

AVAILABLE CAVITIES

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OVERVIEW

The following pages show details for Comatrol standard valve cavities. These cavities are designed around SAE standard O-ring thread ports. In many cases these cavities are interchangeable with cavities used by other manufacturers. The table below is intended as a guide for cartridge valve interchanges.

Cavity crossover table

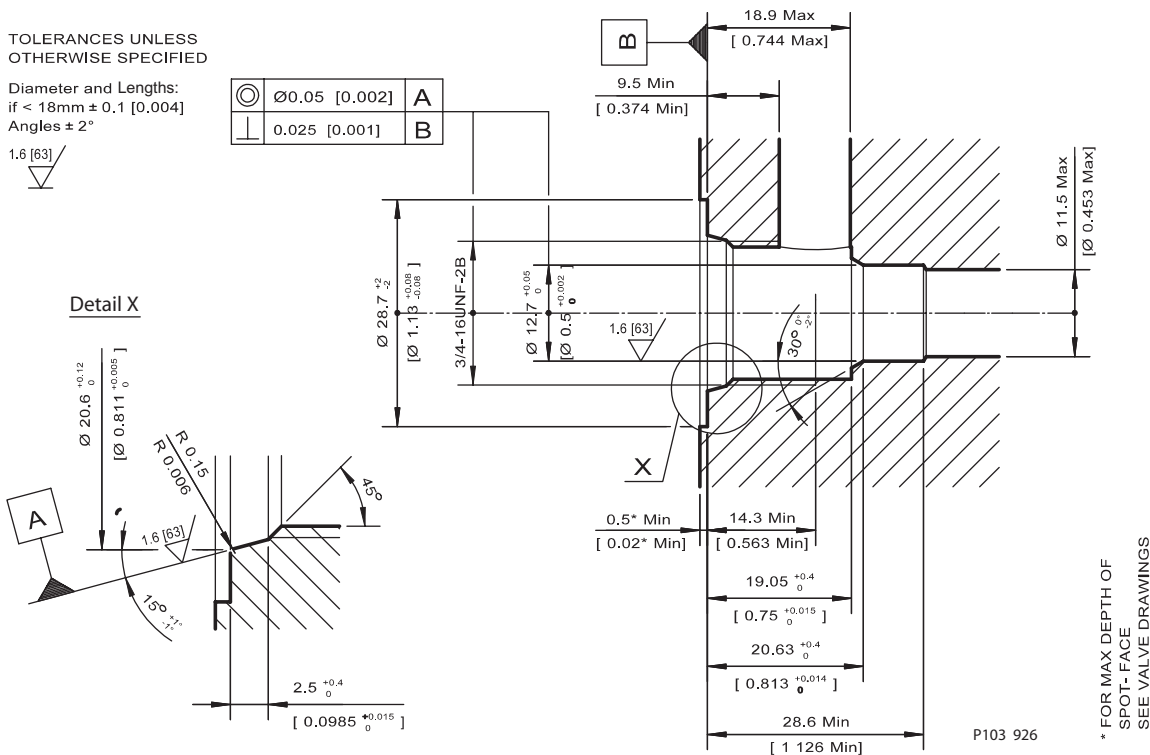
| Comatrol | Thread | Delta Power | Eaton-Vickers | HydraForce | Parker | Sterling [Parker] | Command Controls [Bucher] |
|----------|-----------|-------------|---------------|------------|--------|-------------------|---------------------------|
| CP04-2 | 7/16-20 | | | NO | NO | | NO |
| CP04-3 | | | | NO | NO | | NO |
| CP07-3 | 5/8-18 | YES | | YES | YES | | |
| SDC08-2 | 3/4-16 | YES | YES | YES | YES | YES | YES |
| SDC08-3+ | | YES | YES | YES | YES | YES | YES |
| CP08-3L | | | | | | | |
| SDC08-4 | | YES | YES | YES | YES | YES | YES |
| SDC10-2 | 7/8-14 | YES | YES | YES | YES | YES | YES |
| SDC10-3 | | YES | YES | YES | YES | YES | YES |
| SDC10-3S | | | YES | YES | YES | YES | YES |
| SDC10-4 | | YES | YES | YES | YES | YES | YES |
| CP12-2 | | 1 1/16-12 | NO | NO | YES | NO | |
| SDC12-2 | NO | | NO | NO | NO | | NO |
| CP12-3S | NO | | NO | NO | NO | | NO |
| CP12-3 | NO | | NO | YES | NO | | NO |
| CP12-4 | NO | | NO | NO | NO | | NO |
| SDC16-2 | 1 5/16-12 | | | YES | YES | YES | YES |
| SDC16-3S | | | YES | YES | YES | YES | YES |
| SDC16-3 | | | YES | YES | YES | YES | YES |
| SDC16-4 | | | YES | YES | YES | YES | YES |
| SDC20-2 | | | | YES | | YES | |
| CP20-3S | 1 5/8-12 | | | NO | | | |
| SDC20-3 | | | YES | | | | |
| SDC20-4 | | | YES | | | | |

Please note that most manufacturers have many non-standard cavities and that details are subject to change. Compare cavity details before interchanging cartridges.

The National Fluid Power Association (NFPA) and International Standards Organization (ISO) are developing a standard, NFPA T3.5.31M-19XX, that will define an industry-wide set of standard cavities. Comatrol will manufacture cartridge valves for NFPA cavities upon formal approval of the standard.

Dimensions

mm [in]



Form tools

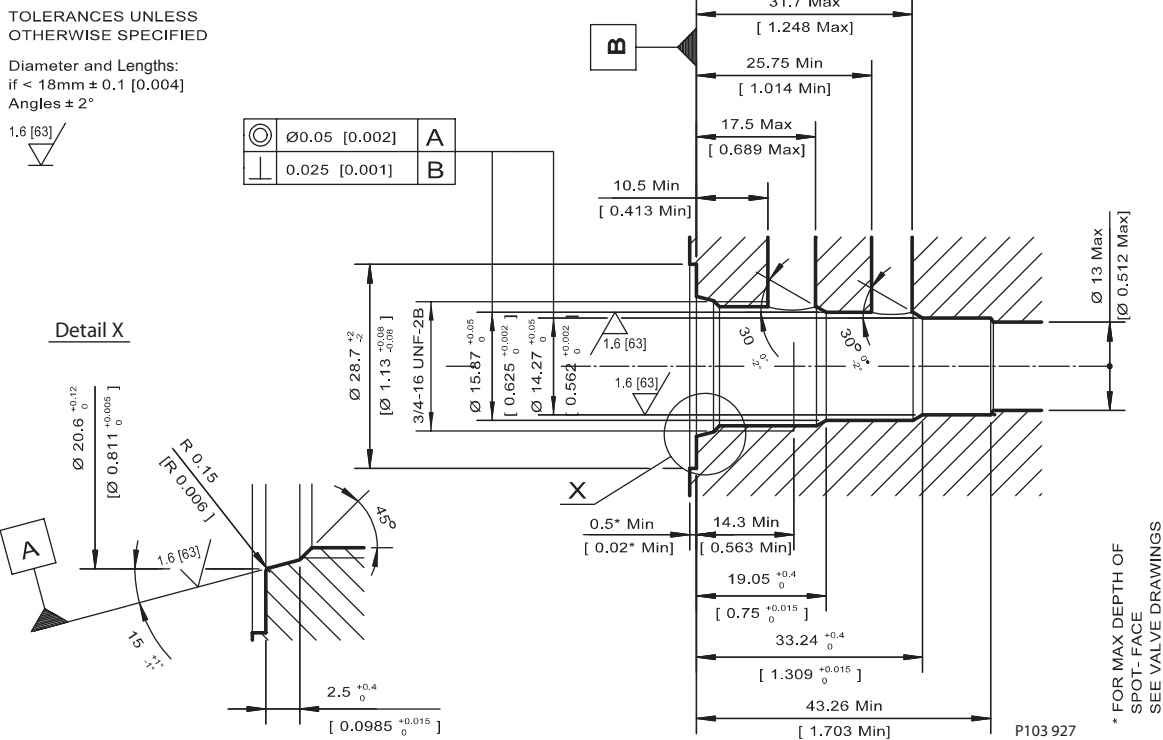
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-08-2-FT | 11027180 |
| Roughing tool | SDC-08-2-RT | 11027181 |

Housings

| Order Code | Description | Ports | Page |
|----------------|--------------------------------|---------|-------|
| CP08-2-4S | Aluminum Housing | SAE #4 | 20.66 |
| CP08-2-6S | Aluminum Housing | SAE #6 | 20.66 |
| CP08-2-6S-2CR | Aluminum Housing - Crossover | SAE #6 | 20.65 |
| CP08-2-8S-2CR | Aluminum Housing - Crossover | SAE #8 | 20.65 |
| CP08-2-8S-2PL | Aluminum Housing - Parallel | SAE #8 | 20.61 |
| CP08-2-S4S | Steel Housing | SAE #4 | 20.66 |
| SDC08-2-HG1-3B | Aluminum Housing, Two #2 Ports | 3/8 BSP | 20.62 |
| SDC08-2-HG2-3B | Aluminum Housing, Two #1 Ports | 3/8 BSP | 20.63 |
| SDC08-2-HG-2B | Aluminum Housing | 1/4 BSP | 20.64 |
| SDC08-2-HG-3B | Aluminum Housing | 3/8 BSP | 20.64 |

mm [in]

Dimensions



Form tools

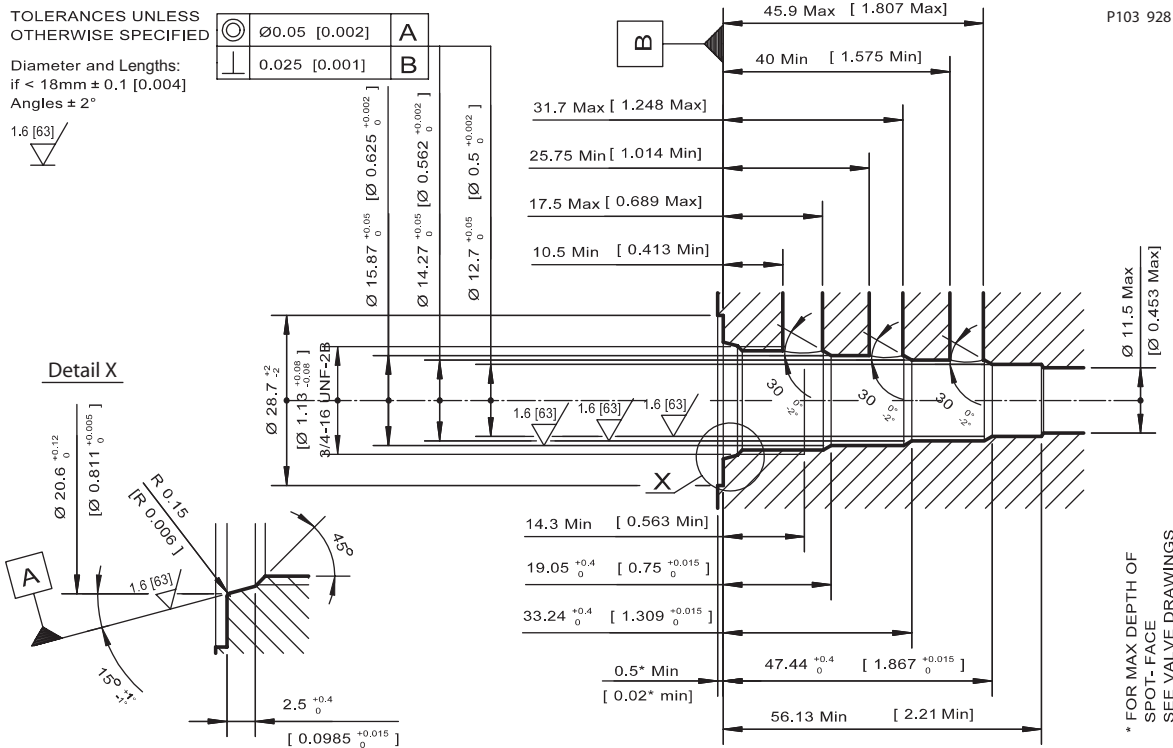
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-08-3-FT | 11027182 |
| Roughing tool | SDC-08-3-RT | 11027183 |

Housings

| Order Code | Description | Ports | Page |
|---------------|--------------------------------|---------|-------|
| CP08-3-4S | Aluminum Housing | SAE #4 | 20.69 |
| CP08-3-6S | Aluminum Housing | SAE #6 | 20.69 |
| CP08-3-S4S | Steel Housing | SAE #4 | 20.69 |
| CP08-3-S6S | Steel Housing | SAE #6 | 20.69 |
| SDC08-3-HI-2B | Aluminum Housing, Two #1 Ports | 1/4 BSP | 20.67 |
| SDC08-3-SE-2B | Aluminum Housing | 1/4 BSP | 20.68 |
| SDC08-3-SE-3B | Aluminum Housing | 3/8 BSP | 20.68 |

Dimensions

mm [in]



Form tools

| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-08-4-FT | 11027184 |
| Roughing tool | SDC-08-4-RT | 11027185 |

Housings

| Order Code | Description | Ports | Page |
|--------------|------------------|---------|-------|
| CP08-4-4S | Aluminum Housing | SAE #4 | 20.70 |
| CP08-4-6S | Aluminum Housing | SAE #6 | 20.70 |
| SDC08-4-L-2B | Aluminum Housing | 1/4 BSP | 20.71 |

mm [in]

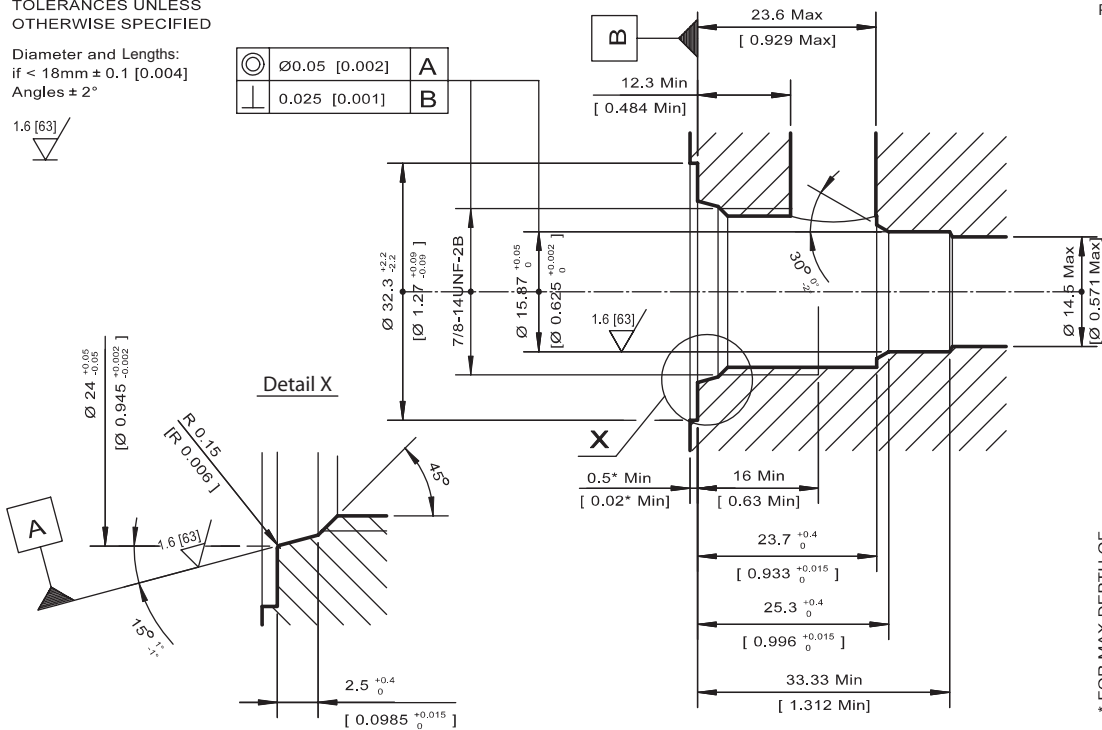
Dimensions

TOLERANCES UNLESS OTHERWISE SPECIFIED

Diameter and Lengths:
 if < 18mm ± 0.1 [0.004]
 Angles ± 2°

| | | |
|---|---------------|---|
| ⊙ | Ø0.05 [0.002] | A |
| ⊥ | 0.025 [0.001] | B |

1.6 [63]



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* FOR MAX DEPTH OF SPOT-FACE SEE VALVE DRAWINGS

Form tools

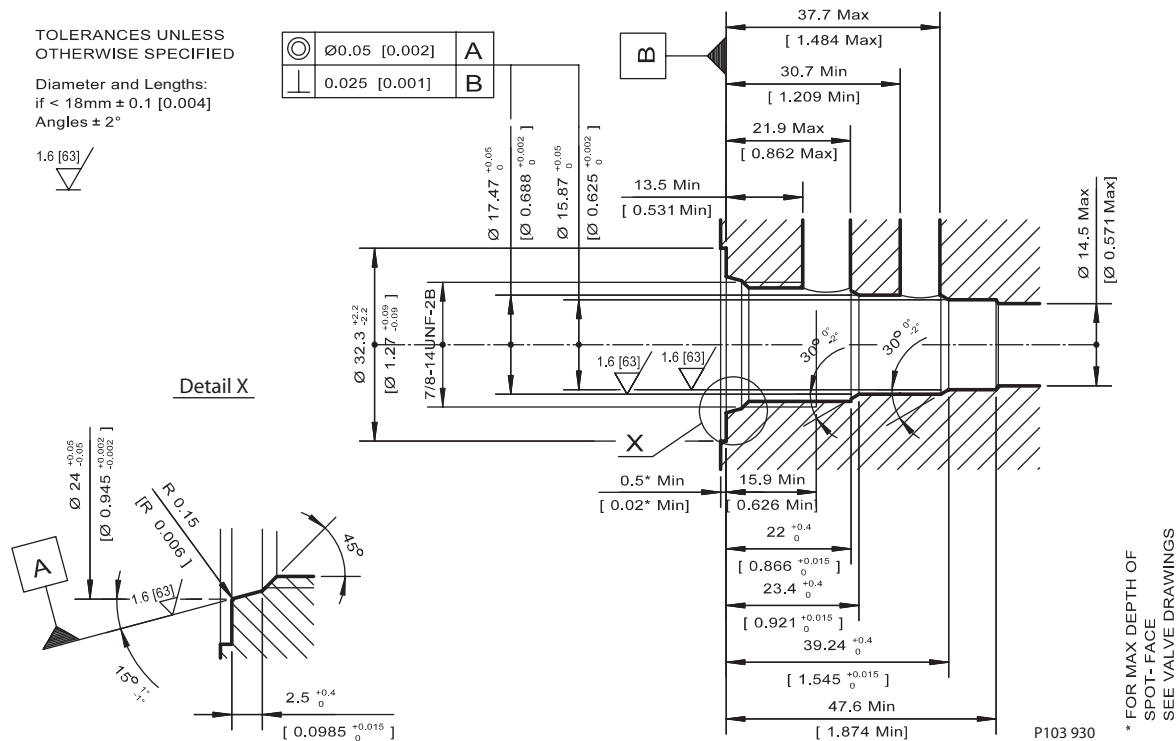
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-10-2-FT | 11027186 |
| Roughing tool | SDC-10-2-RT | 11027187 |

Housings

| Order Code | Description | Ports | Page |
|----------------|--------------------------------|---------|-----------------------|
| CP10-2-10S-2CR | Aluminum Housing | SAE #10 | 20.74 |
| CP10-2-6S | Aluminum Housing | SAE #6 | 20.75 |
| CP10-2-8S | Aluminum Housing | SAE #8 | 20.75 |
| CP10-2-8S-2PL | Parallel housing | SAE #8 | 20.72 |
| CP10-2-S6S | Steel Housing | SAE #6 | 20.75 |
| CP10-2-S8S | Steel Housing | SAE #8 | 20.75 |
| SDC10-2-DG-3B | Aluminum Housing | 3/8 BSP | 20.77 |
| SDC10-2-DG-4B | Aluminum Housing | 1/2 BSP | 20.73 |
| SDC10-2-LG1-4B | Aluminum Housing, Two #2 Ports | 1/2 BSP | 20.76 |
| SDC10-2-LG2-4B | Aluminum Housing, Two #1 Ports | 1/2 BSP | 20.78 |

Dimensions

mm [in]



