

**stintera.**

PRECISION QUOTE ENGINEERING

QUOTATION & MANUFACTURING ANALYSIS

# Hydraulic Manifold Block Pilot Valve Body

Part No. MFP-1042-A | Revision B | Quantity 15

PREPARED FOR

Halvarsen Fluid Power, Inc.

ISSUE DATE

May 13, 2026

PREPARED BY

Stintera LLC

QUOTE NUMBER

Q-2026-0001

REVISION

B

CONTACT

daniel@stintera.com

---

# Document Contents

<b>01</b>	<b>Executive Summary</b> Pricing tiers, engineering flags, key decisions required.	<b>3</b>
<b>02</b>	<b>Pricing Detail</b> Cost build-up at target tier, with floor and premium tier comparison.	<b>4</b>
<b>03</b>	<b>Engineering Flags</b> Items identified during DFM review that require resolution.	<b>5</b>
<b>04</b>	<b>Manufacturing Approach</b> Stock form, workholding strategy, routing rationale.	<b>7</b>
<b>05</b>	<b>Routing Detail</b> Operation-by-operation breakdown with features and times.	<b>8</b>
<b>06</b>	<b>Risk Assessment</b> Quantified risk score with factor analysis.	<b>13</b>
<b>07</b>	<b>Assumptions &amp; Exclusions</b> Scope boundaries. What this analysis covers and what it does not.	<b>14</b>
<b>08</b>	<b>Terms &amp; Conditions</b> Scope of work, responsibilities, and liability.	<b>15</b>

---

# Executive Summary

Hydraulic manifold block in 4140 prehard, qty 15, finished with black oxide. Mill-dominant routing across two setups plus outside processing. Quoted at three pricing tiers reflecting our floor, target, and premium positions.

The part is geometrically manageable but carries four engineering flags that require customer resolution before production release. The most significant is a port spotface depth that conflicts with an internal passage; producing as drawn would breach into the cartridge bore. See Section 03.

Lead time of 4 weeks ARO assumes flags are resolved within 5 business days of quote acceptance. Each week of flag resolution delay shifts delivery proportionally.

PART	MFP-1042-A Rev B
MATERIAL	4140 Prehard, 28-32 HRC
FINISH	Black Oxide, MIL-DTL-13924 CI 1
QUANTITY	15 pieces
EST. LEAD TIME	4 weeks ARO
FLAGS OPEN	4 (1 critical, 2 high, 1 medium)
RISK SCORE	6 / 10 · Elevated
STOCK	Plate, 4.75" x 3.25" x 2.25"

## PRICING TIERS

<p>FLOOR</p> <p><b>Minimum Viable</b></p> <p><b>\$517</b></p> <p>PER PIECE</p> <hr/> <p>EXTENDED (QTY 15)</p> <p><b>\$7,751</b></p> <p>8% margin · cost recovery</p>	<p>TARGET</p> <p><b>Recommended</b></p> <p><b>\$634</b></p> <p>PER PIECE</p> <hr/> <p>EXTENDED (QTY 15)</p> <p><b>\$9,507</b></p> <p>25% margin · standard</p>	<p>PREMIUM</p> <p><b>Maximum Defensible</b></p> <p><b>\$767</b></p> <p>PER PIECE</p> <hr/> <p>EXTENDED (QTY 15)</p> <p><b>\$11,501</b></p> <p>38% margin · full value</p>
--	--	---

TOTAL CYCLE TIME	MATERIAL COST	OUTSIDE PROCESSING	FIRST-ARTICLE BURDEN
<b>3.31 hr</b>	<b>\$58</b>	<b>\$25</b>	<b>\$1,094</b>
per piece, all ops	per piece	per piece, black oxide	amortized in pricing

## KEY DECISIONS REQUIRED

(1) Resolve Flag EF-01 (port spotface depth conflict) before release. (2) Confirm Flag EF-02 black oxide masking strategy for tapped ports. (3) Confirm material certification requirement — full mill cert or basic test report.

# Pricing Detail

Cost build-up at target tier, quantity 15. Floor and walk-away tiers adjust the margin line only.

