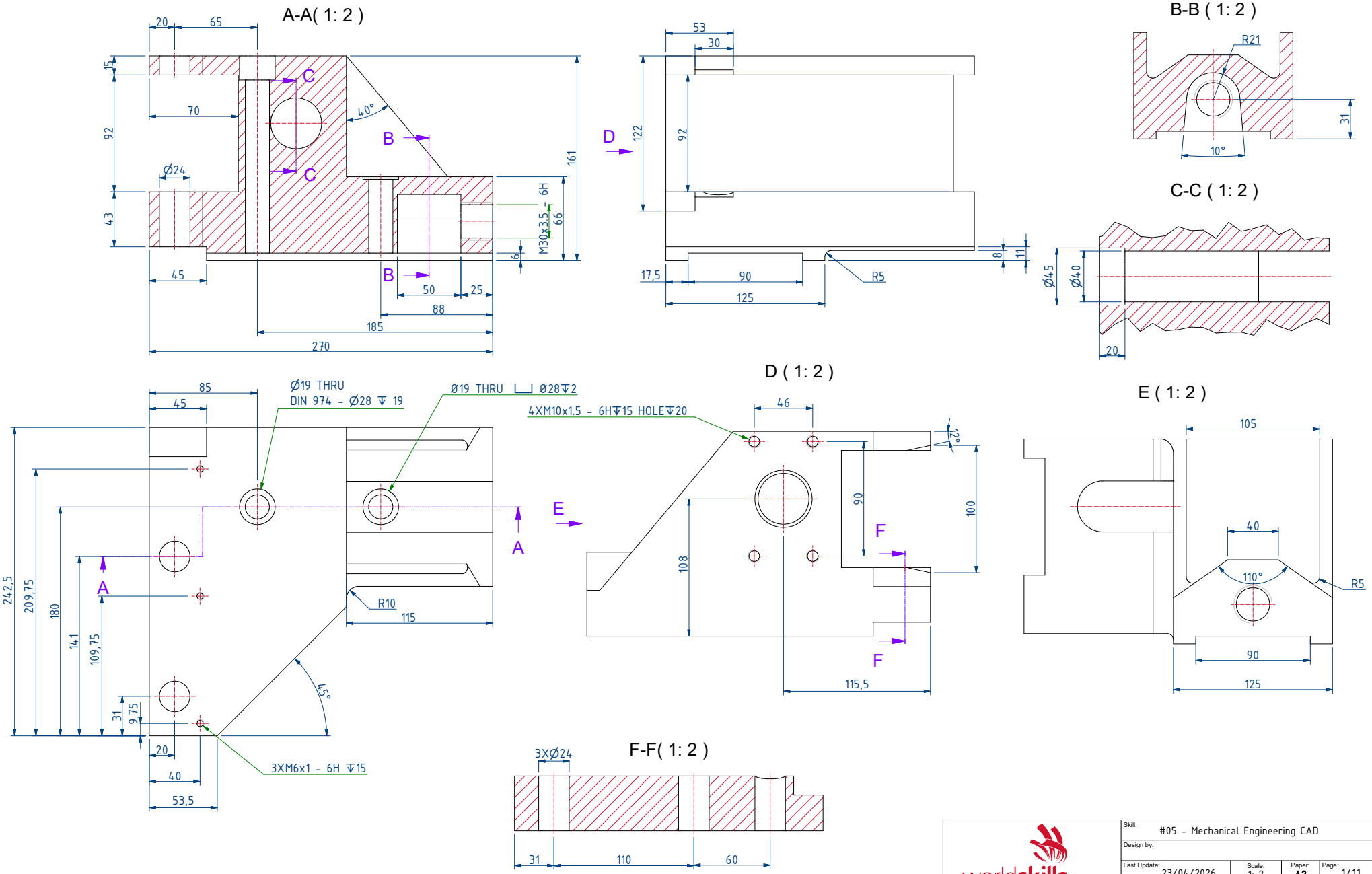
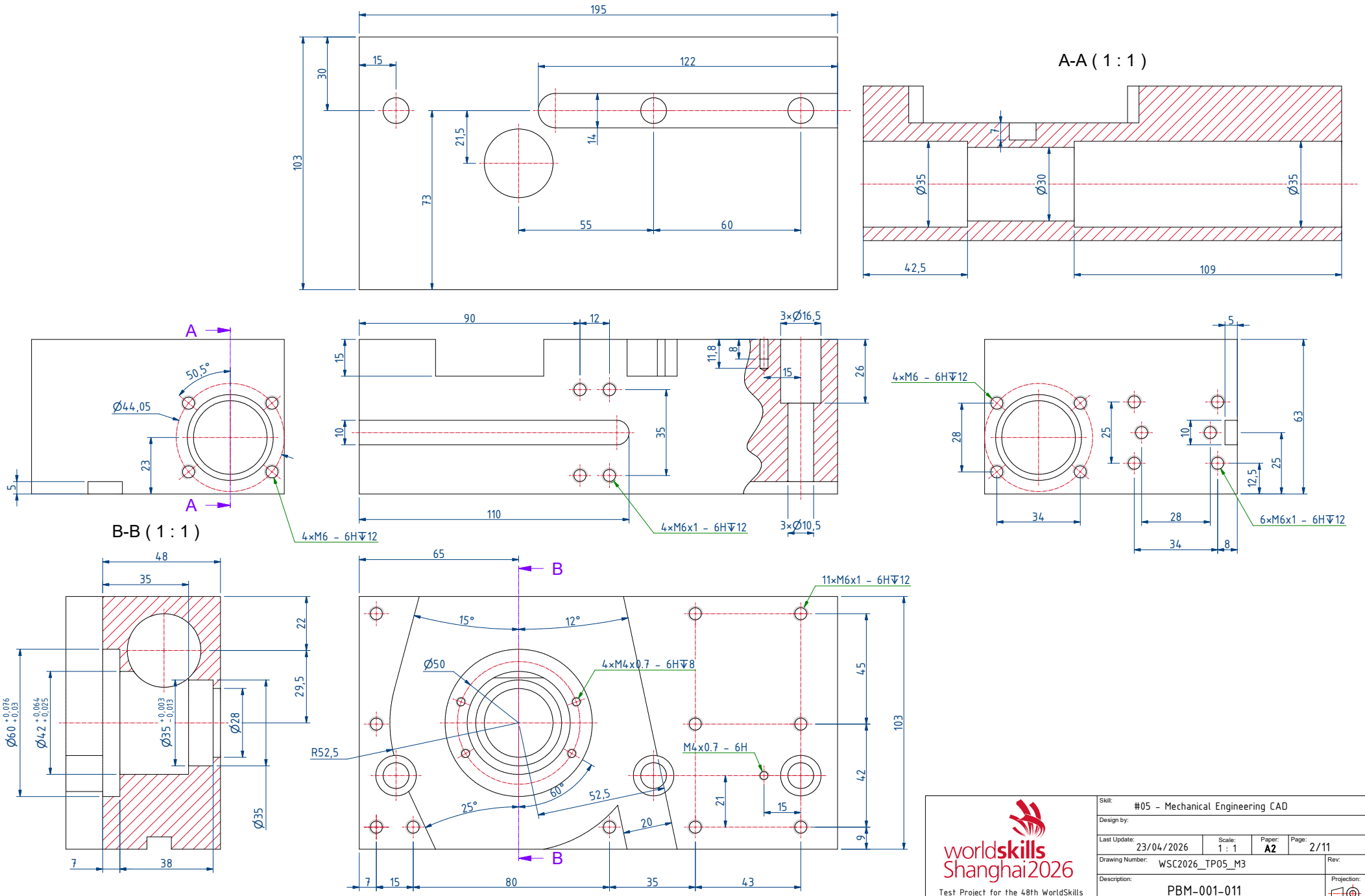


worldskills Shanghai2026	Skill: #05 - Mechanical Engineering CAD
Test Project for the 48th WorldSkills Competition in Shanghai, China 2026	Design by:
Copyright 2026 © WorldSkills International All Rights Reserved	Last Update: 23/04/2026 · Scale: 1: 2 · Paper: A2 · Page: 1/11
	Drawing Number: WSC2026_TP05_M3 · Rev:
	Description: PBM-001-004-005 · Projection:



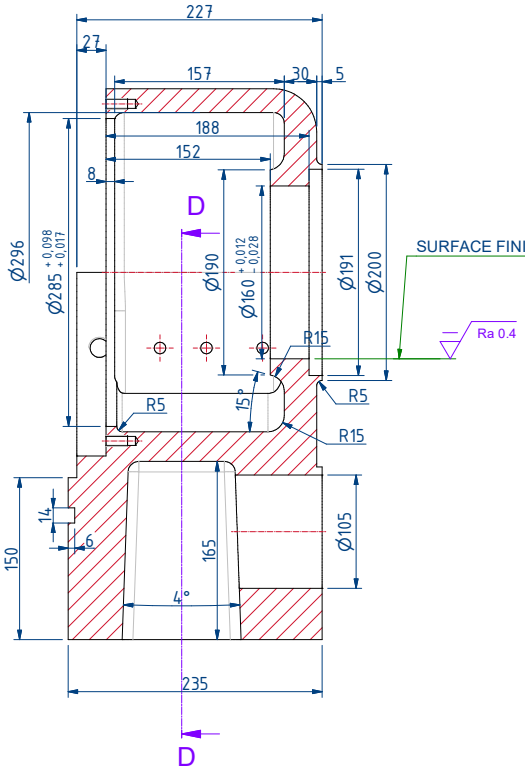
worldskills Shanghai2026

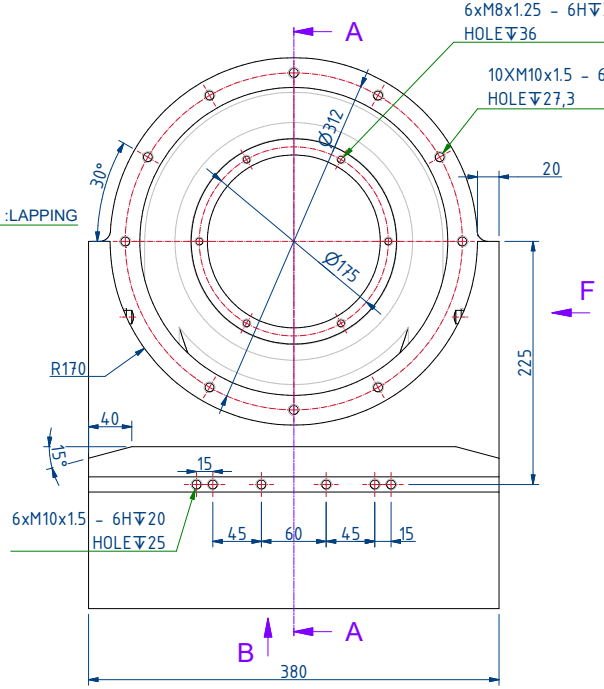
Test Project for the 48th WorldSkills Competition in Shanghai, China 2026

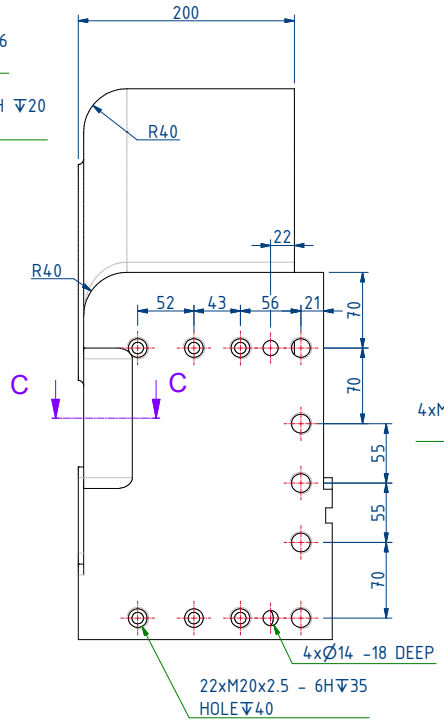
Copyright 2026 © WorldSkills International
All Rights Reserved

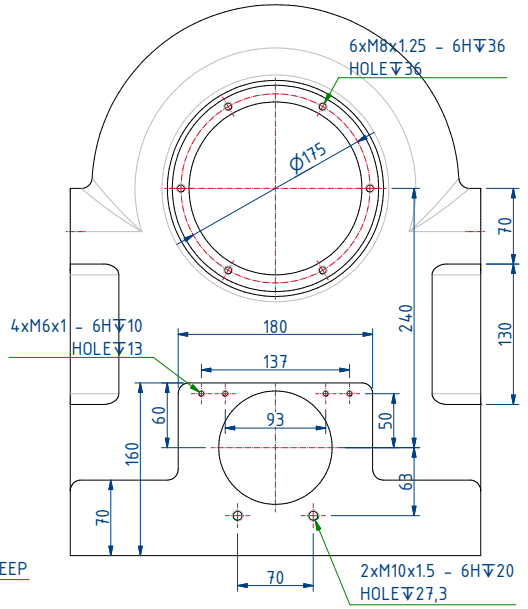
Skill:	#05 - Mechanical Engineering CAD
Design by:	
Last Update:	23/04/2026
Scale:	1 : 1
Paper:	A2
Page:	2/11
Drawing Number:	WSC2026_TP05_M3
Rev:	
Description:	PBM-001-011
Projection:	

A-A (1 :3.5)

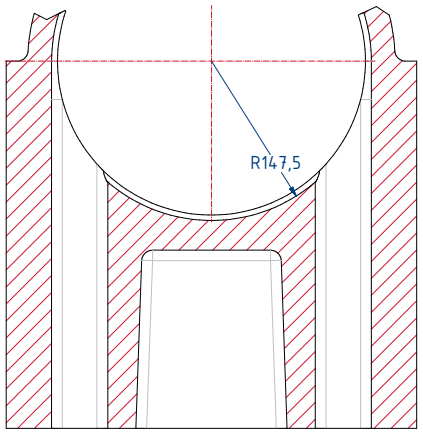




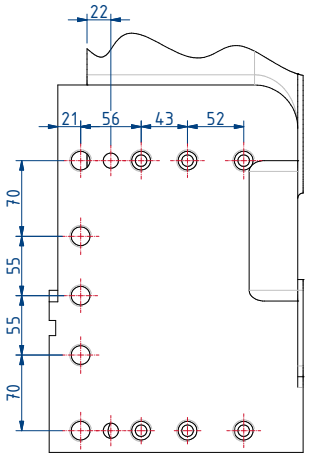




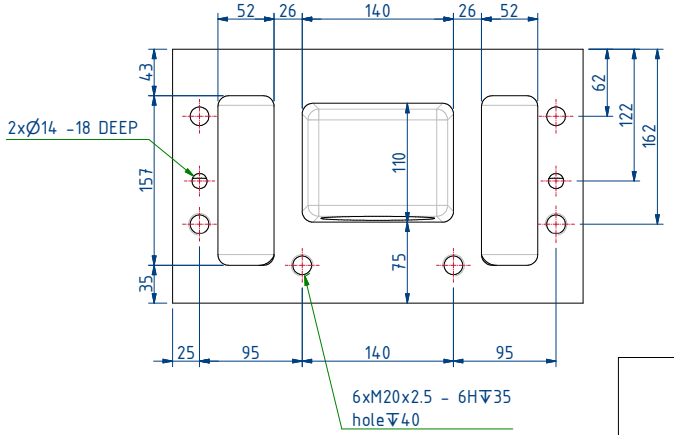
D-D (1 :3.5)



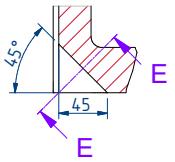
F (1 :3.5)



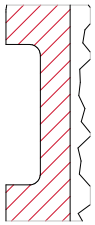
B (1 :3.5)



C-C (1 :3.5)



E-E (1 :3.5)



NOTES:
1.All unspecified fillets=R10

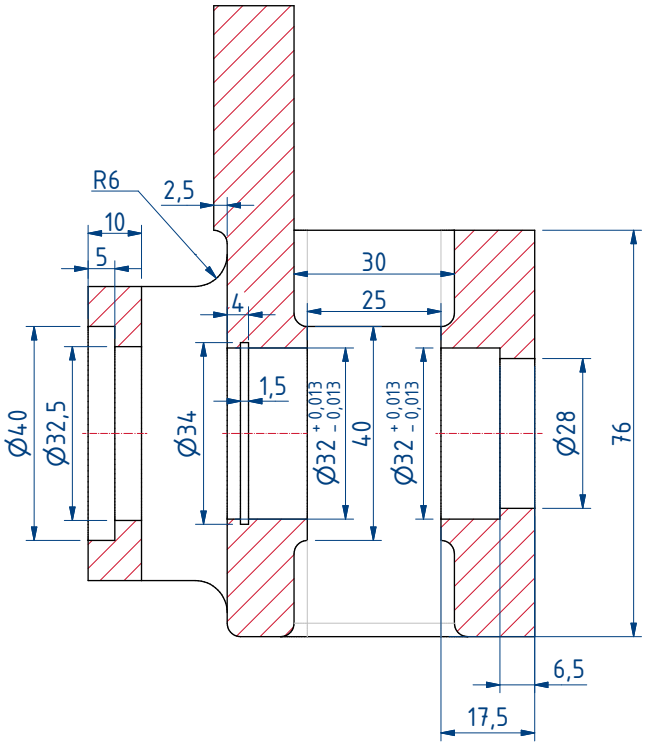
worldskills Shanghai2026

Test Project for the 48th WorldSkills Competition in Shanghai, China 2026

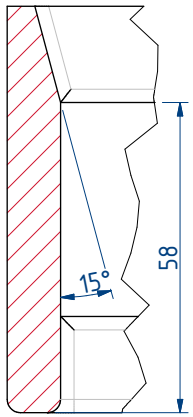
Copyright 2026 © WorldSkills International All Rights Reserved

