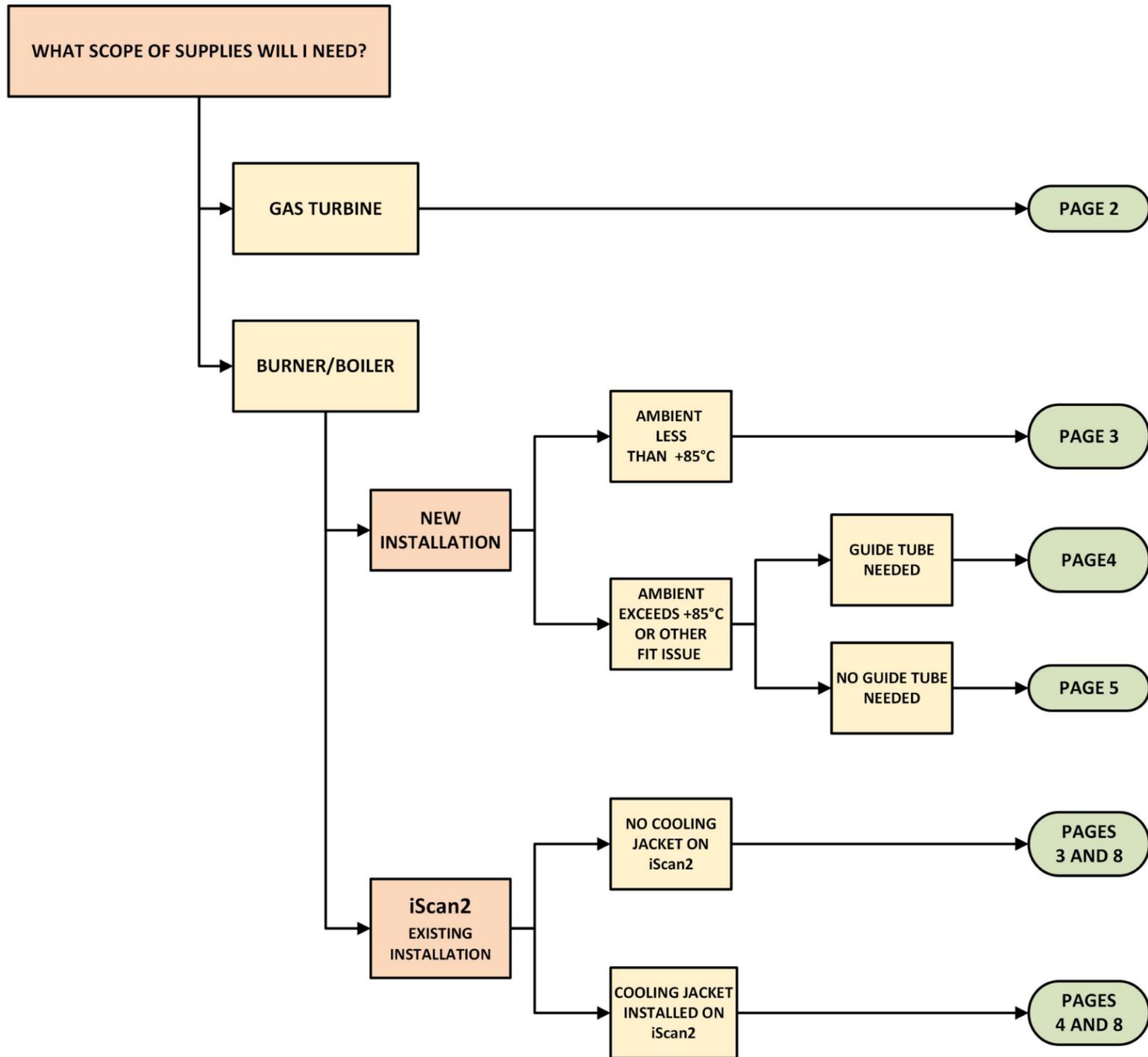


APPLICATION GUIDE: **iScan3+** FLAME SCANNER FIBER OPTICS "iScan3+ FOX"



SCOPES OF SUPPLY:

PAGE 2: GAS TURBINES

IN GAS TURBINE APPLICATIONS, THE iScan3+ CANNOT BE MOUNTED DIRECTLY TO THE ENGINE DUE TO TEMPERATURE, PRESSURE, AND VIBRATION. A FOX ASSEMBLY IS CONNECTED TO A PRESSURE-SEALED ENGINE ADAPTOR WHICH SECURES THE FOX ASSEMBLY TO THE ENGINE AND ALLOWS AN iScan3+ TO BE INSTALLED IN A LESS HARSH ENVIRONMENT.

BURNER/BOILER WITH GUIDE TUBES

GUIDE TUBES ARE INSTALLED AT THE BURNER FRONT AND INSERTED INTO THE SYSTEM. THESE ALLOW COOLING AIR TO COOL THE INTERNAL FOX ASSEMBLY.

PAGES 3: DIRECT MOUNT

IN SOME GUIDE TUBE APPLICATIONS, THE FOX ASSEMBLY MOUNTS THE SCANNER DIRECTLY AT THE BURNER FRONT.

