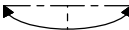
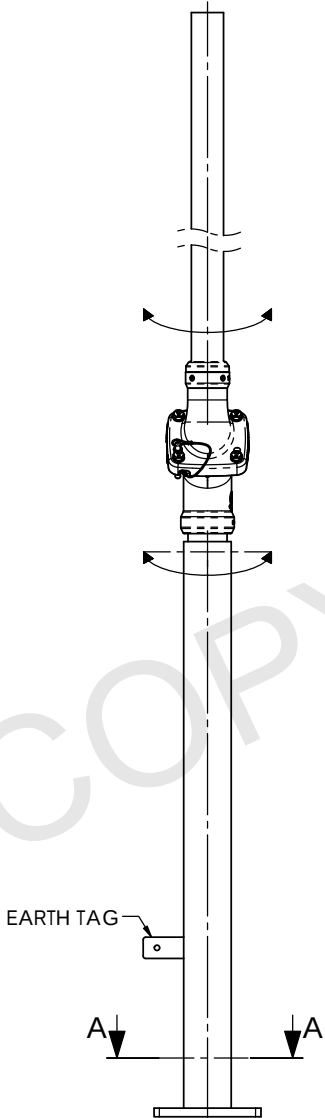
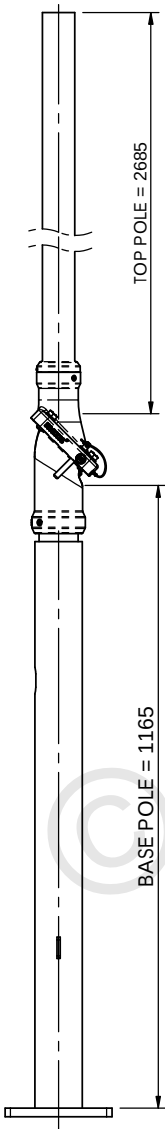
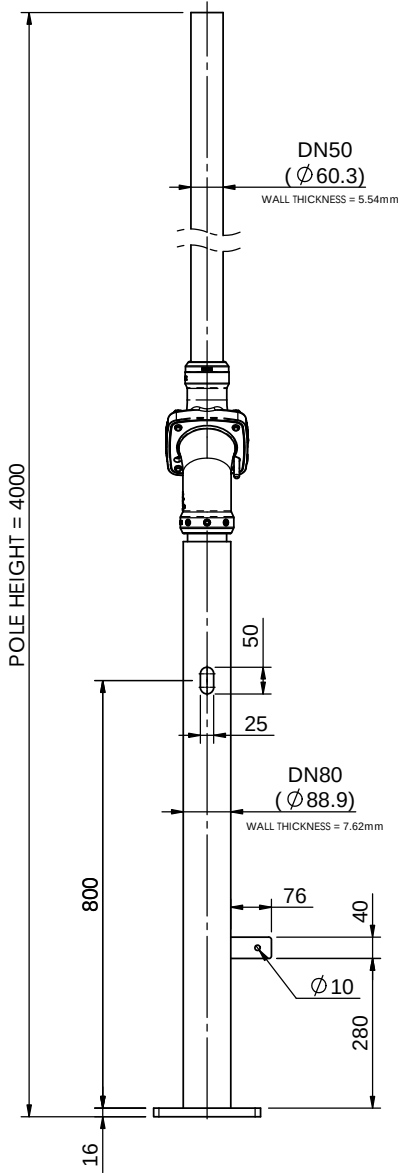


· Project Name: **Chevron Gorgon**
 · Project Location : **Gorgon**
 · Client Name: **Steve Lyons - Windssocks Australia**

ITEM No.	QTY.	PartNoAus	DESCRIPTION	CODE	kg/ea
1	1	M-CHS-T502865P-HG-TQ3869	DN50 (Ø60.3mm) TOP SECTION - PLAIN	-	20.0
2	1	R1-M2-5076-HG	SWIVELPOLE™ MAXIST™ - M2 JOINT	-	7.3
3	1	CHS-B801150PS-FBP-002-HG	DN80 (Ø88.9mm) BASE SECTION - 1150mm - SLOTTED	SP124/SP125	22.6

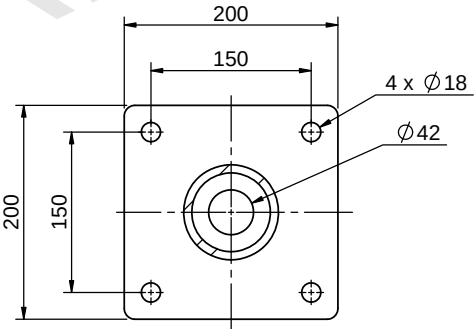
 = CAN BE ROTATED 360-DEGREES TO REQUIRED ORIENTATION



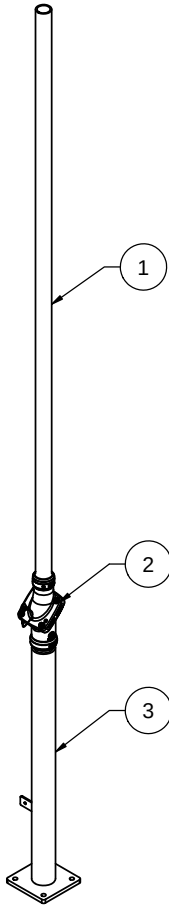
PART NUMBER = F11-4000-P-HG-TQ3869

MATERIAL = Steel - HDG Finish OR EQUIVALENT

WEIGHT = 49.9 kg



BASE PLATE DETAIL
SECTION A-A



Scan Code with
 QR Reader app for more
 Swivelpole™ Light Mount
 Product Information

PATENTED
PRODUCTS

www.swivelpole.com

Swivelpole

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ALL DIMENSIONS ARE IN MILLIMETERS	PROJECT	SERIES / CODE	PART NUMBER
	SWIVELPOLE™	F	F11-4000-P-HG-TQ3869
DRAWN BY	KM	DATE	22/07/26
CHECKED BY	AI	DATE	22/07/26
APPROVED BY	RP	DATE	22/07/26
THIRD ANGLE PROJECTION		SCALE	1:2.5
		DRG No	C-AU-F11-4000-P-HG-TQ3869
		REV	0
			A3

Swivelpole™
 DN80 (Ø88.9) Base Pole & CUSTOM DN50 (Ø60.3) Top Pole
 Client Detail

POLE DESIGN CHECK - SUMMARY OF RESULTS

Swivelpole™ Type
Project No.
Date

F11-4000-P/PS-HG-TQ3869
TQ3869 REVIEW - 350mm Windsack
30/07/2026

Material Type

Mild Steel

The adequacy of the guardrail and supporting structure must be verified by a site approved engineer.

Wind Load

Wind Region
Installed Height
Design Wind Speed - **Ultimate**
Design Wind Pressure: **Ultimate**

	D	m
h	10	m
$V_{des,ult}$	87	m/s
p_u	4.50	kPa

Swivelpole Group Pty Ltd and or Exemplar Products Pty Ltd, subsidiaries and related entities ("Swivelpole") **will accept no responsibility** for failure due to inadequacy of the supporting structure or guardrail to which the Maxis™ is mounted.

Pole Geometry

Top Pole

Pipe O.D.
Wall Thickness
Welded Sections
Yield Stress used in design
Member Moment Capacity

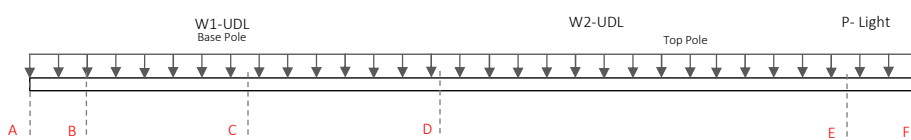
(D)	60.3	mm
(t)	5.54	mm
	N/A	
(f_y)	350	Mpa
(ΦM_t) *	5.25	kNm

Bottom Pole

Pipe O.D.
Wall Thickness
Welded Sections
Yield Stress used in design
Member Moment Capacity

(D)	88.9	mm
(t)	7.62	mm
	N/A	
(f_y)	350	Mpa
(ΦM_b) *	15.90	kNm

Load Inputs



Fixture EPA
Base Pole:
Top Pole:
Fixture
Fixture Outreach from Centre of Pole
Weight of Fixture

W1-UDL	0.19	m²
W2-UDL	0.33	kN/m
P-Light	0.29	kN/m
	0.86	kN
	1.50	m
	5.00	kg

Maximum Moment, Shear and Bracket Reactions

At Base Pole Base:

Member Moment Capacity:
Max. bending moment at point A
Max. shear at point A
Utilisation

(ΦM_b) *	15.90	kNm
(M_{Amax})	5.87	kNm
(V_{Amax})	2.07	kN
	37%	

Bending moment at point B (slot in pole)
Bending moment at point C (slot in pole)

M_B	5.48	kNm
M_C	4.61	kNm

CAPACITY CHECK - PASS
CAPACITY CHECK - PASS

PASS

At Top Pole Base (Joint):

Member Capacity:
Max. bending moment at point D
Max. shear at point D
Utilisation

(ΦM_t) *	5.25	kNm
(M_{Dmax})	3.60	kNm
(V_{Dmax})	1.67	kN
	69%	

Bending moment at point E (slot in pole)

M_E	N/A	kNm
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PASS

Additional Design Checks:

Base Plate Bolt Capacity Check (M16 - GR 8.8)
Base Plate Capacity Check
Weld Check - Base of Pole to Base Plate Connection
Weld Check - Base Pole to Spigot Connection

Utilisation	21%	PASS
	68%	PASS
	75%	PASS
	N/A	N/A



Wind Load - Design Sheet

				Job No.:	TQ3869	
Project:	Windsocks Australia Chevron Gorgon			Designer:	KM	
Subject:				Date:	28/07/2026	
				References: AS 1170.0 & AS1170.2 (Unless otherwise stated)		
Wind Region				AS 1170.2 - Table 3.1 (A & B)		
Importance Level				Ordinary Structures - AS 1170.0 - Clause 3.3 - Table 3.2 (NZ) & AMDT 5 - Clause F2 - Appendix F - Table F2 (AU) (AMDT = Ammendment)		
Design Life				AS 1170.0 - Sub-Clause 1.4.23 - Table 3.3 (NZ) & AMDT 5 - Clause F3 - Appendix F - Table F2 (AU)		
Annual Probability of Exceedance (Wind) - ULTIMATE				AS 1170.0 - Clause 3.4 - Table 3.2 (NZ) & AMDT 5 - Appendix F - Table F2 (AU)		
Annual Probability of Exceedance (Wind) - SERVICEABILITY				AS 1170.0 - Clause 3.4 - Table 3.2 (NZ) & AMDT 5 - Appendix F - Table F2 (AU)		
Regional Wind Speed (V _R)				AS 1170.2 - Table 3.1		
Serviceability Limit States				AS 1170.0 - Appendix C		
Ultimate Limit States				AS 1170.2 - Table 3.1		
Building Height						
Wind Direction Multipliers (Any Direction) - All Regions (A to D)				AS 1170.2 - Clause 3.3 - for all directions - AS 1170.2 - Sub-Clause 3.3.1 - Table 3.2 (A & B)		
Climate Change Multiplier				AS 1170.2-2021 - Clause 3.4 - Table 3.3		
Terrain Category - Ultimate				AS 1170.2 - Clause 4.2.1		
Terrain Category - Serviceabilty				AS 1170.2 - Clause 4.2.1		
Terrain / Height Multiplier - Ultimate				AS 1170.2 - Clause 4.2.2 - Table 4.1		
Terrain / Height Multiplier - Serviceability				AS 1170.2 - Clause 4.2.2 - Table 4.1		
Shielding Multiplier				AS 1170.2 - Clause 4.3.1 - Table 4.2		
Topographic Multiplier				AS 1170.2 - Clause 4.4.1		
Design Wind Speed				AS 1170.2 - Clause 2.2 & 2.3		
Serviceabilty						
Ultimate						
Design Wind Pressure:						
Density of Air				AS 1170.2 - Clause 2.4.1		
Design Wind Speed						
Aerodynamic Shape Factor				AS 1170.2 - Appendix E: Table E3 - Appendix F: Table F1		
Dynamic Response Factor				AS 1170.2 - Clause 6.1 (a)		
Design Wind Pressure: Serviceability				Remember C _{dyn} and C _{fig}		
Density of Air				AS 1170.2 - Clause 2.4.1		
Design Wind Speed						
Aerodynamic Shape Factor				AS 1170.2 - Appendix E - Table E3		
Dynamic Response Factor				AS 1170.2 - Clause 6.1 (a)		
Design Wind Pressure: Ultimate				Remember C _{dyn} and C _{fig}		
Ratio (p _s / p _u)						

