

OILGEAR™

HYDRAULIC ROTARY ACTUATORS

SM SERIES

SM45
SM82
SM150



SM82 standard foot mount shown with optional dual counterbalance valves





WHO WE ARE

For more than a century, Oilgear has been devoted to developing innovative solutions that help our customers increase productivity. We are committed to creating sustainable products and services that benefit everyone. Our durable, reliable, and high-performance products make us a leader in the oil and gas, mobile, and industrial markets. Our engineering team is dedicated to providing economic and sustainable value to our customers. Our products and solutions are easy to maintain and are designed to deliver exceptional results on the job site. We are dedicated to providing customer support throughout the lifespan of our products, so you can count on us to deliver value every step of the way.



COLLABORATIVE APPROACH

Our engineering teams thrive on challenges and always enjoy collaborating closely with customers to develop innovative solutions that help businesses succeed in today's competitive environment. With their curious and forward-thinking approach, they constantly push the boundaries to deliver results that exceed expectations.

COMMITMENT TO QUALITY

At Oilgear, we prioritize quality in everything we do. Our products are designed to withstand the toughest environments on the planet, and we're proud to say that they meet ISO and API standards. We offer an extensive selection of hydraulic control products and systems and have earned certifications from respected institutions like ABS, DNV, and Lloyds.

COMMUNITY PARTNERSHIP

The Oilgear Company is committed to making a positive impact globally through innovation, dedication to our customers, and investment in our team members.

- **Supporting the community where we live and work**
- **Provide a safe work environment**
- **Taking steps to reduce our environmental footprint**

GLOBAL SERVICE NETWORK

No matter where you are, Oilgear can provide service to you.



| TRAVERSE CITY



| FREMONT



| LEEDS, U.K.



| KOREA



| CHINA



| SPAIN

THE OILGEAR DIFFERENCE

At Oilgear, we are driven by our guiding principles that align with our vision, values, and mission. These principles inspire us to work together as a team towards shared objectives. Our unwavering dedication to upholding these principles in every interaction with our colleagues and customers is the key to our success.

OUR VISION

To be the go-to partner for engineered hydraulic solutions and services within mission-critical markets and applications.

OUR MISSION

To move, elevate, protect and improve lives throughout the world and communities where we work and live.



OUR CORE VALUES

THE WORLD DEMANDS
OILGEAR

TRUST

- Make and keep commitments*
- Be credible, competent and transparent*

A close-up photograph of several hands of different skin tones clasped together in a circle, symbolizing teamwork and trust.

THE WORLD DEMANDS
OILGEAR

TEAM

- Win together*
- Service before self*
- Embrace diversity*

A close-up photograph of hands placing puzzle pieces together, symbolizing teamwork and collaboration.

THE WORLD DEMANDS
OILGEAR

EXCELLENCE

- Build a legacy of purpose and greatness*
- Innovation that is driven by unmet needs of our customers*
- Never settle for the status quo*

A graphic featuring a red gauge with a needle pointing upwards and an arrow, symbolizing excellence and progress.

A CLEVER SOLUTION FOR TODAY'S MODULAR DESIGNS

Optional counterbalance valves provide leak and drift free operation.

Equal displacement on either side of the piston. At full stroke the actuator uses much less volume of fluid than designers realize.

Standard or Special seals can accommodate various fluid requirements for special applications.

Composite bearing material assure quiet, smooth continuance of driving torque.

Bolt pattern can be customized to a machines specific requirements.

Composite bearing material also directs overhung loading from radial, axial or a combination of forces into the structure to act as a beam or powered hinge.

Full gear mesh immersed in oil assures long lasting operation even at full loading.

Shown in a standard foot mount configuration, hydraulic rotary actuators can be adaptive with custom mounting provisions.



Shown in a custom clevis configuration, hydraulic rotary actuators can be adaptive to customer-specific designs.

Oilgear's SM Series Hydraulic Rotary Actuators are designed to exceed OEM requirements. Available in standard and customized options.



■ HIGH POWER DENSITY

High drive and holding torque capabilities in a small, compact space claim.

■ LEAK AND DRIFT FREE OPERATION

Load holding valves (counterbalance valves) provide high holding torque to resist external loads.

