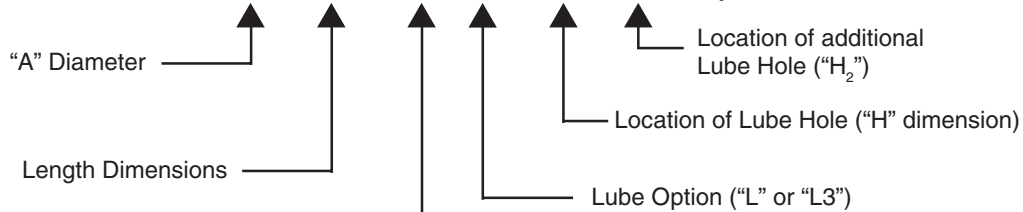
Optional thread for 1/4 - 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 10" or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

### Masterline Double Snap Ring Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 41 for additional ordering information.)

**How To Order:** # 1/2 x 4 - DRH L - 1/2 - 3 - Optional Thread



Series ("DRS", "DRM", "DRH" or "DRY")

All Parts Available In Inch And Metric.

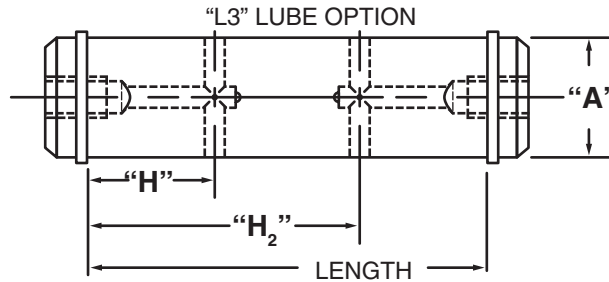
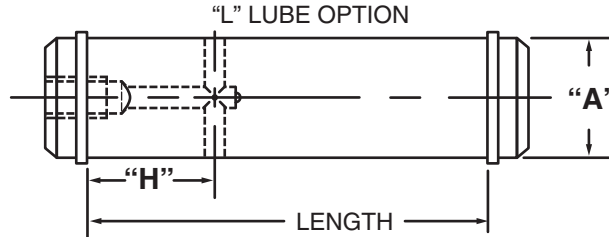


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# MASTERLINE METRIC DOUBLE SNAP RING SHAFT ASSEMBLY WITH LUBE HOLE



Lube options are not available under 13M dia. shaft.

Lube options in 13M - 16M dia. shafts have a 1/4 - 28 tapped hole in end.

All other diameter shafts have 1/8 - 27 N.P.T. in ends.

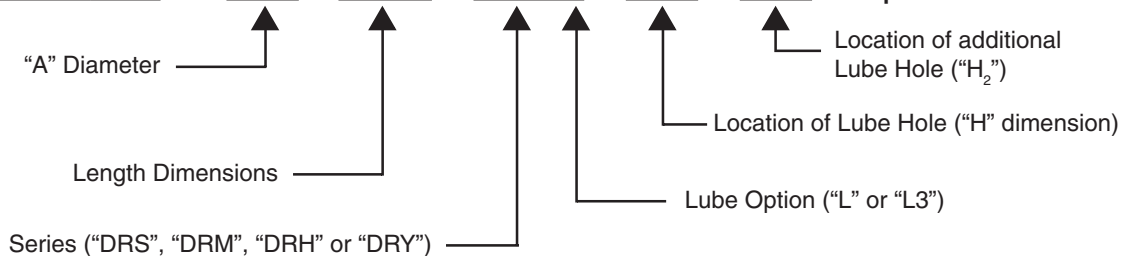
Optional thread for 1/4 - 28 is M6 - 1.0 & optional thread for 1/8 - 27 N.P.T. is 1/8 - 28 B.S.P.T.

"L3" option is recommended for use on shafts 250mm or longer when more than one cross-hole is necessary and access to both ends of shaft is possible.

## Masterline Metric Double Snap Ring Shaft Assembly with Lube Hole

(Note: Refer to Section II, page 42 for additional ordering information.)

**How To Order:** # 20M x 100M - DRH L - 20M - 80M - Optional Thread



All Parts Available In Inch And Metric.



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**This is a page reserved for your product.  
Talk with us for special ends, key grooves and  
other items you might require.**

**Thanks,**

*Masterline<sup>®</sup>*