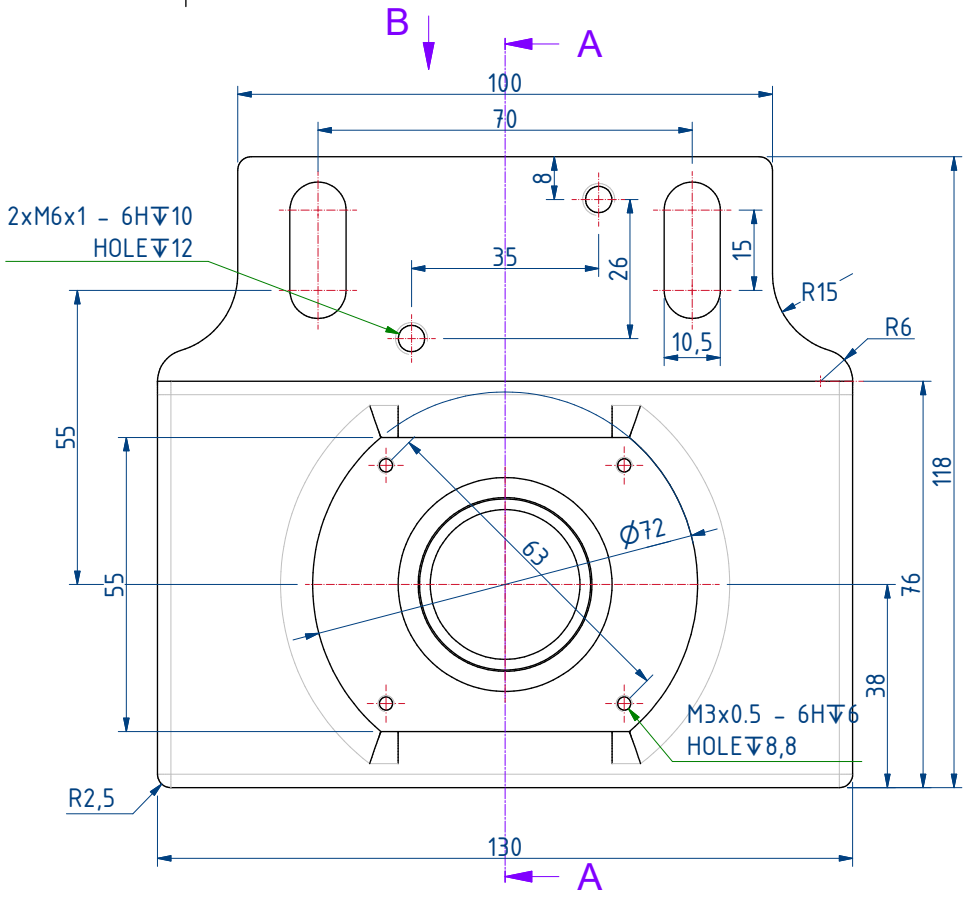
Skill:	#05 - Mechanical Engineering CAD
Design by:	
Last Update: 23/04/2026	Scale: 1 :3.5 / Paper: A2 / Page: 3/11
Drawing Number:	WSC2026_TP05_M3 / Rev:
Description:	PBM-001-028 / Projection:

A-A (1 : 1)

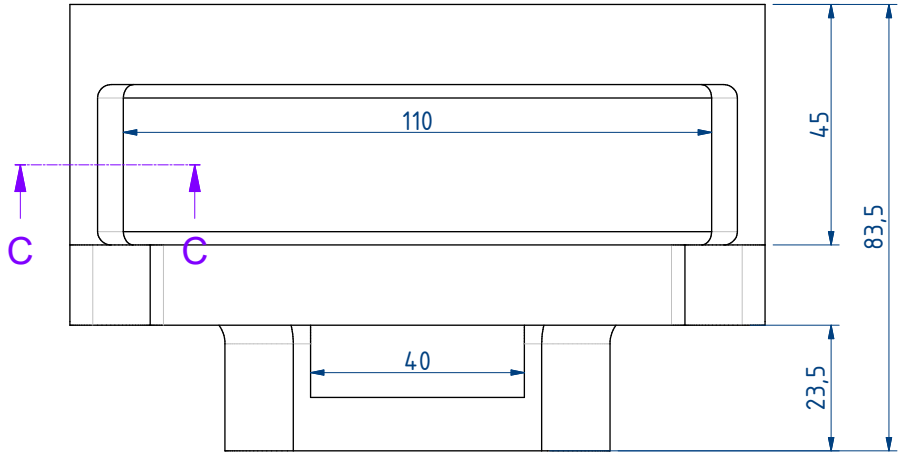


C-C (1 : 1)





B (1 : 1)



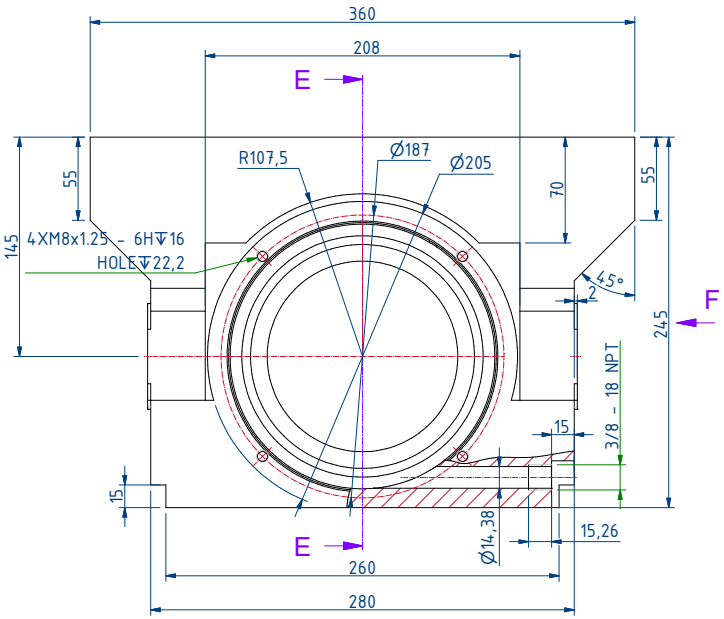
NOTES:
1.All unspecified fillets=R2.5

worldskills Shanghai2026

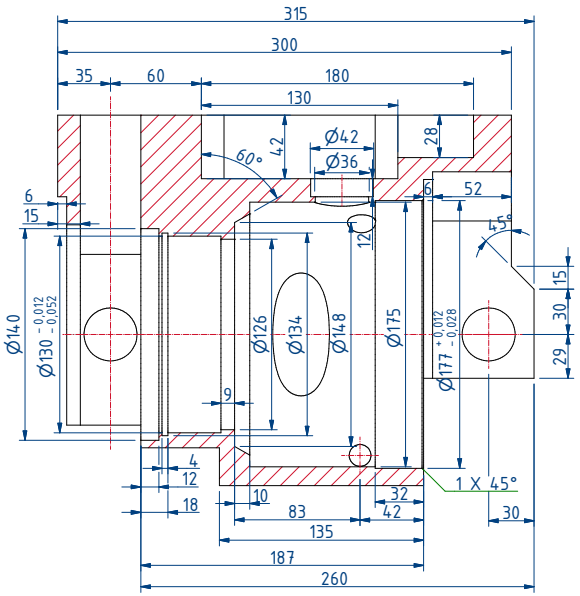
Test Project for the 48th WorldSkills Competition in Shanghai, China 2026

Copyright 2026 © WorldSkills International All Rights Reserved

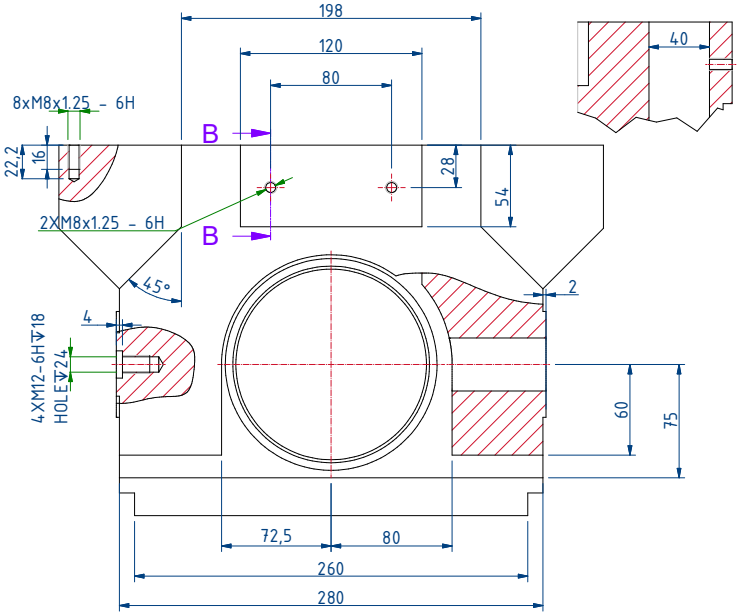
Skill: #05 - Mechanical Engineering CAD				
Design by:				
Last Update: 23/04/2026	Scale: 1 : 1	Paper: A3	Page: 4/11	
Drawing Number: WSC2026_TP05_M3				Rev:
Description: PBM-001-006-006				Projection:



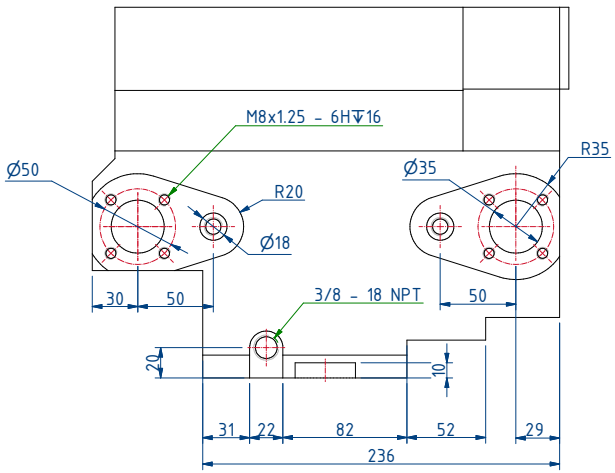
E-E

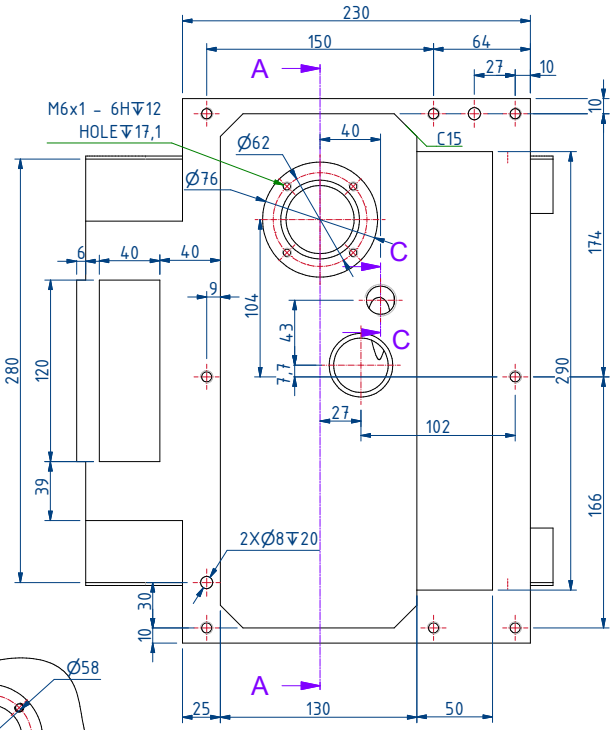


B-B (2: 5)