■ ADAPTABLE GROUNDING TO MANY APPLICATIONS

Drop-in-ready installation is easy on existing or new applications.

Industries Served:



Construction



Waste Management



Utility



Agriculture



Military



Marine



Mining



Energy

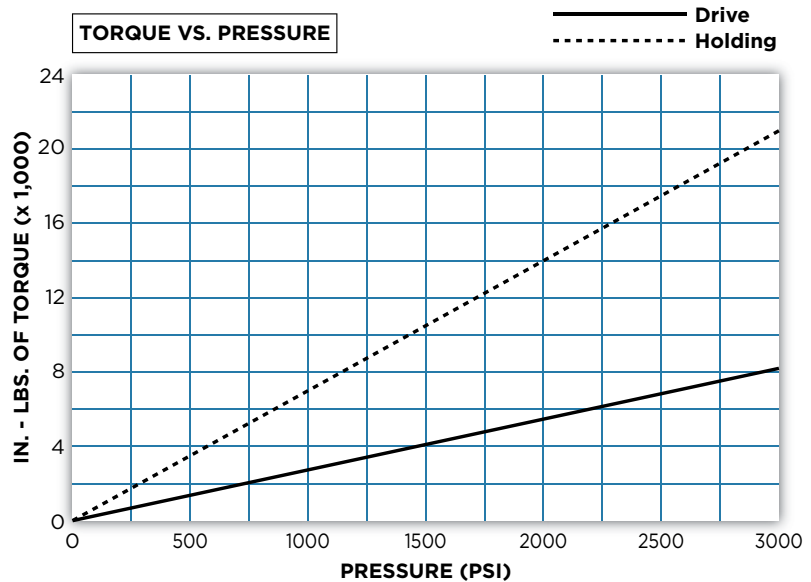
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TORQUE VERSUS HYDRAULIC PRESSURE

The graph* shows a linear relationship between pressure and torque. It also highlights that at a given pressure, holding torque is higher than driving torque.

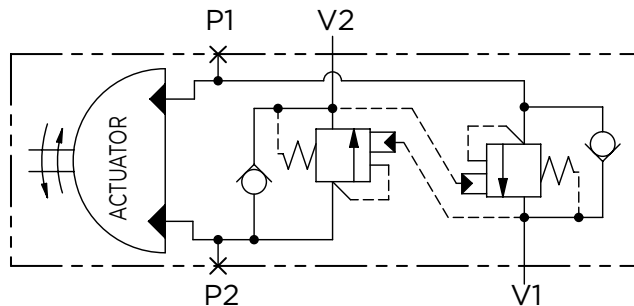
* The graph represents SM82 Torque vs. Pressure. Other actuators' graphs scale similar.



COUNTERBALANCE VALUE

WITH DUAL COUNTERBALANCE VALVES
PILOT RATIO - 3:1*
RELIEF PRESSURE: 3,200 ±300 PSI

* With optional ratios available upon request



MODEL ORDERING INFORMATION

UNIT NAME EXAMPLE SM — 82 — E — FT — 180 / 90 — S1 — C — H

BLOCK NUMBER 1 — 2 — 3 — 4 — 5 / 6 — 7 — 8 — 9

1 = UNIT
SM SM Rotary Actuator

4 = HOUSING CONFIGURATION
FT Foot Mount
C Custom Mount

7 = ENDCAP CONFIGURATION
Mounting holes in shaft flange with thru-hole for tie rod

2 = UNIT SIZE
45 4,500 in-lbs torque output
82 8,200 in-lbs torque output
150 15,000 in-lbs torque output