Form tools

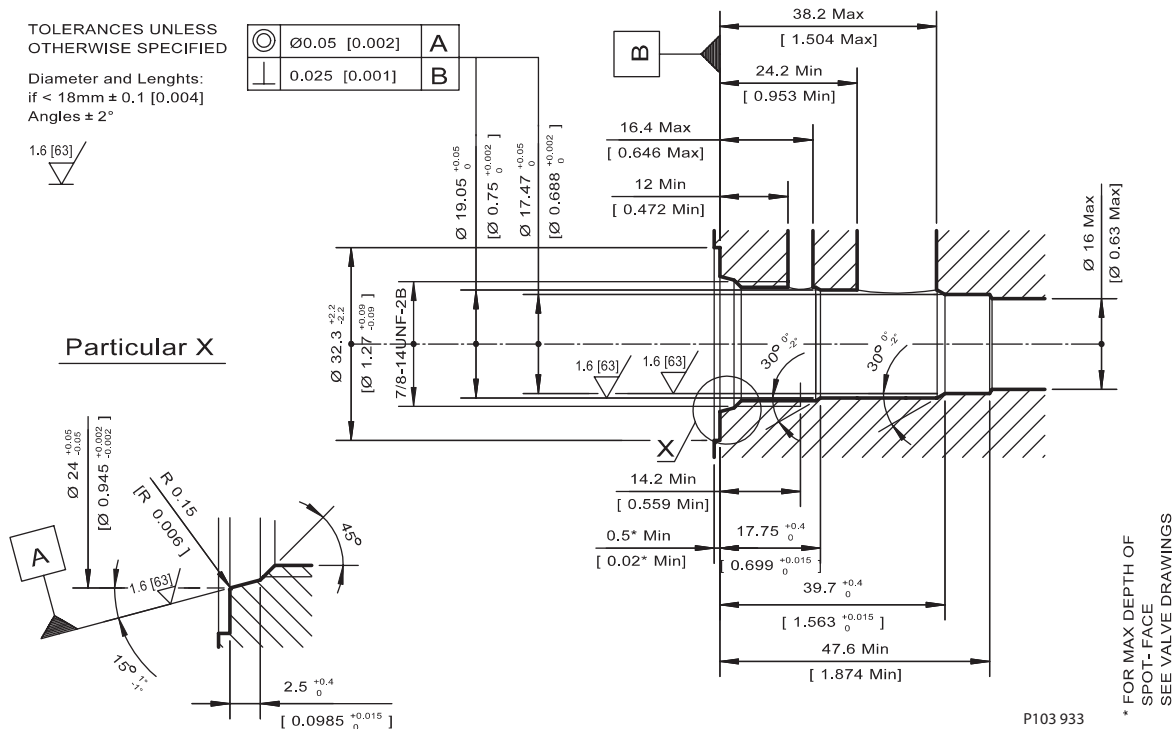
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-10-3-FT | 11027188 |
| Roughing tool | SDC-10-3-RT | 11027119 |

Housings

| Order Code | Description | Ports | Page |
|---------------|--------------------------------|---------|-------|
| CP10-3-6S | Aluminum Housing | SAE #6 | 20.79 |
| CP10-3-8S | Aluminum Housing | SAE #8 | 20.79 |
| CP10-3-S6S | Steel Housing | SAE #6 | 20.79 |
| CP10-3-S8S | Steel Housing | SAE #8 | 20.79 |
| SDC10-3-SE-3B | Aluminum Housing | 3/8 BSP | 20.83 |
| SDC10-3-SE-4B | Aluminum Housing | 1/2 BSP | 20.82 |
| SDC10-3-SI-3B | Aluminum Housing, Two #1 Ports | 3/8 BSP | 20.80 |
| SDC10-3-SI-4B | Aluminum Housing, Two #1 Ports | 1/2 BSP | 20.81 |

Dimensions

mm [in]



Form tools

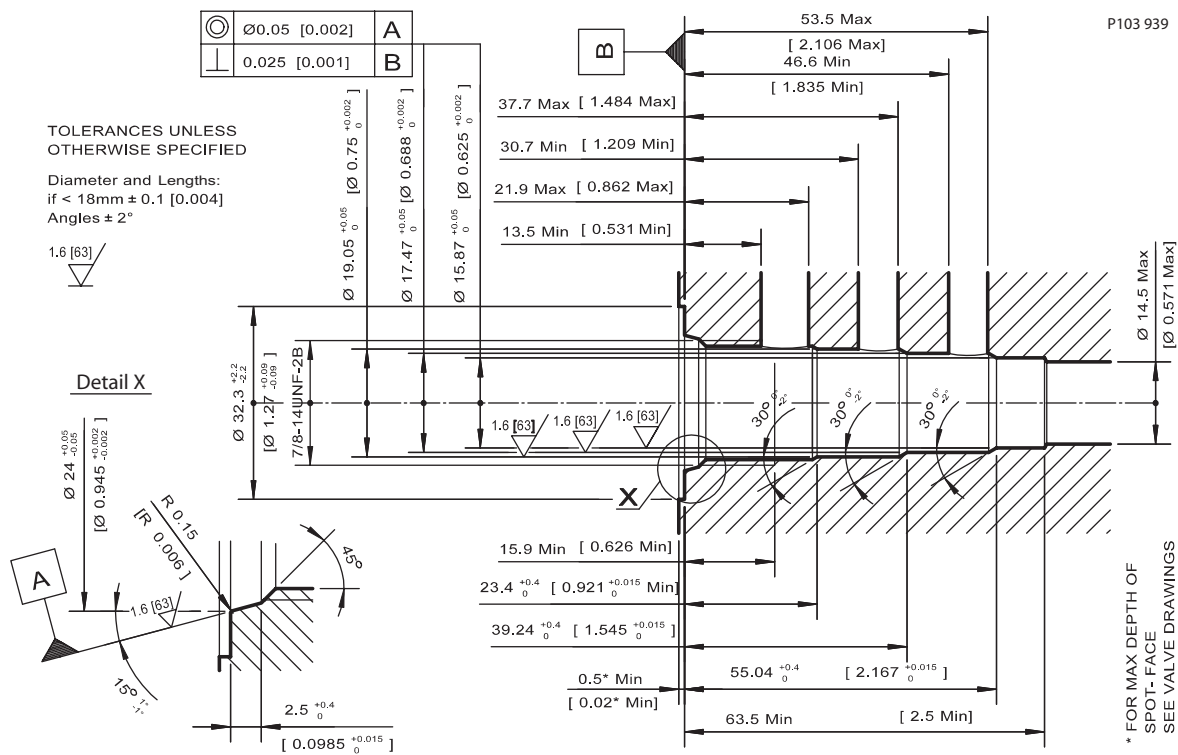
| | Model code | Material number |
|-----------------------|--------------|-----------------|
| Finishing tool | SDC-10-3S-FT | 11027120 |
| Roughing tool | SDC-10-3S-RT | 11027121 |

Housings

| Order Code | Description | Ports | Page |
|-----------------|------------------------------------|---------|-------|
| SDC10-3S-10S/6S | Aluminum Housing, Pilot at Port #3 | SAE #10 | 20.85 |
| SDC10-3S-8S/6S | Aluminum Housing, Pilot at Port #3 | SAE #8 | 20.85 |
| SDC10-3S-SE-3B | Aluminum Housing | 3/8 BSP | 20.84 |
| SDC10-3S-SE-4B | Aluminum Housing | 1/2 BSP | 20.84 |
| SDC10-3S-6S/6S | Aluminum housing, pilot at port #3 | SAE #6 | 20.85 |

Dimensions

mm [in]



Form tools

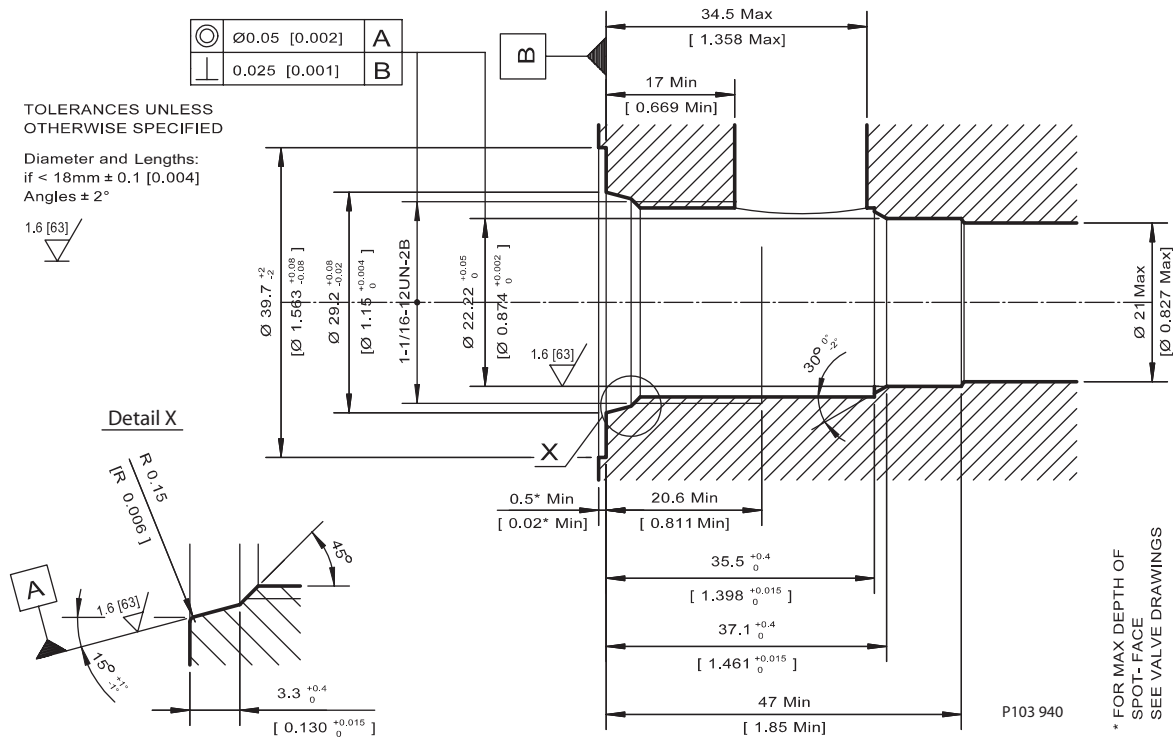
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-10-4-FT | 11027192 |
| Roughing tool | SDC-10-4-RT | 11027193 |

Housings

| Order Code | Description | Ports | Page |
|---------------|------------------------------|---------|-------|
| CP10-4-6S | Aluminum Housing | SAE #6 | 20.86 |
| CP10-4-6S-X1 | Aluminum Housing, No Port #1 | SAE #6 | 20.86 |
| CP10-4-8S | Aluminum Housing | SAE #8 | 20.86 |
| CP10-4-8S-X1 | Aluminum Housing, No Port #1 | SAE #8 | 20.86 |
| CP10-4-S6S | Steel Housing | SAE #6 | 20.86 |
| CP10-4-S8S | Steel Housing | SAE #8 | 20.86 |
| SDC10-4-HD-3B | Aluminum Housing, No Port #1 | 3/8 BSP | 20.87 |
| SDC10-4-L-3B | Aluminum Housing | 3/8 BSP | 20.88 |
| SDC10-4-L-4B | Aluminum Housing | 1/2 BSP | 20.89 |

mm [in]

Dimensions



Caution
SDC12-2 and CP12-2 cavities are not interchangeable. Differences in sealing area depth may lead to leakage if the wrong valve is used with this cavity. Use only the specified cavity for each valve.

Cavities
SDC12-2

Form tools

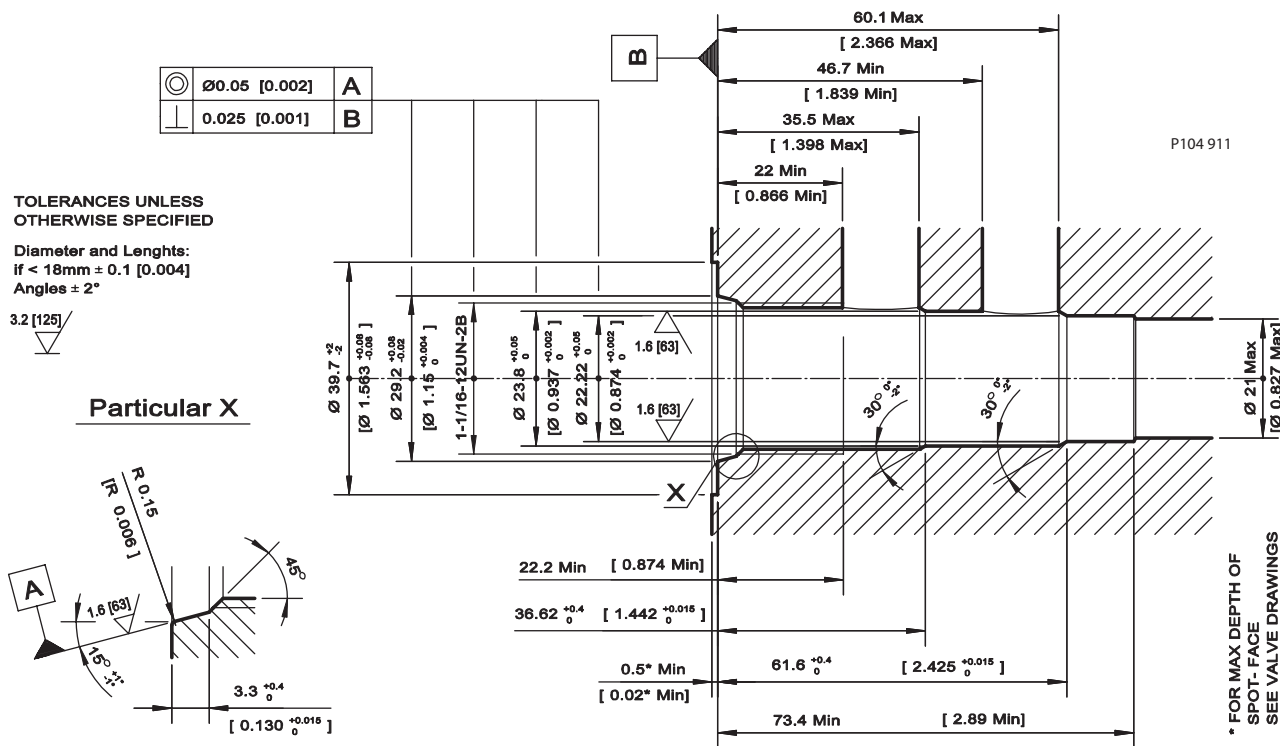
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-12-2-FT | 11027194 |
| Roughing tool | SDC-12-2-RT | 11027195 |

Housings

| Order Code | Description | Ports | Page |
|----------------|--------------------------------|---------|-------|
| SDC12-2-DG-4B | Aluminum Housing | 1/2 BSP | 20.94 |
| SDC12-2-DG-6B | Aluminum Housing | 3/4 BSP | 20.90 |
| SDC12-2-LG1-6B | Aluminum Housing, Two #2 Ports | 3/4 BSP | 20.93 |
| SDC12-2-LG2-6B | Aluminum Housing, Two #1 Ports | 3/4 BSP | 20.92 |
| SDC12-2-10S | Aluminum housing | #10 SAE | 20.91 |
| SDC12-2-12S | Aluminum housing | #12 SAE | 20.91 |

Dimensions

mm [in]



Form tools

| | |
|----------------|-----------------|
| Roughing tool | Consult Factory |
| Finishing tool | Consult Factory |

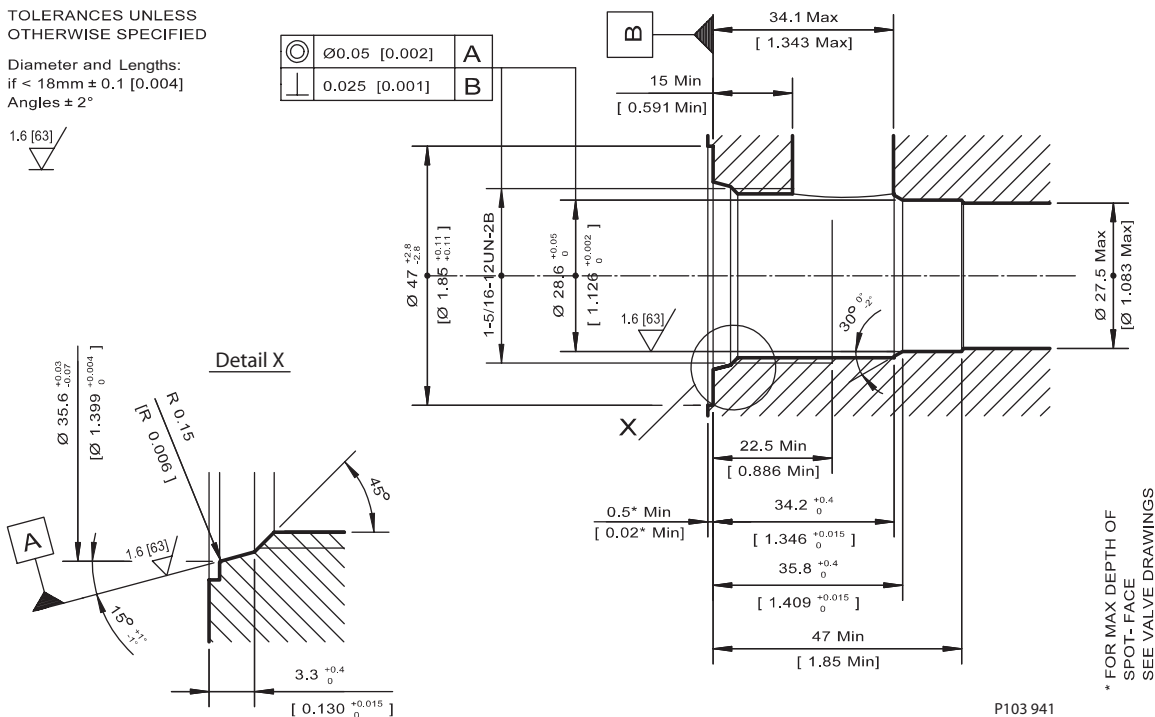
mm [in]

Dimensions

TOLERANCES UNLESS OTHERWISE SPECIFIED

Diameter and Lengths:
 if < 18mm ± 0.1 [0.004]
 Angles ± 2°

1.6 [63]



* FOR MAX DEPTH OF SPOT-FACE SEE VALVE DRAWINGS

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Form tools

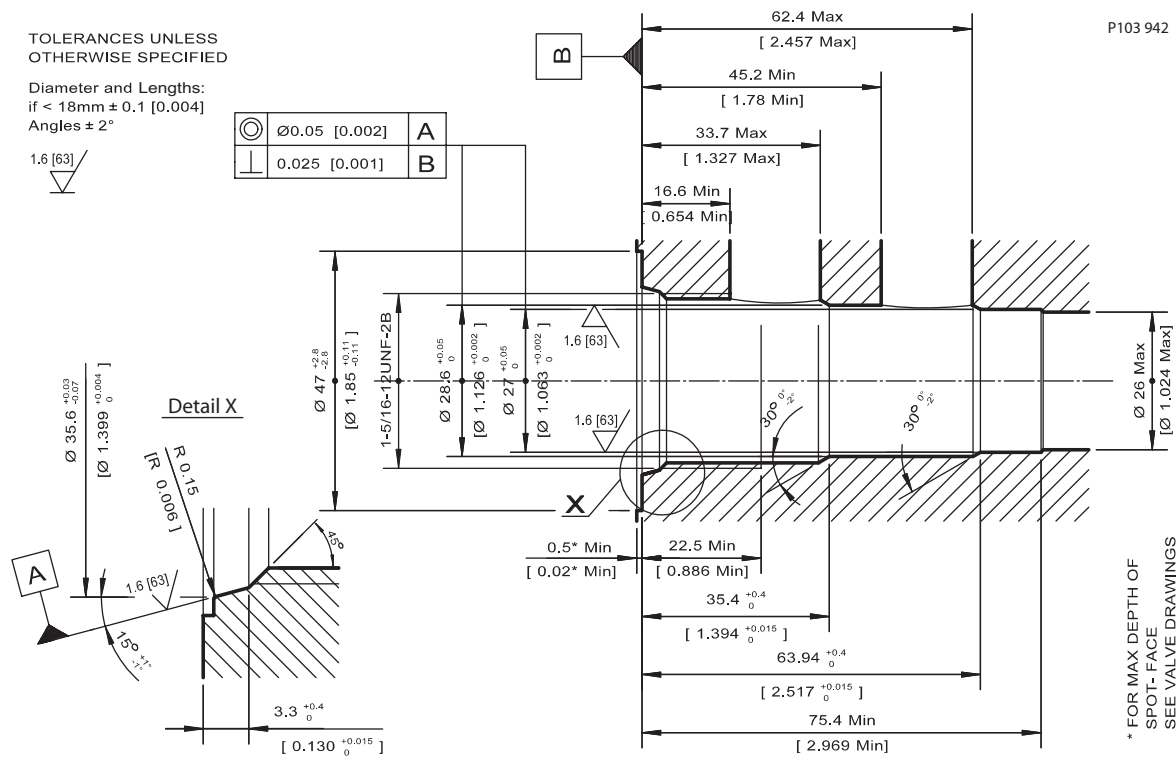
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-16-2-FT | 11027196 |
| Roughing tool | SDC-16-2-RT | 11027197 |