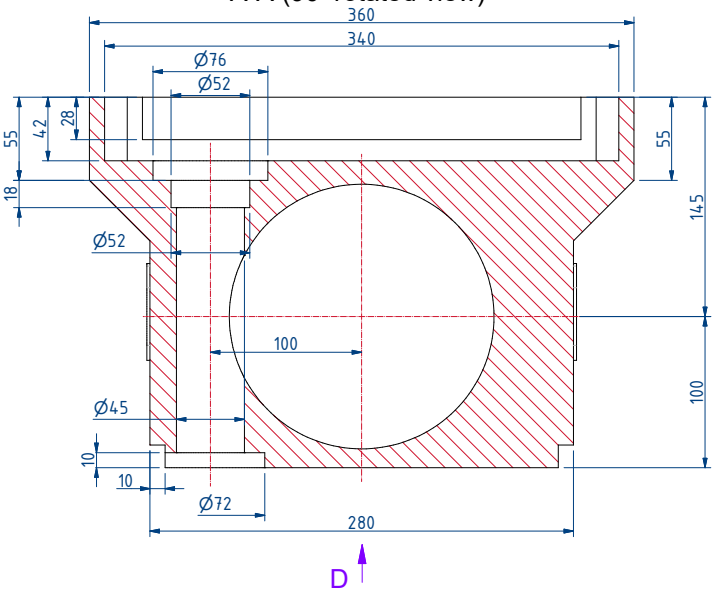


F

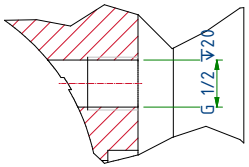




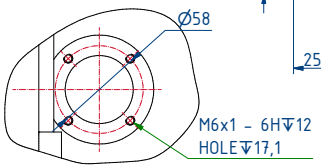
A-A (90° rotated view)



C-C



D

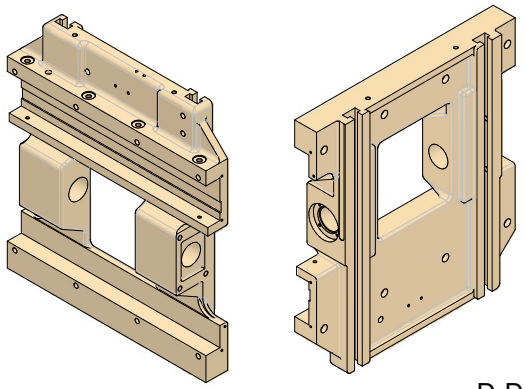


worldskills Shanghai2026

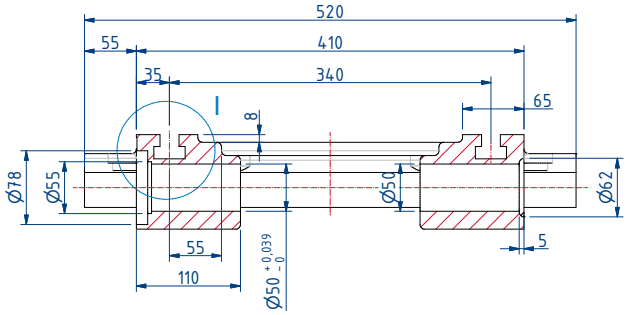
Test Project for the 48th WorldSkills Competition in Shanghai, China 2026

Copyright 2026 © WorldSkills International
All Rights Reserved

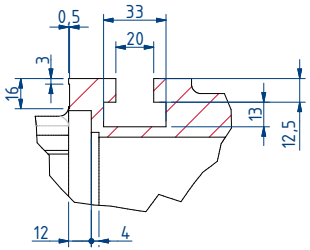
Skill: #05 - Mechanical Engineering CAD				
Design by:				
Last Update: 23/04/2026	Scale: 2: 5	Paper: A2	Page: 5/11	
Drawing Number: WSC2026_TP05_M3				Rev:
Description: PBM-002-004-014				Projection:



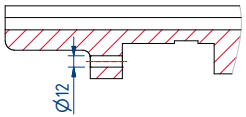
C-C (1 : 4)

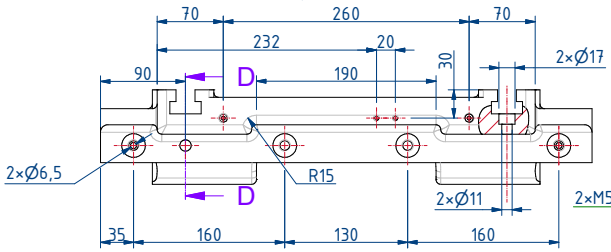


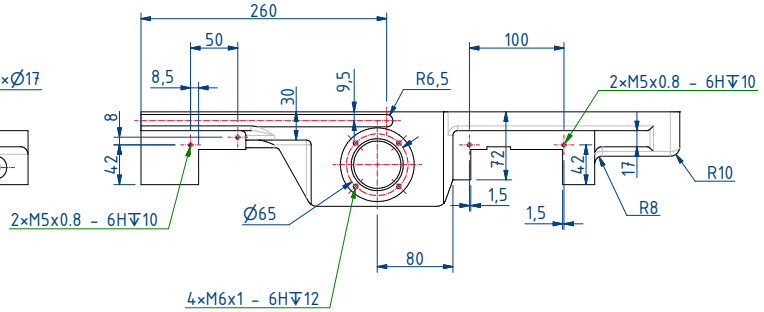
I (1 : 2)



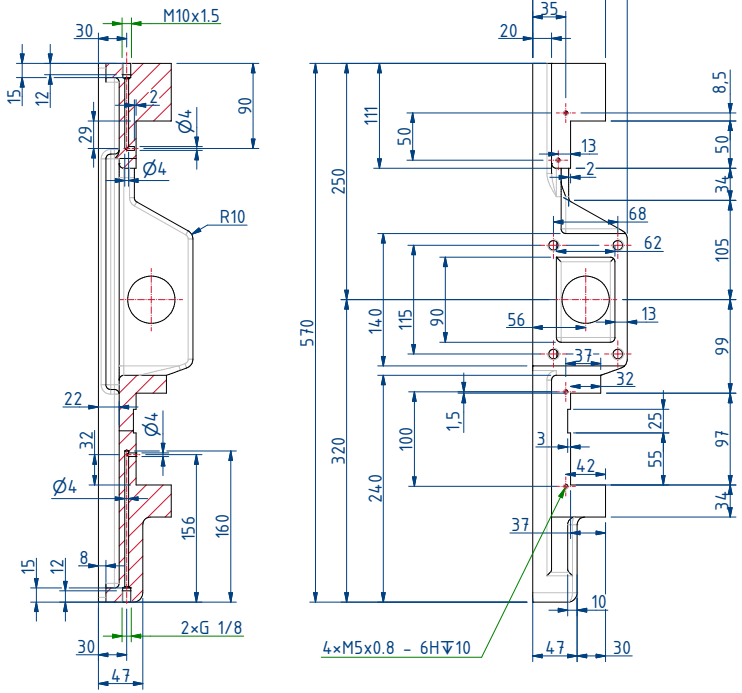
D-D (1 : 4)

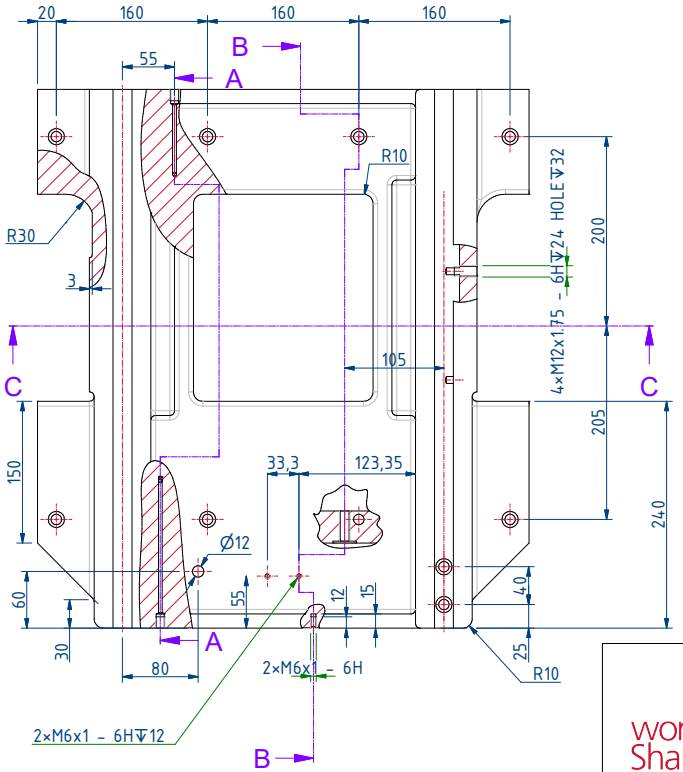




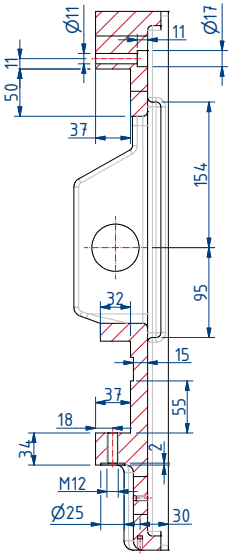


A-A (1 : 4)