PAGES 4: REMOTE MOUNT

IN SOME GUIDE TUBE APPLICATIONS, THE BURNER FRONT IS TOO HOT FOR AN iScan3+ AND A FOX ASSEMBLY IS INSTALLED THAT ALLOWS FOR THE iScan3+ TO BE MOUNTED AWAY FROM THE BURNER FRONT.

PAGE 5: BURNER/BOILER, HIGH TEMPERATURE

IN SOME BURNER/BOILER APPLICATIONS, THE BURNER FRONT IS TOO HOT FOR AN iScan3+ TO BE INSTALLED. A FOX ASSEMBLY IS CONNECTED TO A SEALED BURNER ADAPTOR WHICH SECURES THE FOX ASSEMBLY TO THE BURNER FRONT AND ALLOWS AN iScan3+ TO BE INSTALLED IN A COOLER AREA.

CONFIGURATION INSTRUCTIONS:

PAGE 6: iScan3+ BURNER/BOILER GUIDE TUBE

PAGE 7: iScan3+ BURNER/BOILER DIRECT MOUNT FOX ASSEMBLY

PAGE 8: iScan3+ BURNER/BOILER REMOTE MOUNT FOX ASSEMBLY

PAGE 9: iScan2 RETROFITS

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GENERAL ARRANGEMENT DRAWING

iScan3+ FOX APPLICATION GUIDE

DOC. NO. iScan3+ FOX APPLICATION GUIDE

REVISION DATE: 2025-Nov-14

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GENERAL ARRANGEMENT DRAWING

PAGE 1 OF 9

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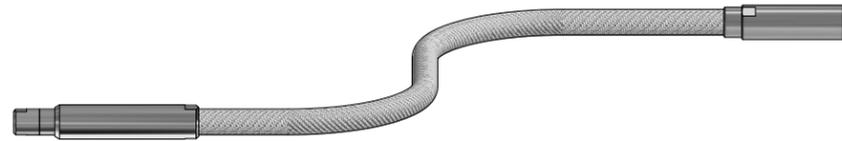
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GAS TURBINE, REMOTE MOUNT

TYPICAL SCOPE OF SUPPLIES

DESCRIPTION	PART NUMBER	QTY
iScan3+	04005200	1
SCANNER HARNESS	03005000	1
iScan3+ FOX ASSEMBLY	04005400	1
ENGINE ADAPTOR, HIGH PRESSURE	04005401	1
SCANNER MOUNT	04005402	1

**iScan3+ FOX ASSEMBLY
PN: 04005400**

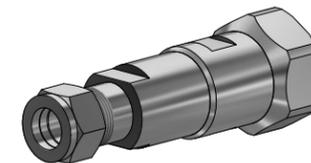


CUSTOMER SCOPE
3/4 NPT CONNECTION
ON ENGINE

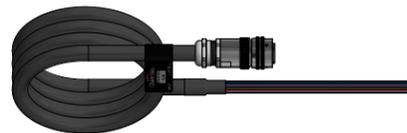
TYPICAL
13 in [328 mm]



**ENGINE ADAPTOR
PN: 04005401**



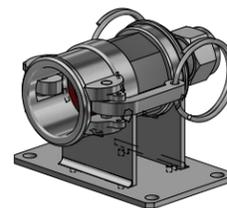
**SCANNER HARNESS
PN: 03005000**



**iScan3+
PN: 04005200**



**SCANNER MOUNT
PN: 04005402**



NOTES:
1. SEE INDIVIDUAL DRAWINGS FOR COMPLETE DETAILS AND SPECIFICATIONS.
2. APPEARANCES MAY VARY.

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GENERAL ARRANGEMENT DRAWING

GENERAL ARRANGEMENT DRAWING

PAGE 2 OF 9

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iScan3+ FOX APPLICATION GUIDE
GT, REMOTE MOUNT

DOC. NO. iScan3+ FOX APPLICATION GUIDE

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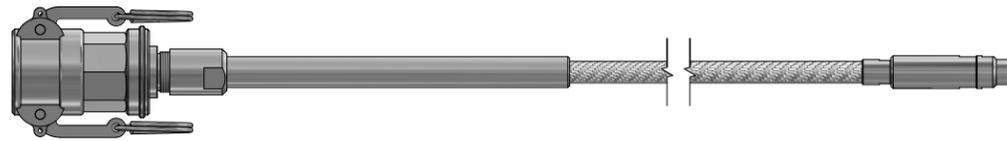
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BURNER/BOILER, DIRECT MOUNT WITH GUIDE TUBE