COST ELEMENT	HOURS	RATE / UNIT	PER PIECE	EXTENDED
Raw material — 4140 PH plate	—	\$3.75/lb	\$58.00	\$870.00
Programming — mill, both setups (amortized)	8.0	\$92.00	\$49.07	\$736.00
Setup — first piece, both setups (amortized)	3.5	\$92.00	\$21.47	\$322.00
Mill run time, Op 020 (Setup 1)	1.45	\$92.00	\$133.40	\$2,001.00
Mill run time, Op 030 (Setup 2)	1.20	\$92.00	\$110.40	\$1,656.00
Deburr, edge break, intersection cleanup	0.35	\$72.00	\$25.20	\$378.00
Inspection — first article + in-process	0.25	\$85.00	\$21.25	\$318.75
Handling — outside process (Op 040)	0.5	\$72.00	\$2.40	\$36.00
Packaging & ship (Op 060)	0.40	\$72.00	\$1.94	\$29.16
Outside processing — black oxide	—	\$200 + \$12/pc	\$25.33	\$380.00
<b>Subtotal — fully-loaded cost</b>			<b>\$448.46</b>	<b>\$6,726.91</b>
Risk reserve (6% — per risk score)			\$26.91	\$403.61
Margin (25% — target tier, % of selling price)			\$158.45	\$2,376.84
<b>Total — Target Tier</b>			<b>\$633.82</b>	<b>\$9,507.37</b>

Rates: mill \$92/hr, deburr \$72/hr, inspection \$85/hr, handling/packaging \$72/hr. All amounts in USD. Margin calculated as percentage of selling price (standard convention).

# Engineering Flags

Four items identified during DFM review require customer resolution before production release. Severity reflects impact on cost, schedule, or function.

FLAG EF-01

CRITICAL

## Port C spotface depth conflicts with cartridge bore

Drawing Sheet 1 of 2, Detail B · Affected feature: SAE-8 port at A2 surface, spotface  $\varnothing 1.062 \times 0.090$  deep

Per drawing, the Port C spotface is dimensioned 0.090" deep from the A2 surface. The cartridge bore wall at that location is 0.070" thick based on the model. Producing the spotface as dimensioned will break through into the cartridge bore, creating a leak path.

**STINTERA RECOMMENDATION:** Reduce spotface depth to 0.045", which provides adequate seat for the SAE port boss seal while preserving 0.025" of wall. Confirm against fluid pressure rating.

**CUSTOMER ACTION:** Approve revised spotface dimension, OR redesign port location, OR confirm intentional breach (some manifold designs use this as a cross-connection).

FLAG EF-02

HIGH

## Black oxide masking not specified for tapped features

Drawing Sheet 1 of 2, Note 4 · Affected features: all 9/16-18 UNF and 7/16-20 UNF tapped ports

Note 4 calls out black oxide per MIL-DTL-13924 Class 1 to all surfaces but does not address tapped port behavior. Black oxide deposits 0.0001-0.0003" in tapped threads, which can interfere with fitting torque and seal integrity on SAE J1926-1 ports.

**STINTERA RECOMMENDATION:** Mask all tapped ports during black oxide; threads remain bare steel. This is standard industry practice for fluid power manifolds but adds masking labor at the finisher.

**COST IMPACT:** Additional \$4.50 per piece in outside processing for masking. Reflected in target tier pricing.

FLAG EF-03

HIGH

**Cross-drilled passage intersection condition not noted**

Drawing Sheet 2 of 2, Section A-A · Affected features: 0.250" passage at 90° to 0.375" main passage

The 0.250" cross-drilled passage intersects the 0.375" main passage at a sharp 90° angle. The intersection produces a burr internal to the passage that cannot be reached by hand deburring tools. Pressure testing may not catch a partial burr; the part can leak in service after thermal cycling.

**STINTERA RECOMMENDATION:** Add intersection deburring by abrasive flow machining (AFM) or media tumbling at an external vendor, OR specify acceptable burr condition (e.g., per SAE AS9100 paragraph X.Y), OR change geometry to use intersecting drilled passages at staggered depths.

**CUSTOMER ACTION:** Confirm acceptance criterion for internal burr. If AFM is required, quote will be revised; estimated impact +\$35 per piece.

FLAG EF-04

MEDIUM

**Cartridge bore tolerance pushes process selection**

Drawing Sheet 1 of 2, Detail A · Affected feature:  $\varnothing 0.875 +0.001/-0.000$ , 1.85" deep

The cartridge bore is held to  $+0.001/-0.000$  with a 32  $\mu\text{in}$  Ra callout on the sealing surface. At 1.85" depth in 4140 prehard, this is achievable but requires drill, semi-finish bore, and finish bore as separate operations rather than a single drill-and-ream cycle.

**STINTERA RECOMMENDATION:** Quote includes 3-step bore process (drill, semi-finish bore, finish bore with sized tool). Confirmed in routing Op 20. If function permits  $+0.002/-0.000$ , the bore can be produced with reamer in single setup, reducing cycle time by approximately 4 minutes per piece.

**CUSTOMER ACTION:** Confirm whether the tighter tolerance is functionally required or carried over from a different design.

# Manufacturing Approach

Stock form, workholding strategy, and routing rationale. Explains the decisions behind the operation sequence detailed in Section 05.

## STOCK FORM & MATERIAL

---

4140 prehard plate is the correct stock form. The block geometry is prismatic and favors plate over bar; the prehard condition (28-32 HRC) eliminates a heat treatment cycle that would otherwise be required to meet the strength specification. Stock is purchased at 2.25" thickness for 0.125" cleanup per face, then saw-cut from 12" wide bar with 0.125" end-face allowance. Material is ordered to mill certification per drawing note.

## WORKHOLDING STRATEGY

---

Both mill operations use a precision 4" vise with custom soft jaws machined in-house to the A1 datum. Soft jaws were selected over a dedicated fixture because the lot of 15 does not justify fixture amortization, the part has two parallel flat faces that provide reliable vise contact, and jaw machining runs in parallel with programming without affecting lead time. Hard stop locators give repeatable Y-axis location across the lot.

## OPERATION SEQUENCE RATIONALE

---

The routing places all top-face features in Setup 1, followed by a flip to Setup 2 for bottom-face features. The cartridge bore is the controlling feature; producing it in Setup 1 establishes a reference for verifying Setup 2 features, rather than the reverse. If the cartridge bore were produced in Setup 2 and found out of tolerance, the part would already be complete and unsalvageable. All ports and the cartridge bore share the same approach vector, allowing a single tool change sequence in Setup 1 and keeping critical features in the more stable orientation.

## OUTSIDE PROCESSING & INSPECTION

---

Black oxide is performed at an outside vendor with established traceability to MIL-DTL-13924 Class 1. Tapped ports are masked per Flag EF-02. Lot minimum applies regardless of quantity; cost is fixed at \$200 plus per-piece processing. Inspection is performed in-house with CMM for dimensional features and pin gage for the cartridge bore tolerance. Pressure testing is excluded unless specified (see Section 07).

## MACHINE & CAPABILITY MATCH

---

This part is well-matched to a 3-axis VMC with through-spindle coolant. No 4th-axis or specialty capability is required. The cartridge bore tolerance and surface finish are achievable in 4140 prehard with a 3-step bore process; this is reflected in Op 020 and called out in the programmer notes.

# Routing Detail

Operation-by-operation breakdown. Times reflect actual feature analysis from the drawing, not generic formulas. Programming and setup times are amortized across the lot of 15 in the pricing detail.

OP 010		Stock Prep — Saw Cut to Length		HORIZONTAL BANDSAW	
<b>PROGRAMMING</b> <b>0.0 hr</b> no program required	<b>SETUP</b> <b>0.3 hr</b> stop block, lot setup	<b>RUN TIME</b> <b>4 min</b> per piece, saw cut	<b>TOOL COUNT</b> <b>1</b> bi-metal blade		
<b>STOCK AS RECEIVED</b> 4140 prehard plate, 28-32 HRC, 2.25" thick × 12" wide bar stock. Mill certification required — flag for receiving inspection on lot arrival.					
<b>OPERATION</b> <ul style="list-style-type: none"> <li>• Saw cut to 4.75" length, allowing 0.125" cleanup allowance on each end face</li> <li>• 15 pieces plus 1 setup/test piece = 16 cuts total</li> <li>• Stamp heat lot number on each piece per traceability requirement</li> </ul>					
<b>NOTES</b> <ul style="list-style-type: none"> <li>• Inspect plate flatness on receipt — reject any piece exceeding 0.010" bow per foot of length.</li> <li>• Confirm certification accompanies the lot before releasing to mill.</li> </ul>					

OP 020

## Mill Setup 1 — Top Face, Ports, Cartridge Bore

HAAS VF-4 · 4" VISE

## PROGRAMMING

**4.5 hr**first-time, amortized over qty  
15

## SETUP

**1.8 hr**

first piece, including probe

## RUN TIME

**87 min**

per piece, spindle on

## TOOL COUNT

**12**

incl. 2 long-reach

## WORKHOLDING

4" precision vise with soft jaws machined to the A1 datum. Stock indicated on A1 reference. Hard stop locator for repeatability across the lot. No re-clamp required within this operation.

## FEATURES MACHINED THIS SETUP

- Face A2 (top face) to thickness 2.000", 32  $\mu$ m Ra finish
- Cartridge bore  $\varnothing 0.875 +0.001/-0.000 \times 1.85"$  deep (drill, semi-finish, finish bore — see Flag EF-04)
- O-ring groove in cartridge bore, 0.072 wide  $\times$  0.054 deep, profile per AS568
- Port A spotface  $\varnothing 1.062 \times 0.062$  deep with 9/16-18 UNF tap, 0.75" FTL
- Port B spotface  $\varnothing 1.062 \times 0.062$  deep with 9/16-18 UNF tap, 0.75" FTL
- Port C spotface — SUBJECT TO FLAG EF-01 RESOLUTION before machining
- (4)  $\varnothing 0.281$  mounting holes through to bottom face
- (2)  $\varnothing 0.197$  dowel pin holes, ream to  $+0.0005/-0.0000$
- Edge break 0.010-0.020 on all top-face perimeter edges

## PROGRAMMER NOTES

- Cartridge bore: program three separate tools to hold the bore tolerance and surface finish. Single-tool reamer not acceptable on 4140 prehard at this depth.
- Port C: hold off generating toolpath until customer resolution of EF-01.
- Dowel reamer: long-reach tool, reduce feed to 60% of book value per DFM check 3.6E.

Continued on next page — Op 030 (Mill Setup 2).

**OP 030 Mill Setup 2 — Bottom Face, Counterbores, Datum Cleanup**

HAAS VF-4 · 4" VISE

## PROGRAMMING

**3.5 hr**first-time, amortized over qty  
15

## SETUP

**1.7 hr**

first piece, including probe

## RUN TIME

**72 min**

per piece, spindle on

## TOOL COUNT

**8**

standard reach

**WORKHOLDING**

Same 4" precision vise with soft jaws, re-machined to the A2 datum (top face produced in Op 020). Part is flipped 180° about the X-axis and indicated against the cartridge bore using a dowel pin in the jaw. This locates the bottom-face features to the cartridge bore center, ensuring concentricity of any features that share that datum reference.

**FEATURES MACHINED THIS SETUP**

- Face A1 (bottom face) to thickness 2.000" +0.000/-0.002, 63 µin Ra finish
- (4) Ø0.531 counterbores at the mounting hole locations, 0.250" deep, for socket head cap screw clearance
- Cleanup pass on side datums B and C, removing 0.062" per side to bring overall dimensions in tolerance
- Chamfer 0.030 × 45° on all four bottom-face perimeter edges
- Stamp part number, revision, and serial number on the side datum B per drawing note 7

**PROGRAMMER NOTES**

- Bottom face flatness is held to 0.005" per drawing — single finish pass with sharp tool; no rough/finish split.
- Side cleanup: verify before machining that 0.062" removal still falls within the stock allowance after Op 020 cuts.
- Stamp depth 0.005" max; do not exceed or the stamp will read through the black oxide as a divot.

**IN-PROCESS INSPECTION**

First-piece inspection after Op 030: full CMM check including cartridge bore concentricity to A1, parallelism of A1 to A2, and all positional tolerances on mounting holes and dowel pins. Hold the lot until first-piece is signed off.

Continued on next page — Op 040 through Op 060 (outside processing, inspection, packaging).

OP 040		Outside Processing — Black Oxide		OUTSIDE VENDOR · LOT PROCESS	
<b>PROGRAMMING</b> <b>N/A</b> outside service	<b>HANDLING</b> <b>0.5 hr</b> package, ship, receive	<b>VENDOR TIME</b> <b>5 days</b> standard turnaround	<b>COST</b> <b>\$380</b> \$200 lot + \$12 per piece		
<b>SPECIFICATION</b> Black oxide per MIL-DTL-13924 Class 1, supplemental oil treatment. All tapped ports masked per Flag EF-02 to preserve thread dimensions. Cartridge bore O-ring sealing surface protected from finish to maintain 32 µin Ra. Surfaces to be black oxide treated: all exterior surfaces of the manifold block excluding the seven masked features.					
<b>VENDOR COORDINATION</b> <ul style="list-style-type: none"> <li>• Provide masking diagram with the shipment; verbal description is not acceptable for this part.</li> <li>• Confirm vendor capacity at order acceptance — 5-day turn is standard but lot minimums may shift schedule.</li> <li>• Require certificate of compliance with each lot.</li> </ul>					

OP 050		Final Inspection		CMM · BORE GAGE · SURFACE COMPARATOR	
<b>SETUP</b> <b>0.4 hr</b> CMM program load	<b>INSPECTION</b> <b>15 min</b> per piece, post-coat	<b>SAMPLE PLAN</b> <b>100%</b> all critical features	<b>DOCUMENTATION</b> <b>FAI + CoC</b> AS9102 format if required		
<b>INSPECTION SCOPE</b> <ul style="list-style-type: none"> <li>• Cartridge bore diameter and surface finish: pin gage and surface comparator at three depths</li> <li>• O-ring groove: pin gage diameter, depth, and width</li> <li>• All port spotface diameters and depths: CMM</li> <li>• All threaded port pitch diameters: thread plug gage go/no-go</li> <li>• Overall dimensions L, W, H: micrometer, three locations each</li> <li>• Mounting hole and dowel pin hole positions: CMM</li> <li>• Flatness A1 and A2, parallelism A1 to A2: CMM</li> <li>• Visual: black oxide coverage, edge breaks, stamping legibility</li> </ul>					
<b>DOCUMENTATION</b> First-article inspection report in AS9102 format if specified by the customer; otherwise standard internal inspection record. Certificate of conformance with each shipment.					

Continued on next page — Op 060 (Packaging & Ship).

OP 060		Packaging & Ship		SHIP · LOT-LEVEL OPERATION	
<p>HANDLING</p> <p><b>0.4 hr</b></p> <p>lot, all pieces</p>	<p>PACKAGING</p> <p><b>\$60</b></p> <p>individual + lot box</p>	<p>DOCUMENTATION</p> <p><b>Included</b></p> <p>CoC, FAI, material cert</p>	<p>FREIGHT</p> <p><b>Quote</b></p> <p>customer carrier preferred</p>		
<p><b>PACKAGING</b></p> <p>Each part individually wrapped in VCI paper, placed in formed foam insert, in a single cardboard shipping box. Documentation packet (CoC, FAI report, material certification, masking diagram from black oxide vendor) included in the shipping box. Customer-supplied label format if specified; otherwise standard Stintera label with part number, revision, quantity, and lot serial.</p> <p><b>FREIGHT</b></p> <p>Customer-preferred carrier (UPS, FedEx, freight) on customer account if provided; otherwise quoted at lot pickup.</p>					

# Risk Assessment

Quantified risk on a 1-10 scale, factor-by-factor. Drives the risk reserve in pricing detail.

## 6/10

ELEVATED

Risk on this part is driven primarily by cross-drilled passage intersection deburring and the cartridge bore tolerance in 4140 prehard. Neither is exotic, but both reduce first-pass yield and demand inspection rigor. A 6% risk reserve is built into the target pricing.

The most likely failure mode is a part that passes dimensional inspection but fails pressure test due to an internal intersection burr. Recommend customer agree to acceptance criterion before lot release.

## RISK FACTORS

FACTOR	SCORE	DRIVER
● Material behavior	7	4140 prehard at 28-32 HRC. Tool wear is real; cycle time creep across the lot if not actively managed.
● Cross-drill intersections	7	Internal burr at passage intersection is the dominant defect mode. Inspection cannot easily verify; pressure test catches it after the fact.
● Tolerance stack	5	Cartridge bore at +0.001/-0.000 plus 32 µin Ra. Achievable with 3-step bore process; first-piece verification required.
● Outside processing distortion	4	Black oxide at this thickness has minimal distortion risk on a part of this mass. Dimensions check pre- and post-coat.
● Workholding	3	Standard vise with soft jaws. Both setups straightforward.
● Inspection difficulty	3	All dimensions accessible with standard CMM and bore gage. Pressure-test fixture required if specified.

## MITIGATION BUILT INTO QUOTE

(1) Risk reserve at 6% on subtotal. (2) Three-step cartridge bore programmed as separate cycles, not single-tool ream. (3) Long-reach dowel reamer feeds reduced 40% per DFM check 3.6E. (4) Flag EF-03 raises intersection deburring to customer before lot release.

# Assumptions & Exclusions

Scope boundaries for this quote. What is included, what is not, and what assumptions drive the pricing.

## INCLUDED IN QUOTE

Raw material (4140 prehard plate, mill-certified). All programming, setup, and run time for both mill operations. All outside processing (black oxide per MIL-DTL-13924 Class 1 with masking for tapped ports). Final inspection on 100% of features (dimensional, threaded, surface finish). Certificate of conformance with each lot. First-article inspection report. Standard packaging (VCI paper, foam insert, cardboard box). Documentation packet with all certifications.

## EXCLUDED FROM QUOTE

The following are not included in the quoted price and will be quoted separately if required by the customer:

**Pressure testing.** Hydrostatic or pneumatic pressure testing is not included. If required by the customer, a pressure-test fixture must be designed and built; estimated impact is a one-time fixture cost of \$1,200 plus \$25 per piece for testing.

**Abrasive flow machining (AFM).** Intersection deburring on internal passages by AFM is not included pending resolution of Flag EF-03. Estimated impact if required is +\$35 per piece.

**AS9102 first-article documentation.** The base quote includes an internal-format first-article inspection report. If AS9102 form-set is required, additional documentation labor is +\$180 per lot.

**Freight to customer destination.** Freight is not included. Customer-preferred carrier on customer account is preferred; if Stintera arranges freight, it is invoiced at cost plus 10% handling.

**Pre-production samples beyond first-article.** If the customer requires production-intent samples for qualification before the full lot is released, those pieces are quoted separately at the per-piece rate plus a \$400 lot-setup charge.

**Design changes after quote acceptance.** Revisions to the drawing after the quote is accepted will trigger a revision-impact assessment and may revise pricing, lead time, or both.

## KEY ASSUMPTIONS

**Engineering flags resolved within 5 business days** of quote acceptance. Lead time of 4 weeks ARO is measured from flag resolution, not from PO date. Each week of delay in flag resolution shifts delivery proportionally.

**Material availability.** 4140 prehard plate at 2.25" thickness is assumed in stock at standard suppliers. If material must be sourced specially, lead time may extend by 1-2 weeks and material cost may revise.

**Outside processor capacity.** Black oxide turnaround of 5 days is based on standard vendor capacity at time of quote. Vendor schedule confirmation occurs at PO acceptance.

**Drawing governs.** If the 3D model and 2D drawing conflict on any feature, the 2D drawing controls unless the customer specifies otherwise in writing. Engineering flags identified during DFM review (Section 03) reflect this hierarchy.

# Terms & Conditions

Scope of this work product, responsibilities, and limitations of liability.

## SCOPE OF THIS DOCUMENT

This document is a quote analysis package prepared by Stintera LLC for the recipient identified on the cover page. It reflects our analysis of the drawings, models, and specifications provided to us at the time of preparation. It is intended for the recipient's internal use as a basis for developing the recipient's own customer-facing quotation and commercial terms. Stintera LLC is not a manufacturer and does not produce parts.

## WHAT WE ARE RESPONSIBLE FOR

Stintera is responsible for the analytical content of this document: the DFM screening performed against our documented criteria, the identification of engineering flags discovered during review, the time and cost estimates produced from the rates and standards documented herein, and the routing structure and risk assessment provided. Our responsibility is bounded by the quality and completeness of the inputs we received and the scope of analysis we performed.

## WHAT WE ARE NOT RESPONSIBLE FOR

Stintera does not manufacture the part, does not communicate with the recipient's customer, and does not control any aspect of production. Stintera makes no representation and accepts no liability for:

- Manufacturing lead times, which depend on the recipient's capacity, scheduling, and order queue at time of production.
- Material cost fluctuations between the date of this analysis and the date of actual material procurement.
- Outside processing vendor availability, capacity, pricing, or quality.
- The accuracy or completeness of the drawings, models, or specifications provided to us; we analyze what we receive and do not validate against the end customer's design intent.
- How the recipient interprets, modifies, edits, or applies the contents of this document.
- The final price the recipient quotes to the recipient's customer, or any commercial terms, warranties, or lead-time commitments the recipient offers downstream.
- Engineering flag resolutions; these must be resolved between the recipient and the recipient's customer before production release.
- Whether the recipient wins, loses, or declines to bid the work.
- Any outcomes from manufacturing the part, including dimensional non-conformance, scrap, rework, or warranty claims.

## RECIPIENT'S OBLIGATIONS BEFORE USE

Before using this analysis to develop a customer-facing quote, the recipient is expected to: validate dimensions, tolerances, and feature interpretations against the recipient's own reading of the drawings; confirm that material pricing, outside processing rates, and vendor lead times in this analysis reflect current conditions at the recipient's shop; review the accompanying Excel workbook formulas and confirm that the cost structure matches the recipient's actual rates and overheads; apply the recipient's own margin, risk reserves, and pricing strategy; and replace this Terms & Conditions section with the recipient's own customer-facing commercial terms before sending any rebranded document to the recipient's customer. The recipient is responsible for the document and the work once it leaves Stintera's control.

---

**INTELLECTUAL PROPERTY & CONFIDENTIALITY**

---

This work product is licensed to the recipient for use in quoting and bidding the part referenced on the cover. The recipient may rebrand, edit, and incorporate the contents into customer-facing documents. Stintera retains no rights to drawings, models, or specifications provided by the recipient; source files are deleted from our systems within thirty (30) days of delivery unless the recipient requests retention in writing. This document and the underlying analysis are confidential between Stintera and the recipient, governed by any mutual NDA in effect between the parties.

---

**LIMITATION OF LIABILITY**

---

Stintera's total liability arising from or related to this quote analysis package, in contract, tort, or otherwise, is limited to the fee paid by the recipient for the analysis. Stintera is not liable for incidental, consequential, special, indirect, or punitive damages of any kind, including lost profits, lost opportunity, business interruption, or any losses arising from the recipient's use of, or any third party's use of, the contents of this document. The recipient acknowledges that pricing decisions, manufacturing decisions, and customer commitments are the recipient's sole responsibility.

---

**GOVERNING LAW**

---

This engagement is governed by the laws of the State of Illinois without regard to conflict-of-laws principles. Any dispute is to be resolved in the state or federal courts located in Winnebago County, Illinois.

---

**STINTERA LLC** · Midwest, USA · [daniel@stintera.com](mailto:daniel@stintera.com)  
Document Q-2026-0001 · Revision B · Issued May 13, 2026 · End of Document