B-B (1 : 4)



NOTES:
1.All unspecified fillets=R5

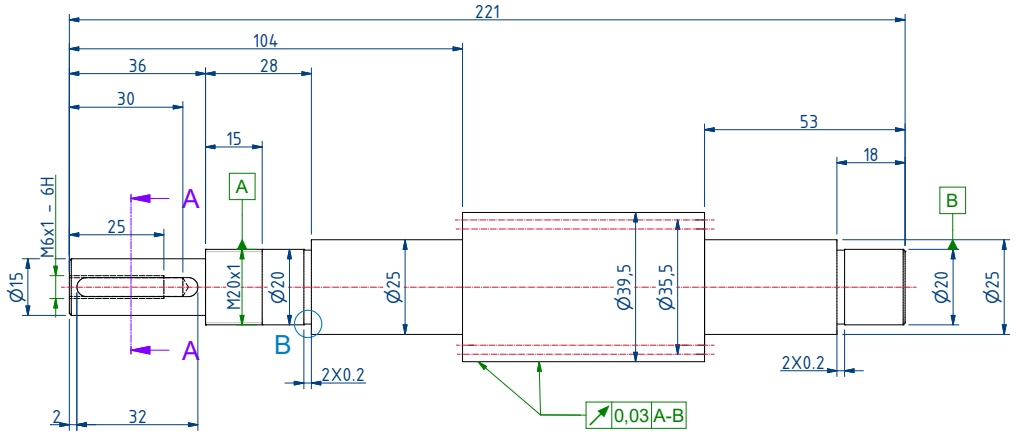
worldskills Shanghai2026

Test Project for the 48th WorldSkills Competition in Shanghai, China 2026

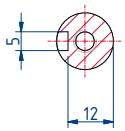
Copyright 2026 © WorldSkills International All Rights Reserved

Skill:	#05 - Mechanical Engineering CAD
Design by:	
Last Update:	23/04/2026
Scale:	1 : 4
Paper:	A2
Page:	6/11
Drawing Number:	WSC2026_TP05_M3
Rev:	
Description:	PBM-002-001-008
Projection:	

modulus	m	?
number of threads of worm	Z1	1
modification coefficient	?	
lead angle	γ	3°13'28"
Spiral direction		right
pressure angle	α	20°
center distance	a	?

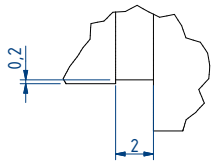


A-A (1 : 1)



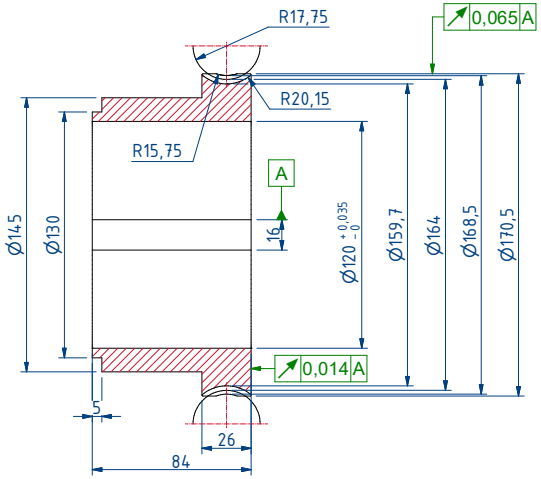
NOTES:
1.All unspecified chamfers=C0.5

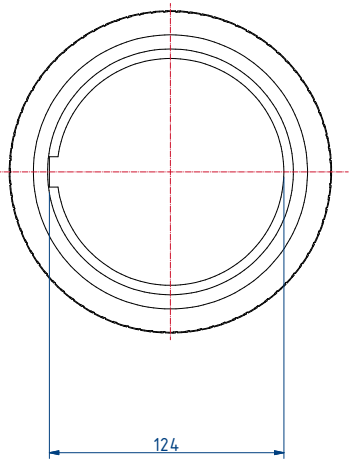
B (5 : 1)

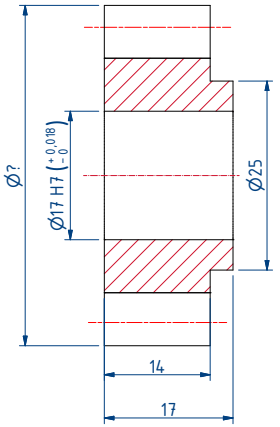


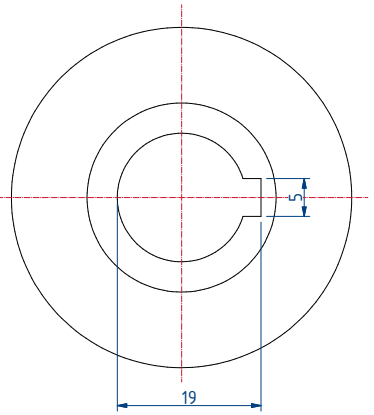
PBM-002-004-011

modulus	m	?
number of teeth	Z2	?
number of threads of worm	Z	1
modification coefficient	0.125	
lead angle	γ	3°13'28"
Spiral direction		right
Pressure angle within the axial section of the worm shaft	α	20°
center distance	a	?









PBM-001-015

PBM-002-004-012

worldskills Shanghai2026

Test Project for the 48th WorldSkills Competition in Shanghai, China 2026

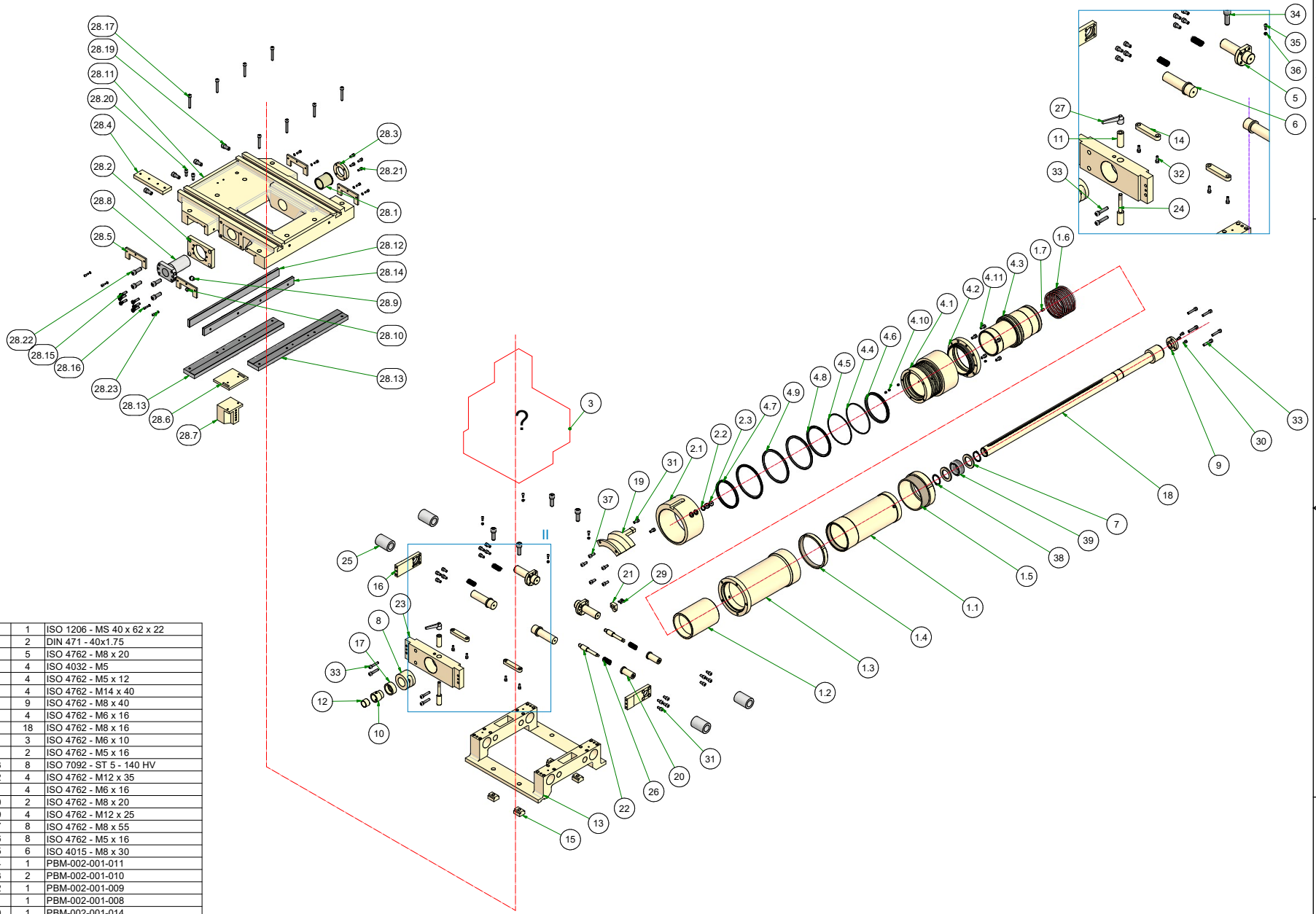
Copyright 2026 © WorldSkills International All Rights Reserved