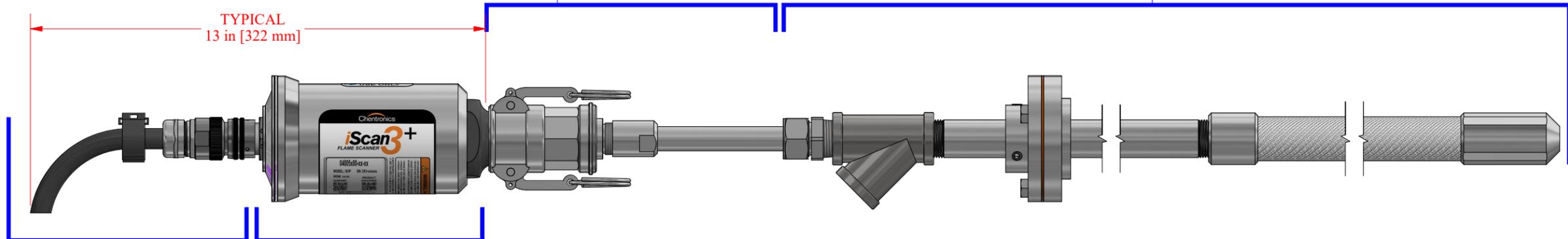
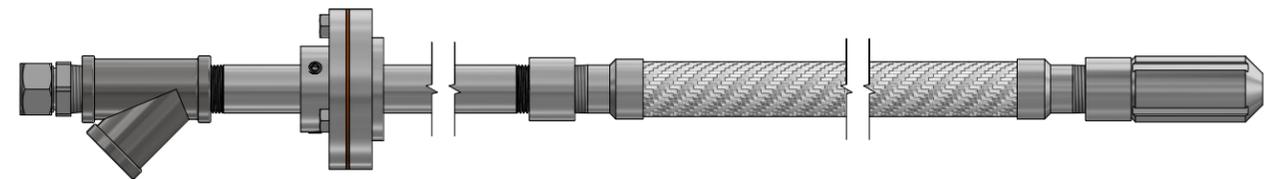
TYPICAL SCOPE OF SUPPLIES

DESCRIPTION	PART NUMBER	QTY
iScan3+	04005200	1
SCANNER HARNESS	03005000	1
iScan3+ FOX ASSEMBLY	04005405	1
GUIDE TUBE	04005406	1

iScan3+ FOX ASSEMBLY
PN: 04005405



GUIDE TUBE
PN: 04005406



SCANNER HARNESS
PN: 03005000



iScan3+
PN: 04005200



NOTES:

1. SEE NEXT PAGE FOR LENGTH CONFIGURATIONS.
2. FOR *iScan2* FOX RETROFITS, A NEW GUIDE TUBE MAY NOT BE REQUIRED. SEE THE *iScan2* RETROFIT PAGE FOR MORE INFORMATION.
3. SEE INDIVIDUAL DRAWINGS FOR COMPLETE DETAILS AND SPECIFICATIONS.
4. APPEARANCES MAY VARY.

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PAGE 3 OF 9

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iScan3+ FOX APPLICATION GUIDE
BB, DIRECT MOUNT WITH GUIDE TUBE

DOC. NO. iScan3+ FOX APPLICATION GUIDE

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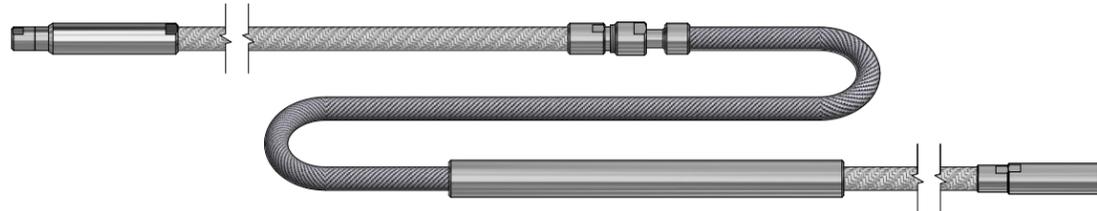
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BURNER/BOILER, REMOTE MOUNT WITH GUIDE TUBE

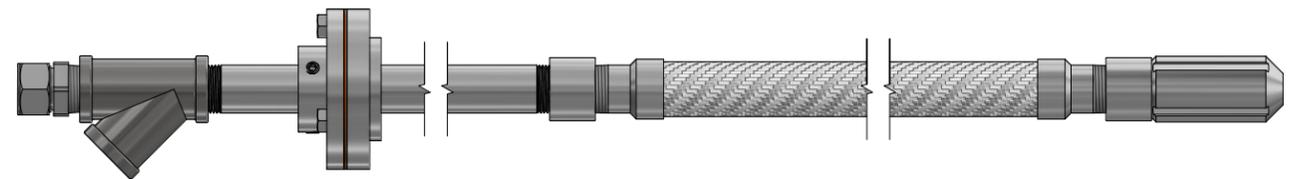
TYPICAL SCOPE OF SUPPLIES

DESCRIPTION	PART NUMBER	QTY
iScan3+	04005200	1
SCANNER HARNESS	03005000	1
iScan3+ FOX ASSEMBLY	04005410	1
GUIDE TUBE	04005406	1
SCANNER MOUNT	04005402	1

**iScan3+ FOX ASSEMBLY
PN: 04005410**



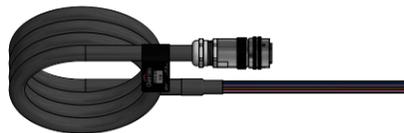
**GUIDE TUBE
PN: 04005406**



TYPICAL
13 in [323 mm]



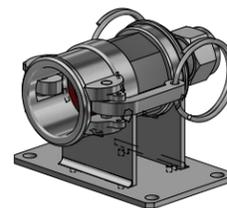
**SCANNER HARNESS
PN: 03005000**



**iScan3+
PN: 04005200**



**SCANNER MOUNT
PN: 04005402**



NOTES:

1. SEE NEXT PAGE FOR LENGTH CONFIGURATIONS.
2. FOR *iScan2* FOX RETROFITS, A NEW GUIDE TUBE MAY NOT BE REQUIRED. SEE THE *iScan2* RETROFIT PAGE FOR MORE INFORMATION.
3. SEE INDIVIDUAL DRAWINGS FOR COMPLETE DETAILS AND SPECIFICATIONS.
4. APPEARANCES MAY VARY.

GENERAL ARRANGEMENT DRAWING

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PAGE 4 OF 9

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**iScan3+ FOX APPLICATION GUIDE
BB, REMOTE MOUNT WITH GUIDE TUBE**

DOC. NO. iScan3+ FOX APPLICATION GUIDE

REVISION DATE: 2025-Nov-14

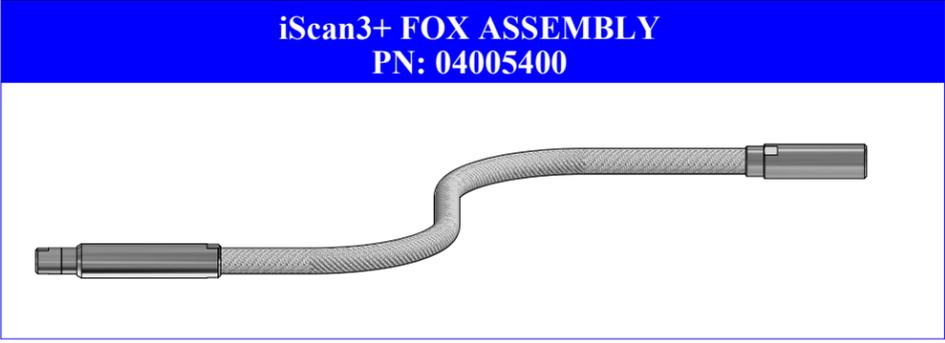
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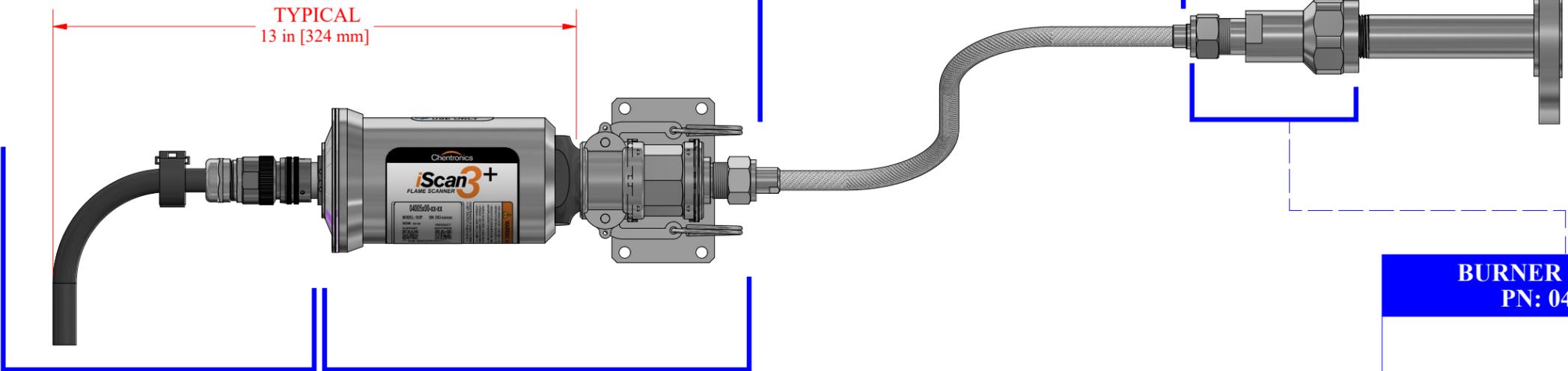
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BURNER/BOILER, HIGH TEMPERATURE

TYPICAL SCOPE OF SUPPLIES		
DESCRIPTION	PART NUMBER	QTY
iScan3+	04005200	1
SCANNER HARNESS	03005000	1
iScan3+ FOX ASSEMBLY	04005400	1
BURNER ADAPTOR, SEALED	04005412	1
SCANNER MOUNT	04005402	1



CUSTOMER SCOPE
3/4 NPT CONNECTION
ON BURNERFRONT



NOTES:
1. SEE INDIVIDUAL DRAWINGS FOR COMPLETE DETAILS AND SPECIFICATIONS.
2. APPEARANCES MAY VARY.

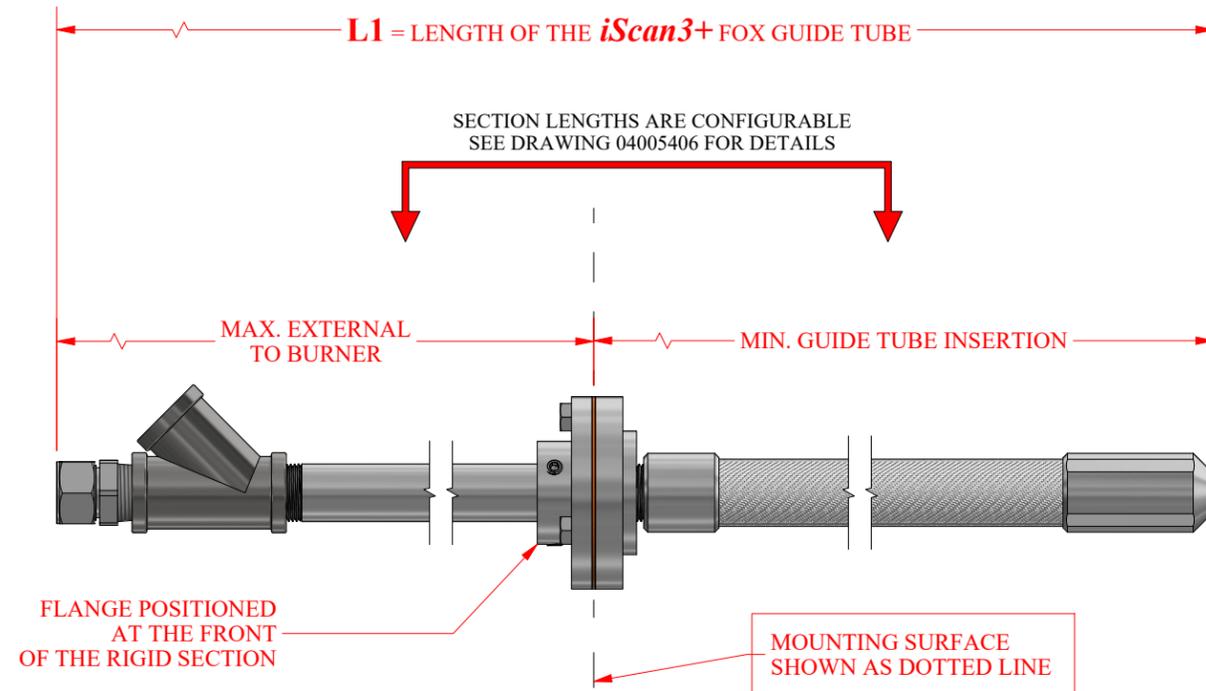
iScan3+ FOX GUIDE TUBE LENGTH CONFIGURATION

THE OVERALL LENGTH OF THE *iScan3+ GUIDE TUBE* MUST BE DETERMINED BEFORE THE LENGTH OF AN *Scan3+ FOX ASSEMBLY* MAY BE CHOSEN.

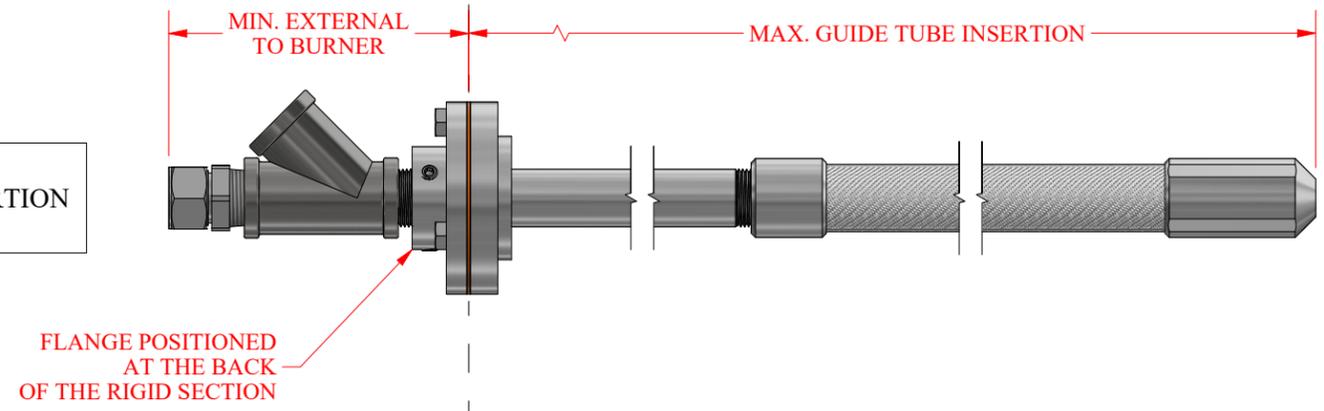
*DRAWING NEEDED: 04005406

- THE EXACT GUIDE TUBE LENGTH WILL VARY BY APPLICATION.
- FLANGE TYPE WILL VARY BY APPLICATION.
- FLANGE POSITION ON THE RIGID SECTION WILL DETERMINE THE DISTANCE A GUIDE TUBE WILL INSERT INTO THE BURNER.
- FLANGE POSITION IS TYPICALLY ADJUSTABLE AND IS PARTIALLY DEPENDENT ON THE CONFIGURED RIGID SECTION LENGTH.
- MINIMUM AND MAXIMUM FLANGE POSITIONS SHOULD BE CONSIDERED, AS SHOWN IN THE PICTURES TO THE RIGHT.
- THE OVERALL LENGTH, **L1**, WILL ULTIMATELY DRIVE THE LENGTH OF THE FOX ASSEMBLY.

FLANGE TOWARD FRONT:
MINIMUM GUIDE TUBE INSERTION
MAXIMUM EXTERNAL



FLANGE TOWARD BACK:
MAXIMUM GUIDE TUBE INSERTION
MINIMUM EXTERNAL



GENERAL ARRANGEMENT DRAWING

GENERAL ARRANGEMENT DRAWING

GENERAL ARRANGEMENT DRAWING

PAGE 6 OF 9

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iScan3+ FOX APPLICATION GUIDE
iScan2 RETROFITS

DOC. NO. iScan3+ FOX APPLICATION GUIDE

REVISION DATE: 2025-Nov-14

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BURNER/BOILER DIRECT MOUNT WITH GUIDE TUBE LENGTH CONFIGURATION

HOW TO DETERMINE THE CONFIGURED LENGTH OF A BURNER/BOILER DIRECT MOUNT *iScan3+* FOX ASSEMBLY FOR USE IN AN *iScan3+* GUIDE TUBE:

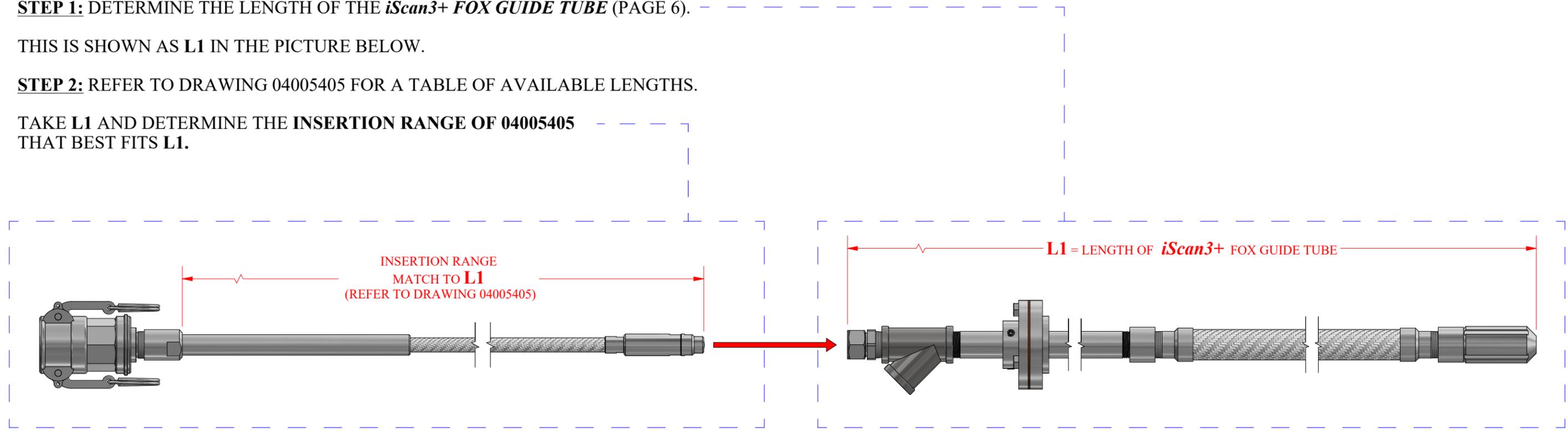
*DRAWINGS NEEDED: 04005405 AND 04005406

STEP 1: DETERMINE THE LENGTH OF THE *iScan3+* FOX GUIDE TUBE (PAGE 6).

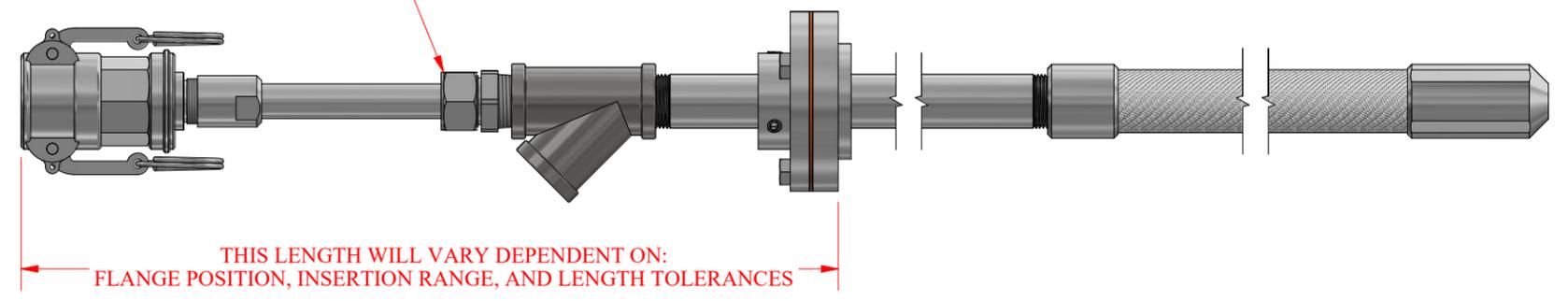
THIS IS SHOWN AS **L1** IN THE PICTURE BELOW.

STEP 2: REFER TO DRAWING 04005405 FOR A TABLE OF AVAILABLE LENGTHS.

TAKE **L1** AND DETERMINE THE **INSERTION RANGE OF 04005405 THAT BEST FITS L1.**



THIS RIGID SECTION OF 04005405 ATTACHES TO THE GUIDE TUBE VIA COMPRESSION FITTING



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iScan3+ FOX APPLICATION GUIDE
iScan2 RETROFITS
DOC. NO. iScan3+ FOX APPLICATION GUIDE REVISION DATE: 2025-Nov-14 REV. BY: EMK

BURNER/BOILER REMOTE MOUNT WITH GUIDE TUBE LENGTH CONFIGURATION

HOW TO DETERMINE THE CONFIGURED LENGTH OF A BURNER/BOILER REMOTE MOUNT *iScan3+* FOX ASSEMBLY FOR USE IN AN *iScan3+* GUIDE TUBE.

*DRAWINGS NEEDED: 04005402, 04005406, AND 04005410

STEP 1: DETERMINE THE LENGTH OF THE *iScan3+* FOX GUIDE TUBE (PAGE 6).

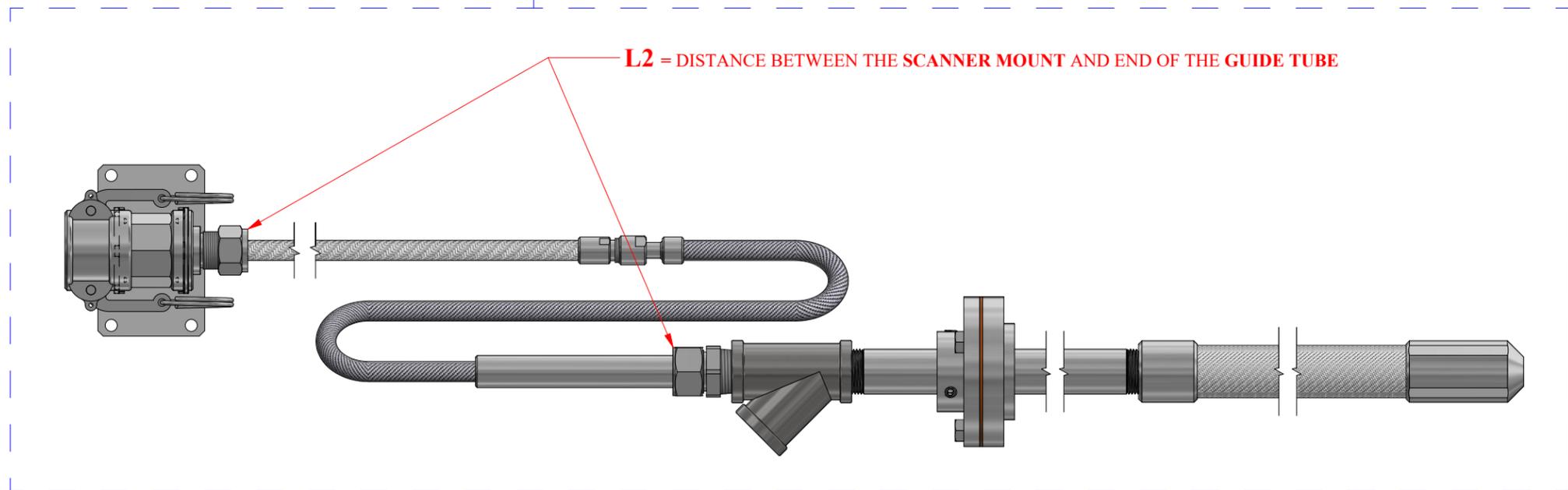
THIS IS SHOWN AS **L1** IN THE PICTURE TO THE RIGHT.

STEP 2: DETERMINE THE DISTANCE BETWEEN THE LOCATION OF THE SCANNER MOUNT AND THE GUIDE TUBE.

CONSIDER THIS MEASUREMENT AS **L2**.

STEP 3: USE **L1** TO DETERMINE THE INSERTION LENGTH OF THE 04005410.

STEP 4: CHOOSE AN AVAILABLE OVERALL LENGTH OF 04005410 THAT BEST FITS THE INSTALLATION.



iScan2 FOX GUIDE TUBE RETROFITS

HOW TO RETROFIT AN *iScan2* GUIDE TUBE FOR USE WITH AN *iScan3+* FOX ASSEMBLY:

*RETROFITTING WILL REQUIRE A COMPRESSION FITTING, PART NUMBER 02000275.

STEP 1: REMOVE ITEMS IDENTIFIED IN THE BLUE RECTANGLE IN THE PICTURE TO THE RIGHT.

THESE PARTS ARE NO LONGER NEEDED.

STEP 2: INSTALL THE COMPRESSION FITTING, AS DISPLAYED IN THE BLUE CIRCLE IN THE PICTURE TO THE RIGHT. INSTALL PER STANDARD NPT GUIDELINES.

THE GUIDE TUBE IS NOW RETROFITTED.

HOW TO DETERMINE THE CONFIGURED LENGTH OF AN *iScan3+* FOX ASSEMBLY FOR USE IN AN EXISTING *iScan2* GUIDE TUBE:

*THIS CALCULATION MAY BE MADE BEFORE THE *iScan2* FOX GUIDE TUBE HAS BEEN RETROFITTED.

STEP 1: MEASURE THE LENGTH OF THE EXISTING *iScan2* FOX GUIDE TUBE FROM THE TIP TO THE WYE FITTING.

THIS IS SHOWN AS **L0** IN THE PICTURE TO THE RIGHT.

STEP 2: USE **L0** TO DETERMINE THE LENGTH OF A **RETROFITTED *iScan2* FOX GUIDE TUBE**.