Housings

| Order Code | Description | Ports | Page |
|----------------|--------------------------------|---------|-----------------------|
| CP16-2-12S | Aluminum Housing | SAE #12 | 20.96 |
| CP16-2-16S | Aluminum Housing | SAE #16 | 20.96 |
| CP16-2-S16S | Steel Housing | SAE #16 | 20.96 |
| SDC16-2-HG1-8B | Aluminum Housing, Two #2 Ports | 1 BSP | 20.95 |
| SDC16-2-HG2-8B | Aluminum Housing, Two #1 Ports | 1 BSP | 20.99 |
| SDC16-2-HG-6B | Aluminum Housing | 3/4 BSP | 20.98 |
| SDC16-2-HG-8B | Aluminum Housing | 1 BSP | 20.97 |

Dimensions

mm [in]



Form tools

| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-16-3-FT | 11027198 |
| Roughing tool | SDC-16-3-RT | 11027199 |

Housings

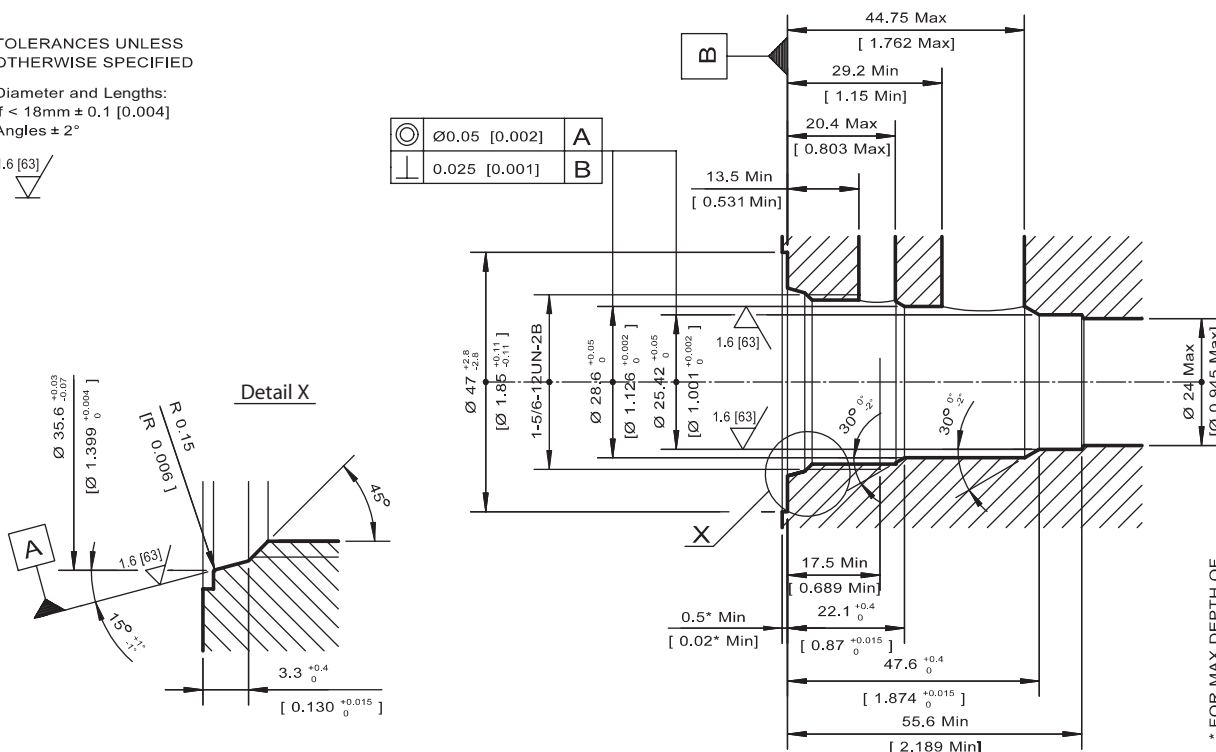
| Order Code | Description | Ports | Page |
|---------------|--------------------------------|---------|--------|
| CP16-3-12S | Aluminum Housing | SAE #12 | 20.103 |
| CP16-3-16S | Aluminum Housing | SAE #16 | 20.103 |
| SDC16-2-HE-6B | Aluminum Housing | 3/4 BSP | 20.101 |
| SDC16-2-HE-8B | Aluminum Housing | 1 BSP | 20.100 |
| SDC16-3-HI-8B | Aluminum Housing, Two #1 Ports | 1 BSP | 20.102 |

Dimensions

mm [in]

TOLERANCES UNLESS OTHERWISE SPECIFIED

Diameter and Lengths:
if < 18mm ± 0.1 [0.004]
Angles ± 2°



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Form tools

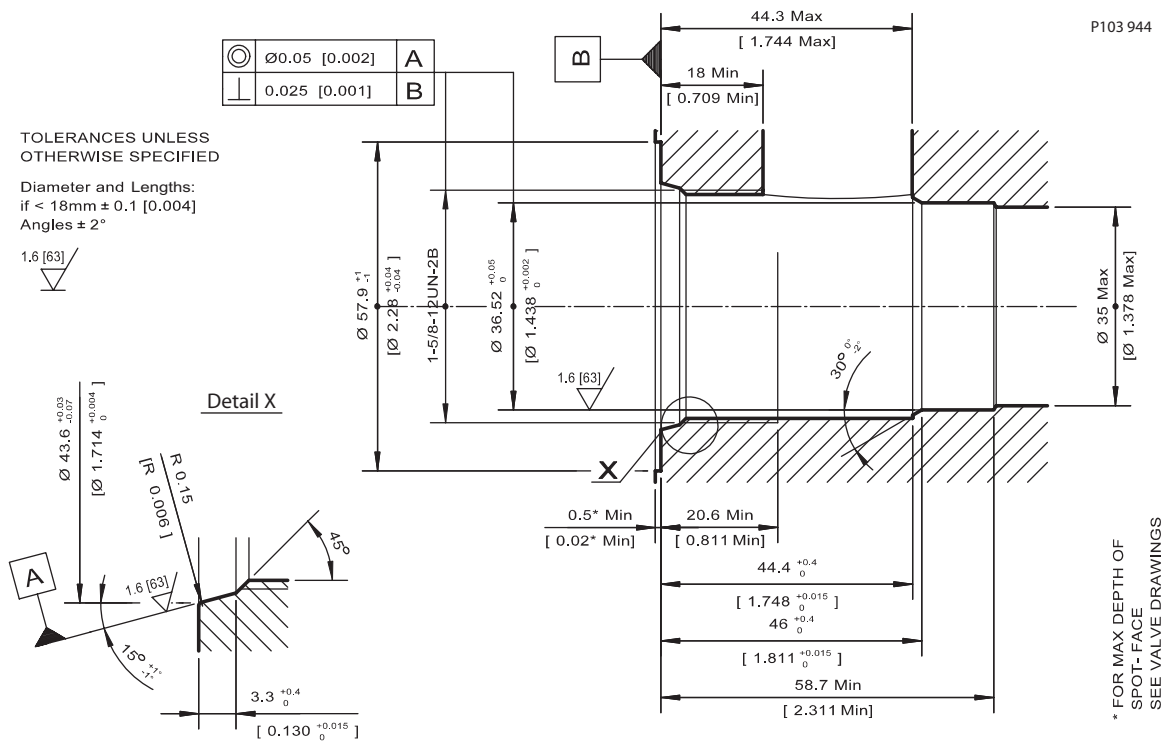
| | Model code | Material number |
|-----------------------|--------------|-----------------|
| Finishing tool | SDC-16-3S-FT | 11027234 |
| Roughing tool | SDC-16-3S-RT | 11027235 |

Housings

| Order Code | Description | Ports | Page |
|----------------|------------------------------------|------------------|--------|
| CP16-3S-12S/4S | Aluminum Housing, Pilot at Port #3 | SAE #12, #4 | 20.104 |
| CP16-3S-16S/4S | Aluminum Housing, Pilot at Port #3 | SAE #16, #4 | 20.104 |
| CP16-3S-6B/2B | Aluminum Housing, Pilot at Port #3 | 3/4 BSP, 1/4 BSP | 20.104 |
| CP16-3S-8B/2B | Aluminum Housing, Pilot at Port #3 | 1 BSP, 1/4 BSP | 20.104 |

Dimensions

mm [in]



Form tools

| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-20-2-FT | 11027236 |
| Roughing tool | SDC-20-2-RT | 11027237 |

Housings

| Order Code | Description | Ports | Page |
|------------|------------------|-----------|--------|
| CP20-2-10B | Aluminum Housing | 1 1/4 BSP | 20.105 |
| CP20-2-16S | Aluminum Housing | SAE #16 | 20.105 |
| CP20-2-20S | Aluminum Housing | SAE #20 | 20.105 |
| CP20-2-8B | Aluminum Housing | 1 BSP | 20.105 |

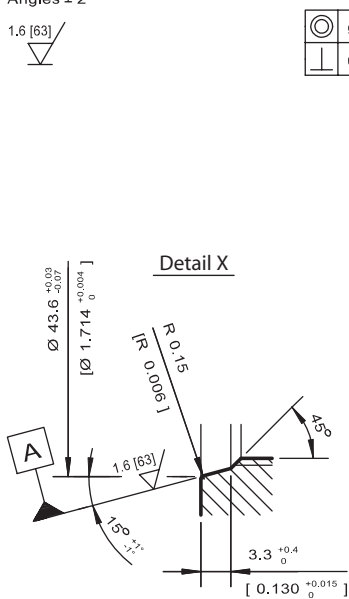
mm [in]

Dimensions

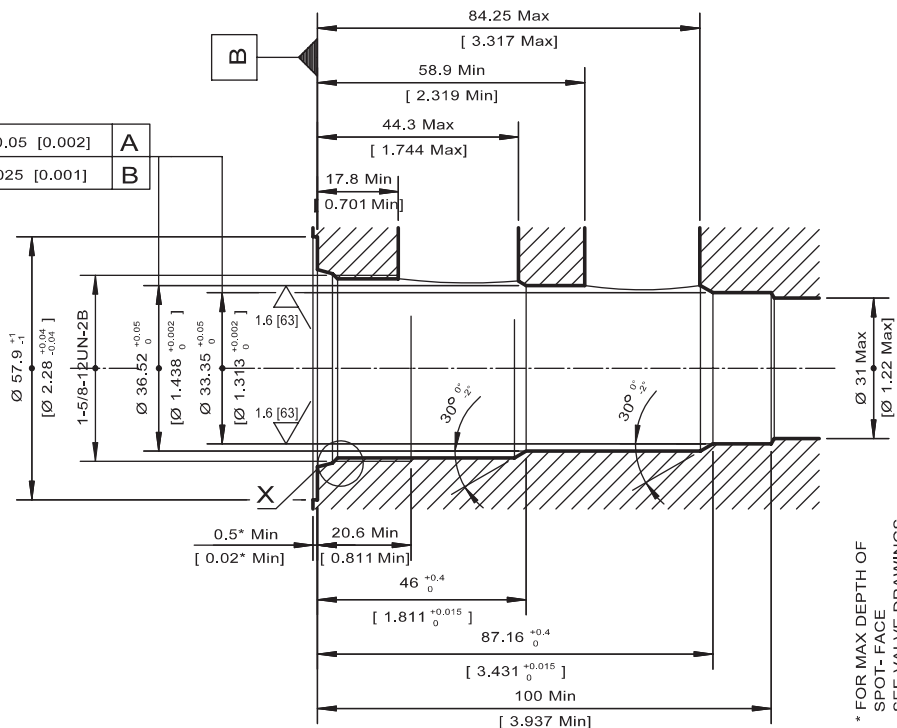
TOLERANCES UNLESS OTHERWISE SPECIFIED

Diameter and Lengths:
if < 18mm ± 0.1 [0.004]
Angles ± 2°

1.6 [63]



| | | |
|---|---------------|---|
| ⊙ | Ø0.05 [0.002] | A |
| ⊥ | 0.025 [0.001] | B |



P103 945

Cavities
SDC20-3

Form tools

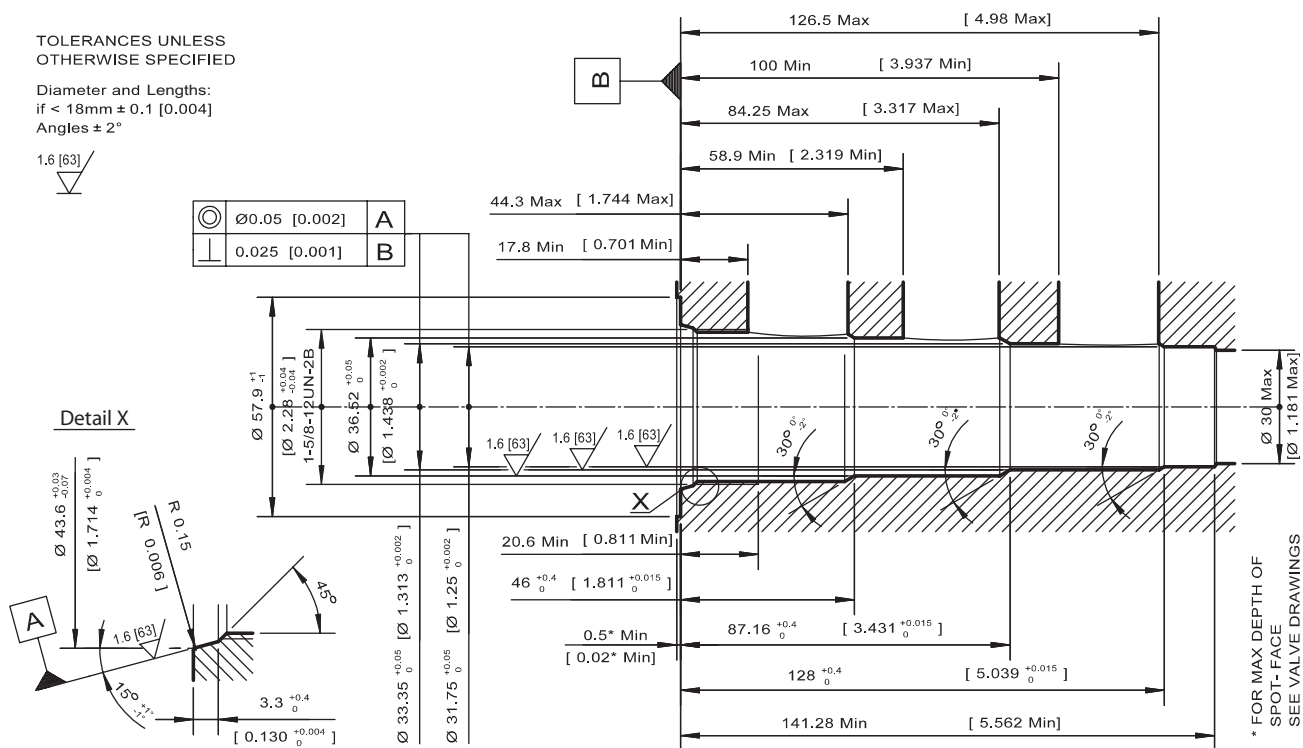
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-20-3-FT | 11027238 |
| Roughing tool | SDC-20-3-RT | 11027239 |

Housings

| Order Code | Description | Ports | Page |
|----------------|------------------------------------|--------------------|------------------------|
| CP20-3-10B | Aluminum Housing | 1 1/4 BSP | 20.106 |
| CP20-3-10B/2B1 | Aluminum Housing, Pilot at Port #3 | 1 1/4 BSP, 1/4 BSP | 20.106 |
| CP20-3-16S | Aluminum Housing | SAE #16 | 20.106 |
| CP20-3-16S/4S1 | Aluminum Housing, Pilot at Port #3 | SAE #16, #4 | 20.106 |
| CP20-3-20S | Aluminum Housing | SAE #20 | 20.106 |
| CP20-3-20S/4S1 | Aluminum Housing, Pilot at Port #3 | SAE #20, #4 | 20.106 |
| CP20-3-8B | Aluminum Housing | 1 BSP | 20.106 |
| CP20-3-8B/2B1 | Aluminum Housing, Pilot at Port #3 | 1 BSP, 1/4 BSP | 20.106 |

Dimensions

mm [in]



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Form tools

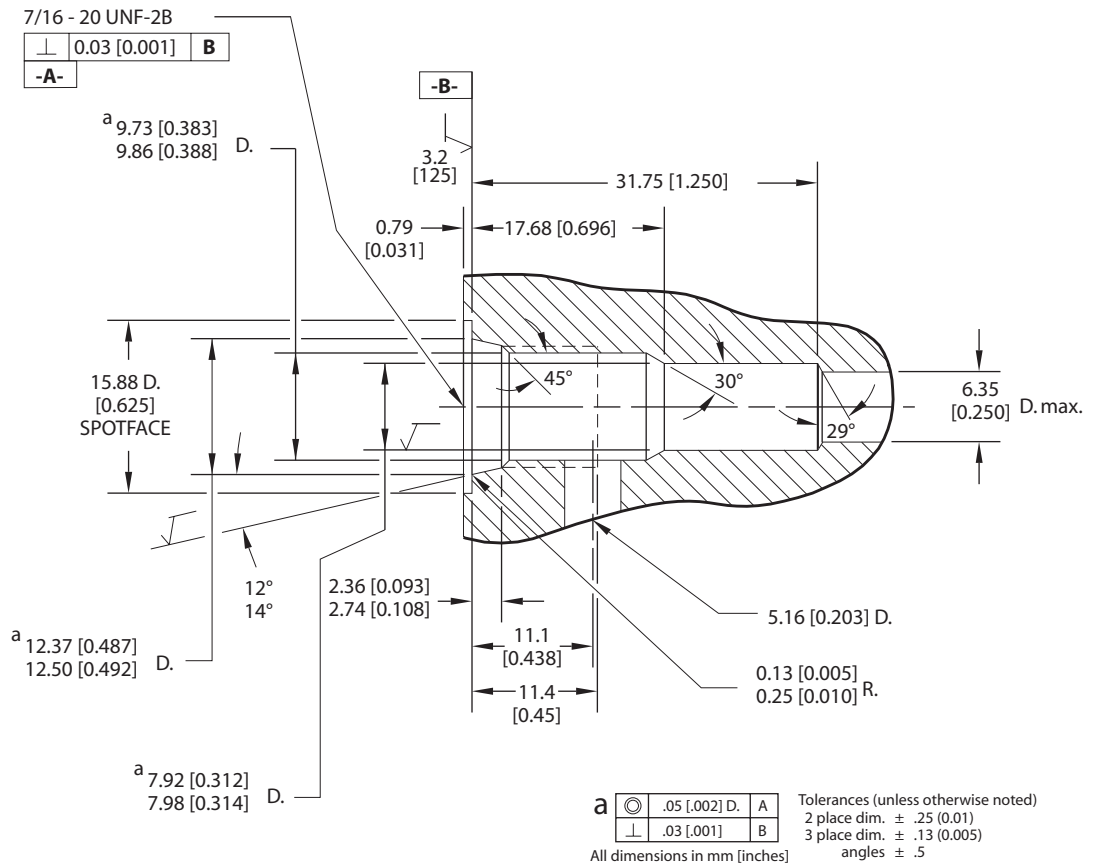
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | SDC-20-4-FT | 11027240 |
| Roughing tool | SDC-20-4-RT | 11027241 |

Housings

| Order Code | Description | Ports | Page |
|----------------|------------------------------------|-------------|--------|
| CP20-4-10B | Aluminum Housing | 1 1/4 BSP | 20.107 |
| CP20-4-10B-X1 | Aluminum Housing, No Port #1 | 1 1/4 BSP | 20.107 |
| CP20-4-16S | Aluminum Housing | SAE #16 | 20.107 |
| CP20-4-16S/4S | Aluminum Housing, Pilot at Port #1 | SAE #16, #4 | 20.107 |
| CP20-4-16S-X1 | Aluminum Housing, No Port #1 | SAE #16 | 20.107 |
| CP20-4-20S | Aluminum Housing | SAE #20 | 20.107 |
| CP20-4-20S/4S | Aluminum Housing, Pilot at Port #1 | SAE #20, #4 | 20.107 |
| CP20-4-20S-X1 | Aluminum Housing, No Port #1 | SAE #20 | 20.107 |
| CP20-4-8B | Aluminum Housing | 1 BSP | 20.107 |
| CP20-4-8B-X1 | Aluminum Housing, No Port #1 | 1 BSP | 20.107 |
| CP20-4-S16S | Steel Housing | SAE #16 | 20.107 |
| CP20-4-S16S-X1 | Steel Housing, No Port #1 | SAE #16 | 20.107 |

mm [in]

Dimensions



$\sqrt{\quad} = 1.6 [63] \sqrt{\quad}$

P102815

Cavities
CP04-2

Form tools

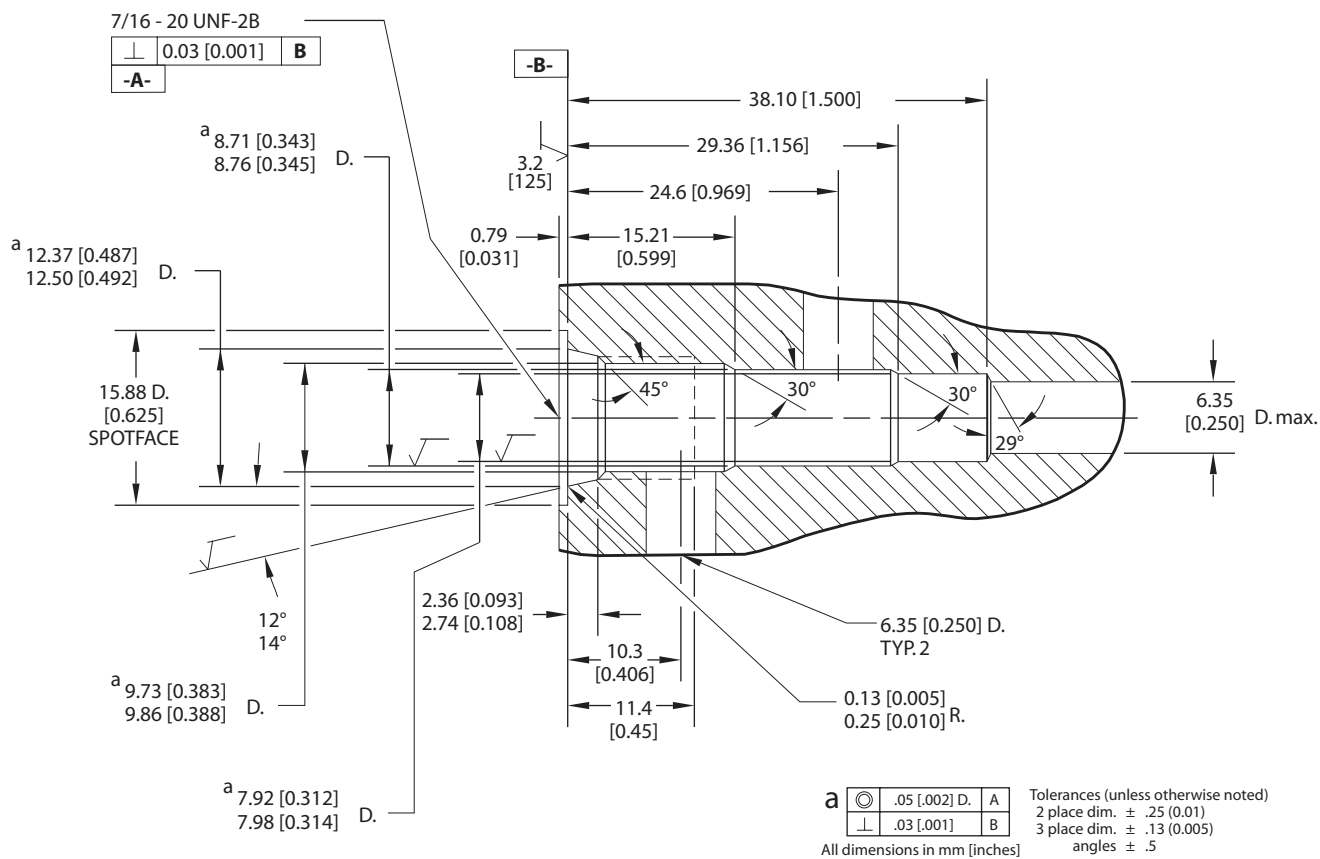
| | Model Code | Material Number |
|-----------------------|------------|-----------------|
| Roughing tool | CP-04-2-RT | 310038 |
| Finishing tool | CP-04-2-FT | 310027 |

Housings

| Order Code | Description | Ports | Page |
|------------|------------------|---------|------|
| CP04-2-2B | Aluminum Housing | 1/4 BSP | 20.6 |
| CP04-2-4S | Aluminum Housing | SAE #4 | 20.6 |

Dimensions

mm [in]



$\sqrt{\quad} = 1.6 [63] \sqrt{\quad}$
 P102 769

Form tools

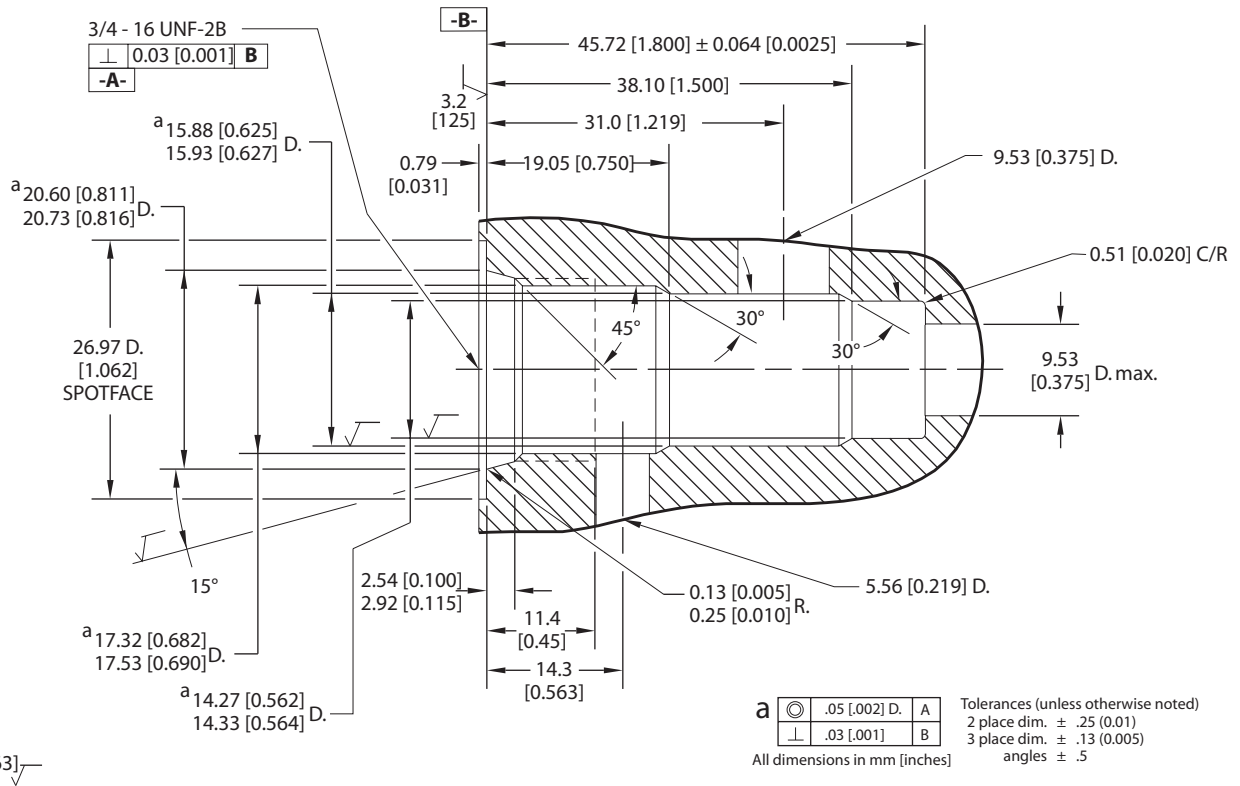
| | Model Code | Material Number |
|-----------------------|------------|-----------------|
| Roughing tool | CP-04-3-RT | 310037 |
| Finishing tool | CP-04-3-FT | 310028 |

Housings

| Order Code | Description | Ports | Page |
|------------|------------------|---------|------|
| CP04-3-2B | Aluminum Housing | 1/4 BSP | 20.7 |
| CP04-3-4S | Aluminum Housing | SAE #4 | 20.7 |

Dimensions

mm [in]



P102775

Cavities
 CP08-3L

Form tools

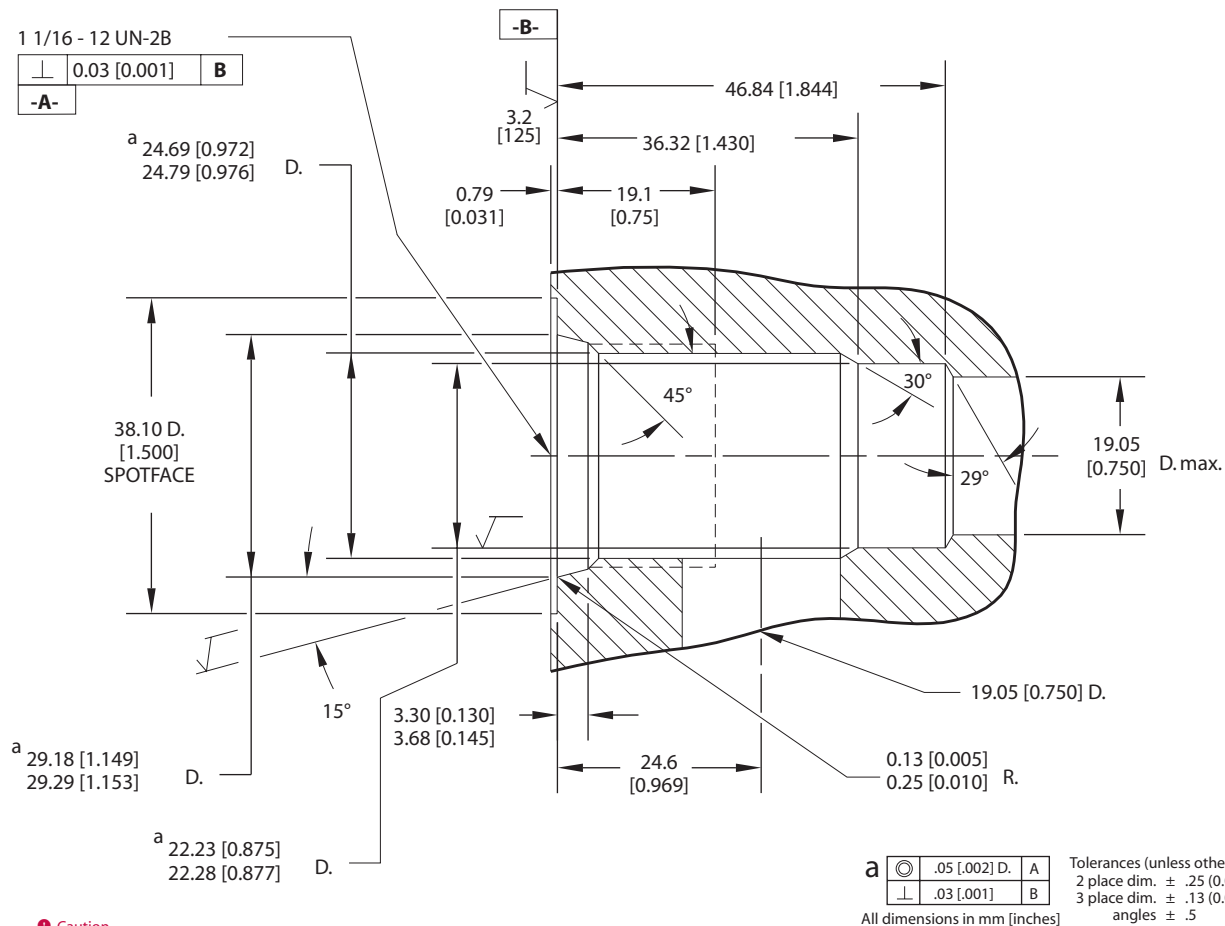
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Roughing tool | CP-08-3L-FT | 11027088 |
| Finishing tool | CP-08-3L-RT | 11027089 |

Housings

| Order Code | Description | Ports | Page |
|------------|------------------|---------|------|
| CP08-3L-2B | Aluminum Housing | 1/4 BSP | 20.9 |
| CP08-3L-3B | Aluminum Housing | 3/8 BSP | 20.9 |
| CP08-3L-4S | Aluminum Housing | SAE #4 | 20.9 |
| CP08-3L-6S | Aluminum Housing | SAE #6 | 20.9 |

mm [in]

Dimensions



Caution
 SDC12-2 and CP12-2 cavities are not interchangeable. Differences in sealing area depth may lead to leakage if the wrong valve is used with this cavity. Use only the specified cavity for each valve.

$\sqrt{\quad} = 1.6 [63] \sqrt{\quad}$
 P102 789

Form tools

| | | | |
|-----------------------|------------|--------|--|
| Roughing tool | CP-12-2-RT | 310022 | |
| Finishing tool | CP-12-2-FT | 310005 | |

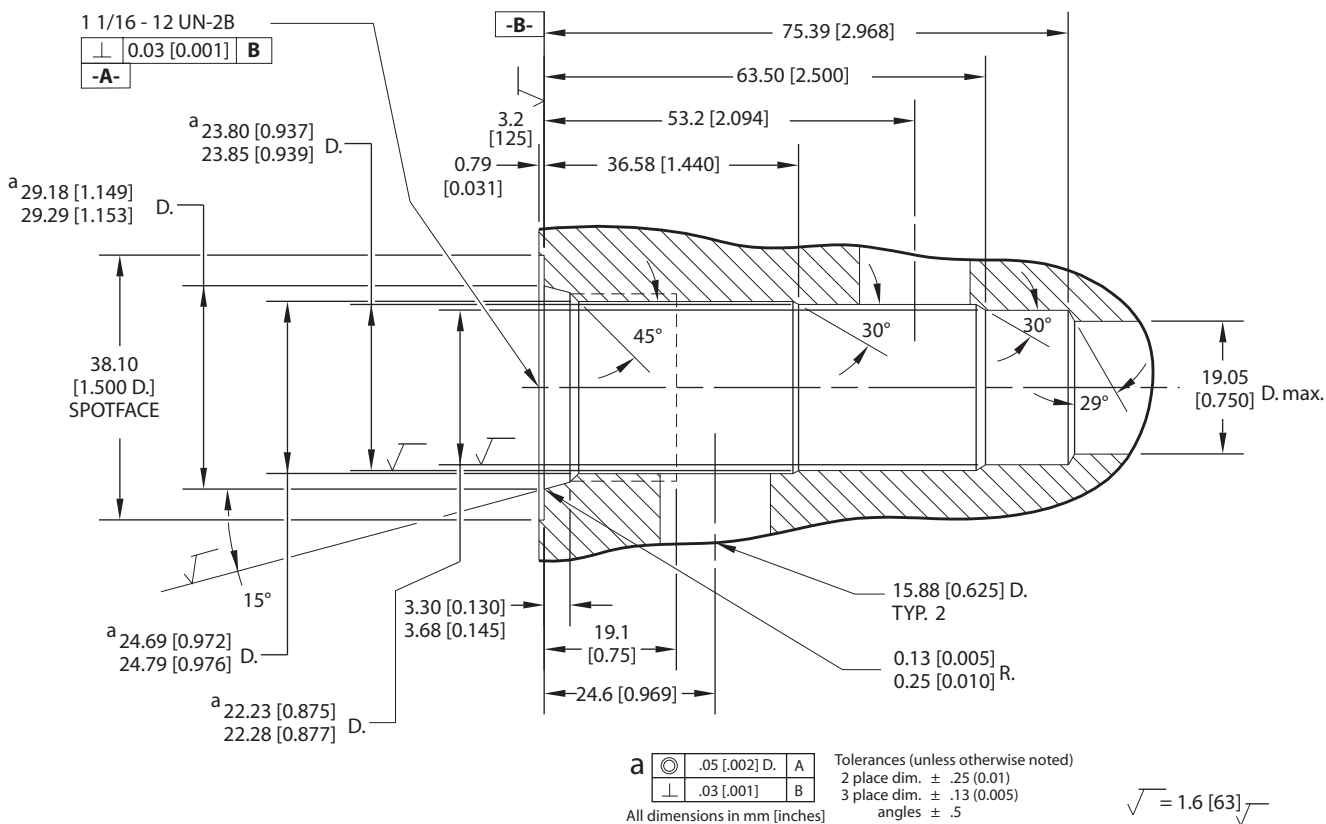
Housings

| Order Code | Description | Ports | Page |
|-------------|------------------|---------|-------|
| CP12-2-10S | Aluminum Housing | SAE #10 | 20.10 |
| CP12-2-12S | Aluminum Housing | SAE #12 | 20.10 |
| CP12-2-S10S | Steel Housing | SAE #10 | 20.10 |
| CP12-2-S12S | Steel Housing | SAE #12 | 20.10 |
| CP12-2-4B | Aluminum housing | 1/2 BSP | 20.10 |
| CP12-2-6B | Aluminum housing | 3/4 BSP | 20.10 |

Cavities
CP12-2

mm [in]

Dimensions



Cavities
 CP12-3

Form tools

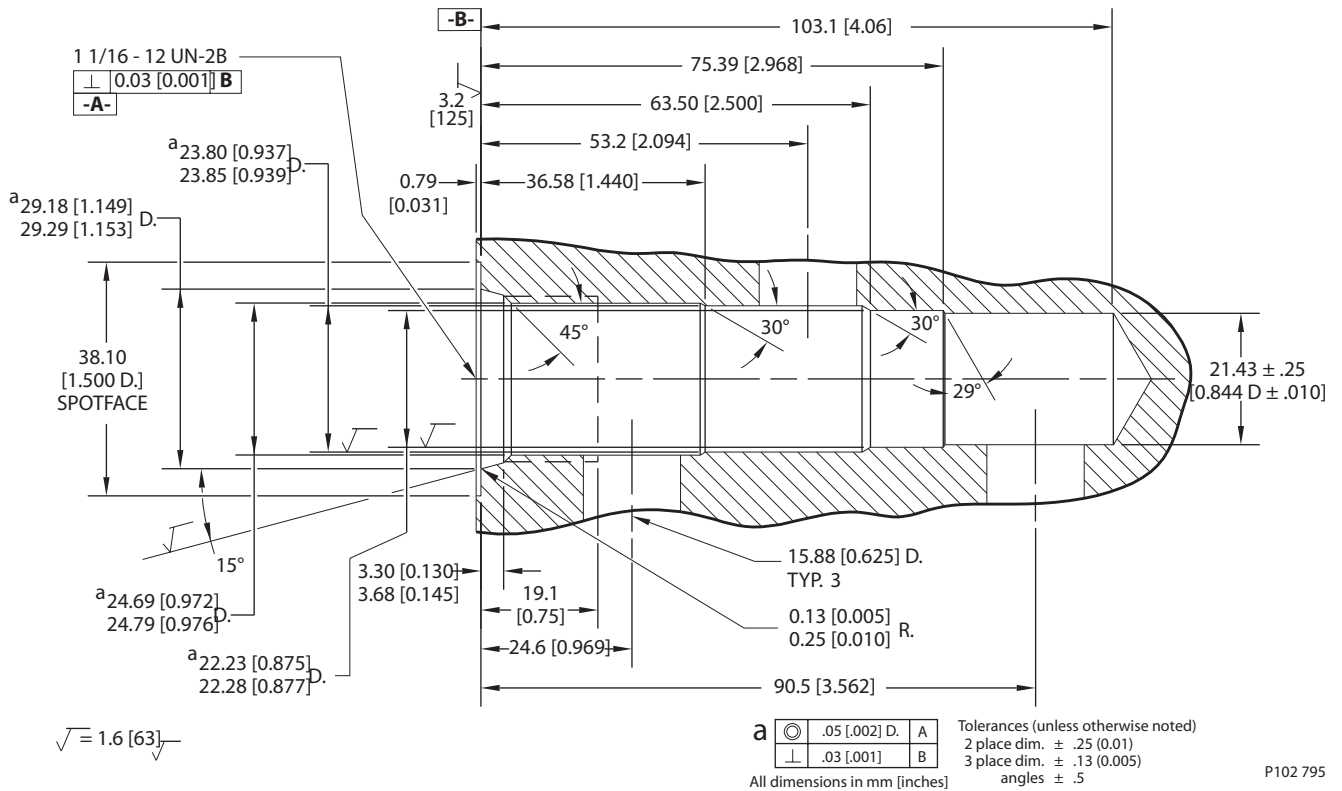
| | | |
|-----------------------|------------|--------|
| Roughing tool | CP-12-3-RT | 310033 |
| Finishing tool | CP-12-3-FT | 310007 |

Housings

| Order Code | Description | Ports | Page |
|-------------|------------------|---------|-----------------------|
| CP12-3-10S | Aluminum Housing | SAE #10 | 20.11 |
| CP12-3-12S | Aluminum Housing | SAE #12 | 20.11 |
| CP12-3-4B | Aluminum Housing | 1/2 BSP | 20.11 |
| CP12-3-6B | Aluminum Housing | 3/4 BSP | 20.11 |
| CP12-3-S10S | Steel Housing | SAE #10 | 20.11 |
| CP12-3-S12S | Steel Housing | SAE #12 | 20.11 |

Dimensions

mm [in]



P102 795

Form tools

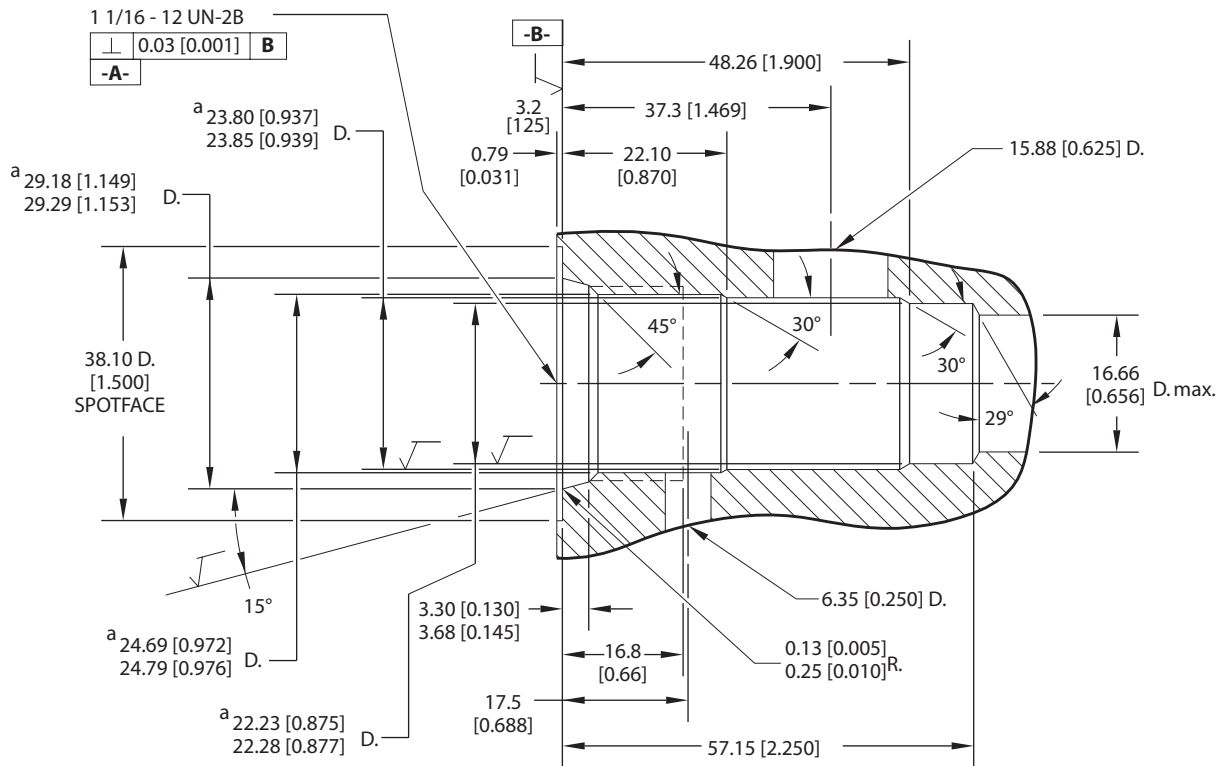
| Tool | |
|----------------|--|
| Roughing tool | |
| Finishing tool | |

Housings

| Order Code | Description | Ports | Page |
|-------------|------------------|---------|-------|
| CP12-3M-10S | Aluminum Housing | SAE #10 | 20.12 |
| CP12-3M-12S | Aluminum Housing | SAE #12 | 20.12 |
| CP12-3M-6B | Aluminum Housing | 3/4 BSP | 20.12 |

Dimensions

mm [in]



$\sqrt{\quad} = 1.6 [63] \sqrt{\quad}$

a $\text{Ⓢ} \begin{matrix} .05 [.002] D. & A \\ .03 [.001] & B \end{matrix}$
 All dimensions in mm [inches]

Tolerances (unless otherwise noted)
 2 place dim. $\pm .25 (0.01)$
 3 place dim. $\pm .13 (0.005)$
 angles $\pm .5$

P102 791

Cavities
CP12-3S

Form tools

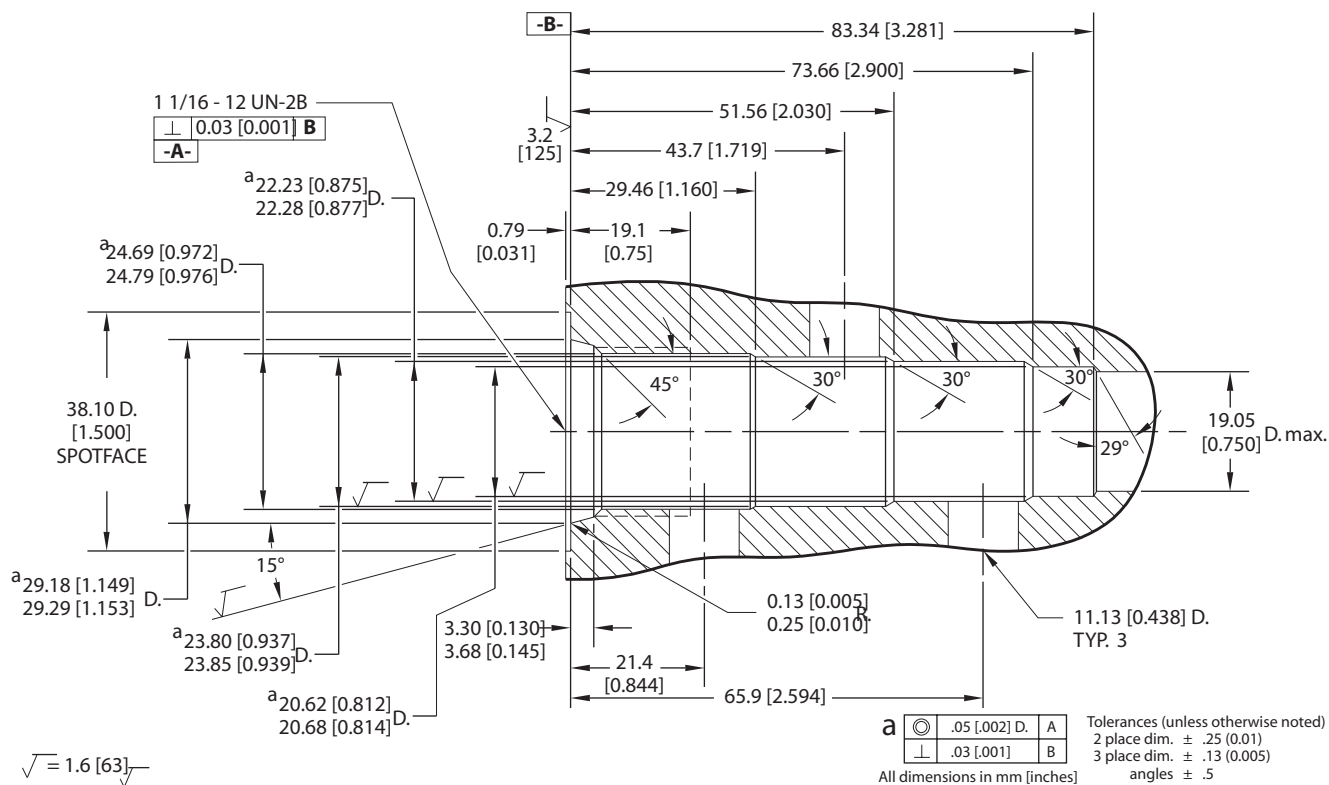
| | | |
|-----------------------|-------------|--------|
| Roughing tool | CP-12-3S-RT | 310020 |
| Finishing tool | CP-12-3S-FT | 310006 |

Housings

| Order Code | Description | Ports | Page |
|----------------|------------------------------------|------------------|-----------------------|
| CP12-3S-10S/4S | Aluminum Housing, Pilot at Port #3 | SAE #10, #4 | 20.13 |
| CP12-3S-12S/4S | Aluminum Housing, Pilot at Port #3 | SAE #12, #4 | 20.13 |
| CP12-3S-4B/2B | Aluminum Housing, Pilot at Port #3 | 1/2 BSP, 1/4 BSP | 20.13 |
| CP12-3S-6B/2B | Aluminum Housing, Pilot at Port #3 | 3/4 BSP, 1/4 BSP | 20.13 |

Dimensions

mm [in]



P102 797

Form tools

| | Model code | Material number |
|-----------------------|------------|-----------------|
| Finishing tool | CP-12-4-FT | 11027090 |
| Roughing tool | CP-12-4-RT | 11027091 |

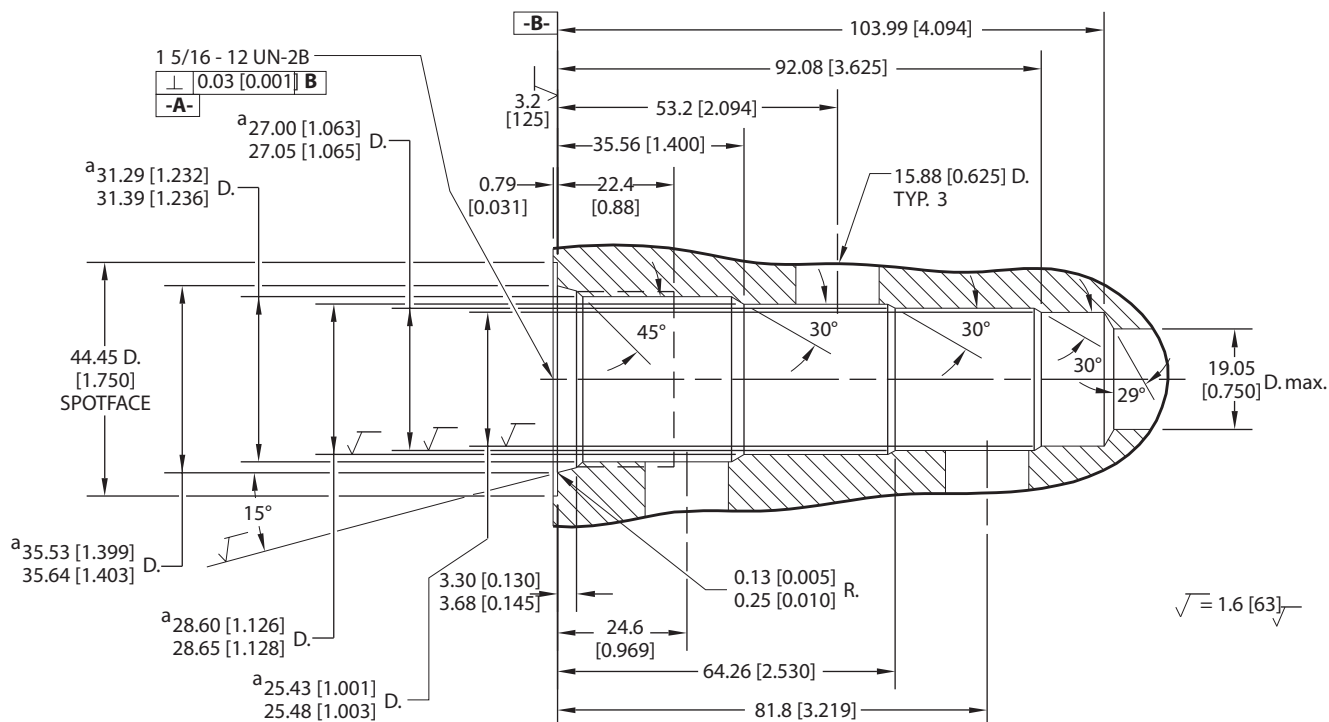
Housings

| Order Code | Description | Ports | Page |
|---------------|------------------------------------|-------------|-------|
| CP12-4-10S | Aluminum Housing | SAE #10 | 20.14 |
| CP12-4-10S/4S | Aluminum Housing, Pilot at Port #1 | SAE #10, #4 | 20.14 |
| CP12-4-10S-X1 | Aluminum Housing, No Port #1 | SAE #10 | 20.14 |
| CP12-4-3B | Aluminum Housing | 3/8 BSP | 20.14 |
| CP12-4-3B-X1 | Aluminum Housing, No Port #1 | 3/8 BSP | 20.14 |
| CP12-4-4B | Aluminum Housing | 1/2 BSP | 20.14 |
| CP12-4-4B-X1 | Aluminum Housing, No Port #1 | 1/2 BSP | 20.14 |
| CP12-4-8S | Aluminum Housing | SAE #8 | 20.14 |
| CP12-4-8S/4S | Aluminum Housing, Pilot at Port #1 | SAE #10, #4 | 20.14 |
| CP12-4-8S-X1 | Aluminum Housing, No Port #1 | SAE #8 | 20.14 |



mm [in]

Dimensions



P102 805

a

| | | |
|---|----------------|---|
| ⊙ | .05 [0.002] D. | A |
| ⊥ | .03 [0.001] | B |

 Tolerances (unless otherwise noted)
 2 place dim. ± .25 (0.01)
 3 place dim. ± .13 (0.005)
 angles ± .5
 All dimensions in mm [inches]

Form tools

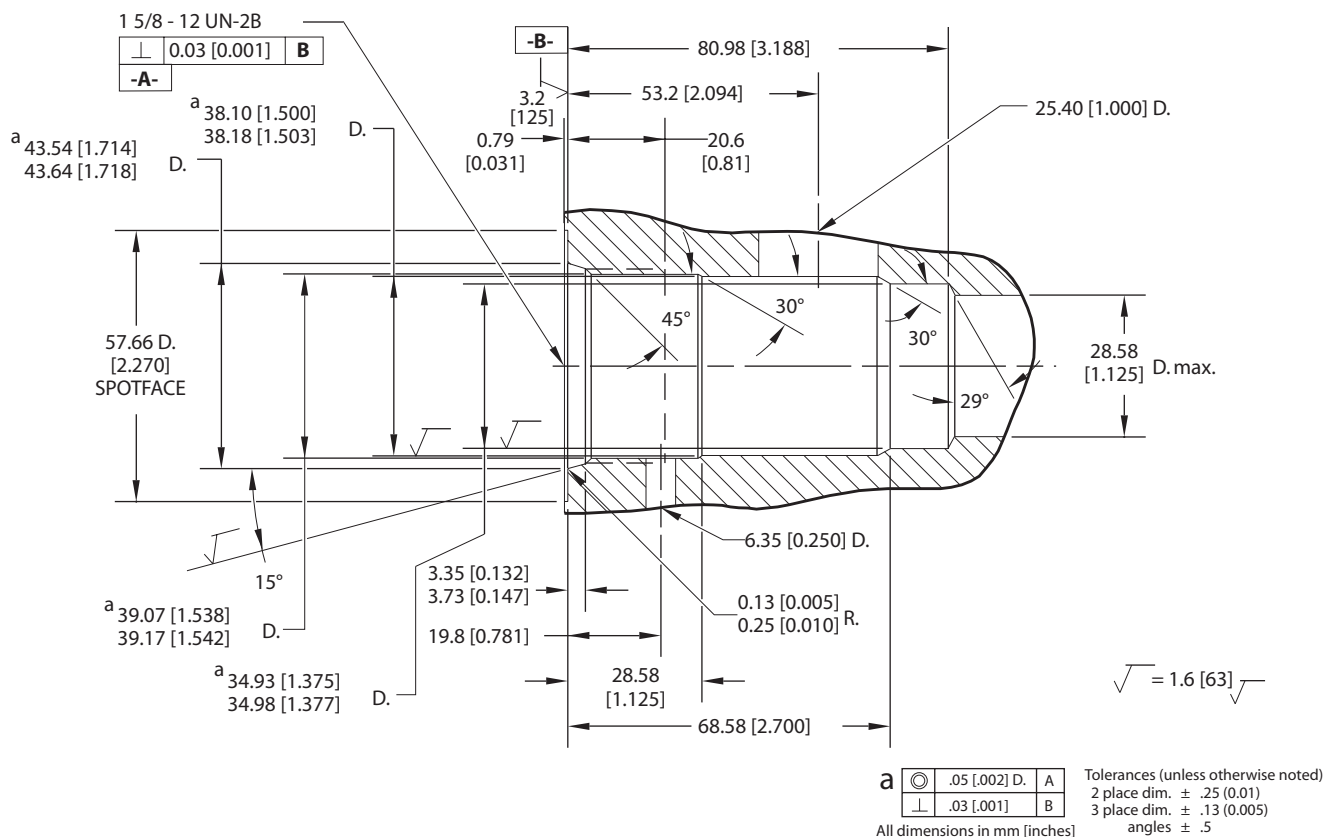
| | Model code | Material number |
|-----------------------|------------|-----------------|
| Finishing tool | CP-16-4-FT | 11027092 |
| Roughing tool | CP-16-4-RT | 11027093 |

Housings

| Order Code | Description | Ports | Page |
|---------------|------------------------------|---------|-------|
| CP16-4-12S | Aluminum Housing | SAE #12 | 20.16 |
| CP16-4-12S-X1 | Aluminum Housing, No Port #1 | SAE #12 | 20.15 |
| CP16-4-16S | Aluminum Housing | SAE #16 | 20.16 |
| CP16-4-16S-X1 | Aluminum Housing, No Port #1 | SAE #16 | 20.15 |
| CP16-4-6B | Aluminum Housing | 3/4 BSP | 20.16 |
| CP16-4-8B | Aluminum Housing | 1 BSP | 20.16 |

Dimensions

mm [in]



P102 809

Form tools

| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | CP-20-3S-FT | 11013235 |
| Roughing tool | CP-20-3S-RT | 11013233 |

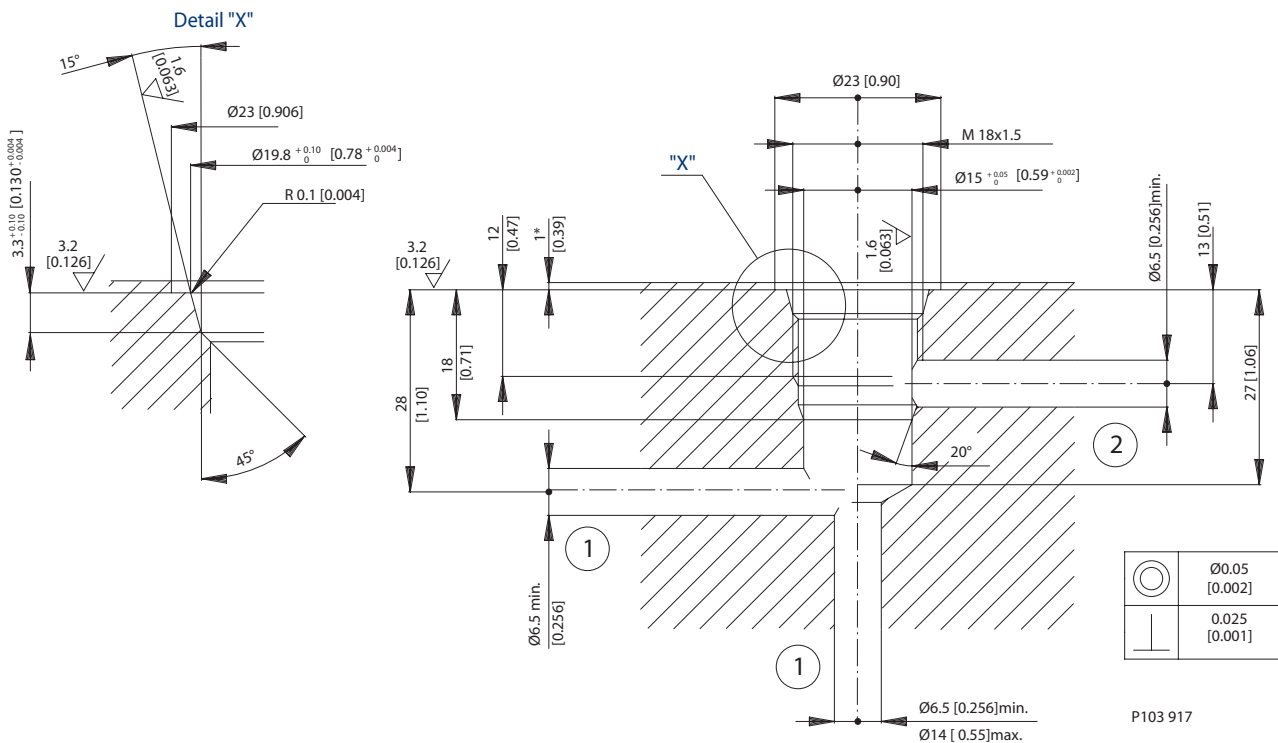
Housings

| Order Code | Description | Ports | Page |
|----------------|------------------------------------|--------------------|-------|
| CP20-3S-10B/2B | Aluminum Housing, Pilot at Port #3 | 1 1/4 BSP, 1/4 BSP | 20.17 |
| CP20-3S-16S/4S | Aluminum Housing, Pilot at Port #3 | SAE #16, #4 | 20.17 |
| CP20-3S-20S/4S | Aluminum Housing, Pilot at Port #3 | SAE #20, #4 | 20.17 |
| CP20-3S-8B/2B | Aluminum Housing, Pilot at Port #3 | 1 BSP, 1/4 BSP | 20.17 |



mm [in]

Dimensions



Form tools

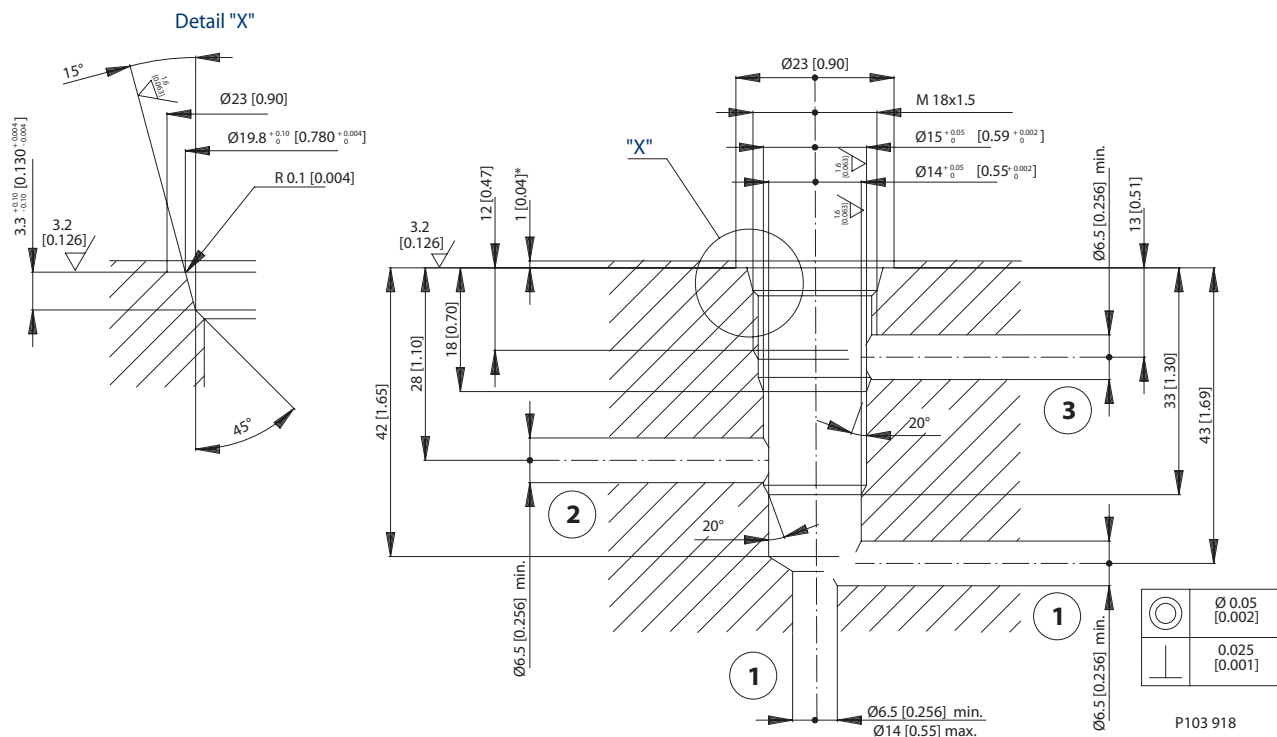
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | NCS-04-2-FT | 11027154 |
| Roughing tool | NCS-04-2-RT | 11027155 |

Housings

| Order Code | Description | Ports | Page |
|-----------------|--------------------------------|---------|-----------------------|
| NCS04/2-DG-1/4 | Aluminum Housing | 1/4 BSP | 20.22 |
| NCS04/2-DG-4S | Aluminum Housing | SAE #4 | 20.22 |
| NCS04/2-DG-6S | Aluminum Housing | SAE #6 | 20.22 |
| NCS04/2-LG1-1/4 | Aluminum Housing, Two #2 Ports | 1/4 BSP | 20.23 |
| NCS04/2-LG1-4S | Aluminum Housing, Two #2 Ports | SAE #4 | 20.23 |
| NCS04/2-LG1-6S | Aluminum Housing, Two #2 Ports | SAE #6 | 20.23 |
| NCS04/2-LG2-1/4 | Aluminum Housing, Two #1 Ports | 1/4 BSP | 20.21 |
| NCS04/2-LG2-4S | Aluminum Housing, Two #1 Ports | SAE #4 | 20.21 |
| NCS04/2-LG2-6S | Aluminum Housing, Two #1 Ports | SAE #6 | 20.21 |

Dimensions

mm [in]



Form tools

| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | NCS-04-3-FT | 11027156 |
| Roughing tool | NCS-04-3-RT | 11027157 |

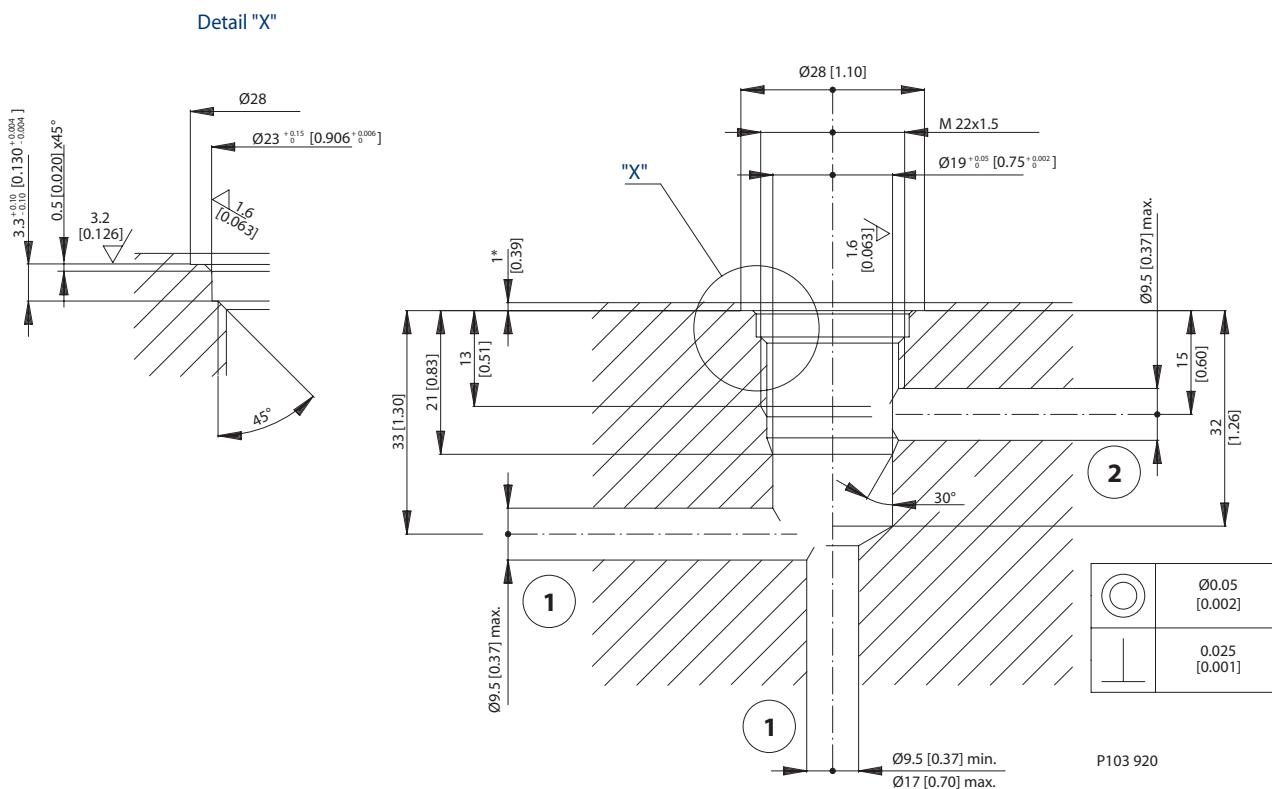
Housings

| Order Code | Description | Ports | Page |
|----------------|---|---------|-------|
| NCS04/3-DI-1/4 | Alum. Hsg., 2 Cavities w/#3 Ports Conn. | 1/4 BSP | 20.26 |
| NCS04/3-DI-3/8 | Alum. Hsg., 2 Cavities w/#3 Ports Conn. | 3/8 BSP | 20.26 |
| NCS04/3-DL-1/4 | Alum. Hsg., 2 Cavities w/#1 Ports Conn. | 1/4 BSP | 20.27 |
| NCS04/3-DL-4S | Alum. Hsg., 2 Cavities w/#1 Ports Conn. | SAE #4 | 20.27 |
| NCS04/3-DL-6S | Alum. Hsg., 2 Cavities w/#1 Ports Conn. | SAE #6 | 20.27 |
| NCS04/3-SE-1/4 | Aluminum Housing | 1/4 BSP | 20.24 |
| NCS04/3-SE-4S | Aluminum Housing | SAE #4 | 20.28 |
| NCS04/3-SE-6S | Aluminum Housing | SAE #6 | 20.28 |
| NCS04/3-SI-1/4 | Aluminum Housing, Two #1 Ports | 1/4 BSP | 20.25 |
| NCS04/3-SI-4S | Aluminum Housing, Two #1 Ports | SAE #4 | 20.29 |
| NCS04/3-SI-6S | Aluminum Housing, Two #1 Ports | SAE #6 | 20.29 |



mm [in]

Dimensions



Form tools

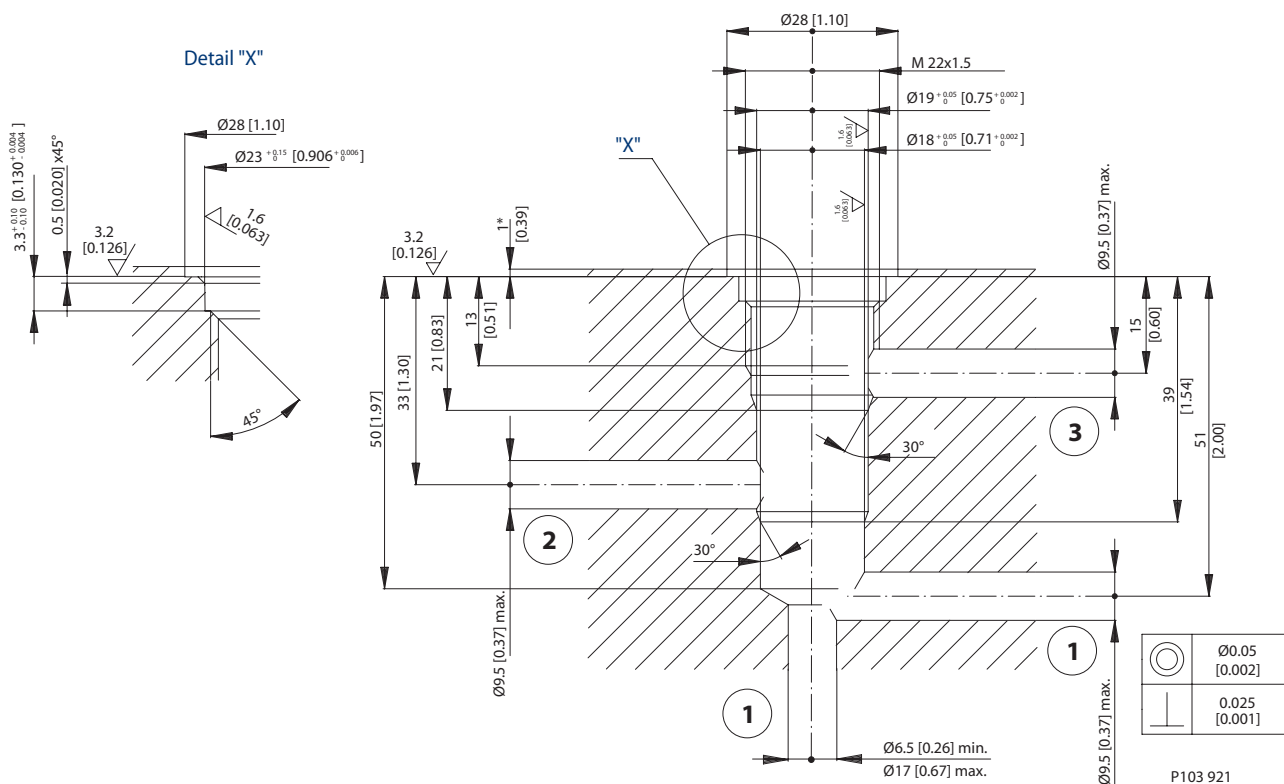
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | NCS-06-2-FT | 11027158 |
| Roughing tool | NCS-06-2-RT | 11027159 |

Housings

| Order Code | Description | Ports | Page |
|-----------------|--------------------------------|---------|-----------------------|
| NCS06/2-DG-1/2 | Aluminum Housing | 1/2 BSP | 20.34 |
| NCS06/2-DG-3/8 | Aluminum Housing | 3/8 BSP | 20.33 |
| NCS06/2-DG-6S | Aluminum Housing | SAE #6 | 20.33 |
| NCS06/2-DG-8S | Aluminum Housing | SAE #8 | 20.34 |
| NCS06/2-LG1-1/2 | Aluminum Housing, Two #2 Ports | 1/2 BSP | 20.36 |
| NCS06/2-LG1-3/8 | Aluminum Housing, Two #2 Ports | 3/8 BSP | 20.37 |
| NCS06/2-LG1-8S | Aluminum Housing, Two #2 Ports | SAE #8 | 20.36 |
| NCS06/2-LG2-1/2 | Aluminum Housing, Two #1 Ports | 1/2 BSP | 20.32 |
| NCS06/2-LG2-3/8 | Aluminum Housing, Two #1 Ports | 3/8 BSP | 20.35 |
| NCS06/2-LG2-6S | Aluminum Housing, Two #1 Ports | SAE #6 | 20.35 |
| NCS06/2-LG2-8S | Aluminum Housing, Two #1 Ports | SAE #8 | 20.32 |

Dimensions

mm [in]



Form tools

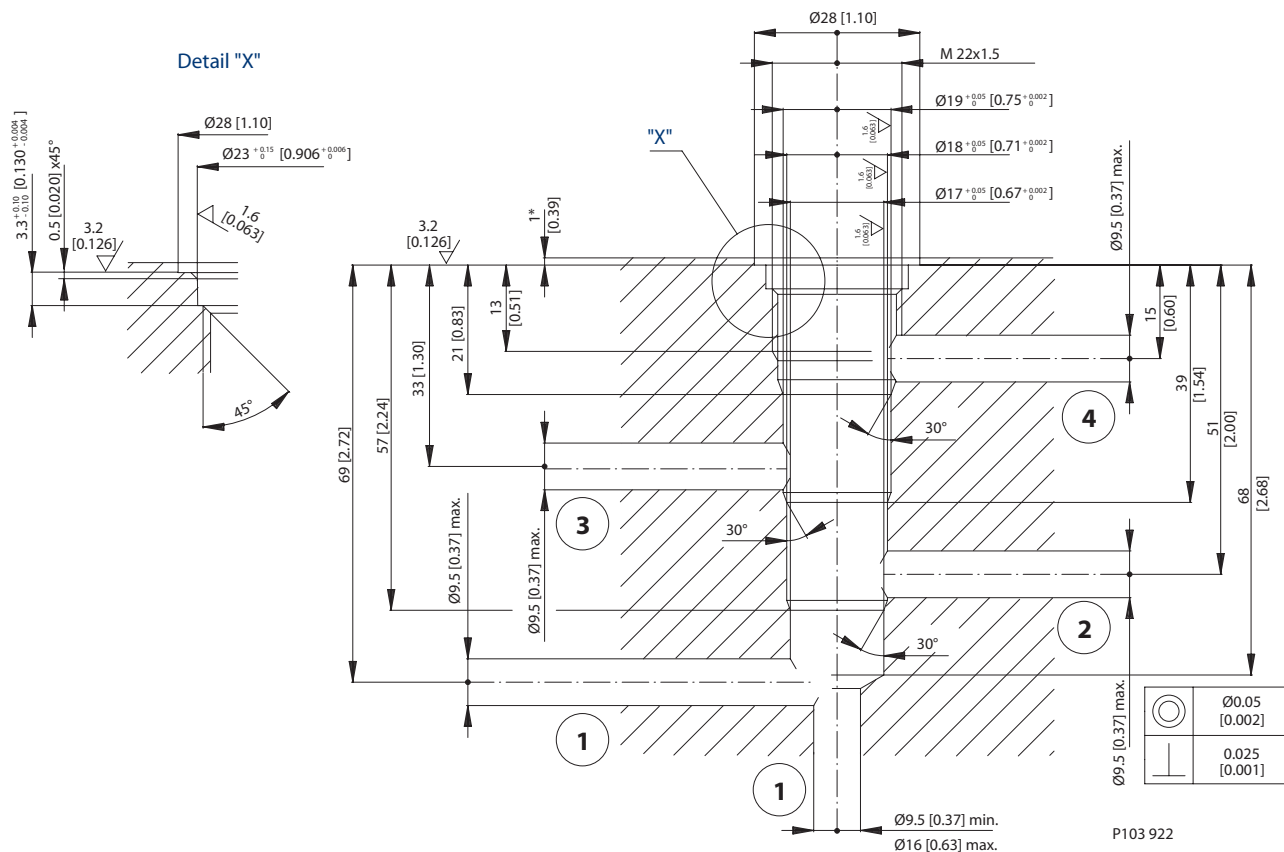
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | NCS-06-3-FT | 11027160 |
| Roughing tool | NCS-06-3-RT | 11027161 |

Housings

| Order Code | Description | Ports | Page |
|----------------|---|---------|-------|
| NCS06/3-DL-1/2 | Alum. Hsg., 2 Cavities w/#1 Ports Conn. | 1/2 BSP | 20.38 |
| NCS06/3-DL-3/8 | Alum. Hsg., 2 Cavities w/#1 Ports Conn. | 3/8 BSP | 20.45 |
| NCS06/3-DL-6S | Alum. Hsg., 2 Cavities w/#1 Ports Conn. | SAE #6 | 20.45 |
| NCS06/3-DL-8S | Alum. Hsg., 2 Cavities w/#1 Ports Conn. | SAE #8 | 20.38 |
| NCS06/3-LD-6S | Aluminum Housing, No Port #1 | SAE #6 | 20.39 |
| NCS06/3-LD-8S | Aluminum Housing, No Port #1 | SAE #8 | 20.40 |
| NCS06/3-SE-1/2 | Aluminum Housing | 1/2 BSP | 20.41 |
| NCS06/3-SE-3/8 | Aluminum Housing | 3/8 BSP | 20.42 |
| NCS06/3-SE-6S | Aluminum Housing | SAE #6 | 20.42 |
| NCS06/3-SE-8S | Aluminum Housing | SAE #8 | 20.41 |
| NCS06/3-SI-1/2 | Aluminum Housing, Two #1 Ports | 1/2 BSP | 20.44 |
| NCS06/3-SI-3/8 | Aluminum Housing, Two #1 Ports | 3/8 BSP | 20.43 |
| NCS06/3-SI-6S | Aluminum Housing, Two #1 Ports | SAE #6 | 20.43 |
| NCS06/3-SI-8S | Aluminum Housing, Two #1 Ports | SAE #8 | 20.44 |

mm [in]

Dimensions



Form tools

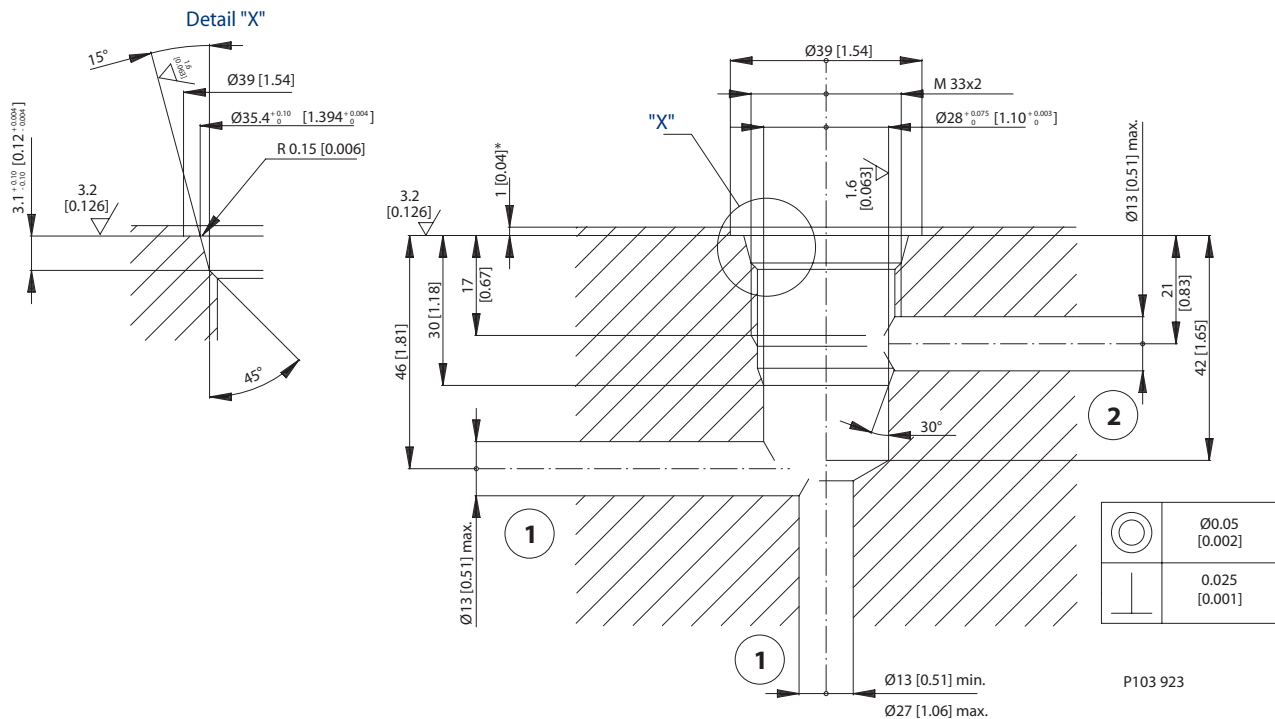
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | NCS-06-4-FT | 11027172 |
| Roughing tool | NCS-06-4-RT | 11027173 |

Housings

| Order Code | Description | Ports | Page |
|----------------|------------------------------|---------|-------|
| NCS06/4-L-1/2 | Aluminum Housing | 1/2 BSP | 20.47 |
| NCS06/4-L-3/8 | Aluminum Housing | 3/8 BSP | 20.49 |
| NCS06/4-L-6S | Aluminum Housing | SAE #6 | 20.49 |
| NCS06/4-L-8S | Aluminum Housing | SAE #8 | 20.47 |
| NCS06/4-LD-1/2 | Aluminum Housing, No Port #1 | 1/2 BSP | 20.48 |
| NCS06/4-LD-3/8 | Aluminum Housing, No Port #1 | 3/8 BSP | 20.46 |

Dimensions

mm [in]



Form tools

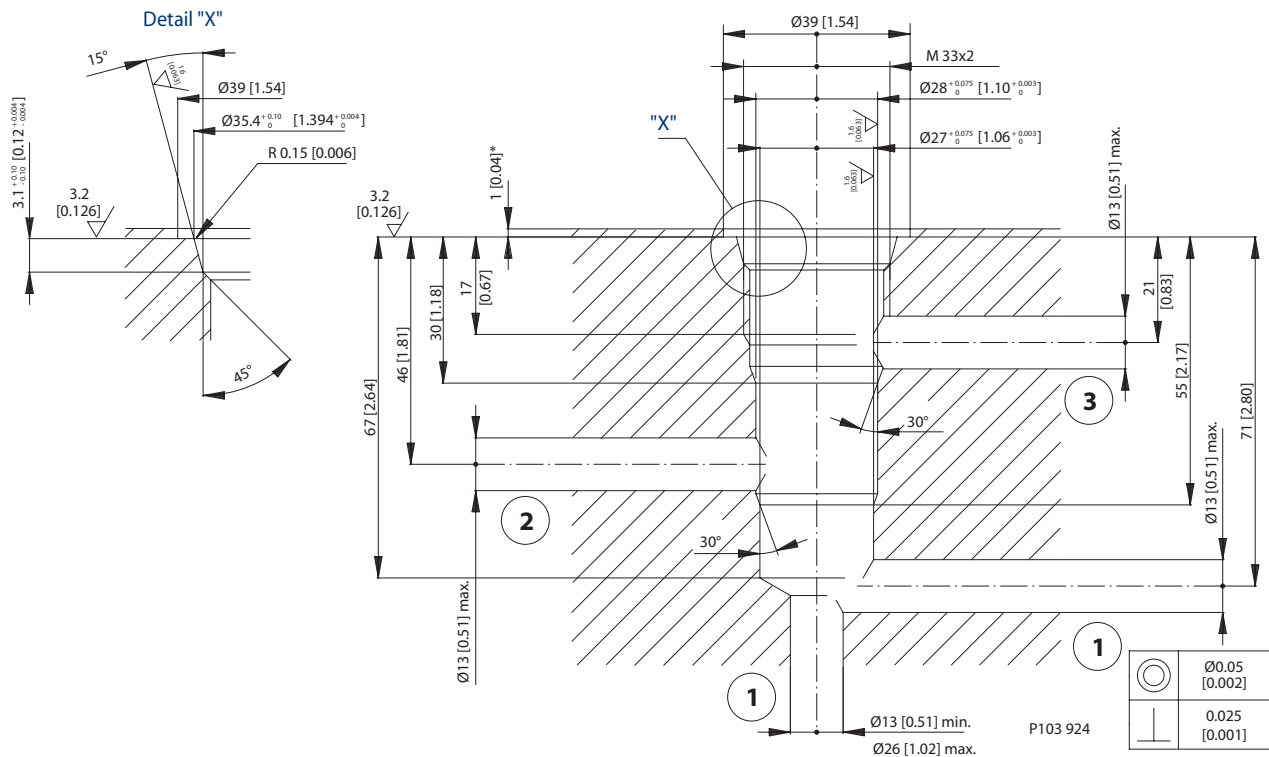
| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | NCS-12-2-FT | 11027174 |
| Roughing tool | NCS-12-2-RT | 11027175 |

Housings

| Order Code | Description | Ports | Page |
|-----------------|--------------------------------|---------|-------|
| NCS12/2-DG-1/2 | Aluminum Housing | 1/2 BSP | 20.50 |
| NCS12/2-DG-12S | Aluminum Housing | SAE #12 | 20.50 |
| NCS12/2-DG-3/4 | Aluminum Housing | 3/4 BSP | 20.50 |
| NCS12/2-DG-8S | Aluminum Housing | SAE #8 | 20.50 |
| NCS12/2-LG1-12S | Aluminum Housing, Two #2 Ports | SAE #12 | 20.51 |
| NCS12/2-LG1-8S | Aluminum Housing, Two #2 Ports | SAE #8 | 20.51 |
| NCS12/2-LG2-1/2 | Aluminum Housing, Two #1 Ports | 1/2 BSP | 20.52 |
| NCS12/2-LG2-12S | Aluminum Housing, Two #1 Ports | SAE #12 | 20.52 |
| NCS12/2-LG2-3/4 | Aluminum Housing, Two #1 Ports | 3/4 BSP | 20.52 |
| NCS12/2-LG2-8S | Aluminum Housing, Two #1 Ports | SAE #8 | 20.52 |

mm [in]

Dimensions



Form tools

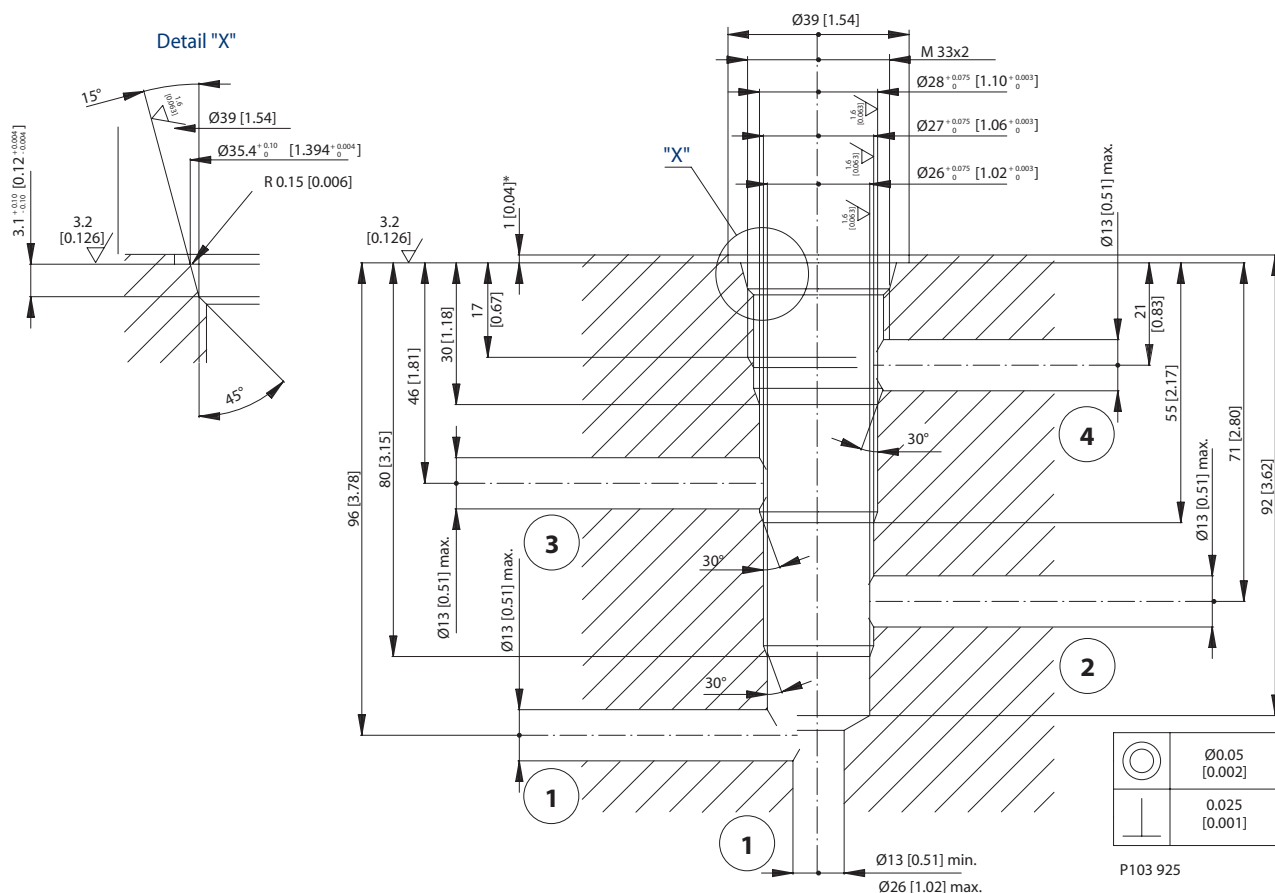
| | Model code | Material number |
|-----------------------|------------|-----------------|
| Finishing tool | NCS12-3-FT | 11027176 |
| Roughing tool | NCS12-3-RT | 11027177 |

Housings

| Order Code | Description | Ports | Page |
|----------------|---|---------|-----------------------|
| NCS12/3-DL-1/2 | Alum. Hsg., 2 Cavities w/#1 Ports Conn. | 1/2 BSP | 20.54 |
| NCS12/3-DL-12S | Alum. Hsg., 2 Cavities w/#1 Ports Conn. | SAE #12 | 20.53 |
| NCS12/3-DL-3/4 | Alum. Hsg., 2 Cavities w/#1 Ports Conn. | 3/4 BSP | 20.55 |
| NCS12/3-DL-8S | Alum. Hsg., 2 Cavities w/#1 Ports Conn. | SAE #8 | 20.53 |
| NCS12/3-SE-1 | Aluminum Housing | 1/2 BSP | 20.56 |
| NCS12/3-SE-12S | Aluminum Housing | SAE #12 | 20.56 |
| NCS12/3-SE-3/4 | Aluminum Housing | 3/4 BSP | 20.56 |
| NCS12/3-SE-8S | Aluminum Housing | SAE #8 | 20.56 |
| NCS12/3-SI-1 | Aluminum Housing, Two #1 Ports | 1/2 BSP | 20.57 |
| NCS12/3-SI-12S | Aluminum Housing, Two #1 Ports | SAE #12 | 20.57 |
| NCS12/3-SI-3/4 | Aluminum Housing, Two #1 Ports | 3/4 BSP | 20.57 |
| NCS12/3-SI-8S | Aluminum Housing, Two #1 Ports | SAE #8 | 20.57 |

Dimensions

mm [in]



Form tools

| | Model code | Material number |
|-----------------------|-------------|-----------------|
| Finishing tool | NCS-12-4-FT | 11027178 |
| Roughing tool | NCS-12-4-RT | 11027179 |

Housings

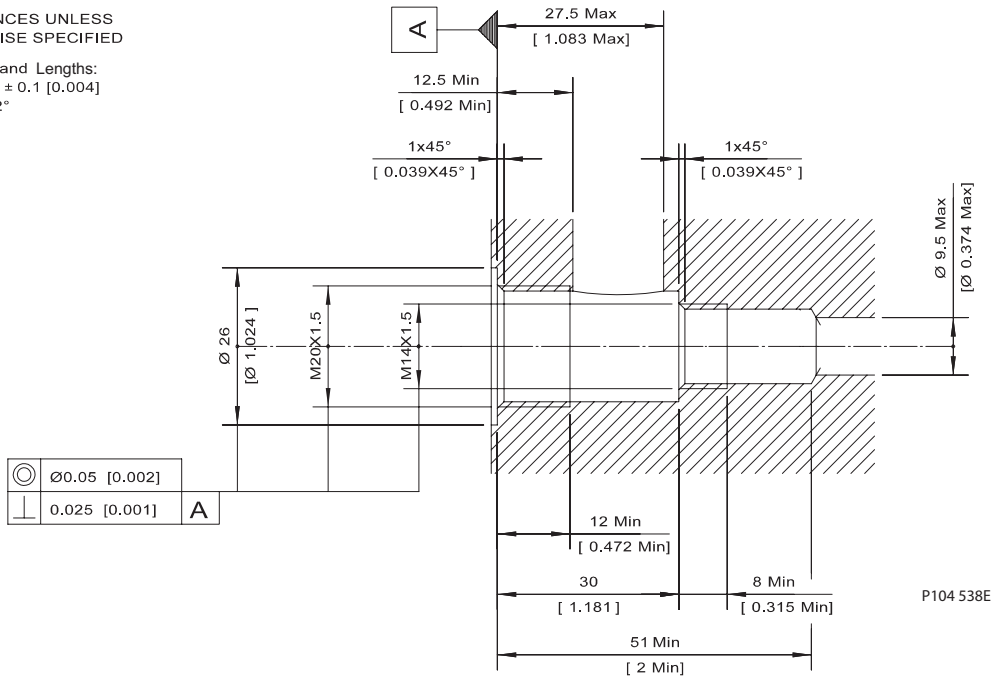
| Order Code | Description | Ports | Page |
|---------------|------------------------------|---------|-------|
| NCS12/4-HD-1 | Aluminum Housing, No Port #1 | 1/2 BSP | 20.59 |
| NCS12/4-L-1 | Aluminum Housing | 1/2 BSP | 20.58 |
| NCS12/4-L-12S | Aluminum Housing | SAE #12 | 20.60 |
| NCS12/4-L-3/4 | Aluminum Housing | 3/4 BSP | 20.58 |

mm [in]

Dimensions

TOLERANCES UNLESS OTHERWISE SPECIFIED

Diameter and Lengths:
 if < 18mm ± 0.1 [0.004]
 Angles ± 2°



Form tools

| | Model code | Material number |
|-----------------------|------------|-----------------|
| Finishing tool | VME-06-FT | 11027242 |
| Roughing tool | VME-06-RT | 11027243 |

Housings

| Order Code | Description | Ports | Page |
|--------------|------------------|---------|------------------------|
| VME 06-DG-3B | Aluminum Housing | 3/8 BSP | 20.109 |
| VME 06-DG-6S | Aluminum Housing | SAE #6 | 20.109 |
| VME 06-LG-3B | Aluminum Housing | 3/8 BSP | 20.108 |
| VME 06-LG-6S | Aluminum Housing | SAE #6 | 20.108 |

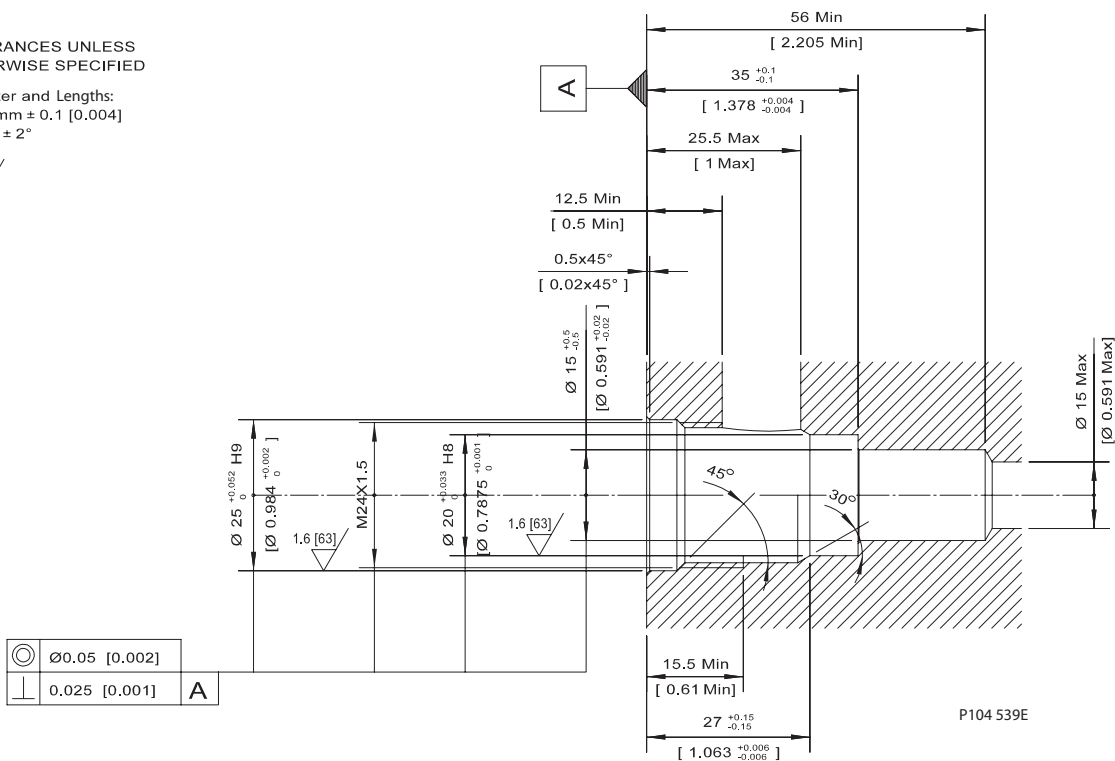
Dimensions

mm [in]

TOLERANCES UNLESS OTHERWISE SPECIFIED

Diameter and Lengths:
 if < 18mm ± 0.1 [0.004]
 Angles ± 2°

3.2 [125]



| | | |
|---|---------------|---|
| ⊙ | ∅0.05 [0.002] | |
| ⊥ | 0.025 [0.001] | A |

Form tools

| | Model code | Material number |
|-----------------------|------------|-----------------|
| Finishing tool | VME-07-FT | 11027244 |
| Roughing tool | VME-07-RT | 11027245 |

Housings

| Order Code | Description | Ports | Page |
|--------------|------------------|---------|--------|
| VME 07-DG-4B | Aluminum Housing | 1/2 BSP | 20.110 |
| VME 07-DG-8S | Aluminum Housing | SAE #8 | 20.110 |
| VME 07-LG-4B | Aluminum Housing | 1/2 BSP | 20.111 |
| VME 07-LG-8S | Aluminum Housing | SAE #8 | 20.111 |

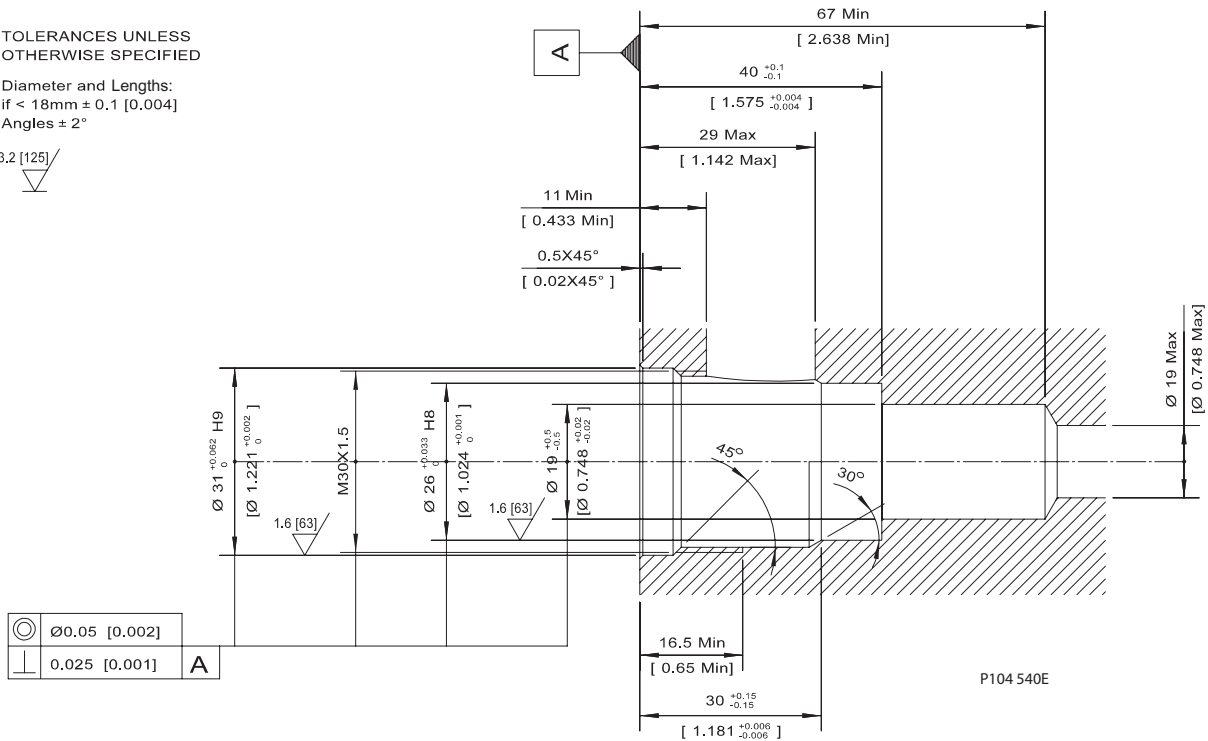
Dimensions

mm [in]

TOLERANCES UNLESS OTHERWISE SPECIFIED

Diameter and Lengths:
 if < 18mm ± 0,1 [0,004]
 Angles ± 2°

3.2 [125]



| | | |
|--|----------------|---|
| | Ø 0.05 [0.002] | A |
| | 0.025 [0.001] | A |

Form tools

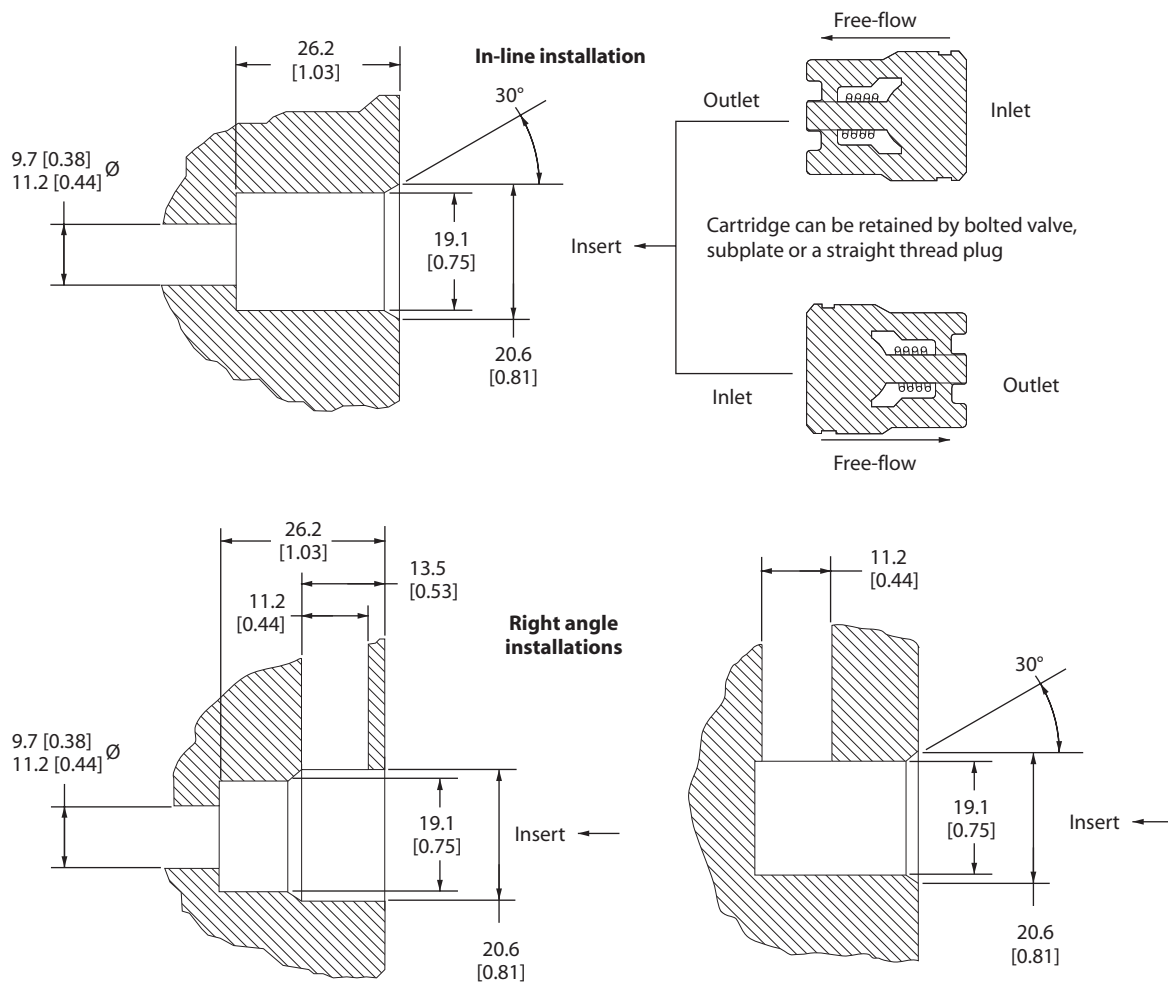
| | Model code | Material number |
|-----------------------|------------|-----------------|
| Finishing tool | VME-08-FT | 11027246 |
| Roughing tool | VME-09-RT | 11027247 |

Housings

| Order Code | Description | Ports | Page |
|---------------|------------------|---------|------------------------|
| VME 08-DG-12S | Aluminum Housing | SAE #12 | 20.113 |
| VME 08-DG-6B | Aluminum Housing | 3/4 BSP | 20.113 |
| VME 08-LG-12S | Aluminum Housing | SAE #12 | 20.112 |
| VME 08-LG-6B | Aluminum Housing | 3/4 BSP | 20.112 |

Dimensions

mm [in]

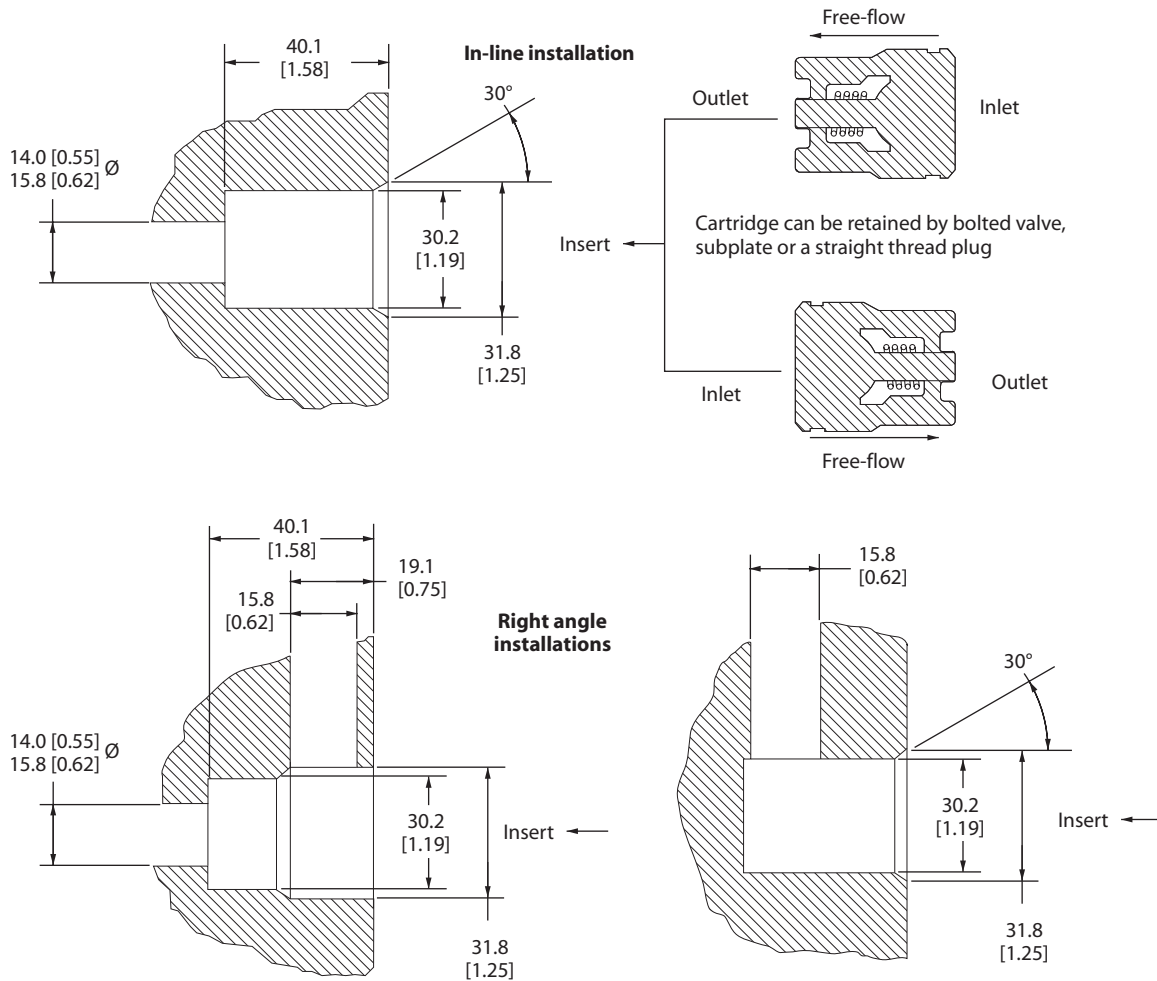


Form tools

| | |
|-----------------------|-----------|
| Roughing tool | FC-144-RT |
| Finishing tool | FC-144-FT |

mm [in]

Dimensions



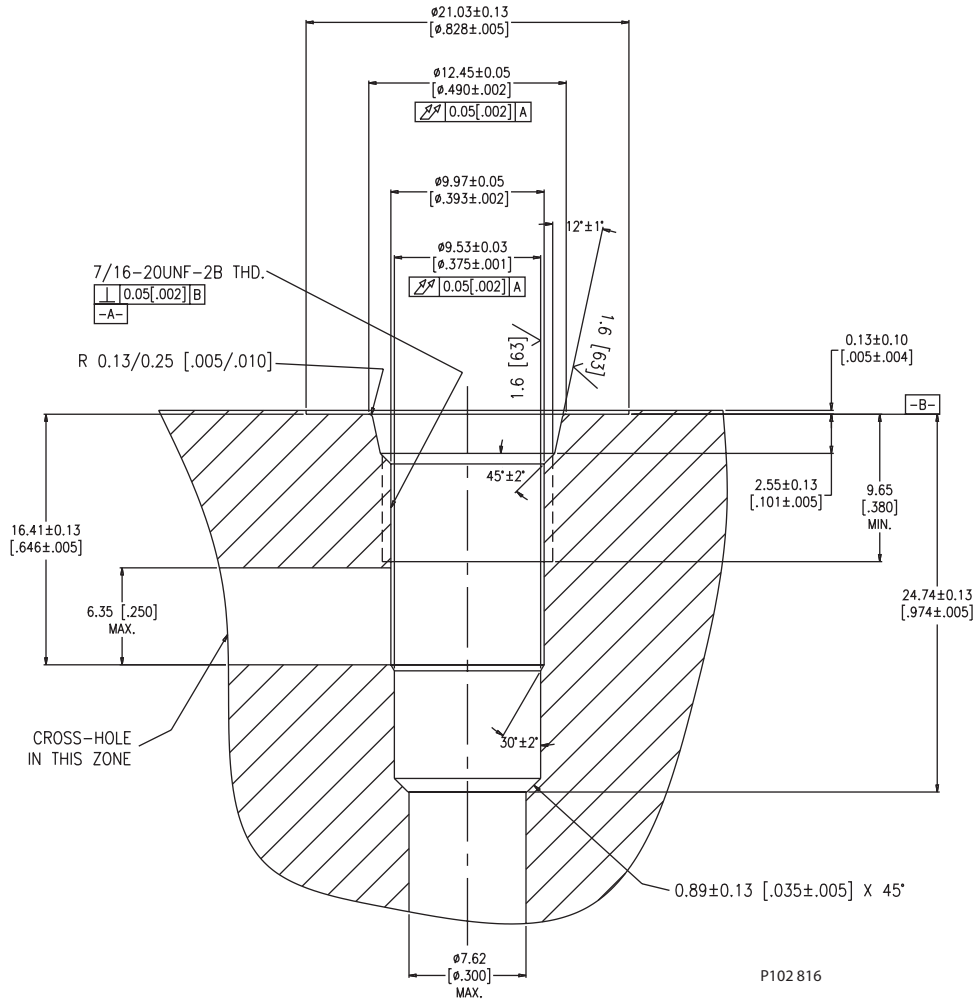
P102 820

Form tools

| | |
|-----------------------|-----------|
| Roughing tool | FC-304-RT |
| Finishing tool | FC-304-FT |

Dimensions

mm [in]



Form tools

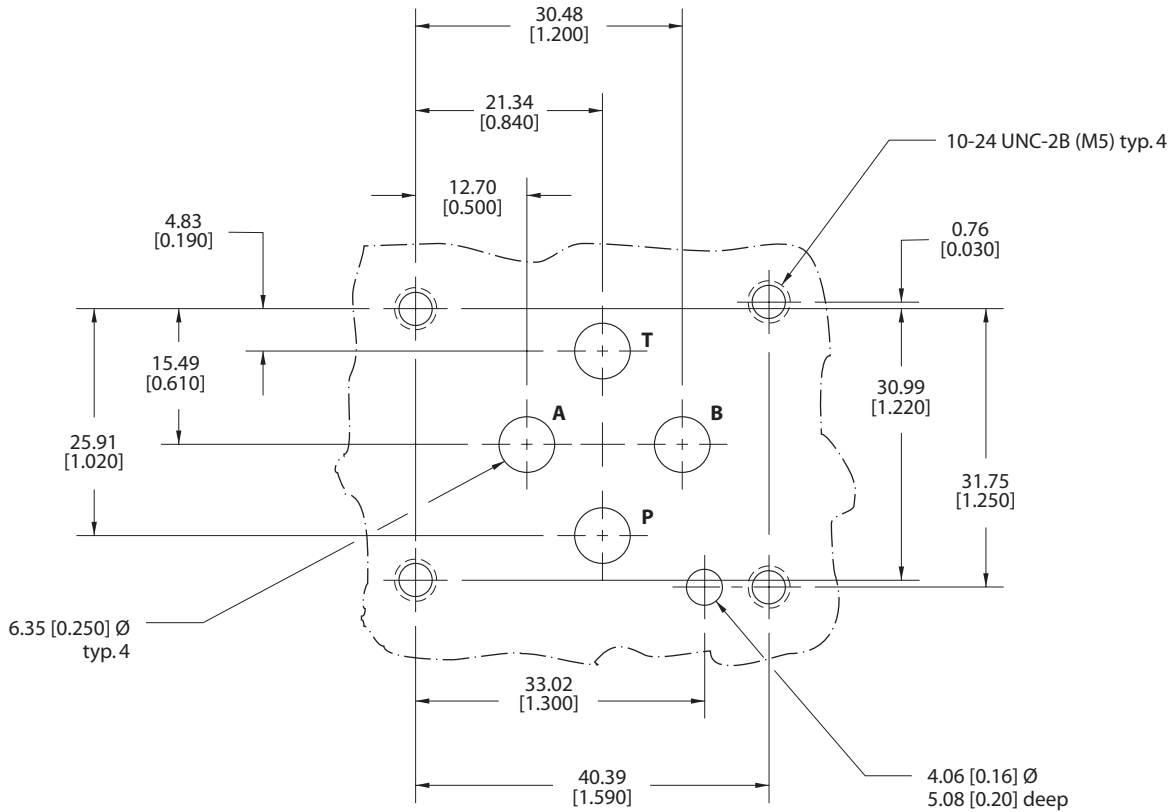
| | Model code | Material number |
|-----------------------|------------|-----------------|
| Roughing tool | FC-336-RT | 11027248 |
| Finishing Tool | FC-336-FT | 310219 |

Housings

| Order Code | Description | Ports | Page |
|------------|------------------|--------|-------|
| FC336-4S | Aluminum Housing | SAE #4 | 20.18 |

Dimensions

mm [in]



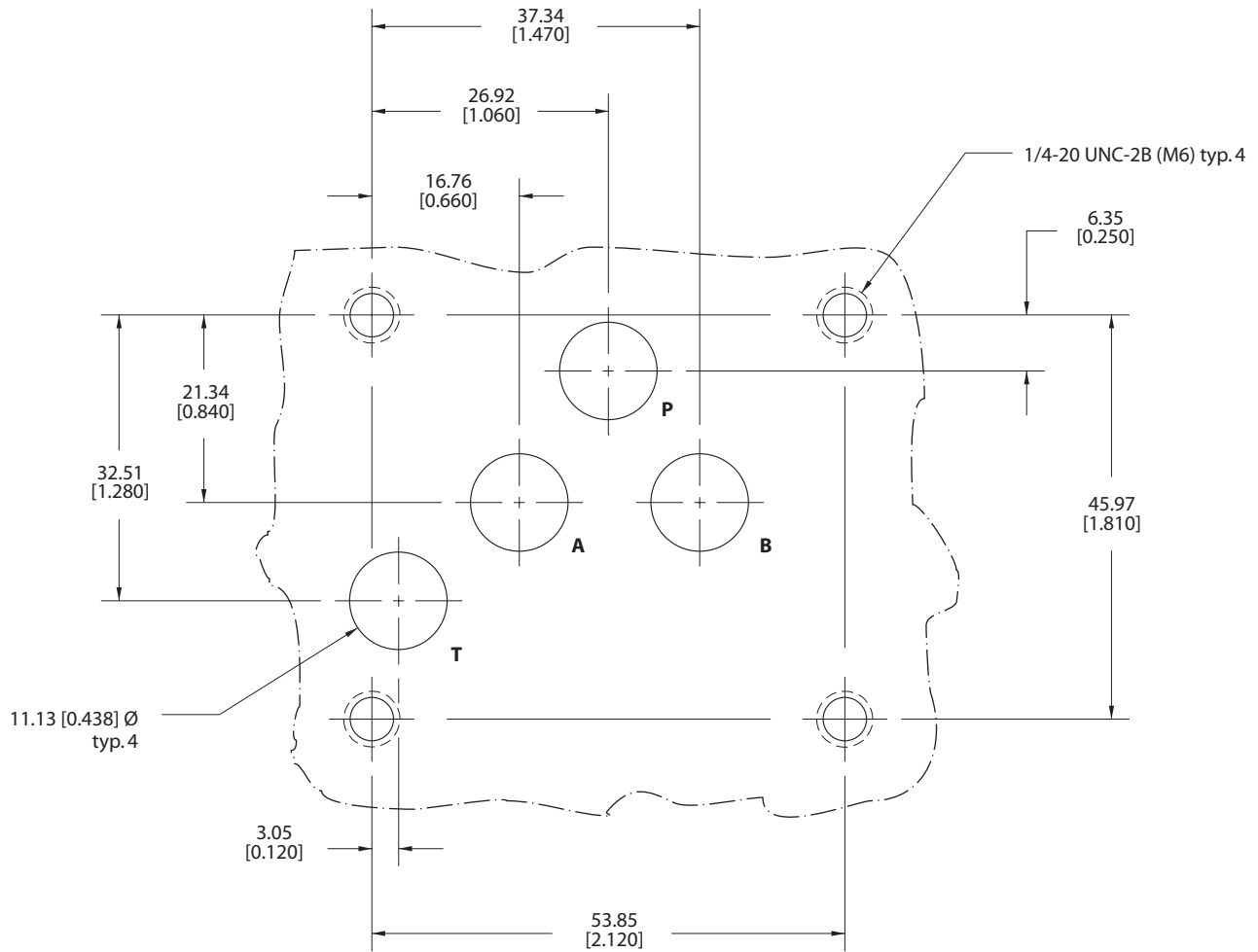
P102 926E

Housings

| Order Code | Description | Ports | Page |
|------------|--------------------------------|--------|-----------------------|
| UDPS-06-AL | ISO D03 Subplate, Aluminum | #8 SAE | 20.19 |
| UDPS-06-DI | ISO D03 Subplate, Ductile Iron | #8 SAE | 20.19 |

Dimensions

mm [in]



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Housings

| Order Code | Description | Ports | Page |
|------------|--------------------------------|--------|-------|
| UDPS-10-AL | ISO D05 Subplate, Aluminum | #8 SAE | 20.20 |
| UDPS-10-DI | ISO D05 Subplate, Ductile Iron | #8 SAE | 20.20 |