Skill: #05 – Mechanical Engineering CAD				
Design by:				
Last Update: 23/04/2026	Scale: 1 : 1	Paper: A2	Page: 7/11	
Drawing Number: WSC2026_TP05_M3				Rev:
Description:				Projection:

NO.	QTY.	PART NUMBER
26	4	PBM-002-027
25	4	PBM-002-026
24	1	PBM-002-025
23	1	PBM-002-024
22	2	PBM-002-023
21	1	PBM-002-022
20	2	PBM-002-021
19	1	PBM-002-020
18	1	PBM-002-019
17	1	PBM-002-018
16	2	PBM-002-017
15	4	PBM-002-016
14	2	PBM-002-015
13	1	PBM-002-014
12	1	PBM-002-013
11	1	PBM-002-012
10	1	PBM-002-011
9	1	PBM-002-010
8	1	PBM-002-009
7	2	PBM-002-008
6	2	PBM-002-007
5	2	PBM-002-006
4.11	5	ISO 4762 - M8 x 16
4.10	4	PBM-002-005-010
4.9	3	PBM-002-005-008
4.8	1	PBM-002-005-007
4.7	1	PBM-002-005-006
4.6	1	PBM-002-005-005
4.5	1	PBM-002-005-009
4.4	1	PBM-002-005-004
4.3	1	PBM-002-005-003
4.2	1	PBM-002-005-002
4.1	1	PBM-002-005-001
4	1	PBM-002-005
3.37	1	ISO 2982-2 - M20 x 1 x 26
3.36	1	ISO 2982-2 - M120 x 2 x 135
3.35	1	DIN 625 SKF - SKF 6007
3.34	1	DIN 625 SKF - SKF 6004
3.33	1	DIN 625 SKF - SKF 6304
3.32	1	DIN 472 - 130 x 4
3.31	2	ISO 8734 - 6 x 14 - A
3.30	1	DIN 3760 - A - 110 x 140 x 12 - NBR
3.29	1	DIN 3760 - A - 130 x 160 x 12 - NBR
3.28	1	DIN 6885 - A 16 x 10 x 70
3.27	1	DIN 6885 - A 5 x 5 x 32
3.26	1	ISO 49 Beaded Plug T9 1/2
3.25	1	PBM-002-004-024
3.24	17	ISO 4762 - M6 x 16
3.23	4	ISO 4762 - M8 x 45
3.20	15	ISO 4762 - M8 x 30
3.38	1	PBM-002-004-023
3.22	1	PBM-002-004-022
3.21	1	PBM-002-004-021
3.19	1	PBM-002-004-019
3.18	1	PBM-002-004-018
3.17	1	PBM-002-004-017
3.16	1	PBM-002-004-016
3.15	1	PBM-002-004-015
3.14	1	PBM-002-004-014
3.13	1	PBM-002-004-013
3.12	1	PBM-002-004-012
3.11	1	PBM-002-004-011
3.10	1	PBM-002-004-010
3.9	1	PBM-002-004-009
3.8	1	PBM-002-004-008
3.7	1	PBM-002-004-007
3.6	1	PBM-002-004-006
3.5	1	PBM-002-004-005
3.4	1	PBM-002-004-004
3.3	1	PBM-002-004-003
3.2	1	PBM-002-004-002
3.1	1	PBM-002-004-001
3	1	PBM-002-004
2.3	2	PBM-002-003-003
2.2	2	PBM-002-003-002
2.1	1	PBM-002-003-001
2	1	PBM-002-003
1.7	1	PBM-002-002-007
1.6	1	PBM-002-002-006
1.5	1	PBM-002-002-005
1.4	1	PBM-002-002-004
1.3	1	PBM-002-002-003
1.2	1	PBM-002-002-002
1.1	1	PBM-002-002-001
1	1	PBM-002-002

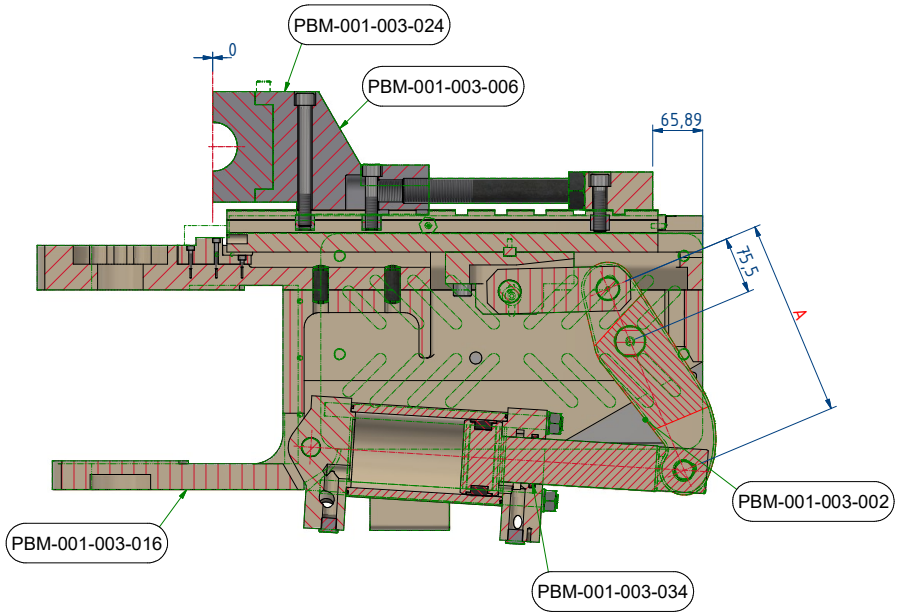
NO.	QTY.	PART NUMBER
39	1	ISO 1206 - MS 40 x 62 x 22
38	2	DIN 471 - 40x1.75
37	5	ISO 4762 - M8 x 20
36	4	ISO 4032 - M5
35	4	ISO 4762 - M5 x 12
34	4	ISO 4762 - M14 x 40
33	9	ISO 4762 - M8 x 40
32	4	ISO 4762 - M6 x 16
31	18	ISO 4762 - M8 x 16
30	3	ISO 4762 - M6 x 10
29	2	ISO 4762 - M5 x 16
28.23	8	ISO 7092 - ST 5 - 140 HV
28.22	4	ISO 4762 - M12 x 35
28.21	4	ISO 4762 - M6 x 16
28.20	2	ISO 4762 - M8 x 20
28.19	4	ISO 4762 - M12 x 25
28.17	8	ISO 4762 - M8 x 55
28.16	8	ISO 4762 - M5 x 16
28.15	6	ISO 4015 - M8 x 30
28.14	1	PBM-002-001-011
28.13	2	PBM-002-001-010
28.12	1	PBM-002-001-009
28.11	1	PBM-002-001-008
28.10	1	PBM-002-001-014
28.9	1	PBM-002-001-013
28.8	1	PBM-002-001-012
28.7	1	PBM-002-001-007
28.6	1	PBM-002-001-006
28.5	4	PBM-002-001-005
28.4	1	PBM-002-001-004
28.3	1	PBM-002-001-003
28.2	1	PBM-002-001-002
28.1	1	PBM-002-001-001
28	1	PBM-002-001
27	1	PBM-002-028

II (1 : 6)



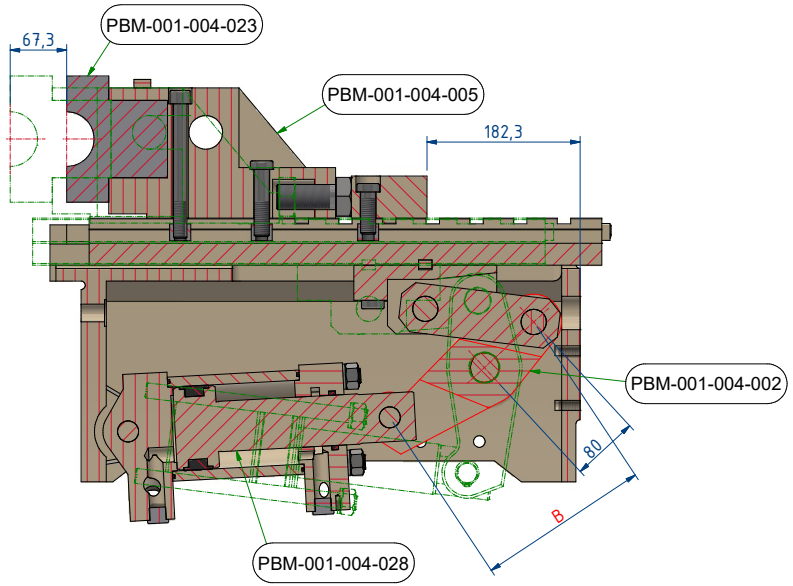
worldskills Shanghai2026
Test Project for the 48th WorldSkills Competition in Shanghai, China 2026
Copyright 2026 © WorldSkills International All Rights Reserved

Skill:	#05 - Mechanical Engineering CAD
Design by:	
Last Update:	23/04/2026
Scale:	1 : 5
Paper:	A1
Page:	8/11
Drawing Number:	WSC2026_TP05_M3
Rev:	
Description:	PBM-002
Projection:	



Determine the dimension A based on the stroke of PBM-001-003-024 and the limit positions of PBM-001-003-034.