L1 = RETROFITTED *iScan2* FOX GUIDE TUBE LENGTH

$$L1 = L0 + 1.5 \text{ in}$$

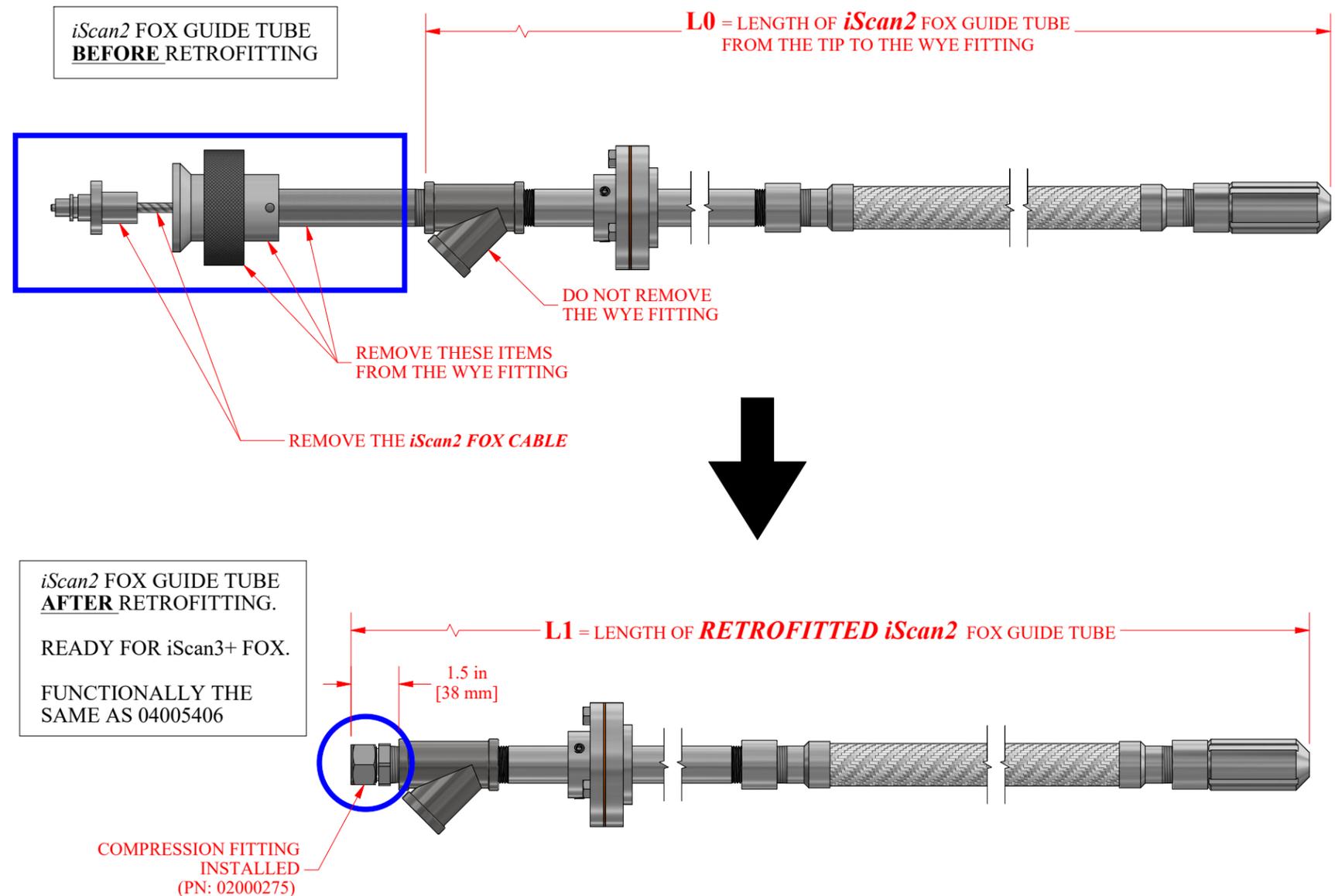
STEP 3: FOLLOW THE CONFIGURATION INSTRUCTIONS EARLIER IN THIS DOCUMENT.

FOR DIRECT MOUNT: SEE PAGE 7

FOR REMOTE MOUNT: SEE PAGE 8

WHEN RETROFITTING AN EXISTING *iScan2* FOX INSTALLATION, THE EXISTING *iScan2* FOX GUIDE TUBE CAN BE REUSED, HOWEVER IT MUST BE MODIFIED AS PER THE INSTRUCTIONS BELOW.

ONCE THE GUIDE TUBE HAS BEEN RETROFITTED, THE SCOPE OF SUPPLIES WILL BE THE SAME AS EITHER THE BURNER/BOILER DIRECT MOUNT (PAGE 3) OR REMOTE MOUNT (PAGE 4) APPLICATIONS.



GENERAL ARRANGEMENT DRAWING

GENERAL ARRANGEMENT DRAWING

GENERAL ARRANGEMENT DRAWING

PAGE 9 OF 9

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iScan3+ FOX APPLICATION GUIDE
iScan2 RETROFITS

DOC. NO. iScan3+ FOX APPLICATION GUIDE

REVISION DATE: 2025-Nov-14

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