5 = STANDARD ROTATION
180 180 Degrees

8 = VALVE OPTIONS
C With Counterbalance Valves
O W/out Counterbalance Valves

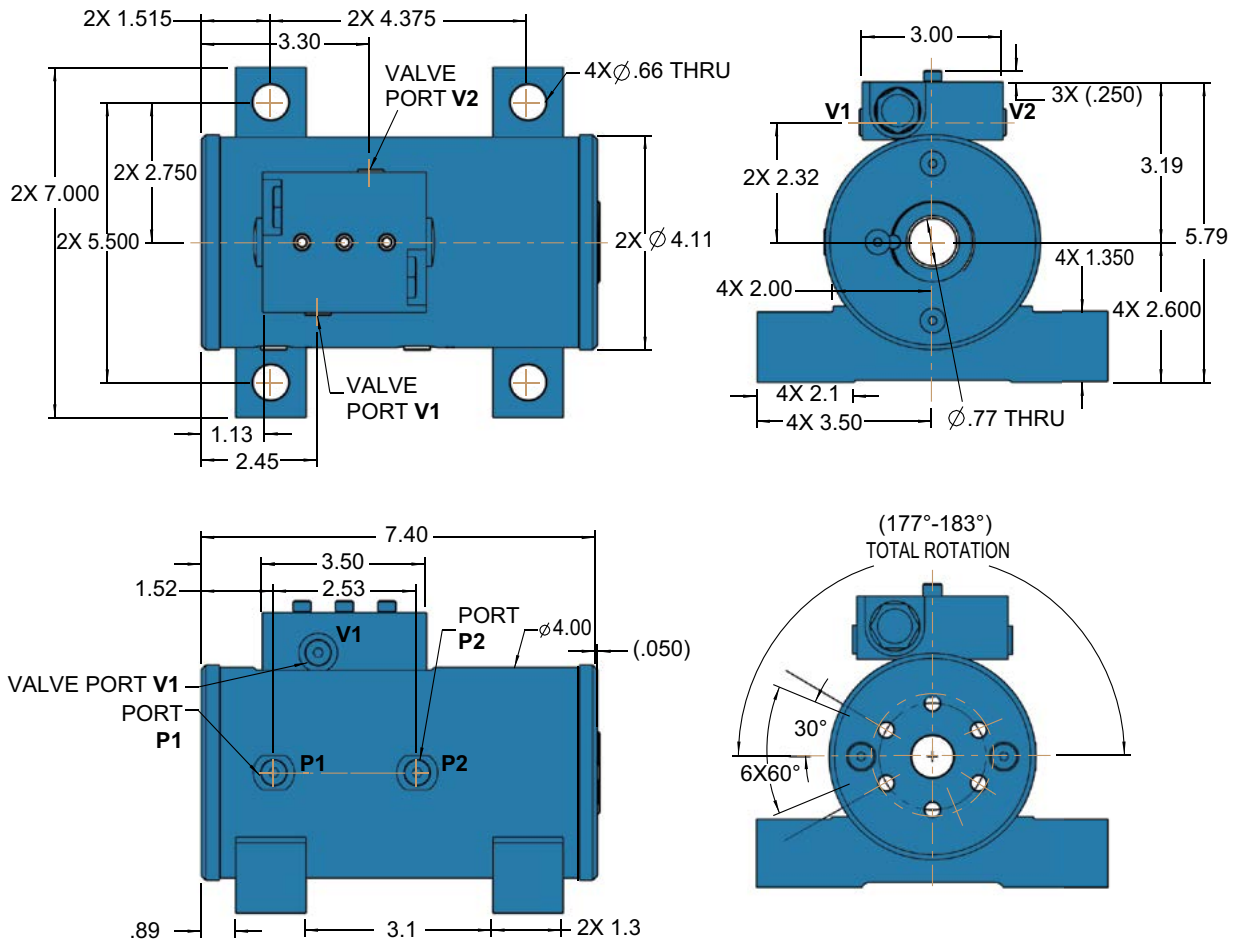
3 = MEASUREMENT SYSTEM
E English System
M Metric System
C Custom Design

6 = SPECIAL ROTATION
Standard Design with stop to limit rotation to customer specification. This indicates final rotation.

9 = SEAL OPTIONS
H Standard Seals
S Special Seals

Standard Options Available First

DIMENSIONAL DATA (inches)

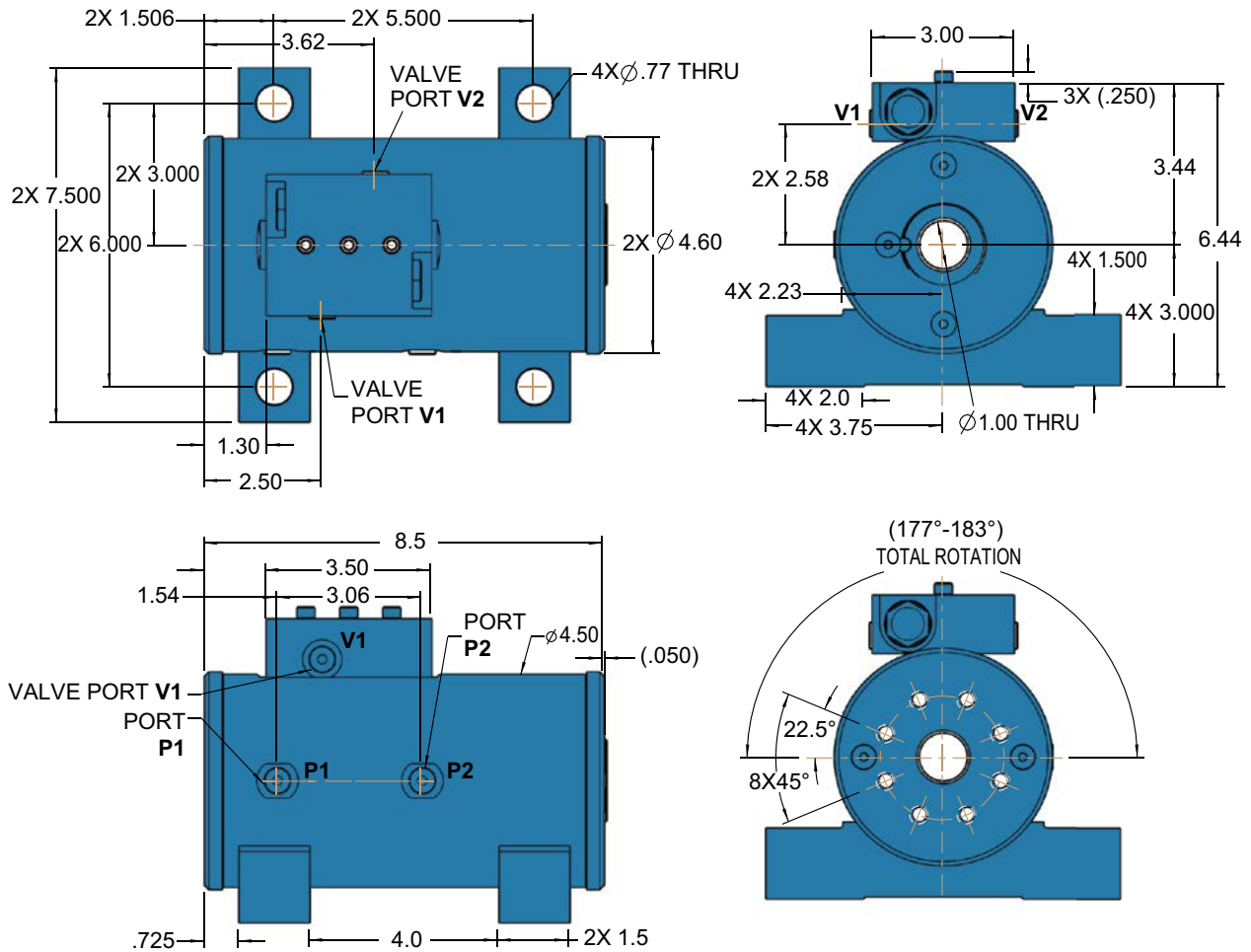


MODEL SPECIFICATIONS

Specification charts are for general reference only.

Rotation	Custom up to 180°
Maximum Drive Torque, in-lbs	4,500
Maximum Holding Torque, in-lbs	11,800
Maximum Straddle Moment, in-lbs	22,500
Maximum Cantilever Moment, in-lbs	12,000
Mounting	Foot, Custom
Radial Capacity, lbs. (kg)	3,050 (1,383)
Axial Capacity, lbs. (kg)	1,100 (499)
Approximate Weight, lbs. (kg)	27 (12.2)
Approximate Displacement 180°, in ³ (cm ³)	8.0 (132)
Threaded Mounting Hole, Shaft Flange, In, Deep (Metric, Deep)	3/8 - 16 ∇ 0.54 (M10 x 1.5 ∇ 15.2)
Quantity of Mounting Hole, Shaft Flange	6
Bolt Circle Diameter, Shaft Flange, in. (mm)	2.125 (54)
Clearance Hole for Shaft Through - Bolt, in. (mm)	3/4 through (M20 through)
Housing Foot Clearance Hole, Required Bolt Size, in. (mm)	5/8 (M16)
P1, P2 Ports, Housing, inch (metric)	ISO-11926/SAE Series of ports. Sizes are 7/16.
V1, V2 Ports, Valve, in. (mm)	(ISO-1179-1/BSPP 'G' Series of ports. Available upon special request.)

DIMENSIONAL DATA (inches)

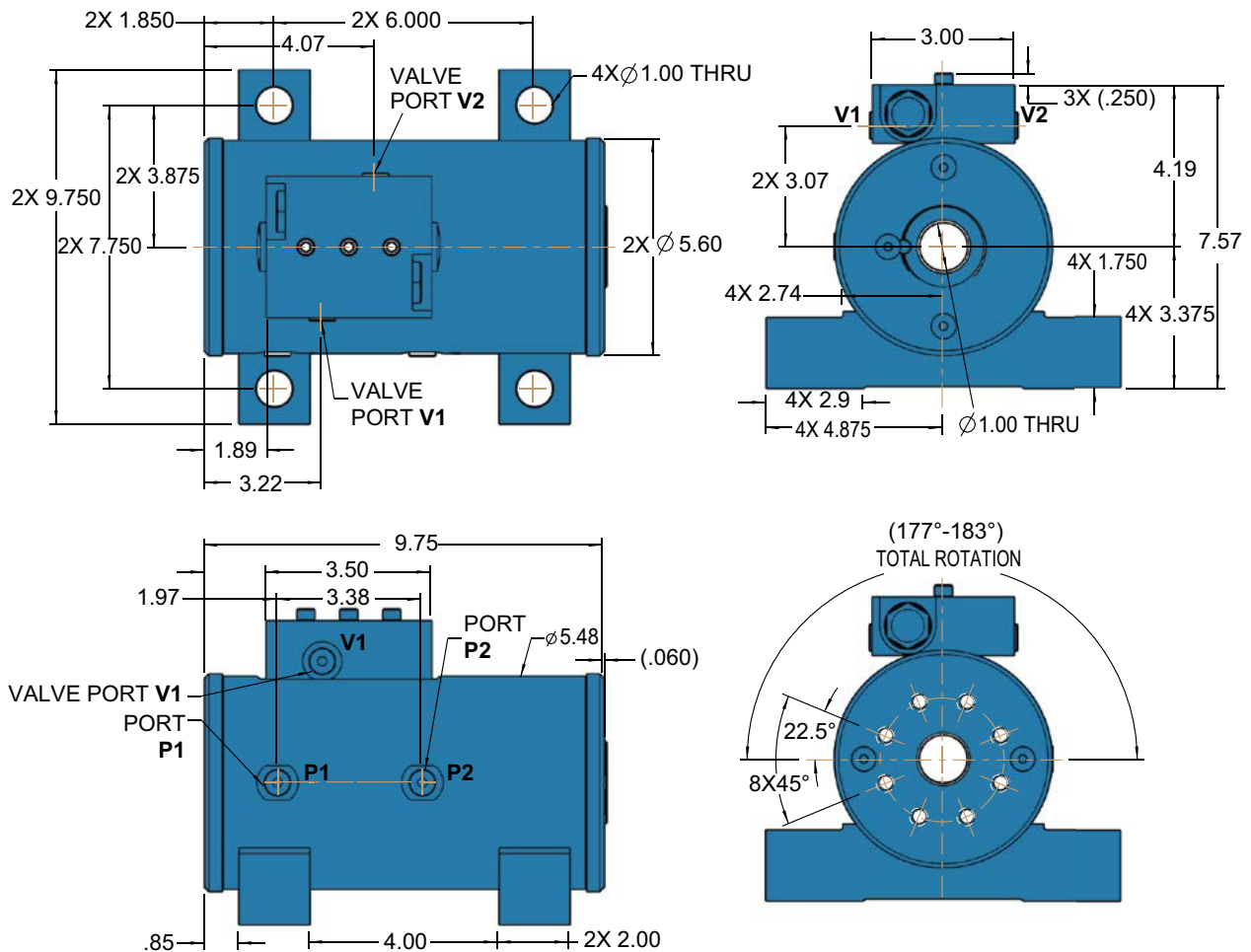


MODEL SPECIFICATIONS

Specification charts are for general reference only.

Rotation	Custom up to 180°
Maximum Drive Torque, in-lbs	8,200
Maximum Holding Torque, in-lbs	21,000
Maximum Straddle Moment, in-lbs	40,000
Maximum Cantilever Moment, in-lbs	22,000
Mounting	Foot, Custom
Radial Capacity, lbs. (kg)	4,700 (2,132)
Axial Capacity, lbs. (kg)	1,500 (680)
Approximate Weight, lbs. (kg)	37 (17)
Approximate Displacement 180°, in³ (cm³)	14 (233)
Threaded Mounting Hole, Shaft Flange, In, Deep (Metric, Deep)	3/8 - 16 ∇ 0.54 (M10 x 1.5 ∇ 15.2)
Quantity of Mounting Hole, Shaft Flange	8
Bolt Circle Diameter, Shaft Flange, in. (mm)	2.625 (65)
Clearance Hole for Shaft Through - Bolt, in. (mm)	1 through (M24 through)
Housing Foot Clearance Hole, Required Bolt Size, in. (mm)	3/4 (M20)
P1, P2 Ports, Housing, inch (metric)	ISO-11926/SAE Series of ports. Sizes are 7/16.
V1, V2 Ports, Valve, in. (mm)	(ISO-1179-1/BSPP 'G' Series of ports. Available upon special request.)

DIMENSIONAL DATA (inches)



MODEL SPECIFICATIONS

Specification charts are for general reference only.

Rotation	Custom up to 180°
Maximum Drive Torque, in-lbs	15,000
Maximum Holding Torque, in-lbs	38,720
Maximum Straddle Moment, in-lbs	90,000
Maximum Cantilever Moment, in-lbs	48,000
Mounting	Foot, Custom
Radial Capacity, lbs. (kg)	9,230 (4,187)
Axial Capacity, lbs. (kg)	2,200 (998)
Approximate Weight, lbs. (kg)	63 (28.6)
Approximate Displacement 180°, in³ (cm³)	26 (426)
Threaded Mounting Hole, Shaft Flange, In, Deep (Metric, Deep)	1/2 - 13 ∇0.75 (M12 x 1.75 ∇19.1)
Quantity of Mounting Hole, Shaft Flange	8
Bolt Circle Diameter, Shaft Flange, in. (mm)	3.375 (85)
Clearance Hole for Shaft Through - Bolt, in. (mm)	1 through (M24 through)
Housing Foot Clearance Hole, Required Bolt Size, in. (mm)	1 (M24)
P1, P2 Ports, Housing, inch (metric)	ISO-11926/SAE Series of ports. Sizes are 7/16.
V1, V2 Ports, Valve, in. (mm)	(ISO-1179-1/BSPP 'G' Series of ports. Available upon special request.)



**The Oilgear Company
Global Headquarters**

☎ **231-929-1660**

✉ **ussales@oilgear.com**

📍 **1424 International Drive, Traverse City, MI 49686**

🌐 **www.oilgear.com**

Oilgear Fremont, Nebraska

905 South Downing St. Fremont, NE 68025 USA

Oilgear Mexicana S.A.

Calle Argentina 3913, Monterrey, 64930, Mexico

Oilgear do Brasil

Av. Ricardo Bassoli Cezare 1009, 13050-080 Campinas, Brazil

Oilgear Towler UK

37 Burley Road, Leeds, LS3 1JT, United Kingdom

Oilgear Towler S.A.S.

5, Allée des Frères Montgolfier, 77183 Croissy-Beaubourg, France

Oilgear Towler GmbH

Im Gotthelf 8, 65795 Hattersheim, Germany

Oilgear Towler S.A.U.

Entidad Zikuñaga, 62, 20120, Hernani, Spain

Oilgear South Korea

167-3 Techno 2-ro, Yuseong-gu, Daejeon City, 34025, South Korea

Oilgear China Co., Ltd.

3rd Floor, Bldg. A, No.3500 Xiupu Road, Shanghai, China

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