PBM-001-003

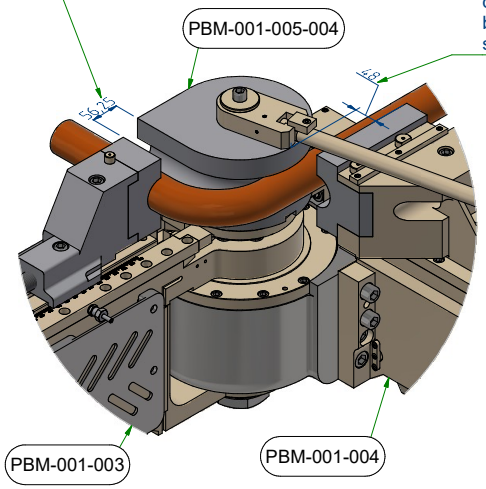


Determine the dimension B based on the stroke of PBM-001-004-023 and
the limit positions of PBM-001-004-028.

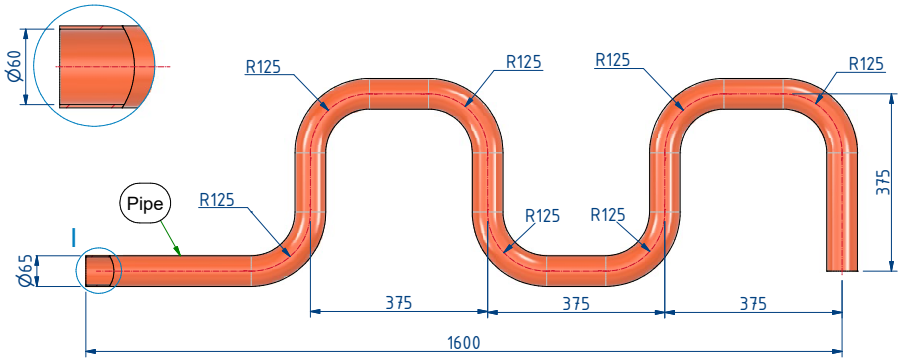
PBM-001-004

Maximum theoretical stroke of PBM-001-003-024 is 59.14 mm. However, during actual operation, its stroke is limited by PBM-001-005-004, resulting in an actual stroke of only 56.25 mm.

Maximum theoretical stroke of PBM-001-004-023 is 67.3 mm. However, during actual operation, its stroke is limited by PBM-001-005-004, resulting in an actual stroke of only 48 mm.



I (1 : 3)

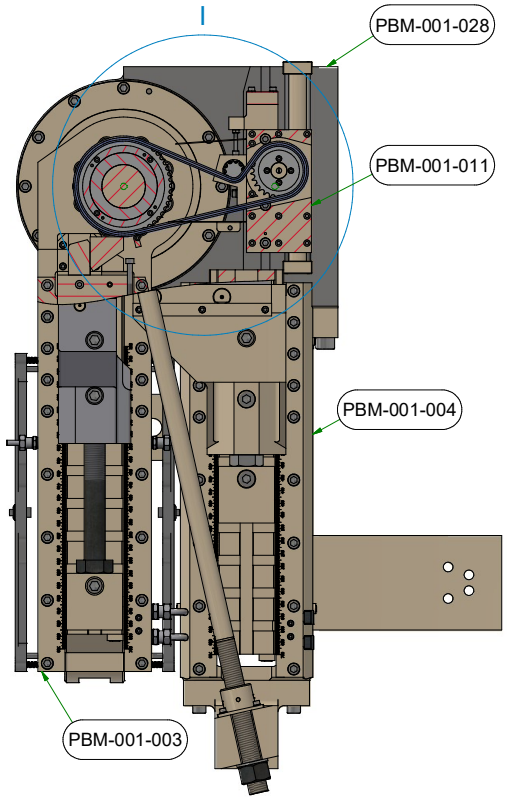


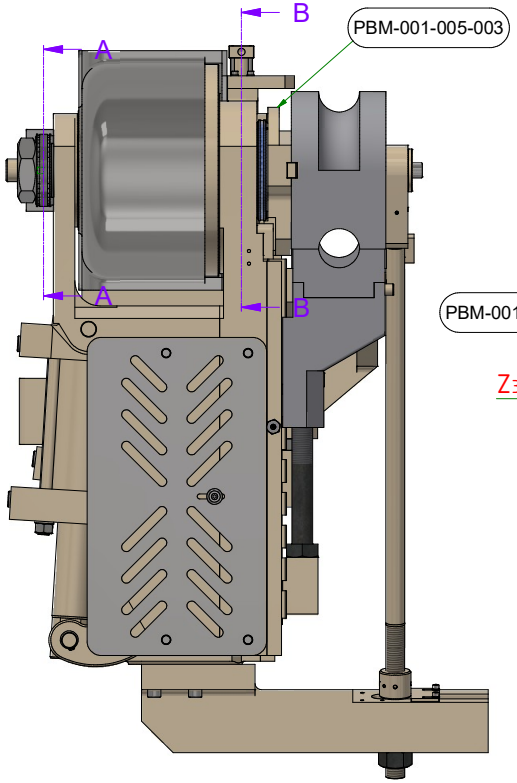
worldskills Shanghai2026

Test Project for the 48th WorldSkills Competition in Shanghai, China 2026

Copyright 2026 © WorldSkills International
All Rights Reserved

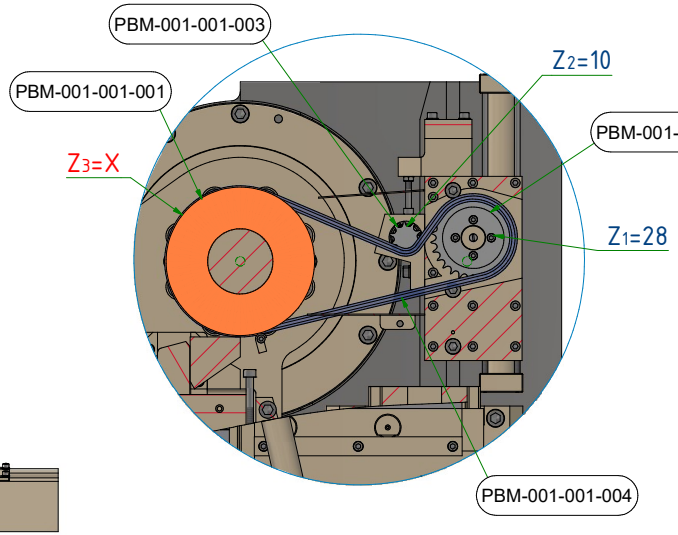
Skill:	#05 - Mechanical Engineering CAD
Design by:	
Last Update:	23/04/2026
Scale:	1 : 4.5
Paper:	A2
Page:	9/11
Drawing Number:	WSC2026_TP05_M3
Rev:	
Description:	PBM-001-003 & PBM-001-004
Projection:	



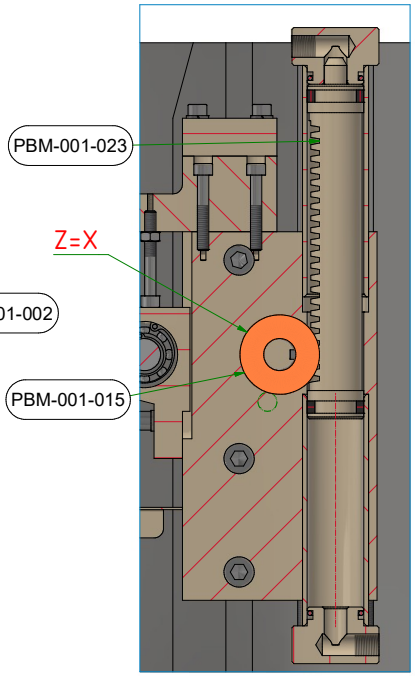


I (1 : 4)

PBM-001-001.iam

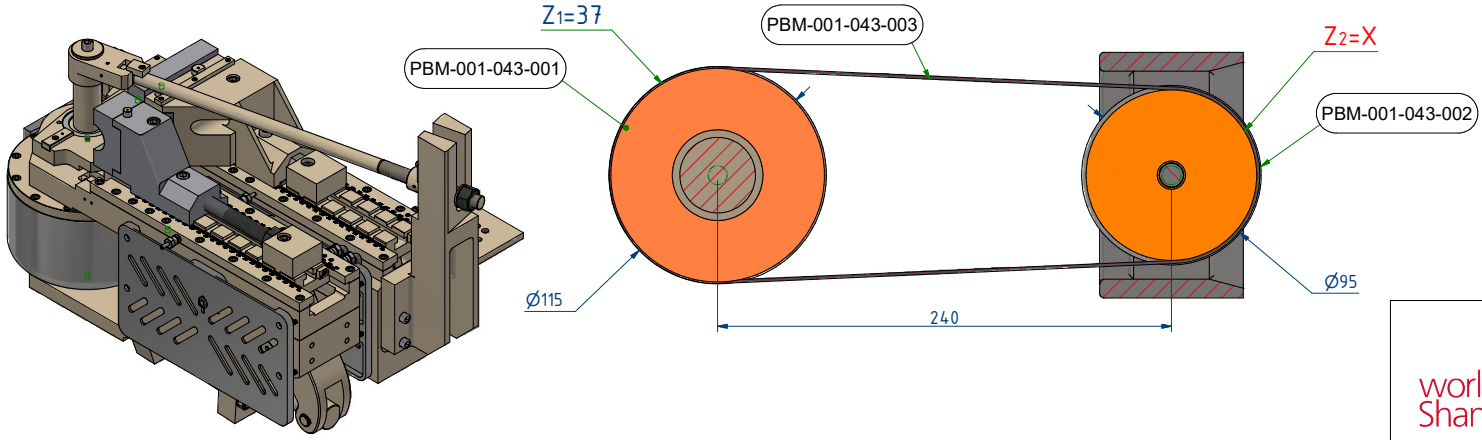


II (1 : 2)