PRELIMINARY DESIGN CHECK

Wind Loading & Surface Area Assessment — Structural Engineering Reference

ORDER / REF S7952	DATE 30 July 2026	DRAWING NO Prelim 1	CUSTOMER Chevron Australia	SITE Barrow Island, WA	WIND REGION Region D
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PRODUCT DETAILS — 4 M POLE ASSEMBLY

Product	Swivelling Pole Assembly — Swivelpole
Model / Order	F11-4000-P-HG-TQ3869 — 4000mm HG DN80 Base Plate & Custom DN50 Top Pole
Windsocks	1 × High Visibility Neon Anti-Static Windsock
Windsock Dimensions	1500mm (L) × 450mm (mouth) × 225mm (tail)
Material	High Visibility Neon Polyester 300D with Anti-Static Properties
Frames & Fittings	FR-06 450mm Dual Windsock Frame with one Windsock mounted, plus FR-04 DN50 Adaptor
Location	Barrow Island, Western Australia
Wind Region (AS/NZS 1170.2)	Region D

SURFACE AREA CALCULATION

PARAMETER	SYMBOL	VALUE	UNIT
Windsock mouth diameter	d	0.450	m
Mouth radius	r=d/2	0.225	m
Projected area — mounted Windsock	A=πr²	0.159	m²
Geometric projected area — Windsock	A	0.159	m²
Nominal EPA — Windsock (Cd = 2.0)	EPA= A×Cd	0.318	m²

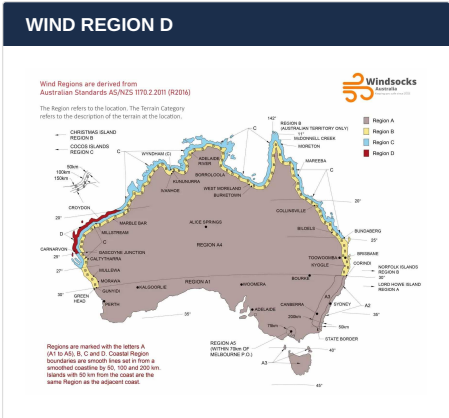
Additional Windsock EPA calculations (Cd = 2.0)

WINDSOCK	AREA CALCULATION	AREA	NOMINAL EPA = AREA × Cd
350 mm Windsock	π × (0.175)²	0.096 m²	0.192 m²
300 mm Windsock	π × (0.150)²	0.071 m²	0.141 m²

Note: Geometric projected area is based on the Windsock mouth openings only. The pole, Frames, bridle components and fittings are excluded and must be assessed by the structural engineer.

KEY ASSUMPTIONS

- Surface area is calculated using the single circular Windsock mouth opening (π × r²), representing the geometric projected area presented to the wind.
- Wind Region D applies to the Barrow Island site; terrain category, topographic multipliers and design wind actions are to be confirmed by the structural engineer.
- For this preliminary nominal EPA calculation, a drag coefficient (Cd) of 2.0 has been used, consistent with the value typically applied by Windsocks Australia's engineers. The appropriate drag coefficient for the final design must be confirmed by the structural engineer.
- The F11-4000-P-HG-TQ3869 is a 4 m Swivelpole assembly with a DN80 base plate and custom DN50 top pole. Pole, Frames, bridle components and fittings remain to be assessed by a registered structural engineer.
- All dimensions are nominal. Fabrication tolerances and material properties are subject to the relevant manufacturer specifications.



ABOUT THIS DOCUMENT

This preliminary design check is prepared by Windsocks Australia for reference purposes. Final structural certification must be completed by a registered structural engineer.

Windsocks Australia



General Arrangement
450 mm SS dual Windsock frame mounted on F7-M2-4000-HDG Swivelpole base mount
Reference image only. Schematic / subject to measurement confirmation against the approved site arrangement.

PROJECT AT A GLANCE	
4m	POLE HEIGHT
Windsocks	1
Mouth Diameter	450mm
Projected Area	0.159 m²
Approximate Weight	8 kg
Wind Region	Region D