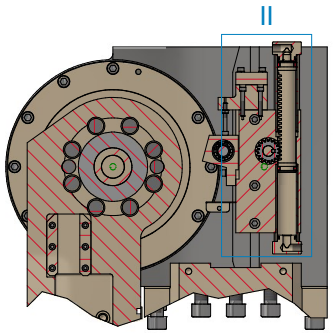


A-A (1 : 2)

PBM-001-043.iam



B-B (1 : 6)

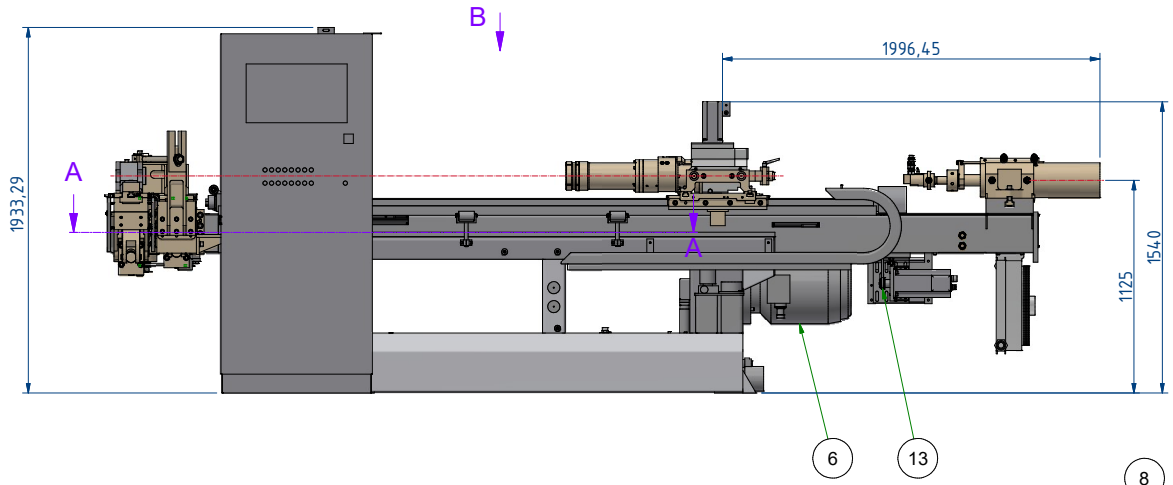


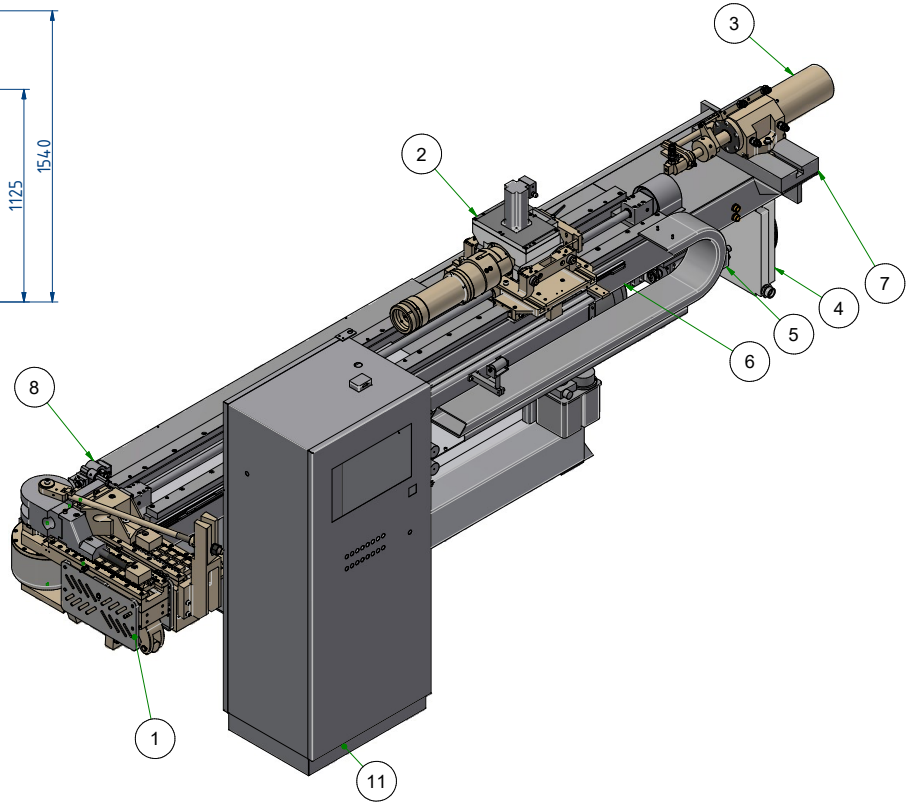
worldskills Shanghai2026

Test Project for the 48th WorldSkills Competition in Shanghai, China 2026

Copyright 2026 © WorldSkills International All Rights Reserved

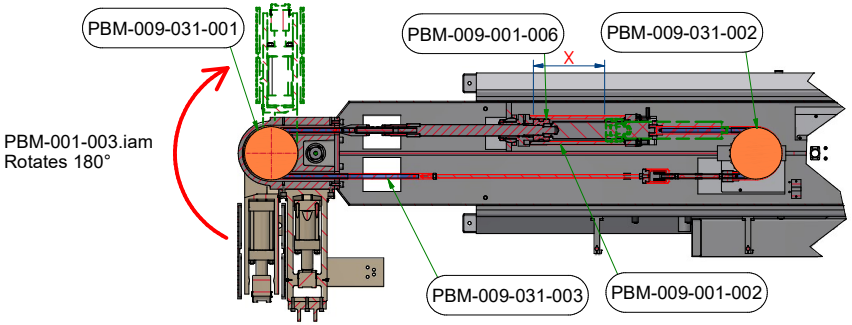
Skill: #05 - Mechanical Engineering CAD				
Design by:				
Last Update: 23/04/2026	Scale: 1 : 8	Paper: A2	Page: 10/11	
Drawing Number: WSC2026_TP05_M3				Rev:
Description: PBM-001				Projection:



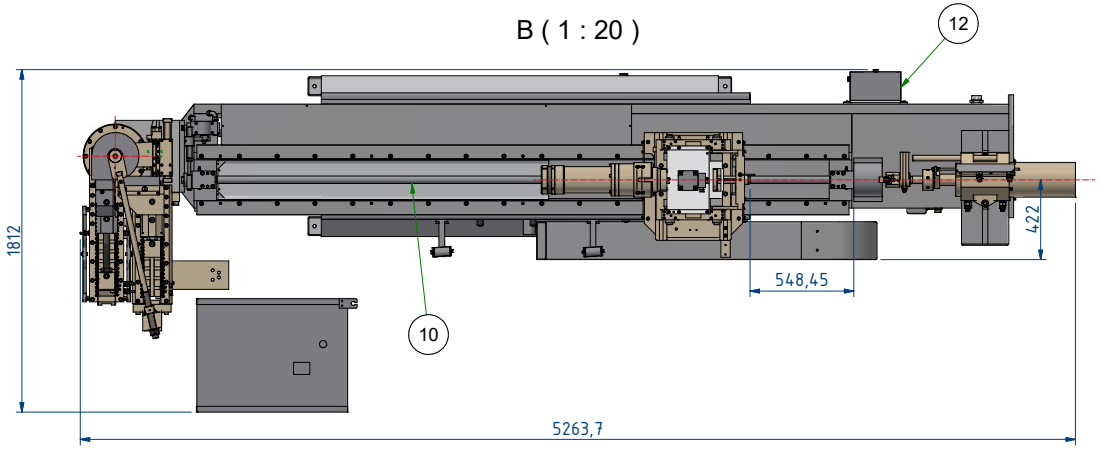


A-A (1 : 20)

PBM-009.iam



B (1 : 20)



NO.	QTY.	PART NUMBER
13	1	PBM-015
12	1	PBM-014
11	1	PBM-013
10	1	PBM-012
9	1	PBM-009
8	1	PBM-008
7	1	PBM-007
6	1	PBM-006
5	1	PBM-005
4	1	PBM-004
3	1	PBM-003
2	1	PBM-002
1	1	PBM-001

worldskills Shanghai2026

Test Project for the 48th WorldSkills Competition in Shanghai, China 2026

Copyright 2026 © WorldSkills International
All Rights Reserved

Skill: #05 - Mechanical Engineering CAD

Design by:

Last Update: 23/04/2026 | Scale: 1 : 20 | Paper: A2 | Page: 11/11

Drawing Number: WSC2026_TP05_M3 | Rev:

Description: PBM-00 | Projection: